

Project Proposal

A. General Information

Provide basic information about the project including: Project Title – The proper name used to identify this project; Project Working Title - The working name or acronym that will be used for the project; Proponent Secretariat - The Secretariat to whom the proponent agency is assigned or the Secretariat that is sponsoring an enterprise project; Proponent Agency – The agency that will be responsible for the management of the project; Prepared by – The person(s) preparing this document; Date Prepared - The date this document is initially prepared.

Project Title:	Electronic Toll Customer Service and Violation Enforcement System	Project Working Title:	Electronic Toll Customer Service and Violation Enforcement System
Proponent Secretariat:	Secretary of Transportation	Proponent Agency:	VDOT
Chair, Transportation Oversight Committee	Deputy Secretary of Transportation	Proponent Agency:	VDOT
Prepared by:	Greg Woodsmall	Date Prepared:	10/26/2005
Edited by:	Kathy Henley, VDOT, ITD	Date Edited:	11/16/2005

Answer the following questions by marking Yes or No and provide a brief response as appropriate.

	Yes	No
Is this an updated Project Proposal Document? If yes, what is the reason for this update? The preliminary design and related benefit – cost analysis resulted in the inclusion of a new Smart Tag Customer Service Center System that is to be fully integrated with the Violation Processing System that was the original focus of this project.	X	
Is this a follow-on to a previous project? If yes, what is the project name and date of completion? Name of previous project: _____ Date completed: _____		X
Will the project deliverable(s) replace a current asset or group of assets? If yes, what is being replaced? Replacing existing Smart Tag back office and customer support system	X	
Is the Project Initiation Phase effort funded? If yes, what is the amount of funding? \$175,000	X	

Is the Project Planning Phase effort funded? If yes, what is the amount of funding? \$269,000	X	
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Points of Contact

List the principal individuals who may be contacted for information regarding the project.

Position	Title/Name/Organization	Phone	E-mail
<i>Project Sponsor</i>	Chief Financial Officer, Barbara Reese, VDOT	(804) 786-5128	Barbara.Reese@VDOT.Virginia.gov
<i>Program Manager</i>	Director, Innovative Finance and Revenue Operations, Deborah Brown, VDOT	(804) 786-9847	Deborah.Brown@VDOT.Virginia.gov
<i>Project Manager (Designee)</i>	Dulles Toll Road Director Greg Woodsmall, VDOT	(703) 383-2697	Gregory.Woodsmall@VDOT.Virginia.gov
<i>Proponent Cabinet Secretariat</i>	Secretary of Transportation, Pierce Homer	(804) 786-8032	Pierce.Homer@Governor.Virginia.gov
<i>Chair, Transportation Oversight Committee</i>	Deputy Secretary of Transportation, Ralph Davis	(804) 786-8032	Ralph.Davis@Governor.Virginia.gov
<i>Proponent Agency Head</i>	Acting Commissioner, Gregory Whirley, VDOT	(804) 786-2702	Greg.Whirley@VDOT.Virginia.gov
<i>Customer (User) Representative(s)</i>	Dulles Toll Road Toll Facility, Director, Greg Woodsmall, VDOT Coleman Bridge Toll Facility Director, Terry Cooke, VDOT Chesapeake Expressway Director, Terry Herbert Dulles Greenway, Chief Executive Officer, E. Thomas Sines, TRIP II Richmond Metropolitan Authority, Director of Operations, Jim Kennedy	(703) 383-2697 (804) 642-1300 (757) 204-0014 (703) 707-9096 (804) 649-8494	Greg.Woodsmall@VDOT.Virginia.gov Terry.Cooke@VDOT.Virginia.gov therbert@mail.city.chesapeake.va.us tsines@dullesgreenway.com jimk@the-rma.org

<i>Other</i>	Richmond Toll Facilities Director, Vacant	(804) 236-3751	TBA
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	Toll Revenue and Financial Planning Manager, Burt Boehling, VDOT	(804) 786-9805	R.Boehling@VDOT.Virginia.gov
	Murali Rao, Director, Information Technology Applications Division	(804) 786-9702	Murali.Rao@VDOT.virginia.gov

B. Project Purpose

Explain the business reason(s) for doing this project. If the Project Analysis Worksheet was completed, the Project Purpose (Section B) from the worksheet provides information to support completion of this section.

1. Business Problem

The Business Problem is a question, issue, or situation, pertaining to the business, which needs to be answered or resolved. State in specific terms the problem or issue this project will resolve. Often, the Business Problem is reflected as a critical business issue or initiative in the Agency's Strategic Plan or IT Strategic Plan.

