There’s no doubt that Americans are in love with their cars and with the idea of jumping into them and taking off down the road. The state’s economic prosperity and quality of life depend not just on the car, however. Those things also depend on the widespread availability of many forms of transportation.

Air ambulance service saves lives. Shipping by rail saves money and rail access attracts businesses. Buses and vans carry workers to their jobs, job seekers to interviews and elders to medical appointments. Safe sidewalks and bicycle routes are paths to good health. These complement the automobile and complete the Kansas transportation system.

Public and private entities share the work of planning for and investing in our multi-modal transportation system. Unfortunately, the resulting system is sometimes fragmented. Information sharing is difficult and sound regional decisions can be hard to attain. All this can affect the mobility options available to Kansas communities, through the air, along the rails or otherwise.

Stakeholders want to see KDOT lead public- and private-sector partners in a planning process that, where practical and feasible, results in the seamless integration of transportation modes in the next generation of Kansas transportation infrastructure. This might mean building a bridge with room for bike lanes and sidewalks or working with transit providers to add a park-and-ride lot and bus service to a suburban roadway or an airport improvement project.

**BROAD MULTIMODAL RECOMMENDATION**

Integrate all modes of transportation into the planning process

KDOT should lead public and private sector partners to consider all modes in the transportation planning process.
4.1 Transit

The demand for public transit in Kansas far exceeds the supply. In 2000, federal and state funded support for transit in Kansas was $26 million statewide, resulting in 6.5 million rides by van and bus. By 2006, funding had grown to $37 million and ridership had increased by 30 percent. But, the 8.5 million rides given in 2006 still falls far short of the 20 million some estimates say are needed statewide.

The demand will grow. Increasing numbers of senior citizens in rural areas and increasing congestion in urban areas will result in more demand for public transit. Increased fuel prices could also have a significant effect in the future.

Of the 8.5 million rides in 2006, 76 percent were on one of five fixed-route public transit systems found in urban areas. These primarily offer traditional bus service, with fixed routes and schedules in Wichita, Topeka, Lawrence, Wyandotte County and Johnson County. Another 24 percent occurred in smaller cities and in rural areas, where Kansans use on-call and scheduled service provided by more than 190 transit operators, typically via vans and small buses. Figure 4.1 depicts the mix of transit services statewide.

Who pays for this system? Fare revenues are only part of the picture, and their statewide total is hard to determine. These are amplified by federal, state and local funds, which are easier to quantify.

Figure 4.1 - Public Transit Service by County
The state increased its commitment to transit – both rural and urban – from $1 million a year during the 1990s to $6 million a year under the CTP. The federal government has also increased its share. In 2000, it was $20 million a year; today, it is $31 million. Of that total, $18 million a year goes to urban areas of 50,000 or more people and $13 million goes to rural transit.

The gap between supply and demand is too great to bridge with funding alone. Were Kansas to meet the demand estimate of 20 million rides annually, the cost would be nearly $160 million, far exceeding the estimated $37 million in statewide revenues available today.

**PRACTICAL PROBLEMS, COORDINATED SOLUTIONS**

The sheer number of transit providers – nearly 200 for 105 counties – results, in some places, in duplication of service. In others there are gaps. Seven Kansas counties have no transit service at all. There also are data shortfalls; who’s giving rides to whom and for what purpose isn’t always known, or if known, isn’t always shared. Efficiency improvements have been made. For example, there are 15 Coordinated Transit Districts (CTDs) to which transit providers must belong in order to receive public funding. However, the CTDs are administered by volunteers who lack substantial funding and authority, meaning efficiencies can be difficult to implement.

Some say the way transit revenues are distributed should be reviewed. State formulas used to determine funding allocations based on population alone fail to address differences in need and demand. One county, for example, may have a much larger number of people who rely on transit than another, yet receive less state funding.

Integrating transit with the rest of the transportation system requires leadership at a statewide level. Alternatives to drive-alone travel such as carpooling and vanpooling are attracting more interest and should be accommodated in the planning and design phases of roadway projects. A highway expansion, for example, might call for planning and promotion of a park-and-ride lot for commuters where the expanded highway intersects another well-traveled roadway.

