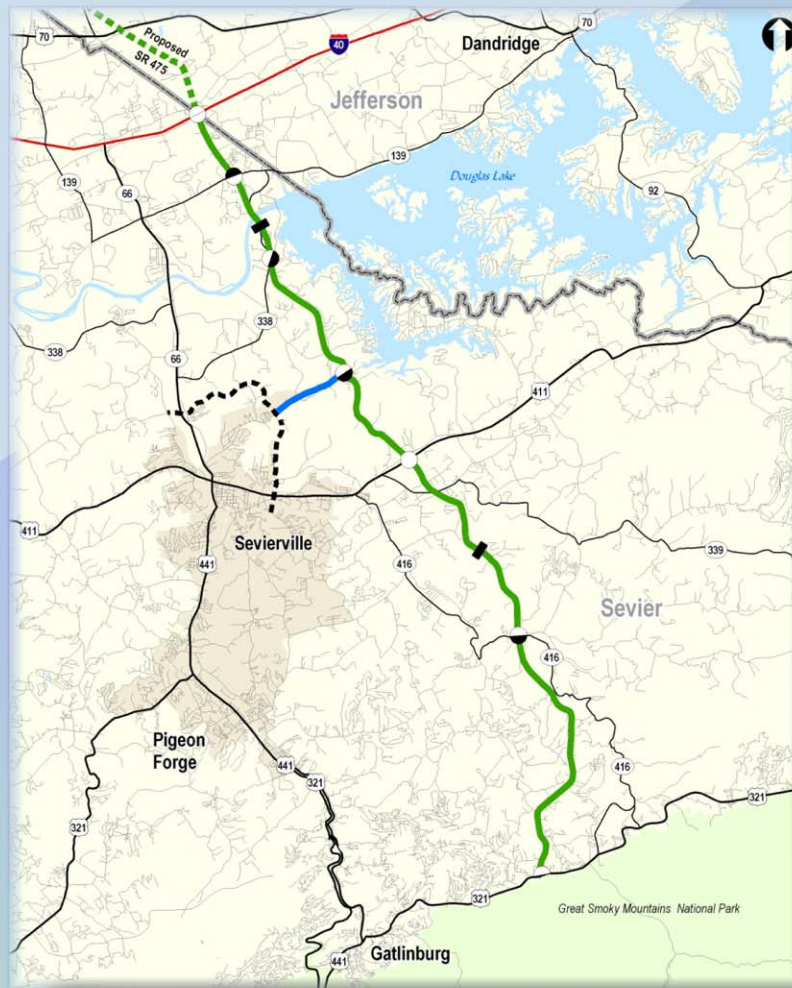


Draft Report

Tennessee Department of Transportation

Proposed Intra County Parkway

Conceptual Feasibility Report



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Prepared For



Prepared By



March 2007

EXECUTIVE SUMMARY

Across the country all levels of government are coming to grips with the fiscal challenges created by increased demand for new transportation infrastructure and the need to maintain the existing transportation networks within the constraints of existing funding mechanisms. In Tennessee, the public sector has financed transportation infrastructure through a combination of state and local taxes and fees and - for major projects - Federal grants derived from the allocation of the national motor fuel taxes. These resources have been combined to fund projects on a "pay-as-you-go" basis, meaning that projects have often been built in phases or increments as funds become available over a period of years.

Because of competing demands for its transportation funding dollar, Tennessee is faced with the reality that critical projects may face years of delay before funding is available. Delaying these projects results in hidden costs associated with inflation and unrealized economic development, especially for projects delayed several years. In addition, delaying projects that reduce emissions or eliminate safety hazards has obvious negative impacts on the quality of life issues for Tennessee residents.

In recognition of these factors, the Tennessee Department of Transportation retained the firm of Wilbur Smith Associates to begin exploring the potential for the use of tolls by the State to advance needed projects that would otherwise languish waiting for adequate funding. Wilbur Smith's scope of work included conducting preliminary traffic and revenue studies on Intra County Parkway (ICP).

Wilbur Smith's assignment culminates in the preparation of Conceptual Feasibility Studies for the ICP. This report constitutes the Conceptual Feasibility Study for the Proposed Intra County Parkway located approximately 20 miles east-south east of Knoxville. The findings of this report should be considered conceptual in nature and are conditioned on the statements contained within this report.

In conducting this report, Wilbur Smith performed three basic analyzes: a preliminary traffic and revenue study; an estimate of project costs; and a conceptual plan of finance. Wilbur Smith also began applying various quantitative and qualitative criteria to the Intra County Parkway to help formulate a recommendation concerning the next steps in the process.

At this early stage sufficient information has not been developed to make a final conclusion concerning the feasibility of the Intra County Parkway. There remain issues yet to be addressed that will significantly influence this outcome. At this time, the Intra County Parkway does not demonstrate sufficient financial feasibility to warrant recommendation as a toll project. However, it has been noted that the current results may be adversely affected by the fact that at the present time, the Knoxville Regional Travel Demand Model treats a number of traffic analysis zones of significant import to the ICP as external zones and, therefore, may lack the detail necessary to accurately predict future demand on the proposed project. The financial feasibility of the ICP may be revisited once appropriate revisions have been made to the Knoxville Regional Travel Demand Model.

