

Existing Conditions

Overview

- ◆ *Kansas has a large transportation infrastructure with a small population base to support it.*
- ◆ *Vehicle miles of travel are increasing faster than population, licensed drivers, or registered vehicles.*
- ◆ *Kansas ranks fourth in public road miles, third in number of bridges, fourth in miles of rail line, eighteenth in number of airports, but thirty-second in population in the U.S.*

Any examination of condition and extent of the transportation system in Kansas quickly reaches the conclusion that Kansas has a large transportation infrastructure with a small population base to support it. Figure 2 compares Kansas with other states. Kansas ranks fourth in terms of public road miles, third in number of bridges, fourth in miles of rail line, eighteenth in number of airports, thirteenth in land area, but thirty-second in population.

The magnitude of the Kansas road network is due to the state's large geographical size and to the lack of natural barriers such as mountain ranges or major rivers that impede the building of roads. The state

Comparison of Public Road Miles & Population				
State	Public Road Miles		Population	People Per Mile
	Ranking	Miles		
Texas	1	296,259	19,163,000	65
California	2	170,506	32,609,000	191
Illinois	3	137,577	11,847,000	86
Kansas	4	133,386	2,572,000	19

1996 Data

Figure 2

developed from an agricultural base that saw a family farm on every 80 or 160 acres which in turn dictated the need for a road every mile.

Transportation in Kansas also is affected by a number of demographic trends that began to emerge in the last 20 years and will likely continue. Between 1980 and 1990, the percentage increase of the U.S. population was far outpaced by both the percentage increase in the number of licensed drivers and the percentage increase in the number of registered vehicles. As shown in Figure 3, the trend in Kansas was very similar.

During the latest ten-year period in Kansas, while posting a 4.8 percent increase in population, the number of licensed drivers in the state increased by 8.3 percent. By 1993, the number of registered vehicles in Kansas totaled 2,198,648, exceeding the number of licensed drivers (1,718,717) in the state by nearly one-half million. Expanding even faster than the growth rate in registered vehicles is the increase in the number of miles traveled in Kansas. The total number of miles traveled grew nearly 30

percent from 1970 to 1980 and 32 percent from 1980 to 1990. In Kansas, more vehicles are on the road, people are driving more, and projections show these trends will continue.

State Highway System

- ◆ *The State Highway System is approximately 9,600 miles. It represents only 8 percent of public road miles but carries over 50 percent of the state's total travel.*
- ◆ *The CHP got transportation on the right track, but it did not address all of the needs. Only 16 percent of the State Highway System miles were addressed.*
- ◆ *At the turn of the century, State Highway System deficiencies will include more than 2,000 miles of deficient shoulders, more than 7,000 miles of pavement, and 303 bridges beyond their life expectancy.*

