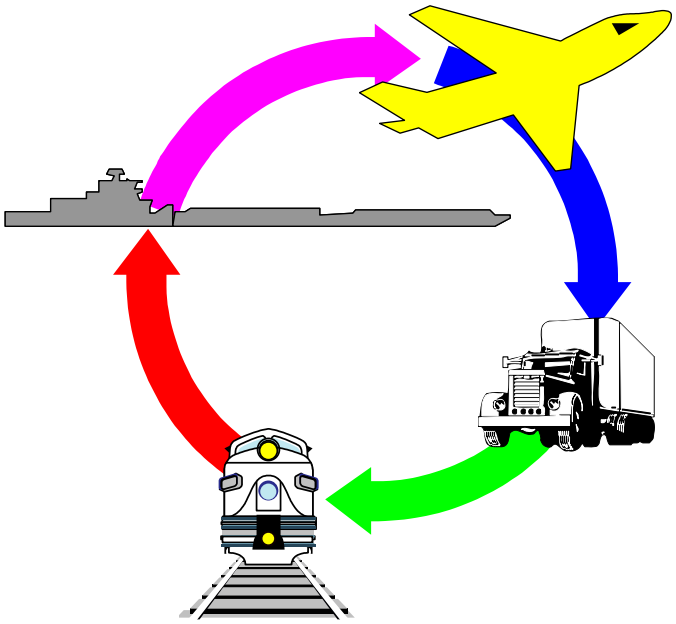
Texarkana Region
Freight Transportation Study
(Shippers' Survey)



Miller County

September 2008

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Miller County

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Prepared by:
Planning and Research Division
Arkansas State Highway and Transportation Department

In Cooperation with:
Texarkana Metropolitan Planning Organization
Texarkana, Texas/Arkansas Chamber of Commerce
Federal Highway Administration

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Executive Summary

Arkansas Highway Commission Minute Order 2004-102 authorized studies to determine the potential for intermodal[1] transportation and for enhanced freight storage and distribution capabilities for the Texarkana region.

This report presents the results of a shippers' survey conducted for the Texarkana region. The shippers' survey was used to determine current and anticipated usage of freight modes and local freight transportation issues and needs. The Texarkana Metropolitan Planning Organization, Chambers of Commerce and local governments provided insight to possible freight transportation opportunities and assisted with the shippers' survey by supplying the contact list and assisting with follow-up activities.

The study area includes Columbia, Hempstead, Howard, Lafayette, Little River, Miller, Nevada and Sevier Counties in Arkansas; and Bowie, Cass, Morris, Red River and Titus Counties in Texas.

Figure 1
Study Area

[1] The movement of freight by more than one mode of transportation.

Major Findings

The freight survey, sent to manufacturers, distributors, and transportation service providers in the 13-county area, revealed the following:

- Approximately 43 percent believed that a new rail siding at their present location could enhance their operation.
- Almost 60 percent of respondents reported that rail/truck intermodal service[2] is important for the region. The surveys indicated that intermodal service could support their current or future operations.
- Rail/truck intermodal service is primarily provided to the area by facilities in the Dallas/Fort Worth, Texas and West Memphis/Marion, Arkansas areas. Both of these locations provide excellent rail service, but because of the distance to the rail terminals, delays and increased costs can result.
- Rail/truck intermodal service is used primarily in the Texarkana region for global shipments through Gulf and Pacific Ports.
- Rail transloading[3] activities currently occur in the study area, but a facility dedicated for transloading does not exist in the Texarkana region. Industries that ship or receive large volumes of products and materials over long distances sometimes make arrangements with railroad companies for cargo to be loaded or unloaded using temporary equipment.
- Approximately 47 percent of respondents expressed an interest in utilizing a local publicly supported rail transloading facility, where they could load and unload railcars on an ongoing basis and have temporary storage available. Returned surveys and follow-up interviews indicate that approximately 36,000 trailers (for both international and domestic shipments) could be routed annually to a local transloading operation.
- Surveys indicate an interest in using waterborne transportation to move agricultural products, wood products, scrap metals, steel, stone, sand and cement. More than half of the respondents indicated an interest in utilizing waterborne transportation, if it were available in the area.
- The Port of Shreveport-Bossier in Louisiana provides waterborne transportation to the region by way of the Red River. The U.S. Army Corps of Engineers (Corps of Engineers) is studying the possibility of extending navigation on the Red River closer to Texarkana.

Key Issues for Success

In today's global business environment, it is necessary for businesses to be able to use different modes of freight transportation. A firm that has access to more than one Class I railroad, is served by several large trucking firms and is located near a navigable waterway may have a competitive advantage over businesses without shipping options. Regions where freight shipping options are available may be better able to attract new businesses, provide more marketing options for existing businesses and foster economic growth in the area.

[2] Truck Trailer on Flatcar (TOFC) or Container on Flatcar (COFC) activities.
[3] The physical transfer of cargo from one transportation vehicle to another.

Section I
Existing Transportation System

This section profiles the freight transportation system serving the 13-county study area. Freight modes include truck services consisting of truckload (TL), less-than-truckload (LTL), local drayage companies and private carriers, and Class I and Class III railroads.[4]

National Freight Trends

The Nation's volume of freight has grown significantly over the past two decades. Freight shipments have increased almost 60 percent, with truck shipments recording the greatest growth. Overall, freight volumes are expected to increase almost 70 percent by the year 2020 according to the Federal Highway Administration's Freight Analysis Framework, a national database.