Specifically, Wilbur Smith recommends that TDOT undertake the following steps:

- Inclusion of the Intra County Parkway in the next TIP and/or LRTP in order to study this project in a regional transportation context;
- Expand upon Knoxville Regional Travel Demand Model socioeconomic data and trip tables in external zones affecting the Intra County Parkway
- Reduce the inflationary impact on construction by revisiting the opening-year assumption to reflect funding the project with tolls, rather than through traditional funding mechanisms;
- Perform a project specific estimate of construction costs; and
- Retain either an investment bank or a financial advisor to prepare a more sophisticated financial model including both federal lending programs and 3P or concessionaire financings.

TDOT has made known its intent to work with local planning staff to enhance the travel demand model along the SR-66 corridor. In addition to enhancing model detail in the area in question, it has been suggested that tourist-oriented traffic patterns may not be adequately represented in the current Knoxville Regional Travel Demand Model. In particular, more information is needed to identify the percentage of traffic destined for the Great Smoky Mountains National Park, as opposed to the percentage of local and tourist traffic headed for commercial development along SR-66. These revisions should be finalized before any further study commences.



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INTRODUCTION

Determining the feasibility of a toll project is an iterative process. The first step is to screen a project, or projects, to develop an initial understanding of the potential traffic and revenue characteristics thereof. This step usually requires either a Level 1 Sketch Level Analysis or a Preliminary Traffic and Revenue Study. Both are considered planning level studies designed to assist in furthering the normal planning process and are required for all transportation projects.

At the request of the Tennessee Department of Transportation (TDOT), Wilbur Smith Associates (WSA) has completed preliminary traffic and revenue studies for the Intra County Parkway approximately 20 miles east-south east of Knoxville. The Intra County Parkway was studied under two alternative configurations, or scenarios. This study was conducted to facilitate the planning process required for the proposed transportation facility. Depending upon a number of factors inherent in the transportation planning process modifications and updates may be needed as competing routes and modes get added to regional plans, project configurations change, and land use patterns evolve.

Traffic and revenue studies, by themselves, do not determine project feasibility – though such studies are significant factors in undertaking such an analysis. As a result, subsequent planning steps are usually taken once a sketch or preliminary traffic and revenue study is completed and it has been determined that a project, or projects, has the potential to be feasible as a toll facility. This planning process often incorporates an analysis of the project in the context of a regional or statewide transportation plan, major investment studies, preferred alignments, preliminary design and engineering, and the development of preliminary plans of finance.

Separately, WSA developed estimates of project costs for each scenario. These estimated project costs were used in analyzing the project's financial feasibility at this conceptual stage. Bonding capacity was estimated utilizing a traditional public toll authority financial model. These cost and bonding estimates (contained herein) are conceptual in nature and are provided as inputs into a screening process to help determine the direction that future planning efforts will take for the proposed project.

PROJECT DESCRIPTION

Figures 1 and 2 depict the project location for each for the two scenarios studied by WSA for the Intra County Parkway. The proposed ICP project, shown as a solid green line, is assumed to operate as a toll facility. Also shown in *Figures 1 and 2* are the proposed toll-free Western Spur and Middle Creek Connector.

Under Scenario 1, the ICP will be approximately 21.5 miles in length starting from its northern terminus at a new interchange with I-40 near Milepost 407, to its southern terminus at U.S. 321. The ICP would provide a high-speed alternative on new alignment to the existing S.R. 66, S.R. 441, and S.R. 321 west of the project alignment.