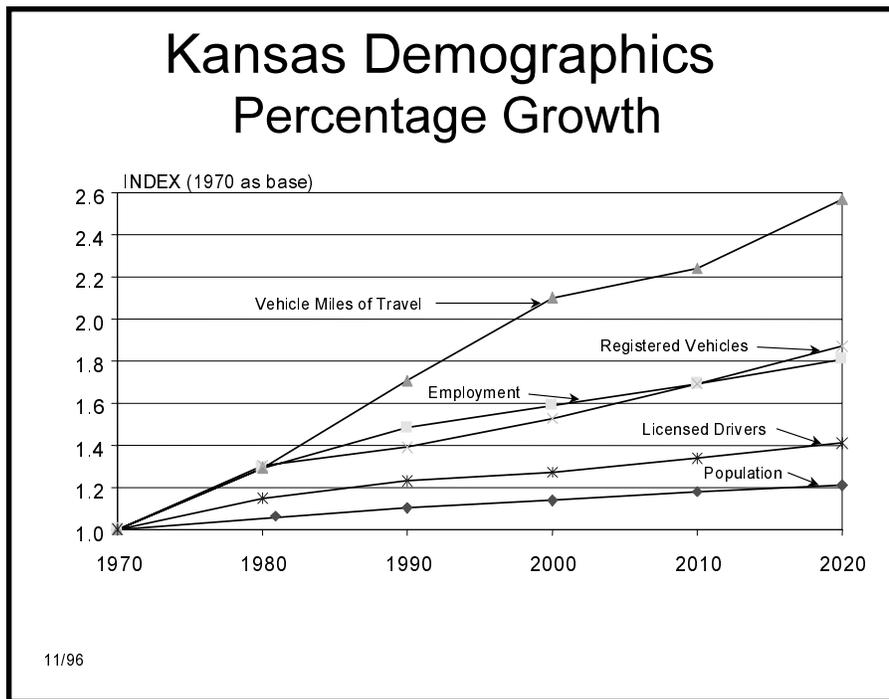


Figure 3

The rural State Highway System consists of approximately 9,600 miles and includes the Interstate, US route-numbered highways, and Kansas (K) route-numbered highways. The Kansas Department of Transportation (KDOT) has jurisdictional responsibility over all of these miles. No portion of the Kansas Turnpike is considered part of the State Highway System.

Figure 4 shows that while the State Highway System represents only 8 percent of the total number of public road miles, it carries over 50 percent of the state's total travel. Travel on the State Highway System has continued to grow over the years and that growth shows no sign of abatement. Between 1970 and 1997, the population of the state grew at one-half percent annually, while travel on the State Highway System grew six times as rapidly, averaging 2.5 percent annually.

In the 1980s, Kansas had fallen woefully behind in highway construction and maintenance, and the consequence was significant deterioration of Kansas roads. Due to the minimal number of State

Highway System miles being reconstructed each year, communities all across Kansas felt short-changed (see Figure 5) and that their transportation needs were being ignored.

Concerns about Kansas' highway adequacy in the 1980s generated several legislative attempts to pass a new highway program. These efforts culminated in 1989 with the passage of House Bill 2014, which was signed into law by Governor Mike Hayden and was named the Kansas Comprehensive Highway Program (CHP).

The eight-year CHP had a construction cost of \$3.13 billion and was funded by \$2.65 billion in new revenue in addition to existing revenues. The CHP was designed to: increase Substantial Maintenance to a level arresting and reversing the decline in road surface and bridge conditions; address the top 16 percent of existing highway system miles (approximately 1,600 miles), as determined by KDOT's prioritization method; increase Priority Bridge projects 20 percent over the program period; and spend \$600 million on System Enhancement projects.

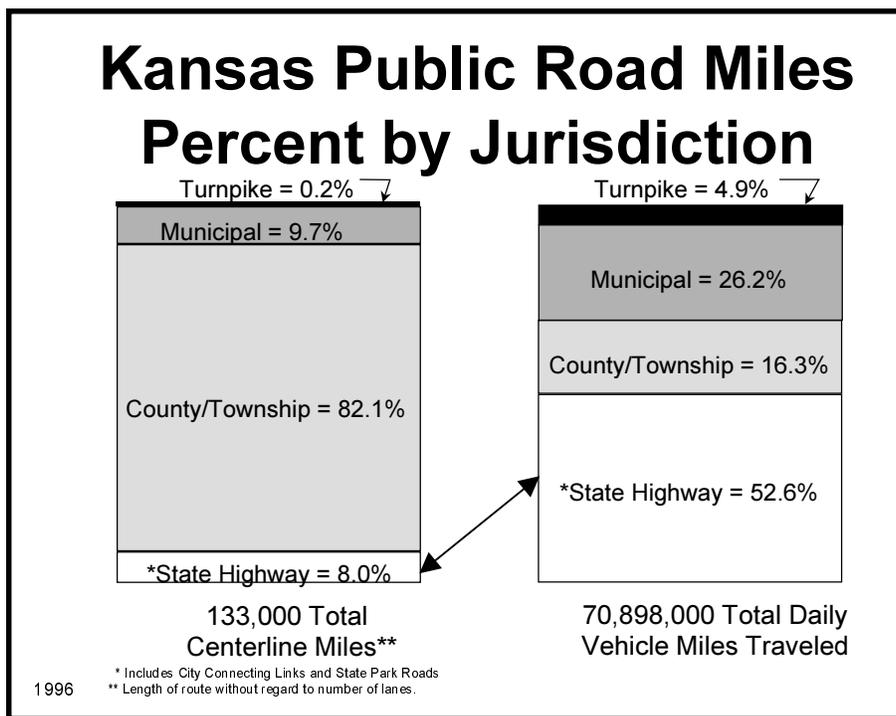


Figure 4

KDOT has met all of these goals. Since the beginning of the CHP, the overall surface condition of the State Highway System has increased from approximately 64 percent of the system miles being rated “good” and 7 percent being rated “deteriorated,” to more than 75 percent and less than 5 percent respectively, as measured by KDOT’s Pavement Management System. More than 1,600 miles of the highway system have been reconstructed during the CHP. At the time House Bill 2014 was passed, it was estimated that 170 bridges needed to be repaired or replaced to meet the 20 percent increase requirement for Priority Bridges. KDOT completed 188 Priority Bridges by the end of the CHP. The System Enhancement total program cost is approximately \$838 million of which the construction costs total \$571 million.