The manner in which freight is moved has also changed. An important trend is the combined use of truck and rail transportation for containerized shipments and long distance movements. Containerized shipments offer many advantages, such as ease of handling, transferability between freight modes, resistance to harsh weather and the ability to serve as a self-contained storage unit. Intermodal transportation, sometimes referred to as multimodal, is a rapidly growing segment of freight movement. Both shippers and transportation providers can benefit from intermodal services. For example, in a TOFC shipment, a trucking company can reduce the long-haul cost while providing competitive services. The railroad, in turn, benefits by the increased usage of their equipment, which results in higher profits. Shippers benefit through lower freight bills and a means for penetrating new market areas. Data compiled by the American Short Line and Regional Railroad Association showed that rail intermodal traffic was up almost five percent in 2006 as compared to the previous year. The rise in intermodal shipments emphasizes the importance for infrastructure that connects different freight modes.

Shippers demand flexible and timely service which increases the need for an efficient and reliable freight transportation system. Dependable service is important for retaining existing industries, attracting new industrial activities and promoting overall economic growth. Key components of a robust freight transportation system are shipping choices with support services, freight mode interchange locations and dedicated cargo handling facilities.

Shipping Location Advantage

The Texarkana area is favorably located for domestic and international shipments via highway, rail and water. Figure 2 illustrates areas that can be reached during a typical one-day truck delivery (200 miles) or an overnight truck trip (500 miles). The Texarkana

[4] Railroads are classified based on annual operating revenues:
Class I – Carriers generating $319.3 million or more
Class II – Carriers generating at least $40.0 million but less than $319.3 million
Class III – Carriers generating less than $40.0 million

area, with its proximity to Laredo, Texas and the rest of the Lower Rio Grande Valley, could become a significant center for trade with Mexico. Figure 3 shows the main U.S./Mexico crossing locations.

Figure 2
Location Advantage

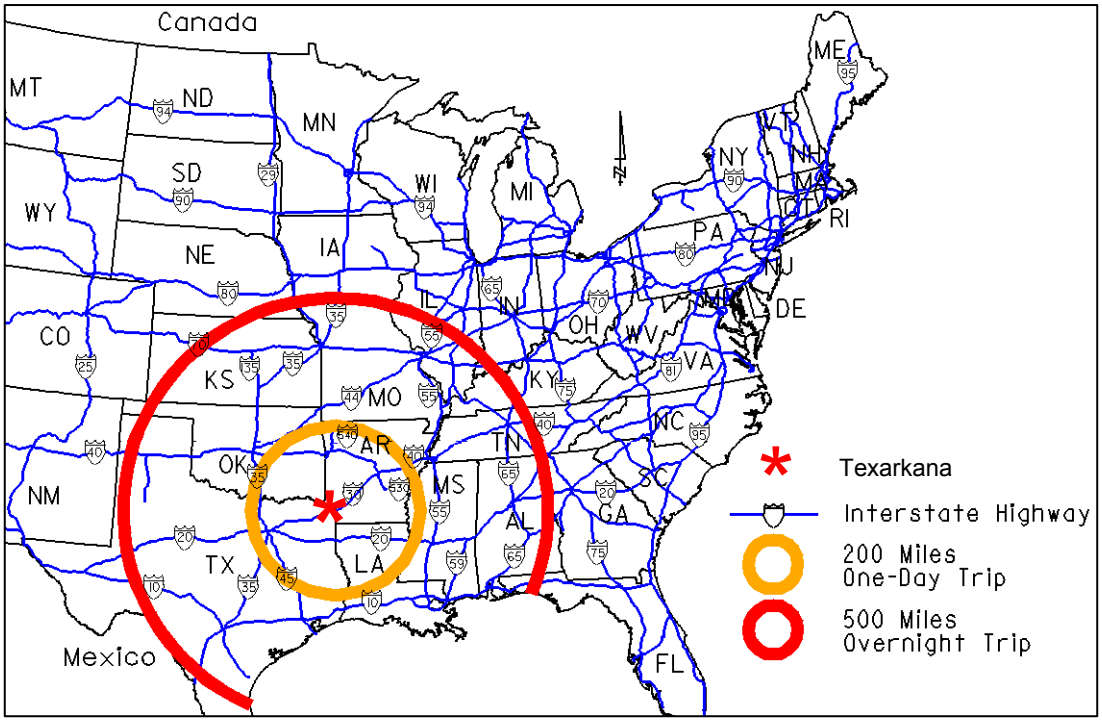
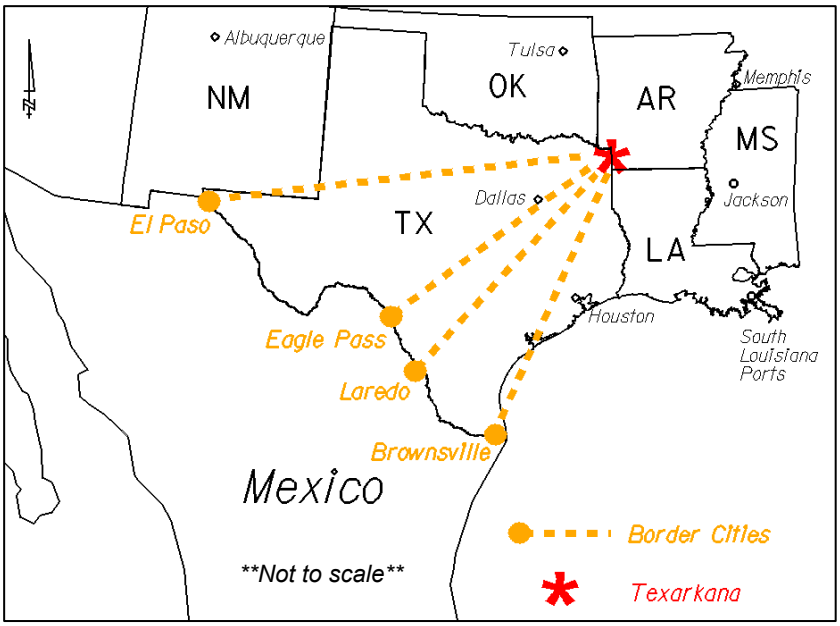


Figure 3
Primary U.S./Mexico Crossing Locations



The study area is also served by Class I and Class III railroads that provide rail service to all major markets. Inland waterway service via the Red River is available about 85 miles south of Texarkana at the Port of Shreveport-Bossier in Louisiana.