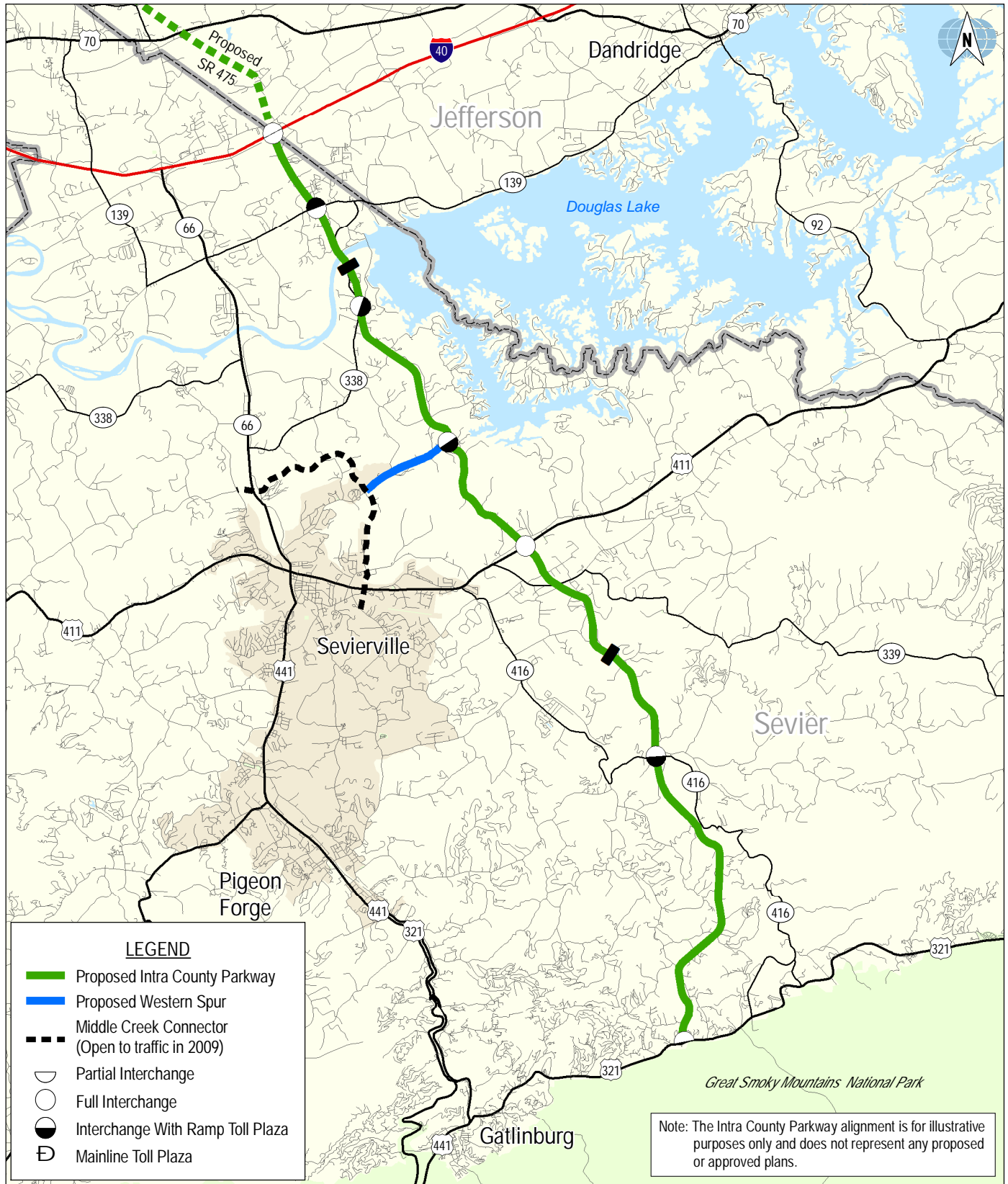
Under Scenario 2, the northern terminus of the ICP is also at I-40 near Milepost 407. The overall length of the project will be significantly shorter, covering approximately 9.9 miles. Under this scenario, the ICP would have its southern terminus at S.R. 411, just to the northeast of the Town of Sevierville.

Assumed to open to traffic in its entirety in year 2020 under either scenario, for purposes of the preliminary traffic and revenue study, the ICP would be constructed as a four-lane, full access-controlled, divided highway on new alignment with 65 mile per hour posted speed limit. Under Scenario 1, full access interchanges were assumed at I-40 (assuming S.R. 475 is constructed), S.R. 139, S.R. 338, the proposed Western Spur, U.S. 411, S.R. 339, and S.R. 416. A partial interchange was assumed at the southern terminus, U.S. 321.

