

## ***Is There a Role for Tolls In Meeting Transportation Needs in Kansas?***

### **Background**

Like many other states, Kansas faces a gap between available funding from its traditional funding sources and the state's current and emerging transportation needs. The state's choices for funding roadway projects include increasing Kansas Department of Transportation's (KDOT)'s traditional funding sources (fuel taxes, sales taxes, and vehicle registration fees) and tolls. KDOT and the Kansas Turnpike Authority (KTA) have recently compiled background materials on tolls to serve as the basis for a dialogue with Kansas policymakers about the potential for tolling to support needed transportation projects in the state. The full materials can be accessed from both KDOT and KTA home pages of their websites. This white paper is drawn from those materials, supplemented by a very preliminary analysis of estimated ranges of toll-paying vehicles that might be necessary in order to help fund a hypothetical toll facility. This document serves as a comparable white paper to KDOT's Funding Sources White Paper published on August 27, 2008, and was prepared at KDOT's request by Spock Solutions, Inc. in association with the Jacobs Engineering Group, the same consultant team that compiled the background materials.

### **Tolls "101"**

Tolls represent a direct user fee charged for a driver's use of a particular facility. The future income stream from tolls provides backing for revenue bonds, which can be issued to accelerate the up-front funding needed to construct a road project (or bridge). Equally if not more important, tolls provide a dedicated ongoing revenue stream to fund ongoing operations, maintenance, and improvements over the life of the facility and a mechanism for recovering those costs from the drivers who directly benefit from their use of the toll facility.

### **Historical Perspective**

Tolls are the oldest means of funding roads, dating back to the seventh century B.C. In the United States, toll roads date back to the late 1700s; by the mid-1800s, state-chartered private operators had built about 15,000 miles of turnpikes. More recently, toll financing played a significant role in the pre-Interstate era when 15 states, including Kansas, built statewide systems to serve their most heavily traveled corridors. With the building of the Interstate Highway System, funding shifted from tolls to fuel taxes. However, with the completion of the Interstate system and changes in Federal policy beginning in the 1990s, there has been a new era in toll activity. The convergence of traffic growth, innovations in technology, and constraints in traditional funding sources have fueled this resurgence in toll financing. A growing diversity of toll applications

reflects the emergence of tolling as an instrument of public policy; tolls are increasingly viewed as a pricing mechanism with the potential to influence driver behavior as a means of managing demand for limited facility capacity. Of particular note, High Occupancy/Toll (HOT) Lanes (sometimes referred to as Express Lanes) have been introduced in a number of congested urban areas throughout the country; these types of toll facilities may have been converted from pre-existing High Occupancy Vehicle Lanes. They allow single occupant vehicles to pay a toll to use dedicated lanes separated in some fashion from the general traffic lanes on a non-tolled roadway.

**Toll Road Activity By Type of Project Initiated between 1992 and 2006**

Type of Toll Project	Number of Projects	Number of States	Share of Total Projects	Share of Total Lane Miles
HOT Conversion	5	4	3%	1%
HOT Widening	35	11	21%	16%
New Centerline Miles	104	21	62%	65%
Roadway Widening	23	13	14%	18%

It is important to note that fewer than one-third of the projects recently initiated have become operating toll facilities; as of mid-2006, more of them remained in planning or NEPA review stages than had advanced to design/finance or construction.

**Consideration of Tolling in Other States**

A recent survey of state transportation officials conducted by the Government Accountability Office indicates a widespread interest in tolling across the United States - as of mid-2006, 31 of the 50 states and the District of Columbia had or were planning toll roads, including 24 states with existing toll operations and seven states planning to introduce tolling. Toll activity has been highly correlated with areas experiencing significant population and traffic growth, e.g. in states like Texas, California, Florida, and Virginia.

With the economic realities of rising construction costs and some relaxation in Federal policy toward tolls, many states have advanced toll projects that are less than fully supported by tolls or that require some period of time to achieve a state of financial self-sufficiency. Funding part of new toll projects' capital and/or operating costs with non-toll

sources could make toll facilities feasible at lower traffic levels. Individual states have adopted different financial standards as a matter of policy, some of which are shown here:

State	Financial Standard Adopted
Washington	"Tolling should be used when it can be demonstrated to contribute to a significant portion of the cost of a project that cannot be funded solely with existing sources."
Texas	The second step of its five-step toll feasibility analysis process assesses the potential for toll revenue to pay for estimated operations and maintenance costs over a 40 year horizon in addition to supporting the required bonding capacity for construction and improvements.
Arkansas	Tolling is considered if revenues fund at least 20% of initial construction costs, but a toll project can only be advanced if it can be shown that toll revenues would cover all operations and maintenance costs.
Florida	Florida's Turnpike Enterprise requires that by the 12th year of operation, projected revenues must cover at least 50% of operating costs and debt service and by the 22 <sup>nd</sup> year of operation, projected revenues must cover all costs and debt service.
Missouri	Missouri DOT's Phase II Toll Feasibility Study notes that for projects where toll revenues cover less than 100% of their capital costs, tolls could potentially be combined with other funding mechanisms, (e.g., the State Road Fund) to cover the remaining construction or operations and maintenance costs, pending obtaining the legal authority to toll.