As a part of the CHP, House Bill 2014 also directed an increase in support to local governments through: an approximate 55 percent increase in the Special City and County Highway Fund; an increase in City Connecting Link maintenance payments; a minimum of \$2.5 million to be expended by KDOT in each

county over the life of the program; prevailing wages to be paid on all projects; and a limited amount of dedicated state funds to improve the mobility of elderly and disabled citizens and the general public.

In addition to these objectives, the CHP maximized the state’s use of funds available from the federal government and increased the state’s participation in partnerships with cities and counties. The last projects under the CHP were let to construction in FY 1997.

As important as the CHP was in getting transportation on the right track in Kansas, it did not address all of the needs. The CHP was funded at a level necessary to address 16 percent of the miles on the State Highway System. This did not address all of the existing needs. Also, during the decade since passage of the CHP, new needs have developed.

Roadway conditions are affected by age, deterioration, and travel demand. According to KDOT data, the following deficiencies will exist on the State Highway System at the turn of the century:

<u>Comparison of Construction Program</u>		
<u>Annual Average Number of Miles and Bridges*</u>		
	Pre-CHP FY 1988-1989	CHP FY 1990-1997
<u>Major Mod./Interstate</u>		
Miles of Roadway	12	17
No. Associated Br.	24	21
<u>Major Mod./Non-Interstate</u>		
Miles of Roadway	33	205
No. Associated Br.	16	50
<u>Priority Bridges</u>	17	24

5/97

*State Highway System includes more than 9,600 miles of roadway and 4,000 bridges

Figure 5

Shoulders

- Deficient Shoulder Width – 2,195 miles
- Deficient Shoulder Type – 3,726 miles

Beyond Calculated Life Expectancy

- Non-Interstate Pavement – 7,213 miles
- Interstate Pavement – 188 miles
- Span Bridges – 303

Bridge Needs

- Significantly Deficient Conditions – 257
- Critically Deficient Width – 344

These numbers reflect modernization and maintenance needs only and do not take into consideration the kind of system expansion needs that were so comprehensively and eloquently requested by Kansas citizens at the Transportation 2000 Town Hall meetings held around the state.

Funding

- ◆ *State Highway Fund revenue sources include motor fuels tax, vehicle registration fees, sales tax, and federal aid.*
- ◆ *KDOT can continue to fund a limited number of contract maintenance and construction projects only through FY 2002, and not at the level of the CHP. No System Enhancement projects are included.*

State sources of highway funds include motor fuels tax, sales tax, vehicle registration fees, and a number of miscellaneous fees. In addition, the 1989 Legislature authorized up to \$890 million in revenue bond sales through FY 1997. All of the bonds have been sold. The State also receives federal funds for highway improvements. The federal government annually apportions or divides the federal-aid highway funds authorized by Congress among the states. The current act guiding federal