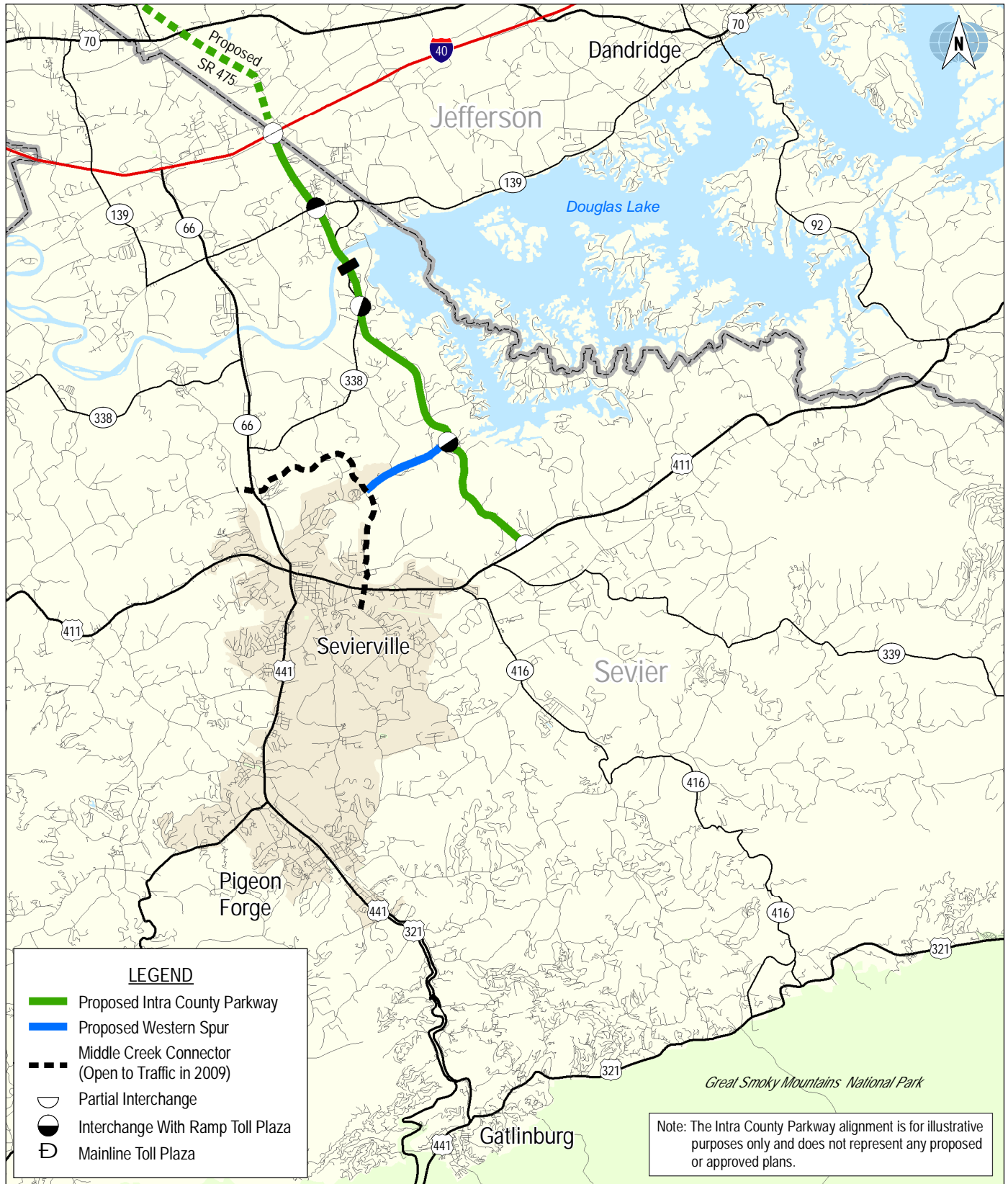
Under Scenario 2 the assumed interchange locations are different than under Scenario 1. Full access interchanges were assumed at I-40 (assuming S.R. 475 is constructed), S.R. 139, S.R. 338, and the proposed Western Spur. A partial access interchange was assumed at the southern terminus, U.S. 411.

Also shown in *Figures 1 and 2* are proposed locations of mainline and ramp toll plazas. As shown, toll plaza locations were positioned to exclude toll-free travel on the facility. Under these tolling concepts, motorists using any portion of the project would pass through at least one toll plaza.

Additionally, based on direction by TDOT, toll collection was assumed to accommodate both cash and electronic toll collection (ETC) customers. As recommended by TDOT, at this time no discount was assumed to be given to those patrons utilizing ETC.



PROJECT LOCATION MAP - SCENARIO 1
I-40 TO US 321



PROJECT LOCATION MAP - SCENARIO 2
I-40 TO US 411

EVALUATION CATEGORIES

WSA has developed a checklist of items that could impact the feasibility of a new toll facility. These items are listed in *Table 1* and are organized around seven main categories. Each of these main categories contains multiple subcategories or criteria. To a great extent the items on the checklist are interdependent. It is important to note that the applicability and/or the weight given to a specific factor are dependent upon the characteristics and objectives of the toll project and the sponsoring agency. In the final analysis toll projects, regardless if developed by a public entity or through a public private partnership, are essentially public assets and subject to public policy of the sponsoring entity.

As mentioned above, the applicability and/or weighting of any of the sub-categories contained in *Table 1* are dependent upon project specific factors. This Conceptual Feasibility Report is not intended to provide an extensive analysis of each of these characteristics. The type of analysis needed to determine a project's feasibility is the part of a project's planning process.

One of the functions of the planning process is to define what issues are relevant to a project and the respective weight of these issues. As such, this analysis will be focused on the major categories rather than trying to determine the applicability of each of the sub items.

Regional Transportation System

Toll facilities need to fit within the overall regional transportation system; in this case overseen by the Knoxville Regional Transportation Planning Organization (TPO). The ICP is unique in that, as a competing route to the existing S.R. 66, it will likely serve a number of trips by travelers from I-40 looking to access the tourism destinations in the region. The ICP would likely offer significant time savings for patrons when compared to the same travel movements using the existing regional roadway infrastructure. In addition, it is important to recognize the location of the ICP's northern terminus in relation to the proposed SR 475 project, currently under study. This roadway will likely carry significant volumes within the Knoxville region which may have trip origins and destination within the ICP corridor.