Highway Access

The highway network includes Interstate 30 and Highways 59, 70, 71 and 82. Through the highway system, regional market cities such as Dallas, Texas and Memphis, Tennessee and gateway cities[5] can be accessed easily. Two future major north/south routes proposed for the region, Interstates 49 and 69, are anticipated to serve North American Free Trade Agreement (NAFTA) traffic.

Many trucking carriers pass through the region because of the highway network, but frequently do not stop as their freight loads have originations and destinations outside the study area. Local drayage companies are active in the area delivering goods between long-distance carriers and the final destination. A more traditional motor carrier is the LTL carrier. These carriers offer many non-traditional transportation services such as on-line tracing, expedited shipments and logistics consulting services. A few manufacturing companies and distributors in the region move a portion of their goods by privately owned trucks. These companies choose this option to tailor their transportation services to the company's needs.

Although trucking operations differ, concerns across the trucking industry are similar.

- Increased shipper demands make truck availability very tight.
- Higher demand has created a national shortage of qualified truck drivers, which has contributed to rising labor costs for the industry.
- The imbalance between markets for inbound and outbound shipments increases the likelihood of an equipment shortage in an area.
- Higher fuel costs have added to overall costs.
- Increased truck volumes on highways may cause congestion and travel delays, making timely service difficult to provide.

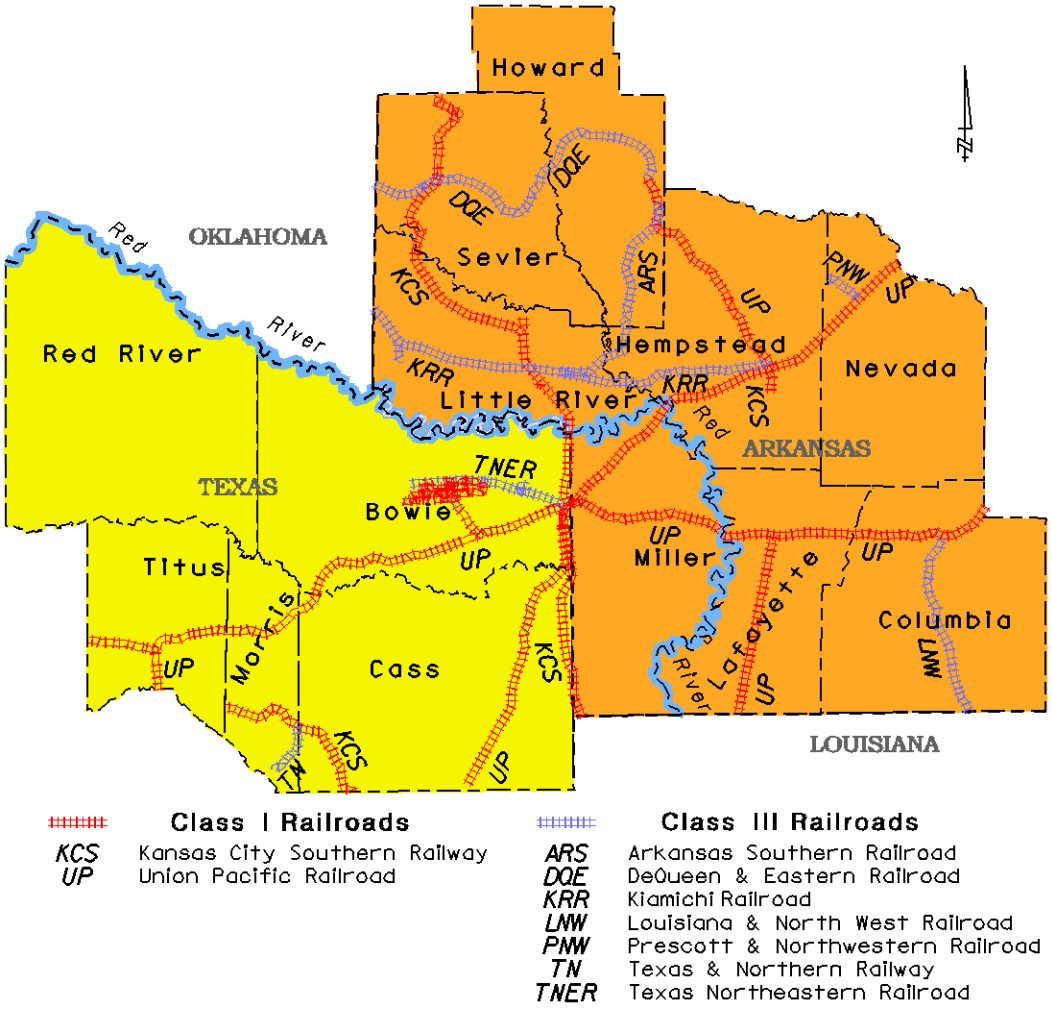
Railroad Access

A significant freight transportation asset of the Texarkana region is the presence of two Class I railroads and seven Class III railroads. The Class I railroads are the Kansas City Southern Railway (KCS) and the Union Pacific Railroad (UP). Class III railroads include the Arkansas Southern Railroad (ARS), the DeQueen and Eastern Railroad (DQE), the Kiamichi Railroad (KRR), the Louisiana and North West Railroad (LNW), the Prescott and Northwestern Railroad (PNW), the Texas and Northern Railway (TN), and

[5] Gateway cities are locations that serve as staging areas for imported and exported goods. Examples include the Mexican border crossing town of Laredo, Texas and the deep-water port of New Orleans, Louisiana.

the Texas Northeastern Railroad (TNER). Figure 4 shows the railroads in the study area.

Figure 4
Regional Railroads



Class I railroads provide long-haul service to national market areas throughout the country and to gateway cities such as Chicago, Los Angeles, Houston, Kansas City, Memphis and New Orleans where connections to other railroads and to international steamship lines can provide entrance to additional markets.