This document describes the project in terms of the business needs, scope, schedule and organization necessary to implement a solution for an integrated toll collection and violation enforcement system.

Violation rates on toll roads in Virginia range between 1% to 2% of total transactions and account for annual lost revenue of over \$1.6 million on VDOT's toll roads alone. Toll agencies without an effective Violation Enforcement System (VES) have little control over toll violation rates and have identified the need to evaluate the related costs and benefits of a new VES. Of the three VDOT toll facilities in Virginia, only one has a violation system. This system is aging, requires significant manual effort to operate and is in need of upgrade. The largest toll facility in Virginia, the Dulles Toll Road, has no violation system and independent studies have shown that toll violation rates can be reduced and income generated through deployment of a violation system.

Additionally, needs analysis, best-in-practice reviews and cost benefit analysis have indicated that the most effective way to deploy and operate a VES for VDOT is to combine the central VES capabilities with the existing electronic toll collection (Smart Tag) customer service center (CSC) system. Since the scope and cost of VES is similar in size to a complete CSC system and since a number of upgrades to the CSC are currently envisioned, this project will develop and implement a new, integrated VES and CSC system.

The business problems for the integrated CSC and VES can be succinctly defined as the following steps:

- Manage Smart Tag customer accounts;
- Process Smart Tag transactions received from Virginia and E-ZPass agencies; and
- Provide cost effective account management and account query capabilities.
- Identify toll violators;
- Identify those violators that are Smart Tag customers;
- Request payment, track and escalate violations; and
- Provide cost effective processes for handling violator queries and violation disposition.

2. Project Business Objectives

Define the specific Business Objectives of the project that correlate to the strategic initiatives or issues identified in the Commonwealth or Agency Strategic Plan. Every Business Objective must relate to at least one strategic initiative or issue and every initiative or issue cited must relate to at least one Project Business Objective.

<i>Commonwealth or Agency Strategic Plan – Critical Issues</i>	<i>Project Business Objectives</i>
Limited Financial Resources	Improve collection of tolls and administrative fees from toll evaders, and improve efficiency of electronic toll collection application by implementing an integrated CSC and VES system.

3. Core Business Activity Impacted

Core Business Activities are agency defined cross-functional processes that produce the agency's primary products and services, or support the production of the products or services. List the Core Business Activities impacted by the project and identify the impact.

<i>Agency Core Business Activity</i>		<i>Impact on Core Business Activity</i>
Core Business Activity Title	Core Business Activity Sub-Function Title	
GROUND TRANSPORTATION: Efforts to plan, maintain and regulate all forms of ground transportation	Toll Facility Operations	Enhance ability to collect tolls to service bonds in a cost efficient way through expanded electronic toll collection.
GROUND TRANSPORTATION: Efforts to plan, maintain and regulate all forms of ground transportation	Toll Facility Operations	Improve the percentage of revenue collected from toll road users.
GROUND TRANSPORTATION: Efforts to plan, maintain and regulate all forms of ground transportation	Toll Facility Operations	Improve ability of customers to manage their toll and violation transactions through additional web and telephone support.

4. Constraints

Constraints are items that by their nature restrict choice. Identify Constraints that will influence the selection of a solution to resolve the Business Problem. Constraints can include but are not limited to: time, funding, personnel, facilities, and management limitations.

- The new central system must communicate with existing toll facility systems at the seven toll roads in Virginia that are utilizing Smart Tag.
- The new central system must support processing of home and away E-ZPass transactions through connection to the E-ZPass network.
- The new violation equipment to be installed in the toll lanes must be compatible with and interface to existing toll lane equipment and support the methods of operation at each toll facility.
- The new central system must allow migration of data from the existing service center system.
- The system must support interfaces to DMVs in several states.

C. Project Description

Describe the project approach, the specific solution, customer(s) served, and expected benefits. The approach is the overall strategy for solving the Business Problem. The solution should identify in specific terms how the project is accomplished and include information about the general timing and cost of major procurements or purchases. If the Project Analysis Worksheet was completed, the Preliminary Project Description (Section C) and the Recommendation (Section G) on the worksheet provide information to support development of the Project Description.

The Integrated Statewide Electronic Toll Customer Service and Violation Enforcement System project involves the design and procurement of hardware, software and operational staffing to provide services for processing electronic tolls, managing customer accounts, and collecting tolls and fees from users who try to avoid toll payments on the toll facilities. The system will replace the current service center system to provide enhanced capabilities and provide new violation enforcement functions through fully integrated management of electronic tolls and violations. This will ensure a maximum level of customer service to Virginia's electronic toll collection customers while providing the most cost effective collection of violation revenue from nonpayers. The system will accept toll transaction and violation image transaction information from the toll facilities, process this information against electronic toll customer accounts and maintain an auditable balance status for these accounts. Images of violators that do not have accounts will be used to retrieve vehicle owner information from a relevant DMV in order to implement an escalating collection process supported by the system.