Table 1
Feasibility Checklist

Regional Transportation System

- a) Traffic movements to be served
- b) Existing Alternative Routes
- c) Future planned networks
- d) Other planned transportation improvements

Environmental

- a) Major Investment Study
- b) Designation of preferred alignment
- c) Cost implications of mitigation requirements
- d) Projected timeline for environmental clearance
- e) Full EIS versus environmental assessment (FONSI)

Right-of-Way

- a) Number of takes
- b) Project costs
- c) Acquisition timetable
- d) 4F Issues
- e) Utility Issues

Construction/Engineering

- a) Uniqueness of engineering/construction requirements
- b) Required Permits
- c) Constructability
- d) Construction schedule
- e) Project Costs
- f) Bonding requirements

Corridor Socio-Economic Data

- a) Land use plans
- b) Population growth
- c) Projected non-residential activity
- d) Income Levels
- e) Household size

Traffic and Revenue

- a) Project configuration
- b) Project interconnectivity
- c) Value of time calculations
- d) Time/distance savings
- e) Corridor share
- f) Toll regimes
- g) Typical movements

Financial Considerations

- a) Project financial structure
- b) State/Local contribution
- c) Federal programs

At this time, the ICP has not been included in the near-term Transportation Improvement Program (TIP) or the Long Range Transportation Improvement Program (LRTP). While WSA has studied and presented findings with respect to the potential usage of the proposed ICP under various tolling scenarios, it is not known at this time what sort of impact the ICP would have on the regional transportation network as a whole or how it may affect future planned or proposed improvements. WSA suggests that future iterations of the TIP or LRTP be amended to include the ICP and its regional impact studied.

Environmental

Toll facilities are not exempt from applicable federal and state environmental review requirements. The environmental clearance process has a significant impact on the feasibility of any transportation project, but especially so in the case of a toll facility. In addition to the typical environmental studies needed for an Environmental Impact Statement (EIS), toll projects need to study the economic impact of charging tolls on the facility.

Besides time, the most significant impact of the environmental process, are the costs of mitigation required by the EIS document. Whether from longer or more difficult alignments, wetland mitigation costs, or more difficult construction requirements, these requirements can add considerable costs to any transportation project. For a toll project, the environmental process can change the amount of project costs that can be paid for solely by toll revenue.

To date, WSA is not aware of any significant environmental work that has been done for the Intra County Parkway.

Right-of-Way

Right-of-way for transportation projects is typically acquired subject to eminent domain procedures. As such the right-of-way acquisition process is established by federal and state laws and requirements. These requirements are typically applied regardless of whether a toll facility is being developed as a public toll facility or through the use of a public-private partnership. In rare cases landowners will donate or “proctor” right-of-way for toll facilities in order to benefit from increased land values resulting from improved access provided by the facility.

Generally, specific right-of-way takings are not identified until after a preferred alignment is identified pursuant to the normal EIS process. The availability and cost of the required right-of-way is often a factor in determining a preferred alignment. This is true for all transportation projects, including toll facilities.

To date, WSA is not aware of any analysis of right-of-way impact and costs that has been undertaken for the proposed Intra County Parkway. Preliminary costs have been made available to WSA based on current TDOT project estimates.

Construction and Engineering

As part of its assignment WSA has made conceptual level estimates of construction and engineering costs. In developing the estimated engineering and construction costs for the Intra County Parkway, TDOT’s cost estimate

worksheet was used to determine the 2007 costs. This worksheet has been used for several years by TDOT in its planning office to develop estimates of engineering, right of way, and construction costs for project planning purposes only. The cost estimation worksheet is based on per lane and per mile cost factors. The calculations take into account factors including location (rural, suburban, urban, etc.) and terrain (flat, hilly, mountainous, etc.).

In addition to standard road construction costs, toll equipment costs were developed for the project. Costs estimated for the anticipated toll equipment also include electronic toll collection (ETC) system components such as ETC antenna and reader units, the tolling zone controllers, automatic coin machines, vehicle detection and classification devices, vehicle detector loops, traffic signals, overhead canopy lights, various power supplies, violation enforcement system cameras, and traffic control gates (in the automatic lanes).

WSA also estimated the cost of the communications infrastructure that would be required to support each of the analyzed tolling concepts. In addition to the direct equipment costs, estimates for the required civil work were prepared, including the cost of procuring and installing tolling gantries at each of the tolling zone locations. Other toll system costs were estimated for toll system design, development, and deployment. These costs include the Toll System Contractor’s program management, software development, development of the system design documentation, factory and integration testing, equipment installation, and field testing to confirm that the delivered system meets the toll specification requirements. The capital costs of the toll system host and the other back office subsystems (including ETC account management and violation processing) were also estimated. These are all one-time costs that are associated with the procurement and deployment of the tolling system on the project.

Project costs were inflated to 2017, the assumed first year of construction. An inflation rate of 10% is applied to the project cost for the first three years through 2010 and a 3% inflation rate is applied to the project cost from 2010 until the year of construction. *Table 2* sets forth the estimated project cost for the project, and each of the associated scenarios. The numbers are in millions of dollars and have been inflated to 2017, the assumed year when construction starts. These estimates exclude costs that would have been expended prior to financing such as environmental costs, preliminary engineering, and right-of-way. As the project becomes better defined during the normal planning process these project costs will need to be refined. Additional factors that could impact these estimates include mitigation costs, bridge lengths, and specific subsurface conditions. The final alignment will also impact estimated project costs.