Class III railroads support area manufacturing, agricultural and forestry operations by providing services such as switching and spotting of railcars and feeder railcar service to Class I railroads. Some Class III railroads offer specialized services such as transloading operations to load and unload railcars when a need arises.

Class I and Class III railroads differ in size and revenue, but concerns throughout the rail industry are similar. Some of these concerns are:

- Heightened demand for rail services may have stretched existing rail capacity and infrastructure, creating bottlenecks and raising safety concerns. Single-track rail lines which allow travel in only one direction at a time, contribute to reduced capacity and potential safety issues.
- The recent increase of standard railcar weight to 315,000 pounds could present a substantial challenge to Class III railroads' track maintenance programs. Many rail bridges in the area are over 50 years old and may need upgrades to handle 315,000-pound carloads.
- Higher fuel costs result in increasing costs.

Waterway Access

The Nation's inland waterway system provides an excellent means for transporting bulk commodities and oversized cargo within the United States and for accessing deepwater ports for overseas shipments. It reaches from the Great Lakes to the Gulf of Mexico and traverses over 20 states as shown in Figure 5.

Figure 5
Inland Waterway System

The Red River is commercially navigable to the Port of Shreveport-Bossier in Northwest Louisiana. The Corps of Engineers is conducting a study, the *Red River Navigation Project,* to examine the feasibility of extending commercial navigation on the Red River

northward toward the Texarkana area. Completion of the study is anticipated in the near future. Three potential port locations are being considered:

- Garland, Arkansas – east of Texarkana
- Fulton, Arkansas – northeast of Texarkana
- Index, Arkansas – north of Texarkana

The challenges of our national waterway system are similar to challenges facing other transportation modes. A few of the challenges and concerns are:

- Existing ports may lack infrastructure for growth such as upgraded roads, rail services, warehouses and industrial property available for new or expanding businesses.
- Waterborne transportation is a multimodal movement and facilities are necessary to accommodate the transfer of cargo between freight modes.
- The primary commodities handled at ports are bulky, oversized cargo. It could be beneficial for ports to handle a larger mix of commodities. Having efficient service available for other commodities and perhaps by offering container service on barges, or COFC or TOFC for shipments that are transported over 500 miles could create other marketing opportunities for the industry and enhance its reputation as the most fuel-efficient mode of transportation.
- Since September 11, 2001, the waterway system has been under scrutiny for security measures. The Nation's ports could be vulnerable to security breaches. The industry may be asked to do even more to minimize security concerns.

Section II
Shippers' Survey

Shipping patterns for the study area, based on a shippers' survey, are described in this section. For discussion purposes, domestic shipments refer to goods and commodities that are transported totally within the United States. International shipments are those that travel to or from another country, such as Mexico, Canada or elsewhere in the world.

The survey, shown in Appendix A, was designed to be a one-page questionnaire to determine the transportation services now being used and those that are perceived as needed to meet future customer and product processing demands. It was sent to regional manufacturers, distributors, and processors that were identified by local Chambers of Commerce, county judges, mayors and city managers. Logistics service providers such as railroads, trucklines, and warehouse firms were also selected to receive the survey. A follow-up telephone call was placed to ask specific questions about shipper concerns and needs.

Field visits were conducted in Miller, Hempstead, Little River, Sevier and Howard Counties in Arkansas as well as Bowie County in Texas to review the freight transportation services that shippers were presently receiving. Representatives of KCS, UP and RailAmerica Company[6] also visited the area to provide input. The Corps of Engineers and the Red River Valley Association provided information about the Red River Navigation Project.

Each respondent rated the facilities and services needed to support current operations and possible future business. The majority of respondents believe that rail/truck intermodal service is important for the region. Many firms in the area believe that transportation choices are limited, while costs are increasing and service levels are declining. Several developments contribute to that view.

- Increased fuel costs have resulted in surcharges that are passed to the shipping public.
- Numerous mergers of transportation providers in almost all sectors have reduced competition between firms and between modes.
- Competition created by global marketplaces (such as Mexico, China, Japan and India) has squeezed profit margins. The ability to minimize freight transportation cost is crucial to profitable and ongoing operations.

In addition, national freight volumes are expected to increase almost 70 percent by 2020, with international shipments leading the way, according to the Federal Highway Administration's national database, the Freight Analysis Framework.

[6] RailAmerica owns two Class III railroads in the area, the Kiamichi Railroad (KRR) and the Texas Northeastern Railroad (TNER).

These developments, plus increased business activity, have pushed transportation carriers to the limit of the existing capacity. According to information from the National Strategic Shippers Transportation Council, the trucking industry used more than 97 percent of its capacity in 2005 compared to just over 90 percent in 1997 and 85 percent in 1985. Logistics firms are being impacted by inadequate capacity and infrastructure limitations. Consequently, firms are being forced to adapt to the changing marketplace. Some firms already use different transportation modes to solve operational problems and to satisfy customer service demands.

Domestic Movements

Truck

Survey results revealed that trucks are the most often used transportation mode for shipping and receiving freight. Every survey submitted indicated that truck transportation is used for a portion of all freight movements. With general freight and dry bulk as the region's primary freight shipment type, motor carriers are well suited to haul products that are obtained locally or from adjacent states or for shipments to markets beyond the region.

The survey also revealed that the trucking sector is having a very difficult time keeping up with the demand for their service. A high rate of truck driver turnover has created a shortage of experienced truck drivers which results in service limitations. The industry is currently operating close to its capacity and often serves customers by a dedicated arrangement only. Many shippers sign service contracts that were not needed previously, to ensure that a portion of the carrier's capacity is available for timely service.

TOFC is presently being utilized by area shippers for long-distance movements of 500 miles or more. This allows shippers some flexibility to arrange truck service in corridors where there is reliable rail service. The shipper is responsible for arranging transportation to or from a rail/truck facility and for providing the specific trailer that will be loaded on a railcar.