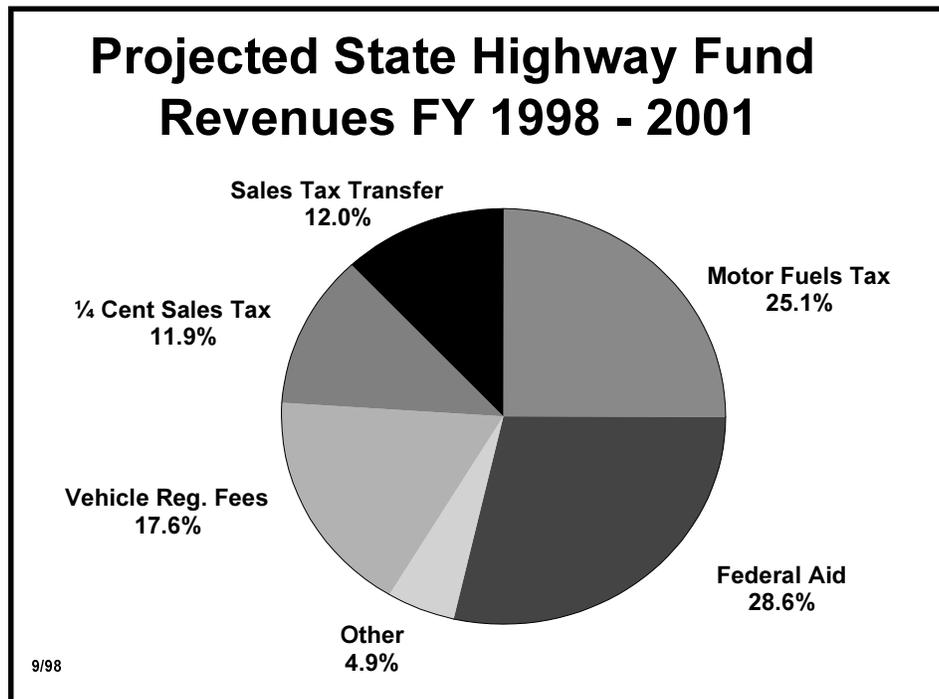


Figure 6

transportation fund distribution is the Transportation Equity Act for the 21st Century (TEA-21).

Figure 6 shows the sources and percentages of funds making up State Highway Fund revenues projected for FY 1998 - 2001.

When the CHP was passed in 1989, cash flow projections anticipated that funds would be insufficient to fund additional projects beyond FY 1997. However, subsequent cash flow projections have allowed KDOT to continue to fund construction projects. Current analysis indicates that construction project lettings are possible through FY 2002, but not at the level of the CHP. It has been possible to fund a construction program beyond FY 1997 because ending cash balances are higher today than estimated in 1989. The higher cash balances are due to:

- Early bond sales with favorable interest rates
- Greater-than-anticipated federal-aid funds
- Low inflation
- Competitive bid lettings

Local Jurisdiction

- ◆ *The 635 incorporated cities have jurisdiction over 12,788 miles of roadway and 879 bridges.*
- ◆ *The 105 counties have jurisdiction over 109,562 miles of roadway and 19,644 bridges.*
- ◆ *More than 50 percent of local city and county bridges are more than 40 years old.*
- ◆ *The local needs are substantial and the resources are limited.*

Cities and counties across the state have an enormous task in maintaining and upgrading their roads and

bridges. The 635 incorporated cities in Kansas have jurisdiction over 12,788 miles of road and 879 bridges. The 105 counties have jurisdiction over 109,562 miles of roadway and 19,644 bridges. Ninety percent of the roads and 80 percent of the bridges in the state are the direct responsibility of cities and counties. The sheer size of the system makes maintaining the local network an overwhelming task.

More than 50 percent of local city and county bridges are more than 40 years old. More local bridges (3,573) were built in the 1930s than in any other decade. Because of these factors, bridge maintenance and the funding to provide that maintenance is a constant challenge facing local officials.

Local governments receive both federal and state funds to assist with roadway and bridge needs, and these funds total 22 percent of KDOT's annual expenditures. KDOT passes a portion of federal funds to local units of government based on a long-standing policy of sharing federal-aid. The Special City and County Highway Fund (SCCHF) is credited with 40.5 percent of the net state motor fuels tax revenues. SCCHF monies are then distributed to both cities and counties based upon formulas established by state statute.

KDOT also reimburses cities for maintenance of City Connecting Links on a lane-mile rate of \$2,000 per lane-mile per year. City Connecting Links are state highways that pass through cities. The Secretary of Transportation may enter into agreements to maintain City Connecting Links in lieu of payment. KDOT maintains all City Connecting Links having full access control such as the Interstate.

Additionally, KDOT administers the Local Partnership Program providing state funds to selected communities for economic development, geometric improvements on City Connecting Links, and for resurfacing on City Connecting Links.

Still, the needs are substantial and the resources are limited when coupled with the size of the system.

Aviation

- ◆ *Kansas has 132 public-use, general-aviation airports.*
- ◆ *Kansas is the only state that provides no financial assistance for airport maintenance or improvement.*
- ◆ *Only 25 of the 132 public-use, general-aviation airports received federal funding for capital improvements in the past ten years.*
- ◆ *Kansas State University's Civil Engineering Department found overall that the current condition of the general-use airport network in Kansas is 48 on a scale of 1 to 100 (with 100 being "best").*

Airports play an important role in the state's

transportation system by providing a fast means of conveyance for essential services and activities. Kansas has 147 public-use airports; 132 are public-use, general-aviation airports (see Figure 7). These airports are important for the economic activity they generate as well as their role in medical services, both as a means of flying medical professionals into communities as well as providing a means of emergency evacuations. Airports are also important in agriculture, providing for aerial applications of chemicals. Airports also provide access to charter and private air travel and link communities to the national air transportation system. While a good airport cannot guarantee the desired quality of life amenities or guarantee economic growth, a good airport is essential if either is to occur.