Table 2		
Construction and Engineering Costs		
(2017 \$ Million)		
	<u>Scenario 1</u>	<u>Scenario 2</u>
Construction/Engineering	\$ 275.0	\$ 142.1
Toll Systems	\$ 34.5	\$ 21.7
Estimated Project Cost	\$ 309.5	\$ 163.8

Corridor Socio-Economics

Future economic growth potential is important for the study of any new start-up toll facility. However, for a facility such as the proposed ICP toll facility which would be constructed to provide congestion relief for existing S.R. 66/U.S. 441, the significance of an economic analysis is particularly important.

The socioeconomic forecast developed by the Knoxville Regional Transportation Planning Organization (KRTPO) included in the Knoxville Regional Travel Demand Model (KRTDM) was used in the analysis. This model includes all of Knox, Blount, Anderson, Jefferson, Sevier, Union and Loudon Counties, along with portions of Grainger, Roane and Morgan Counties. Since this was a preliminary traffic and revenue study, an independent economic analysis was not conducted; however, an independent economic analysis would be necessary for any study that would be used in support of project financing.

A major element in this economic assessment was reviewing both the historical and forecasted growth in population, households, employment and median household income. The historical growth trend assessment was performed focusing on both the study area's nine counties and major cities. In assessing the socioeconomic/demographic forecasts, WSA collected forecasts prepared by a third party source, Woods and Poole, Economics, in addition to those prepared by KRTPO. Both the historical trend data and the third-party forecasts were used to check the reasonableness of the forecasts prepared by KRTPO. This process provides a reasonableness check of the forecasts used in the modeling process

Finally, WSA collected and reviewed available attendance data for theme parks, museums and other tourist venues in the project corridor. Dominated by such attractions as the Great Smokey Mountains National Park and the Dollywood theme park, tourism makes a significant contribution to traffic demand on existing highways in the project corridor.

On balance, the KRTPO's forecast of population, household, and employment growth seems reasonable for Sevier County and the ICP project corridor. The forecasted growth appears to be in line with historical trends for the corridor. Additionally, when compared with an alternative source, it was found that the MPO forecast is slightly more conservative.

Traffic and Revenue

Traffic and revenue reports consider known and measurable factors that influence the choices of tens of thousands of daily traveling decisions. Sophisticated models are built based on regional travel demand models, that reflect socio-economic data, existing and future funded transportation networks, and actual travel time data.

Assumed to open to traffic in its entirety in year 2020 under either scenario, for purposes of the preliminary traffic and revenue study, the ICP would be constructed as a four-lane, full access-controlled, divided highway on new alignment with 65 mile per hour posted speeds. Under Scenario 1, full access interchanges were assumed at I-40 (assuming S.R. 475 is constructed), S.R. 139, S.R. 338, the proposed Western Spur, U.S. 411, S.R. 339, and S.R. 416. A partial interchange was assumed at the southern terminus, U.S. 321.

Under Scenario 2 the assumed interchange locations are different than under Scenario 1. Full access interchanges were assumed at I-40 (assuming S.R. 475 is constructed), S.R. 139, S.R. 338, and the proposed Western Spur. A partial access interchange was assumed at the southern terminus, U.S. 411.

The projected gross revenue, operating expenses, and net revenue for the Intra County Parkway under Scenario 1 and Scenario 2 are presented in *Table 3*. More detailed discussion of the projections is contained within the January 2007 “Proposed Intra County Parkway Preliminary Traffic and Revenue Study” prepared by WSA.