**Consideration of Tolling in Kansas**

The traditional definition of toll feasibility is a financial one, in which projected traffic and resulting toll revenues over time are sufficient to support repaying bonds associated with initial construction and ongoing capital programs and to cover operating and maintenance expenses.

KDOT may wish to use traditional financial criteria as the basis for an initial assessment of the potential for new toll projects to be viable in the state. Based on that type of assessment, KDOT can then decide whether to proceed to a following phase of toll

feasibility study in which specific projects would be identified as toll candidates and would be subjected to detailed evaluation.

### ***Toll-Supported Projects***

Traditional toll facilities from the pre-Interstate era were designed to be totally self-funded, with all of their capital and operating expenses supported by tolls. For a toll project to be fully funded today, it is estimated that average annual daily traffic would have to be in the 45,000 to 75,000 vehicles-per-day range at per-mile toll rates that are significantly higher than currently on the Kansas Turnpike, and some 150,000 or more vehicles per day at comparable per-mile toll rates to those currently charged on the Kansas Turnpike. See the accompanying table for details.

For a toll project to be 50 percent funded, it is estimated that average annual daily traffic would have to be in the 25,000 to 35,000 vehicles-per-day range at per-mile toll rates that are significantly higher than currently on the Kansas Turnpike, and some 80,000 to 125,000 vehicles per day at comparable per-mile toll rates to those currently charged on the Kansas Turnpike.

For a toll project to be 25 percent funded, it is estimated that average annual daily traffic would have to be in the 10,000 to 20,000 vehicles-per-day range at per-mile toll rates that are significantly higher than currently on the Kansas Turnpike, and some 45,000 to 60,000 vehicles per day at comparable per-mile toll rates to those currently charged on the Kansas Turnpike.

To put these traffic levels in perspective, the busiest segment of the Kansas Turnpike today (between Topeka and Lecompton) is 35,000 vehicles a day.

As another point of comparison, the neighboring state of Colorado adopted a 30,000 AADT threshold as the minimum traffic level for a project to be considered as a potential tolling candidate for its first tier screening analysis. On that basis, 39 projects were selected out of over 90 potential candidates. A first tier screening narrowed those 39 projects down to 12 candidate toll facilities for a second tier of evaluation. Of those 12 toll candidates, only one (the I-25 Express Lanes in the Denver area) has been implemented to date.

Percent of Hypothetical New Toll Facility Costs Funded by Toll Revenues	Estimated Toll Rates	Estimated Range of Toll-paying Vehicles Necessary (AADT)
100%	Per-mile toll rates similar to the Kansas Turnpike	150,000 – 250,000
	Per-mile toll rates several times greater than the Kansas Turnpike	45,000 – 75,000
50%	Per-mile toll rates similar to the Kansas Turnpike	80,000 – 125,000
	Per-mile toll rates several times greater than the Kansas Turnpike	25,000 – 35,000
25%	Per-mile toll rates similar to the Kansas Turnpike	45,000 – 60,000
	Per-mile toll rates several times greater than the Kansas Turnpike	10,000 – 20,000

Theoretically, tolling existing capacity (rather than a new-build facility) would be more promising from a financial perspective, because the tolls would not be required to support the bonding capacity to cover the significant capital expenditures for new construction. However, other states have found that tolling existing capacity has a much lower level of public acceptance. In fact, several of the states actively advancing tolling, including Colorado, Texas, and Tennessee, have adopted an explicit policy to toll only new capacity.

**Non-Financial Factors in a Successful Toll Project**

As states have advanced toll projects over the past several decades, they have found that a successful project depends on factors other than financial feasibility. The table below shows some typical factors considered by other states, not listed in any particular order of importance. These factors would need to be examined in more detail for any tolling opportunity (whether for new or existing capacity) deemed appropriate for study in Kansas, in parallel with a sophisticated analysis of financial feasibility to estimate the magnitude of any potential needed supplemental funding from non-toll sources.

<b>Non-Financial Factors in Toll Projects</b>	<b>Considered by Other States</b>
Potential Safety Impacts	Economic Growth/Impact Considerations
Viability Assessment of Toll Operations	Consistency with Statewide and Regional Plan Goals
Congestion Relief Potential	Environmental and Community Impact Assessments
Network Continuity Considerations	Diversion Impacts
General Constructability Assessment	Statewide or Regional Significance
Optimizing System Performance	“Readiness” of Project Start-up in a Reasonable Timeframe
Full Control of Access	Local Support
Explicit Traffic Volume or Congestion Thresholds	Availability of Toll-Free Alternate Route
Roadway Classification Requirement	Multi-State Agreement (If Applicable)
Fairness/Equity Considerations	Federal Requirements (If Applicable)