The Kansas airport system contributes significantly to the state's economic vitality and tax revenues. Leigh Fisher and Associates of San Francisco summarized the 1997 total economic impact of the Kansas airport system was \$2.3 billion not including the state's aircraft/airframe industry. A

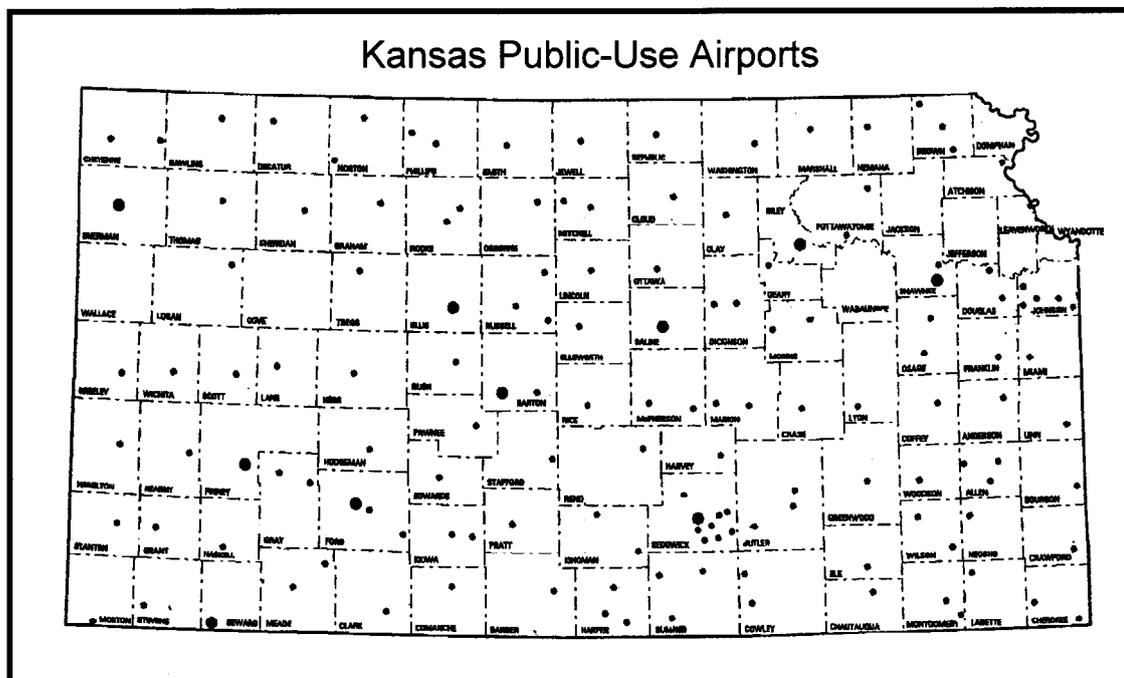


Figure 7

KDOT-sponsored study by Kansas State University's Department of Economics in 1998 reported that the 1997 aviation-related sales tax revenues on goods and services to aircraft owners/operators was between \$3.2 million and \$4.2 million.

As shown in Figure 8, Kansas is the only state in the nation which provides no financial assistance for airport maintenance and improvement. In Kansas, the only nonlocal assistance for airport improvement is provided by the federal government through the Federal Aviation Administration's (FAA) Airport Improvement Program (AIP). Only 25 of the 132 public-use, general-aviation airports received federal funding for capital improvements in the past ten years.

The small number of general-aviation airports receiving grants is attributable to the FAA's priority system and the scope of projects that it funds. The FAA's airport improvement policy focuses on major rehabilitation and does not fund maintenance. The funds available for general-aviation airports have also

declined steadily due to reductions in the AIP funding and because of policy decisions favoring larger airports.

In the 1960s, 70s, and 80s, the federal government assisted many Kansas communities with runway projects. Until recently, these runways served the communities well, and there was no urgent need to appropriate transportation funds for airport improvements. However, time, environmental distresses and weather extremes have had an impact, and many general-aviation airports in Kansas are in need of major maintenance and rehabilitation. The Kansas Aviation System Plan identifies a ten-year need of \$108 million for airport improvements to meet the FAA's standard. With an anticipated federal grant level of approximately \$2.5 million per year for general-aviation airports, a significant shortfall exists.