Table 3
Annual Net Toll Revenue Forecasts
Proposed Intra County Parkway

Year	Scenario 1			Scenario 2		
	Gross Toll Revenue	Toll Operating Expense	Net Toll Operating Revenue	Gross Toll Revenue	Toll Operating Expense	Net Toll Operating Revenue
2020	\$ 7,143,000	\$ 3,421,000	\$ 3,722,000	\$ 3,616,000	\$ 2,897,000	\$ 719,000
2021	9,918,000	3,498,000	6,420,000	4,997,000	2,963,000	2,034,000
2022	12,000,000	3,576,000	8,424,000	6,018,000	3,031,000	2,987,000
2023	13,223,000	3,656,000	9,567,000	6,600,000	3,100,000	3,500,000
2024	13,770,000	3,738,000	10,032,000	6,840,000	3,171,000	3,669,000
2025	14,339,000	3,822,000	10,517,000	7,089,000	3,244,000	3,845,000
2026	14,932,000	3,907,000	11,025,000	7,347,000	3,318,000	4,029,000
2027	15,549,000	3,994,000	11,555,000	7,614,000	3,394,000	4,220,000
2028	16,192,000	4,083,000	12,109,000	7,891,000	3,472,000	4,419,000
2029	16,861,000	4,174,000	12,687,000	8,178,000	3,551,000	4,627,000
2030	17,557,000	4,268,000	13,289,000	8,476,000	3,632,000	4,844,000
2031	17,920,000	4,293,000	13,627,000	8,630,000	3,648,000	4,982,000
2032	18,290,000	4,318,000	13,972,000	8,787,000	3,664,000	5,123,000
2033	18,668,000	4,344,000	14,324,000	8,947,000	3,680,000	5,267,000
2034	19,054,000	4,370,000	14,684,000	9,110,000	3,696,000	5,414,000
2035	19,448,000	4,396,000	15,052,000	9,276,000	3,712,000	5,564,000
2036	19,850,000	4,422,000	15,428,000	9,445,000	3,729,000	5,716,000
2037	20,260,000	4,449,000	15,811,000	9,617,000	3,746,000	5,871,000
2038	20,679,000	4,476,000	16,203,000	9,792,000	3,763,000	6,029,000
2039	21,106,000	4,503,000	16,603,000	9,970,000	3,780,000	6,190,000
2040	21,542,000	4,530,000	17,012,000	10,151,000	3,797,000	6,354,000
2041	21,987,000	4,557,000	17,430,000	10,336,000	3,814,000	6,522,000
2042	22,441,000	4,584,000	17,857,000	10,524,000	3,831,000	6,693,000
2043	22,905,000	4,612,000	18,293,000	10,716,000	3,848,000	6,868,000
2044	23,378,000	4,640,000	18,738,000	10,911,000	3,865,000	7,046,000
2045	23,861,000	4,668,000	19,193,000	11,110,000	3,882,000	7,228,000
2046	24,354,000	4,696,000	19,658,000	11,312,000	3,900,000	7,412,000
2047	24,857,000	4,724,000	20,133,000	11,518,000	3,918,000	7,600,000
2048	25,371,000	4,752,000	20,619,000	11,728,000	3,936,000	7,792,000
2049	25,895,000	4,780,000	21,115,000	11,941,000	3,954,000	7,987,000
2050	26,430,000	4,809,000	21,621,000	12,158,000	3,972,000	8,186,000
2051	26,976,000	4,838,000	22,138,000	12,379,000	3,990,000	8,389,000
2052	27,533,000	4,867,000	22,666,000	12,604,000	4,008,000	8,596,000
2053	28,102,000	4,896,000	23,206,000	12,833,000	4,026,000	8,807,000
2054	28,683,000	4,925,000	23,758,000	13,067,000	4,044,000	9,023,000
2055	29,276,000	4,954,000	24,322,000	13,305,000	4,062,000	9,243,000
2056	29,881,000	4,984,000	24,897,000	13,547,000	4,081,000	9,466,000
2057	30,499,000	5,014,000	25,485,000	13,794,000	4,100,000	9,694,000
2058	31,129,000	5,044,000	26,085,000	14,045,000	4,119,000	9,926,000
2059	31,772,000	5,074,000	26,698,000	14,301,000	4,138,000	10,163,000

Notes: Ramp up was assumed to be 61%, 81%, and 95% in years 1, 2, and 3, respectively.

An annualization factor of 335 was used to calculate annual totals.

It is important to note that over the course of conducting the preliminary traffic and revenue studies for the Intra County Parkway, it was discovered that the Intra County Parkway was not included in the KRTPO Travel Demand Model's highway network and trip tables. It is WSA's belief that had these trip tables been in place traffic volumes would have been 5 to 10 percent greater.

More in detailed discussion of the projections is contained within the January 2007 Proposed Intra County Parkway Preliminary Traffic and Revenue Study prepared by WSA.

Financial

Preliminary bonding capacity analyses were performed for both of the Intra County Parkway scenarios. This analysis was performed to estimate the amount of project costs that could be paid for with proceeds from bonds supported by toll revenues. This analysis is based on the revenue numbers forecasted in the preliminary traffic and revenue studies and presented above in *Table 3*. This analysis utilizes a bond sizing model typical of financings for other toll roads within the United States that have been recently issued by public authorities. The interest rate assumptions are indicative of WSA's understanding of current market conditions, which are subject to change based upon factors outside the control of WSA and TDOT.

Potential bonding capacity was calculated for both a net and a gross revenue pledge. Under a net pledge operations and maintenance are paid prior to debt services. This pledge provides comfort that the facility will be operated and revenues collected.

Under a gross revenue pledge, debt service is paid prior to operations and maintenance being paid. This results in an increase in bonding capacity. For a gross pledge to be financable, TDOT or some other entity would have to guarantee to pay the operations and maintenance costs should toll revenue be insufficient to pay debt service and operations and maintenance. These costs would be subject to reimbursement from future revenue.

Table 4 sets forth the estimated bonding capacity for Scenarios 1 and 2 under both a net and gross revenue pledge scenario. These estimates are net of financing costs, capitalized interest, and a debt services reserve—typical costs and reserves which are either paid or funded out of proceeds from financings.