Manufacturers often use the services of freight brokerage firms to negotiate with national carriers for flexibility and to reserve space for shipping their products.

Rail

Rail transportation is used predominantly by shippers that have large, bulky shipments that travel over 500 miles. Of all survey respondents, approximately 20 percent stated that they now use rail service. While rail service is perceived as being needed to keep transportation costs down, some shippers expressed concern about the dependability of rail service for the general shipping public.

Rail service can be accessed in a number of ways. First, a firm with a rail spur to their facility has direct access for loading and unloading railcars. The survey indicated that 43 percent of the respondents believe that a new rail siding at their present location

could enhance their operation. Railroads, however, are hesitant about committing to building and servicing an industrial rail siding for a single rail shipper.

Shippers in the region without a rail siding currently access rail transportation by several means. One method is to load cargo locally to either a truck or a container that is then trucked to a rail/truck intermodal facility in the Dallas, Texas or West Memphis/Marion, Arkansas areas for a TOFC or COFC movement. Another option is to use a transloading facility where equipment for loading and unloading railcars or trucks and temporary storage facilities are available. Occasionally, a Class III railroad will provide transloading services for an individual firm. Forty-seven percent of the survey respondents expressed an interest in utilizing a local, publicly supported rail transloading facility. The UP has expressed an interest in operating a transloading operation in the Texarkana area.

Water

Transportation by water is cost effective when shipping certain types of bulk commodities that are not time sensitive. Fifty-one percent of the survey respondents are interested in utilizing waterborne transportation to move commodities such as agricultural products, wood products, scrap metals, steel, stone, sand and cement.

The Port of Shreveport-Bossier on the Red River currently provides waterborne transportation to the Texarkana region. The Corps of Engineers is studying the possibility of extending barge navigation on the Red River. If commercial navigation is extended closer to Texarkana, a public slackwater harbor[7] should be considered to further enhance service.

International Movements

Exporting is an important component of the area's economy and is becoming a catalyst for the economic development of the area. Products from the area are now exported to Pacific Rim countries, Latin America, Europe, Canada and Mexico.

Development of a Foreign Trade Zone (FTZ) or Sub-Zone could be a potential enhancement for the area. A description of a FTZ is in Appendix B. FTZs are used to expedite and encourage international trade. A FTZ is a U.S. site that is considered outside U.S. Customs territory and is available for activities that might otherwise be carried on overseas. Foreign and domestic merchandise may enter a FTZ without formal Customs entry procedures or the payment of import duties or government excise taxes.

Currently, rail/truck intermodal service in the region is primarily used for global shipments through Gulf and Pacific Ports. Containers are either loaded or unloaded in the area and trucked to or from rail gateways such as Dallas/Fort Worth in Texas or West Memphis/Marion in Arkansas. Rail companies then provide through train service

[7] A slackwater harbor is an area located outside the main river channel that is protected from the current.

to Pacific Coast Ports such as Long Beach, California or to Gulf Coast Ports such as Houston, Texas or New Orleans, Louisiana.

A major international market for the study area is Mexico. KCS has committed to serving Mexico and is developing a connection to the Port of Lazaro Cardenas which is located on the Pacific Ocean. As Pacific coast ports in the United States become more congested, this location could provide an important optional link.

Potential Intermodal Shipments

Fifty-eight percent of respondents to the survey indicated that rail/truck intermodal service is important for the region. Presently, this service is provided to the area through the rail gateways of Dallas/Fort Worth, Texas and West Memphis/Marion, Arkansas. Both of these locations provide excellent rail service but service is inconvenient and the distance to the rail yards causes delays and increased costs. It is estimated that 36,000 trailers could be routed annually through a local rail/truck operation.

Section III
Summary/Freight Transportation Development Strategies

The purpose of this study was to determine the potential for intermodal transportation and for enhanced freight storage and distribution capabilities for the Texarkana regional area. The analysis involved a survey of regional shippers concerning their freight transportation use, an assessment of shipping patterns and the identification of freight transportation issues and needs.

In today's global business environment, businesses must have access to a variety of transportation modes provided by different transportation companies. A firm may have a competitive advantage if it is able to use more than one Class I railroad, is served by several large trucking firms, and has access to waterborne transportation. Regions that can provide these options are better suited to attract new businesses, provide more marketing options for existing businesses, and improve the business climate of the area. Steps that might improve freight transportation in the Texarkana area include:

- Market the area to the individual railroads for a rail/truck intermodal operation and a rail transloading operation.
- Support the extension of commercial navigation on the Red River, with the possible development of a slackwater harbor in the region.
- Encourage the development of a FTZ in the region.
- Enlist assistance from logistics providers to market the area's businesses.
- Educate the business community as to transportation services that are available.

Appendix A
Shippers' Survey

Greater Texarkana Area Freight Questionnaire

Name of Company _____ Contact Person _____

Address _____ Phone _____

Inbound/Outbound Shipments by Freight Mode (use percentages)

Freight Mode	Present (Percent of Annual Shipments) Inbound	Present (Percent of Annual Shipments) Outbound	Future (5-Year Planning Horizon) (Percent of Annual Shipments) Inbound	Future (5-Year Planning Horizon) (Percent of Annual Shipments) Outbound
Rail	____ %	____ %	____ %	____ %
Water	____ %	____ %	____ %	____ %
Pipeline	____ %	____ %	____ %	____ %
Truck- TL	____ %	____ %	____ %	____ %
Truck- LTL	____ %	____ %	____ %	____ %
Air Freight	____ %	____ %	____ %	____ %
Column Total	100 %	100 %	100 %	100 %

Rail Transportation

Would you be interested in utilizing a publicly supported transloading facility? ___ Yes ____ No

Public Transloading Facility – a railroad site that is available to the public for loading and unloading railcars.