An analysis of all of the state's public-use airports was conducted to determine basic service needs. The range of needs varied from airports with excellent facilities needing no improvements to those with

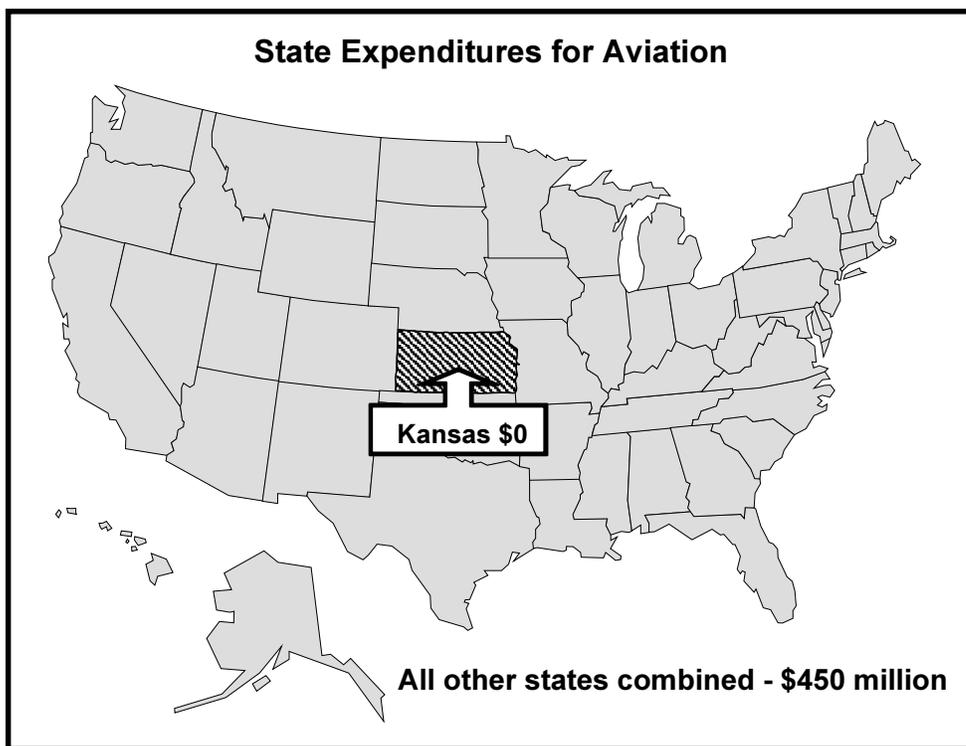


Figure 8

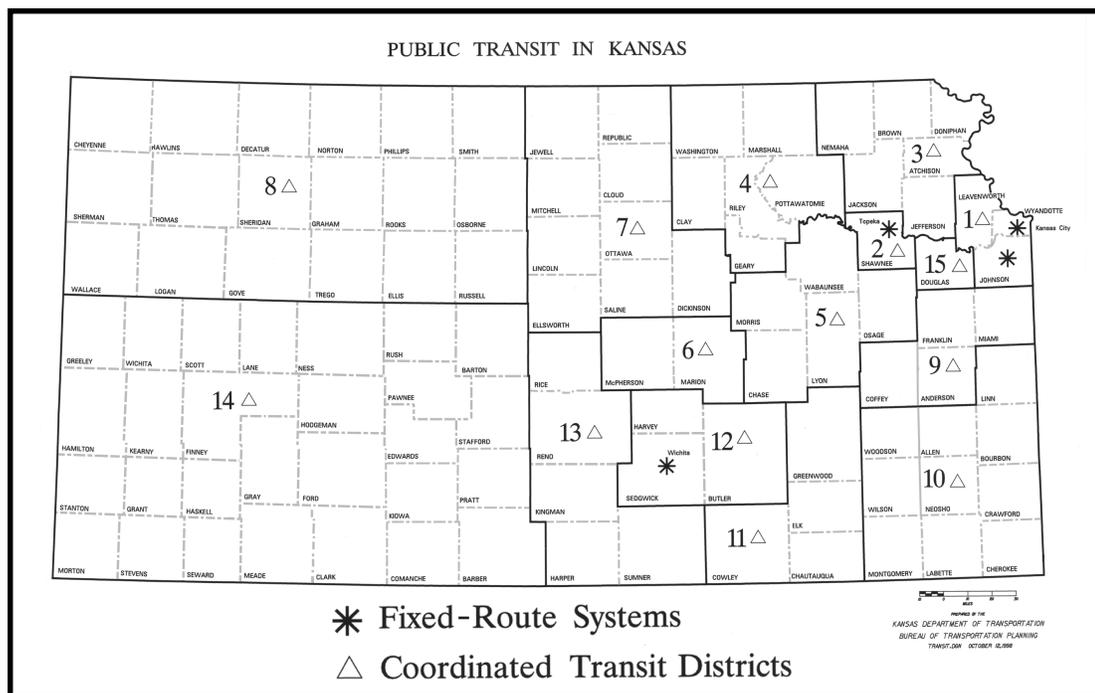
runways that have totally failed and are unusable. A study by Kansas State University’s Civil Engineering Department found that the overall, current condition of the general-use airport network in Kansas is 48 overall on a scale of 1 to 100 (with 100 being “best”), meaning that on average, airport conditions in Kansas are only fair. Underscoring this conclusion is the recent announcement by the state’s largest provider of air ambulance services that it has been forced to restrict operations at eight Kansas airports. These airports meet the provider’s hard-surface and length requirements, but deterioration of the runways poses a significant threat of damage to the aircraft.