	<u>Net Pledge</u>		<u>Gross Pledge</u>	
	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 1</u>	<u>Scenario 2</u>
Bonding Capacity	\$ 109.30	\$ 37.80	\$ 140.20	\$ 66.90
Financial Costs and Reserves	<u>18.10</u>	<u>5.40</u>	<u>13.60</u>	<u>9.90</u>
Net Bonding Capacity	\$ 91.20	\$ 32.40	\$ 126.60	\$ 57.00

The bonding capacity analyses were based on the following major assumptions:

- Project bonds are a combination of Current Interest Bonds and Capital Appreciation Bonds with 40-year maturities
- Both series of project bonds are issued at parity (i.e. both have equal claims to revenue)
- Project bonds have debt service coverage ratios of 1.75X for both series
- Both series have investment grade ratings
- All reserve funds are invested at 4% per annum
- Each project is open for traffic as indicated in *Table 3*
- Interest is capitalized during the assumed construction period for each project
- Financing costs assumed to equal 2.5% of bond size
- Debt Service Reserve is funded at closing from proceeds and estimated to equal 10% of total bond size

The bonding capacity analysis is provided for planning purposes only and is not intended to supplant the analysis that will be required by a financial advisor or underwriter as part of the financing process. The analysis is based on prevailing market rates and conditions for similar revenue bond offerings as of the date of this report. Changes in financial market conditions and further refinements by a financial advisor could materially alter the results of the bond sizing model.

A project's financial feasibility is dependent upon total available funding sources being adequate to pay for project costs. *Table 5* sets forth the conceptual plans of finance for the Intra County Parkway. These conceptual plans of finance are based on the estimated project costs shown in *Table 2*, revenue and operating costs set forth in *Table 3*, and bonding capacities shown in *Table 4*.

	Scenario 1		Scenario 2	
	<u>Net Pledge</u>	<u>Gross Pledge</u>	<u>Net Pledge</u>	<u>Gross Pledge</u>
<i>Sources</i>				
Bonding Capacity	\$ 106.70	\$ 136.10	\$ 37.20	\$ 64.90
Investment Earnings	\$ 2.60	\$ 4.10	\$ 0.70	\$ 1.90
Public Contribution	<u>\$ 218.30</u>	<u>\$ 190.30</u>	<u>\$ 131.30</u>	<u>\$ 106.90</u>
Total Sources	\$ 327.60	\$ 330.50	\$ 169.20	\$ 173.70
<i>Uses</i>				
Project Costs	\$ 309.50	\$ 309.50	\$ 163.80	\$ 163.80
Financing Costs	\$ 7.40	\$ 7.40	\$ 1.70	\$ 3.40
Debt Service Reserve	<u>\$ 10.70</u>	<u>\$ 13.60</u>	<u>\$ 3.70</u>	<u>\$ 6.50</u>
Total Uses	\$ 327.60	\$ 330.50	\$ 169.20	\$ 173.70

Each of the line items shown in the conceptual plans of finance are discussed below:

<i>Bonding Capacity:</i>	The amount of debt that can be supported from a given revenue stream.
<i>Investment Earnings:</i>	Interest and earnings on unused bond proceeds. Bond proceeds are held in trust and drawn down over time to pay for project costs.
<i>Public Contribution:</i>	Public funding needed to cover difference, if any, between net bonding capacity and project costs.
<i>Project Costs:</i>	Estimated engineering, construction, and toll system costs of a project.
<i>Financing Costs:</i>	Transaction costs of a financing paid to underwriters, bond counsel, rating agencies, etc. This line item includes interest paid to bondholders during the construction of a project.
<i>Debt Service Reserve:</i>	Reserve account funded out of proceeds of a bond offering to provide funds to cover unforeseen circumstances resulting in operational deficiencies.

As shown in *Table 5*, on a conceptual level each of the Intra County Parkway plans requires a public contribution in order to cover all project and financing costs.

NEXT STEPS

At this early stage sufficient information has not been developed to make a final conclusion concerning the feasibility of the Intra County Parkway. There remain issues yet to be addressed that will significantly influence this outcome. At this time, the Intra County Parkway does not demonstrate sufficient financial feasibility to warrant recommendation as a toll project. However, it has been noted that the current results may be adversely affected by the fact that at the present time, the KRTDM treats a number of traffic analysis zones of significant import to the ICP as external zones and, therefore, may lack the detail necessary to accurately predict future demand on the proposed project. The financial feasibility of the ICP may be revisited once appropriate revisions have been made to the KRTDM.

Specifically, Wilbur Smith recommends that TDOT undertake the following steps:

- Inclusion of the Intra County Parkway in the next TIP and/or LRTP in order to study this project in a regional transportation context;
- Expand upon KRTDM socioeconomic data and trip tables in external zones affecting the Intra County Parkway;

- Reduce the inflationary impact on construction by revisiting the opening-year assumption to reflect funding the project with tolls, rather than through traditional funding mechanisms;
- Perform a project specific estimate of construction costs; and
- Retain either an investment bank or a financial advisor to prepare a more sophisticated financial model including both federal lending programs and 3P or concessionaire financings.

TDOT has made known its intent to work with local planning staff to enhance the travel demand model along the SR-66 corridor. In addition to enhancing model detail in the area in question, it has been suggested that tourist-oriented traffic patterns may not be adequately represented in the current KRTDM. In particular, more information is needed to identify the percentage of traffic destined for the Great Smoky Mountains National Park, as opposed to the percentage of local and tourist traffic headed for commercial development along SR-66. These revisions should be finalized before any further study commences.