LRTP stakeholders agreed that greater sustained investment in expanding transit services and strong state leadership and innovative thinking are essential for meeting Kansas’ rural and urban transit needs over the next two decades.
**Multimodal Transportation**

**PASSENGER RAIL**

Intercity train travel is attracting more attention in Kansas. Amtrak provides a two-way intercity passenger rail trip through Kansas each day. The Southwest Chief service from Los Angeles to Chicago has six stops in Kansas: Garden City, Dodge City, Hutchinson, Newton, Topeka and Lawrence.

The LRTP process discovered growing interest among Kansans in a second intercity passenger rail line. That could happen if Amtrak’s Heartland Flyer service, which currently runs from Texas to Oklahoma, were extended to Wichita and Kansas City. A KDOT-sponsored Rail Feasibility Study completed in 2000 concluded that this is the state’s most viable corridor for intercity passenger travel. The study projected the capital investment to establish that line could cost $220 million. By 2020, projected ridership was 240,000 people a year.

Further study of a Wichita-to-Kansas City rail corridor should take place. Amtrak is committed to conducting a new study. KDOT will monitor the issue and assess the interest of Kansans in such a service, as well as the costs and benefits to them.

**Transit Needs**

**Definition:** Capital and operating costs for all public transportation needs statewide, including traditional fixed-route service in urban areas, on-demand and scheduled services in rural areas, intercity bus routes and intercity passenger rail service.

**Projected Annual Need:** $175 million in constant 2006 dollars. This includes $160 million for transit in metro and rural areas and $15 million for intercity rail and bus needs.

**ANNUAL NEEDS**

$2.9 BILLION

- **Transit** $175M
- **State Highway Needs** $1.5 BILLION
  - **Preservation** $300M
  - **Fixed Cost & Operations** $320M
  - **Modernization** $210M
  - **Capacity** $700M
  - **Aviation** $100M
  - **Rail Freight** $60M
  - **Bike Ped** $15M
  - **Local Roads** $1B

**STATE HIGHWAY NEEDS - $1.5 BILLION**
INTERCITY PASSENGER BUS

While bus rides between Kansas towns and cities are in a steep decline, Kansans expressed interest in intercity stops.

Bus routes, such as those provided by Greyhound, cover 1,400 route miles in Kansas, a 27 percent decrease over the last decade. Such buses now stop at only 27 places, a 73 percent plunge. This has meant a loss of connection among some state residents. Figure 4.2 shows intercity bus routes in Kansas.

There has been at least one expansion of the intercity bus network in recent years though, with the addition of a Lawrence to Johnson County connection by Johnson County Transit. The route began in January 2007 and ridership has grown from 114 riders a day to 450 to 500 riders per day. Johnson County Transit estimated 66,000 riders in 2007. This example demonstrates that when transit services are focused on a defined need, substantial ridership can be established in Kansas.

Figure 4.2 - Existing Intercity Bus Service
Develop a comprehensive transit system plan
With its partners, KDOT should undertake a full-scale review of public transit in Kansas. KDOT should lead an initiative to collect, analyze and act on transit data. This review should assess ways to improve shared maintenance and dispatch and reexamine strategies for improving transit services, including intercounty transit sharing agreements, coordinated transit districts, regional transit hubs and transit provider consolidation.

Reassess state formulas for distributing transit funds
KDOT should consider whether factors other than population – such as need – should be used for determining how transit funding is distributed.

KDOT should promote alternatives to single-occupant driving
There are several ways for this happen. One is for transit needs to be considered whenever a public roadway or private development project is being planned. A second is for KDOT to promote conventional transit service and alternatives such as carpooling, vanpooling and park-and-ride lots.
4.2 Aviation

Airports support economic growth, shorten the distance between cities and can be a critical component of emergency health services.

In numbers of aviation facilities, Kansas ranks eighth in the nation. Among the 415 designated landing areas, 137 are public-use airports and nine are commercial airports. The commercial airports serve more than 750,000 passengers annually, 96 percent of whom pass through the Wichita Mid-Continent Airport. Aviation activity is projected to double in Kansas by 2030. More Kansans fly out of Kansas City International Airport in Kansas City, Missouri, than from all Kansas airports combined. Although not factored into this report because it is a Missouri facility, KCI Airport benefits Kansas nonetheless. The airport serves more than 1 million passengers a month during its busiest periods. It’s also the largest air cargo facility in the region, handling more than 25 million pounds of freight and mail monthly.