Public Transit

- ◆ Four urbanized area transit systems provide fixed-route bus service and paratransit service to both the general public and the elderly and disabled.
- ◆ 109 providers of rural public transportation services serve both the general public and the elderly and disabled.

- ◆ 57 providers serve primarily elderly or disabled persons in both rural and urbanized areas.
- ◆ As disabled persons continue to move into the work force and live independent lives, and as the population continues to age, public transit needs will continue to grow.

Nearly 170 operators throughout the state offer bus and transportation service. In Kansas, fixed-route bus and paratransit transportation service is provided by four Urbanized Area Transit Authorities: the Topeka Metropolitan Transit Authority; Wichita Metropolitan Transit Authority; Johnson County Transit; and the Unified Government of Wyandotte County/Kansas City, Kansas Transit. Across the state, 109 operators provide rural, public transportation, and 57 operators provide services primarily to the elderly and to persons with disabilities (see Figure 9). The four urbanized transit providers have a ridership of nearly five million per year. The rural public transportation



providers travel more than three million miles per year and transport one million riders while the providers of elderly and disabled services average more than 2.5 million miles per year of travel with a ridership exceeding one million.

Still, the service available in the state is limited and little intercity service exists. As the population continues to age and disabled citizens move into productive jobs in the workplace, public transit needs will grow. “Welfare to Work” programs will continue to place increased demands on public transit.

Recent population figures show the increase of the state’s elderly population. In 1990, 42,171 people in the state were at least 85 years of age. By 1997 that sector of the population had grown to 48,703 — a 15.4 percent increase.

Public transit is funded with federal, state, and local funds. Recent federal transportation legislation did provide an increase in federal funds, but public transit needs cannot be addressed without an increase in funding.

Rail

- ◆ *Kansas is fourth among the 50 states in total railroad miles.*
- ◆ *Kansas has 18 shortline railroads operating 2,724 miles of track in 71 Kansas counties.*
- ◆ *Approximately 2,000 miles of shortline track needs rehabilitation.*
- ◆ *No state funds are currently available to assist shortline railroads.*