Major rail service problems: _____

Rail facilities or service needs*:* _____

Truck Transportation

Would you be interested in a public supported truck cross-dock terminal? _____ Yes _____ No

Truck Cross-Dock Terminal - a site where cargo can be transferred between long haul trucks and small delivery trucks.

Major truck service problems: _____

Truck facilities or service needs: _____

Water Transportation

Would you be interested in utilizing water freight transportation if it was available in the area?

___ *Yes* ____ *No.* What possible commodities? _____

Please rate the need for the following freight facilities and services to support your current operations and to expand your business.

1 (very important) **2** (moderately important) **3** (limited importance)

Facility	Importance	Service	Importance
More warehouse space		Container pool service	
• Indoor		Rail/truck intermodal service	
• Outdoor		Hazardous material handling	
• Climate control		Product sorting/segregation	
• Bonded		Product labeling/repackaging	
• Freezer		Truck or rail transfers	
Dry or liquid bulk tanks		Foreign trade zone service	
Truck scale		Inventory management	
Rail siding		Heavy lift service	

Thank you for taking time to complete this survey. Your participation enables us to better plan for the study area's freight transportation needs. Please return to:

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Appendix B
Foreign Trade Zones

Foreign Trade Zones

U.S. Foreign Trade Zones (FTZs) are part of a program used to expedite and encourage international trade. It is a U.S. site that is considered outside U.S. Customs territory and is available for activities that might otherwise be carried on overseas. Foreign and domestic merchandise may enter a FTZ without formal Customs entry procedures or the payment of import duties or government excise taxes.

Foreign Trade Zone Benefits

- Foreign and domestic merchandise can be brought in for storage, exhibition, assembly, processing and manufacturing.
- Imports may be stored without full Customs formalities. U.S. quota restrictions, duty and bonding are not applicable.
- A company's cash flow could be improved because the duties on goods are not paid until they leave the FTZ. If goods are exported, duty payments are not required. Goods may be withdrawn in less than case lots or in other partial amounts.
- Insurance on goods in storage can be limited to value plus ocean freight, rather than value plus freight plus duty plus taxes paid.
- Buyers may inspect and sample goods displayed in a showroom before purchase and payment of duty.
- Orders for goods may be accepted before payment of duties or excise tax.
- Goods may be processed to qualify for the lowest duties or freight charges. Duty payment may be avoided on damaged or substandard items.
- Goods may be altered, re-labeled or re-marked to meet federal or local requirements or to avoid fines for improperly marked merchandise. Samples of goods may be withdrawn to submit to Customs for proper classification.
- For products manufactured in a FTZ, the rate of duty or quota limitation on the finished product entering U.S. markets may be applied to the finished product (the percentage of which is a foreign origin) or to the foreign materials in the finished product.
- Goods in excess of U.S. import quotas may be imported and held until the next quota period.
- Salvage or repair of damaged goods may be carried out to maximum market advantage, duty or quota free.
- Certain bonded merchandise may be transferred to a FTZ for export, canceling the bond or time limit applicable to bonded warehouses, and making possible immediate recovery of taxes already paid.
- On goods destined for export, recovery of U.S. Customs duty or of certain state taxes can be made upon entry into a FTZ.
- Merchandise stored has an added protection against theft because the facility is under Customs security supervision.
- Posting of bond for missing documents can be avoided because goods can be held until the documents are found.

Appendix C
Freight Transportation Glossary

Freight Transportation Glossary

AAR – Association of American Railroads

AASHTO – American Association of State Highway and Transportation Officials

abandonment – decision of a carrier to discontinue service over a route (Surface Transportation Board permission is required)

accessorial service – service rendered by a carrier, other than a transportation service, such as warehousing service

ad valorem tax – a charge collected by a government that is calculated on the value of goods

ADT – Average Daily Traffic

air cargo – freight, mail, and express packages transported by air

AMTRAK – the nation's rail passenger service

back haul – the return movement of a vehicle from the shipment's destination to its origin

barge – a flat-bottomed vessel used chiefly on inland waterways to transport commodities. Four common types are:

- open hopper – a barge with an open cargo area used to carry materials like coal, crushed rock, scrap metal or any material that does not need to be protected from the weather
- covered hopper – a barge like an open hopper except with a watertight cover to protect the cargo in the hold from the weather, commonly used to carry commodities such as grains and dry chemicals
- deck – a barge with no cargo hold, but with a heavily plated, well supported deck to which cargo is tied, commonly used to move machinery, construction materials, or heavy equipment
- tank – a barge used to transport liquids like petroleum products and liquid chemicals

barge fleeting area – temporary mooring area used to make up multi-barge tows

bill of lading – a contract document between carrier and shipper

blocking – the grouping of railcars for movement to another location

broker – an intermediary between the shipper and the carrier

breakbulk – the separation of a bulk load into smaller shipments

cargo – four types:

- bulk cargo – basic commodities in an unpacked condition (grains, coals, or other materials that voluminous and loose)
- general cargo – large units of semi-manufactured commodities which are packaged (boxes, drums) or self packaged
- neo-bulk cargo – a limited number of commodities such as scrap metal, lumber, automobiles, or paper
- outside cargo – general cargo that is so heavy or large it cannot be accommodated or handled by normal means, and requires use of special loading and/or transportation equipment

cargo movements – three types:

- online movements – cargo is transported by a single carrier
- single mode movements – cargo is transported by one or more carriers of a single mode
- intermodal movements – cargo is transported by two or more modes, involving the transfer of cargo between modes

circuitous route – indirect freight route

CL – carload or container load

Class I Railroad – railroad that provides national rail service

Class II Railroad – railroad that provides regional rail service (none in Arkansas)

Class III Railroad – railroad that provides local rail service

COFC – container on (rail) flatcar

consignee – party to whom articles are shipped

common carrier – for-hire carrier that serves the general public

consignor – party by whom articles are shipped

container terminal – area designated for the storage of containerized freight

contract carrier – for-hire carrier that serves shippers through contract arrangements