The condition of Kansas runways has improved greatly since 2000, when 25 percent were in poor condition. The CTP included state funds for aviation under the Kansas Aviation Improvement Program. The result is that in 2006, just 5 percent of runways are in poor condition. While runway conditions have improved, many needed improvements remain. Aviation needs in Kansas are estimated to be more than $100 million annually. With projected revenues at $35 million, a large gap exists.

During the CTP, runway improvements were completed at Newton City/County Airport in Newton.
INFRASTRUCTURE NEEDS

For many Kansas airports to accommodate the general growth in air traffic and changes in aviation technology, upgraded runways, taxiways, terminals, access and navigational aids. Also included are affordable airfare subsidies.

Projected Annual Need: $100 million in constant 2006 dollars. This includes more than $80 million in airport needs and nearly $20 million in airfare subsidies.

Although there’s obviously a need for an increase, it would be unrealistic to think that upgrading every airport is immediately within reach. The situation demands strategic thinking and prioritization. At present, there’s no process for determining which improvements, at which airports, will yield the greatest regional and state benefit. A second consideration is that of sustainability. Are there instances in which a small initial investment could help an airport generate more revenues – and subsequently better maintain its own infrastructure? At present, neither state nor federal funds can be used for “vertical improvements” at airports – facilities like hangars. Yet these could, if constructed, provide rental income for the airports.
ALL-WEATHER SAFETY
The infrastructure improvements that have occurred mean that every Kansan now lives within 30 miles of an airport that can handle air ambulance service. The problem is that not all of Kansas airports can accommodate that service in bad weather because they don’t have navigational aids. In fact, should a medical emergency arise during bad weather, residents in 50 percent of the state have to drive more than 30 miles to reach an all-weather airport (see Figure 4.3). In many cases, these needed improvements are relatively inexpensive. As an example, for a cost of $10 million, or $500,000 annually over 10 years, an additional 49 airports could be surveyed and equipped with the necessary technological aids to be navigable in all weather, an improvement that would vastly improve the all-weather coverage.

Figure 4.3 - Kansas Airports and Areas With All-Weather Air Ambulance Access
AIRFARE SUPPORT
Aviation funds help subsidize commercial airline services in Kansas by lowering ticket prices for customers. This helps major commercial airlines continue to serve Kansas airports while keeping airfares reasonable. Federal subsidies of $7 million annually are provided through the Essential Air Service program. State subsidies – begun in 2006 with a $5 million annual commitment through 2010 – come through the Kansas Affordable Airfares Program. The funds are allocated to support travel into and out of the Wichita Mid-Continent Airport. Other areas of the state have also expressed interest in the program, but currently they receive no funds. The Regional Economic Area Partnership, an organization of 32 local governments in south-central Kansas, has statutory authority to administer the funds. In all, funding for airfare support totals $12 million a year. The estimated airfare subsidy need for airports across Kansas is nearly $20 million.

AVIATION RECOMMENDATIONS

Develop a long-range, statewide aviation system plan
The gap between needs and revenues requires that the state develop priorities for supporting aviation. Working closely with stakeholders, KDOT should develop a statewide aviation plan that prioritizes aviation needs. One aspect of the plan should be to establish an airport ranking system, much like the highway classification system, that helps determine priorities.

Make all-weather access to air ambulance service available to every Kansan
Kansas should invest in surveys and infrastructure improvements so Kansans can have improved access to air ambulance services in inclement weather.

Promote small-airports sustainability
One approach would be to expand the Kansas Aviation Improvement Program to make more types of projects eligible for funding. Another approach would be to increase technical assistance to help these airports become more self-sufficient.
4.3 Rail-Freight Service

The Kansas rail-freight network - the sixth largest in the country – is made up of both Class I and short-line railroads. On the whole, it is an efficient and reliable means for shipping goods and raw materials into Kansas and for getting Kansas products to markets. The network comprises 4,700 miles of rail as shown in Figure 4.4. It is different from other transportation modes described in this chapter because the freight rail network is privately owned and operated. Because the interests and objectives of rail lines and government may differ, finding opportunities to communicate and to work together is crucial.