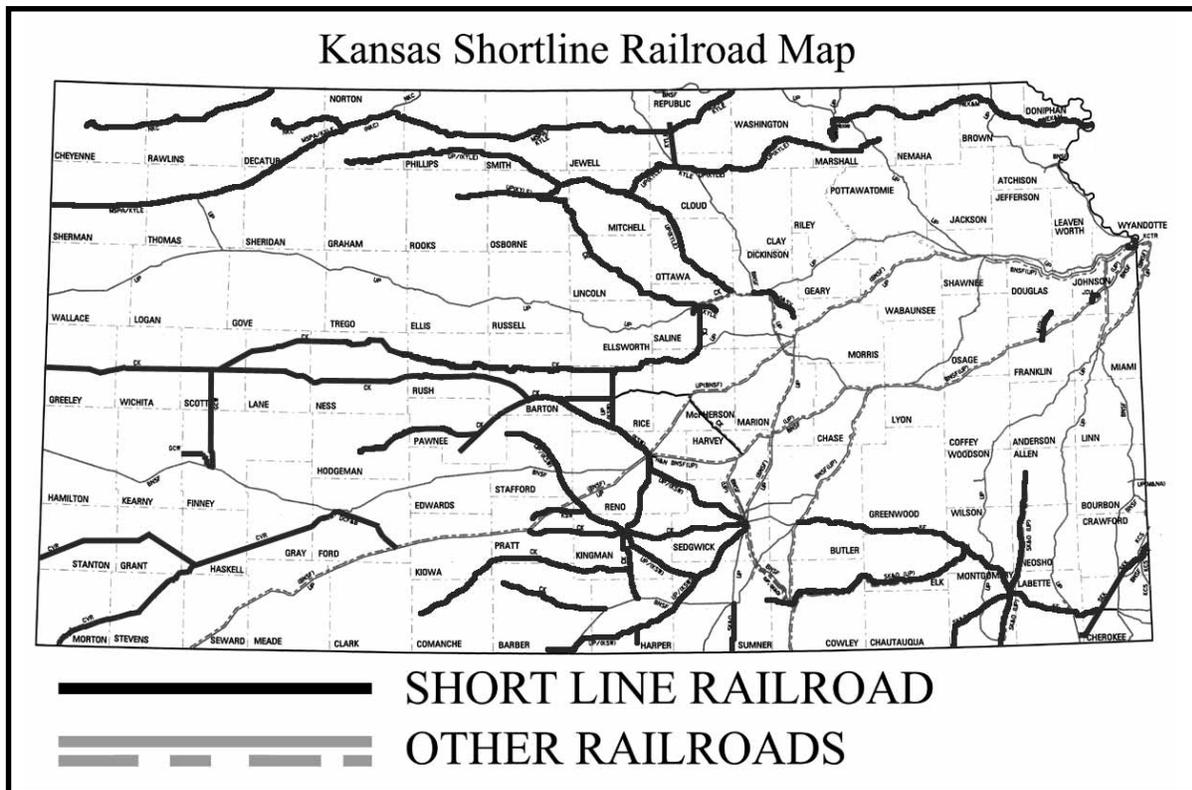


Figure 10

At one time Kansas had more than 9,000 miles of rail trackage covering every county in the state. Railroad mileage was at its maximum in 1917 when 9,363 miles were recorded. Due to initial over-expansion, subsequent bankruptcies, mergers, other competition, and general changes in economic conditions, more than 3,300 miles have been abandoned.

The decline in miles of rail line did not happen overnight but rather was a process that took place over many years. The greatest number of miles of track abandoned occurred during the decades of the 1930s and the 1980s. In recent years, the number of abandonments has decreased, reflecting a trend of major carriers to sell or lease marginally profitable and nonprofitable lines to shortline carriers rather than abandon the lines.

Today, two types of rail carriers - Class I and Class III - operate 5,580 miles of railroad track in the state. Kansas ranks fourth among the 50 states in total railroad miles. Class I rail companies are the major, main, and branch line carriers with revenues of \$250 million or more per year. Class III carriers, also known as shortlines, have average revenues of less than \$20 million per year over a period of three years. Currently, 18 shortline railroads operate 2,724 miles of track in 71 Kansas counties (shown on Figure 10). Shortlines predominantly haul grain and represent more than 50 percent of the state's total railroad mileage. They connect many Kansas communities to the national rail system and provide freight shippers with choices in transportation.

Shortline railroad operators have advantages and disadvantages. Perhaps the biggest advantage is their ability to tailor service to individual shipper's needs. Wage rates are usually lower and labor utilization is more flexible, even though shortlines tend to be more labor intensive.

Shortline railroads share numerous disadvantages. The rail lines acquired by shortlines have usually experienced neglected maintenance under previous owners. Rehabilitation needs include tie replacement and ballast and track maintenance. Shortline carriers are also likely to be more vulnerable to changing economic conditions than Class I carriers. It is estimated that 2,000 miles of shortlines need rehabilitation to remain viable.

No state funds are currently available to assist shortline railroads with their maintenance and rehabilitation needs. Funds available under the Federal Local Rail Freight Assistance Program have been preserved in a revolving loan program administered by KDOT. This program provides low-interest loans to qualifying shortline railroads in Kansas, but the size of the current revolving loan program limits its effectiveness.