Customs duty (or tariff) – amount payable to the government on goods imported or exported

dead head – one leg of a freight movement on which the trailer or container is empty

demurrage – a fee levied by a shipping company when shipping equipment (railcar, container, etc.) in which goods were shipped is detained and not returned by a specified date agreed upon by contract

distribution warehouse – a warehouse used to store finished goods and to assemble customer orders

dock – a general term for a structure at which vessels berth or tie-up

double lockage – a method for moving a large tow through a lock with a smaller capacity by breaking the tow in half and sending half at a time

double stack – stacking containers, frequently with different lengths, on a railcar

draft – the depth to which a vessel lies below the water surface

drawback – a refund of duty taxes which may be obtained when goods are exported or destroyed under certain conditions

drayage – freight hauled by a motor carrier

duty – see Customs duty

exclusive use – carrier vehicles assigned to a specific shipper for its sole use

FRA – Federal Aviation Administration

FHWA – Federal Highway Administration

Foreign Trade Zone – designated area where imported goods or products for export can be stored, displayed, sold, and/or manufactured without being subject to certain quota restrictions and some Customs formalities

FRA – Federal Railroad Administration

freight forwarder – a person engaged in consolidating small shipments of goods for transport as a single shipment

gateway – point where freight moving between territories is interchanged

gateway city – locations that serve as staging areas for imported and exported goods.

head of navigation – the farthest point of navigation from the mouth of a river

inland waterways – the system of lakes, streams, rivers and canals used to transport freight

interchange – transfer of cargo between carriers

intermodal – movement of freight by more than one mode of transportation

intermodal transfer – transfer of commodities between two modes

intermodal transportation facility – freight exchange terminal that also provides warehousing and transfer loading

JIT (just-in-time) – inventory system used by manufacturers and distributors to minimize levels of inventories, for which reliable transportation is essential

LCL – shipments of less than rail carload volume

lead time – total time that elapses from placement of an order until the goods are received

line haul – movement of freight from one point to another

lock – a structure built in a river to allow movement between two pools of water with different elevation heights

logistics channel – network of intermediaries engaged in transfer, storage, handling and communication functions that contribute to the efficient flow of goods

LTL – less than truckload (shipment)

marshalling yard – a series of parallel rail tracks where railcars are stored and grouped for distribution

multimodal – moving cargo from origin to destination by more than one freight transportation mode

outsourcing – contracting with an outside firm for services (e.g., shipping, packaging, storage, billing and/or inventory control)

piggyback – shipment of truck trailers and containers on railroad flatcars; also called TOFC (trailer on flat car)

pool truck service – numerous LTL shipments are consolidated into one truckload shipment to a centralized location where deliveries are arranged by the truckload carrier or its agent

port – an area with marine terminal facilities for transferring cargo between marine vessels and land transportation

port terminal – waterfront buildings, structures and equipment used for the transfer, handling, delivery and reception of waterborne freight

railcars – seven types:

- box car – closed car used for hauling freight
- compartmentizer car – box car equipped with movable bulkheads which can be used to divide the car into separate compartments
- compartment tank car – tank car which has compartments or separate tanks in which different kinds or grades of liquids may be transported
- flatcar – car without sides, top or ends, used for machinery, stone, etc.
- gondola – open top car having sides and ends
- hopper car – car with floor sloping to one or more hoppers through which contents may be unloaded by gravity
- tank car – car used for transporting bulk liquids

rail weight – the weight of rail measured in pounds per yard

relay terminal – motor carrier terminal where a fresh driver is substituted for a driver who has driven the maximum hours permitted

river mile – the location of a marine activity based upon the distance along the deepest part of the navigation channel measured from the mouth of the river

seamless service – level of cooperation among intermodal carriers that makes the modal transfer smooth and effortless with no shipment delay

shippers – individuals or business that purchase transportation services for their goods or commodities

shippers' association – a non-profit entity that represents the interests of a number of shippers

side tracks – rail tracks used for storage, loading or unloading which connect with other railroad tracks

slackwater harbor – an area of water off the main channel and out of the current

spur tracks – rail tracks extending from and connected at only one end with another track

stevedore – a person or company employed to load or unload waterborne cargo

tariff – also called a Customs duty

team track – rail tracks on which railcars are placed for the use of the public in loading and unloading freight

TEU – Twenty-Foot Equivalent Unit. A TEU is equivalent to a 20-foot container

through movement – shipment of a container inspected and sealed by Customs at the factory site and then transported without the need of further inspection until arrival at the destination

TL – truck load (shipment)

TOFC – trailer on flatcar (also called piggyback service)

tow – barges and a towboat tied together, acting as a single vessel with the towboat as the power unit

towboat – a compact shallow-draft vessel with square bow for pushing tows of barges on inland waterways

tramp loading site – loading site that allows for transfers of bulk commodities and containers between trucks and trains

transit shed – a building designed to provide temporary accommodations and sorting space for cargo being transferred to or from a freight mode

transit time – total time that elapses from pickup to delivery of a shipment

transloading – the physical transfer of cargo from one transportation vehicle to another

transload site – a location where products may be temporarily stored and then loaded into a railcar, truck or container

truck cross-dock terminal – a location where cargo is transferred between long haul trucks and small delivery trucks, as part of a freight consolidation service

unit trains – large shipments treated as a single unit (e.g., a multi-car train where all cars carry wood chips to a paper mill)

warehouse – a building in which goods may be stored over a period of time as necessary to make further distribution

wharfage – a charge assessed by a pier or dock owner on freight handled over their pier or dock

Appendix D
Rail Facilities Guidelines

Rail Facilities Guidelines

Railroad Line

Class I railroads are increasing railcar weights to 286,000 and 315,000 pounds. To accommodate the larger railcars, heavy weight rail and track components might be needed (see below).