Despite the fact that rail lines are privately owned, the state has a definite interest in them as a mode of transportation. For example, railroads provide shippers with an alternative to trucks and hold down the roadway preservation expenses that would result from higher truck volumes. There is also concern about delay and safety at railroad crossings.

As pictured in Figure 4.5, the amount of freight moved by rail and truck in the United States is increasing rapidly. This is because of rising global income, growing international trade, the emergence of multi-national manufacturing operations and sophisticated shipping technologies. Not only is rail-freight volume going up; the way freight is moved by rail is changing. Unit freight trains frequently transport containerized loads from ports over long distances without stopping. At big intermodal freight transfer centers sited near interstate highways, the containers are transferred to trucks for final delivery. Grain cars, moving in the opposite direction, take wheat to ports, where ships transport it to the rest of the world.

Figure 4.4 - Kansas Rail Lines
In many rural areas, the economic viability of local industries relies heavily on easy access to rail-freight facilities and the connections that rail lines provide to national and global transportation systems. But the state is also attracting interest from the rail and shipping industries. Because Kansas is centrally located (within 24 hours of 70 percent of America) and has a large amount of land suitable for development, it may be appealing to those who operate distribution warehouses. One stakeholder said that Kansas could be regarded by the logistics industry as “beachfront property.” In other words, the state’s central location could be a strong factor in it becoming an intermodal freight hub, so long as the state’s rail-freight capacity continues to expand and highways remain relatively uncongested.
CLASS I, SHORT-LINE INCOMPATIBILITIES

There are 2,700 miles of Class I railroads (or long-haul lines) in Kansas. Large companies – the Union Pacific Railroad and Burlington Northern Santa Fe Railway, for instance – own these. The unit trains of these companies may be more than 100 cars long, moving from point A to point B without stopping. The state also has about 2,000 miles of short-line railroads – 43 percent of its total rail infrastructure. Some short-lines run just a few miles; one runs for 783 miles.

Short-lines are to Class I’s as local roads are to interstate highways. That is, short-lines and local roads both let local businesses connect to modes of transport that can move freight over long distances between states. The relationship between these modes means that a change in one will affect the other. As such, changes in the infrastructure and operations of the Class I railroads have begun to impact short-line railroads in a couple of ways.

Larger cars

The rail cars of Class I railroads are bigger today than in years past. They can carry up to 286,000 pounds of freight. For many short-line railroads, accommodating these larger cars will require significant investment to upgrade rail lines with heavier rails and/or better rail beds.

Fewer stops

Many Kansas agricultural producers and manufacturers have traditionally relied on short-line railroads to transfer their products to Class I trains for transport across the country. However, long-haul trains, emphasizing efficiency, cost savings and speed to market, often don’t stop to pick up additional cars. In some instances, this forces local producers to use truck transport, driving up costs, reducing competitiveness and leading to greater wear and tear on local and state roads. In other instances, short-line railroads assemble smaller units of cars, say 10 or 20, and “build” a long 100-car train to hand off to the Class I railroads.

As part of the CTP, KDOT administers a revolving loan program to support short-line railroads. Through that program, $3 million annually has been made available to short-line railroads to help rehabilitate track. The dedicated funding associated with that program is scheduled to end with the CTP in 2009. The overall cost to upgrade all the short-lines so they can accommodate 286,000 pound cars has been estimated at more than $300 million. Because many of the short-line companies are small and undercapitalized, they will be unable to absorb these costs on their own. The state’s continued support of this vital transportation link is important. The estimated total of all short-line needs is nearly $20 million annually in the next 20 years.
WHERE RAILS AND ROADS CROSS

Another rail transportation concern derives from the intersection of tracks and road. There are more than 5,400 rail crossings in Kansas. Growth in rail freight in years to come will raise the risk of delay and accidents alike. Crossings need to be made as safe as possible, and, eliminated in some cases. This will require infrastructure investments that range from adding gates at a railroad crossing, at an average cost of $200,000, to building an overpass (called a grade separation). Grade separations can cost an average of $5 million, but in dense urban areas can cost significantly more. The annual need for crossing improvements statewide is estimated at more than $40 million. Funding for crossings and grade separations comes from a variety of state, federal, and private funds, and has averaged $23 million annually over the past decade. Because of a general loss in purchasing power and the likelihood of some funding sources ending in 2009, average annual future revenues are projected to be near $11 million (in constant 2006 dollars).