Railroad Line Guidelines

Track

Weight of rail[8]	132 pounds
Track components (e.g., joint bars, tie plates, rail anchors)	132 pounds
Top ballast depth	12 inches
Subballast depth	10 inches
Number of crossties per mile	3,168 (60 ties per 100 feet)
Crossties	6 inches x 8 inches x 8 feet, 6 inches grade 3, end plated
Switch tie	9 to 16 feet long - Grade 8 or 10

Bridge

Bridge strength rating of 315,000 pounds

Team Track/Transload Facility

A team track is a rail line on which railcars are placed for public use in loading and unloading freight. Transloading is the temporary storage of a product, which is loaded into a railcar for shipment. In most cases, the product loaded into a railcar is delivered by truck. The purpose of the facility is to handle large volumes of inbound and outbound bulk freight and to accumulate shippers' orders. A tramp loading site is often included in the design to enhance its operation. A tramp loading site is used to transfer bulk commodities between trucks and trains and/or containers and trailers. The following table lists guidelines for developing a team track facility. A typical site layout is also shown.

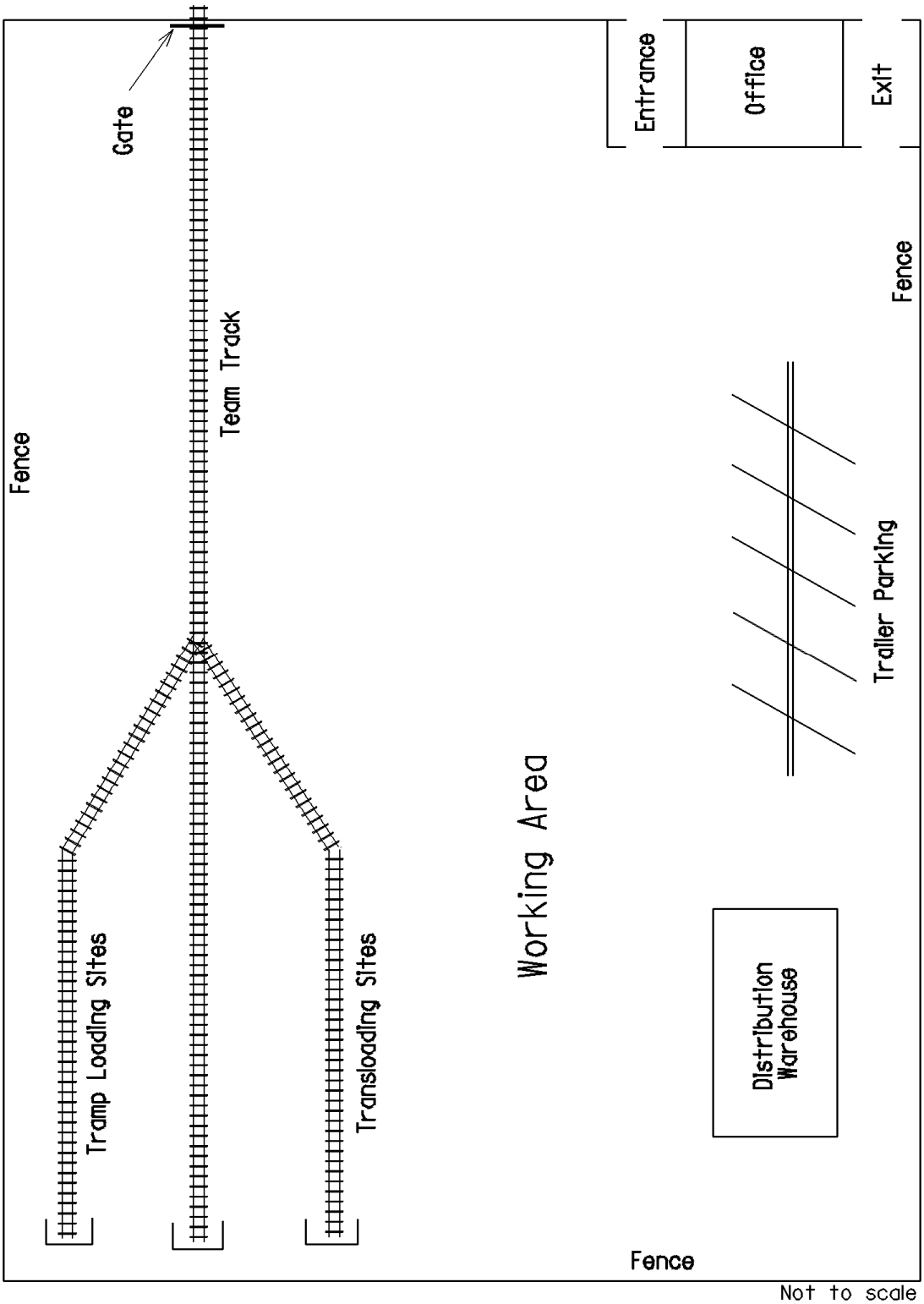
[8] Weight of rail is a per yard measurement

Development Guidelines – Team Track

Facility Location	Land Size (Acres)	Number of Railcar Loads Per Year (Range)	Number of Truck Loads Per Year (Range)	Typical Cost (Excluding Land)
Rural Single Track 2 - 4 Car Spots Open Area	1 - 2	25 - 200	75 - 600	$300,000
Suburban Single Track Dock with End Ramp Open Car Spots	2 - 5	200 - 500	600 - 1,500	$500,000
Urban Industrial Double Track Dock with End Ramp Open Car Spots	5 - 10	500 - 800	1,500 - 2,400	$650,000

A transload operation usually requires an additional 3 to 15 acres, based on the location of the team track. For planning purposes, one railcar holds approximately four truckloads of material.

Typical Layout of a Team Track/Transloading Facility



Texarkana Region
Freight Transportation Study
(Shippers' Survey)

Arkansas State Highway and Transportation Department