All told, the annual short-line and crossing needs total almost $60 million statewide, nearly six times that of projected revenues.

RAIL-FREIGHT RECOMMENDATIONS

Develop a statewide freight plan
KDOT should develop a statewide plan that assesses freight-related challenges and investment needs and makes recommendations on next steps, including options for new or expanded funding and planning roles for the state. It should include a commodity-flow assessment of current and projected freight movements, as well as of existing and potential bottlenecks.

Expand efforts to mitigate railroad crossing problems
KDOT should work with local partners and private-sector interests to develop a long-term plan for identifying and prioritizing needed railroad crossing improvements and solving related problems.

Improve communication between rail lines and government entities
KDOT should devote additional resources to improve communications between railroad companies and their stakeholders. In particular, KDOT should provide a central point of contact that local governments and private sector partners can work with to identify rail issues and develop strategies for addressing them so that everyone’s concerns are heard. This could include establishing a freight advisory council to provide KDOT with better insight on rail issues, options and investment priorities.
4.4 Bikes and Pedestrians

When transportation infrastructure is built with bicyclists and pedestrians in mind, features like sidewalks, crosswalks, wide shoulders, marked bicycle lanes or dedicated-use trails are part of the planning. These improve safety, mobility and access for many users of the transportation system. They also enhance community quality of life and economic viability.

In metropolitan areas of Kansas, transportation planning that includes bicyclists and pedestrians has strong support. Stakeholders encourage KDOT to consider bicycle and pedestrian needs in every project and to take a leadership role to ensure that the transportation system is safe from a bicyclist or pedestrian perspective.

Stakeholders also encouraged KDOT to help promote bicycling and walking as modes of transportation by coordinating with other agencies such as the Kansas Department of Health and Environment and Kansas Wildlife and Parks. Some suggestions included helping to distribute materials and establishing a clearinghouse for bike and pedestrian information.

KDOT currently supports bicycle and pedestrian projects through administration of two federal funding programs: Transportation Enhancements and Safe Routes to school.

Through its Transportation Enhancements (TE) program, KDOT has administered $66 million in federal funds since 1991 on trails and other transportation features that support bicycle and pedestrian travel in Kansas. Through the TE program, KDOT currently administers about $6 million a year in federal and local funds on pedestrian projects. Statewide, about 120 miles of trails have been developed under the TE program, but nearly 1,000 miles of proposed trails within communities remain. Kansas has also banked 700 miles of former rail right-of-way that could be converted to trails. The estimated annual cost of building these facilities over the next 20 years is $15 million per year (in constant 2006 dollars).

KDOT also recently initiated the Safe Routes to Schools program, which provides funding to local units of government for infrastructure projects and education programs that encourage children to safely walk or bicycle to school. The program grants over $1 million dollars per year to school districts, cities, counties and non-profit organizations and since the program’s inception in 2006, KDOT has awarded 33 planning grants, 2 walking school bus programs, and 13 construction projects. The total funds awarded to these projects totals more than $3 million dollars.
Bicycle and Pedestrian Needs

**Definition:** Construction of new bicycle and pedestrian paths and trails for transportation.

**Projected Annual Need:** $15 million in constant 2006 dollars. This includes $5 million needed to build all of the proposed trails in the state’s urban areas, and nearly $10 million annually to meet needs identified in rural areas.

Accommodate bicyclists and walkers
KDOT and its partners should see that consideration is given to bike and pedestrian needs during the planning and design of transportation projects.

Update the statewide bicycle and pedestrian plan
Crafted in 1995, KDOT’s current plan is over a decade old. An update should address topics such as the importance of bicycle and pedestrian transportation, the laws relating to bicycle and pedestrian facilities, the current conditions for bicycle and pedestrian transportation in Kansas, and the policies, goals, and strategies needed to adequately address these forms of transportation.

Emphasize bicycle and pedestrian safety
KDOT and its partners should enhance education for cyclists, pedestrians and highway users on safe practices when sharing facilities.