The project will include design and procurement of:

- A central system housing the account and violation databases, application processing, operator GUIs, reporting, Internet web site and automated telephone capabilities;
- Camera, image capture and communication equipment installed in the toll lanes and at the toll facility host locations;
- Implementation of a wide area communications network to support transfer of files and, transactions necessary to support electronic toll collection and violation enforcement;
- Deployment of a geographically separate disaster recovery system that can take over the functions described above and is synchronized with the primary system; and
- Turnkey operations services to run the systems described above.

It is anticipated that the system to be procured will be a customized configuration of existing software.

The capital budget for the project is estimated at \$12.1 million which includes installation of equipment in all lanes of the 3 VDOT toll facilities plus the installation, configuration and testing of the central, integrated system.

The system is expected to generate toll and administrative fee revenues of \$9 million per year. Additional customer service functionality is anticipated through the enhanced service center system. Additional service center enhancements are expected to provide reduction in operating costs through reducing credit card fees which currently run at about \$2.5 million per year.

Cost benefit analysis showed that ongoing operational efficiencies gained by integrating the CSC system and VES would offset the additional capital costs. Additionally, a number of enhancements to the CSC system were required to bring the existing operation into line with other comparable systems around the country, to provide the desired level of customer service and to help reduce the operational costs associated with account replenishments through credit cards.

D. Strategic Justification

Identify how the project is consistent with the Commonwealth and Agency Strategic or IT Strategic Plan. If the project is not consistent, explain why the project is being proposed.

Answer the following questions in the space provided. Attach detailed explanations and analysis as appendices.

1. Briefly, describe how this project supports or is consistent with the Commonwealth of Virginia Strategic Plan for Technology. If it does not support the Commonwealth of Virginia Strategic Plan for Technology, explain why this project proposal is being submitted.

This project will improve the web accessibility of Smart Tag customer service and violations processing supporting the Secretary's Initiative 1, as defined in the strategic plan for technology, in the area of revolutionizing service delivery to Commonwealth customers through provision of enhanced Internet service.

2. Explain where and how this project is identified in the Agency IT Strategic Plan most recently approved by the Chief Information Officer. If it is not identified in the plan, explain why this project proposal is being submitted.

This project is identified in the Agency IT strategic plan as a Major IT project approved for preliminary planning. The original approved project consisted of a stand alone violation enforcement system. However analysis has shown that combining violation enforcement with CSC functionality will provide ongoing operational economies and a greater level of customer service.

3. Briefly, describe how the planned solution complies with Commonwealth Enterprise Architecture Standards. If it does not comply with the Commonwealth Enterprise Architecture Standards, explain why this Project Proposal Document is being submitted, and identify which Commonwealth Enterprise Architecture Standard(s) are not being met.

The chosen vendor will be required to comply with Commonwealth Enterprise Architecture Standards where these do not conflict with the ability to utilize existing off-the-shelf software packages.

E. Estimated Project Development Schedule (Major Milestones)

Identify major Project Milestones for planning, execution, and closeout.

<i>Event</i>	<i>Estimated Date</i>	<i>Estimated Duration</i>
<i>Project Charter and Proposal Approved</i>	December 05	1 month
<i>Project Plan Completed</i>	January 06	8 months
<i>Project Plan Approved</i>	February 06	1 month
<i>Development Phase (work with contractor to develop project plans after contract award)</i>	December 05	2 months
<i>Project Execution Started</i>	February 06	8 months
<i>Project Execution Completed</i>	October 06	
<i>Project Closed Out</i>	March 07	6 months

F. Financial Estimate

Provide an economic justification for the project based upon the Cost Benefit Analysis and the expected return on investment. Identify the estimated funding resources required to complete the project and then identify the funding requirements to operate or maintain the product(s) or service(s) developed from the project.

1. Cost Benefit Analysis Summary

Answer the following questions in the space provided. Attach detailed explanations and analysis as appendices.

a. Summarize the results of the Cost Benefit Analysis. Explain why the expected monetary and non-monetary benefits validate the expenditure of resources for this project. Attach the Cost Benefit Analysis as Appendix A. Describe saving achieved and separate savings from cost avoidance.

Since this project is enhancing and supplementing an existing system and operation, the costs and benefits relative to a do nothing scenario were calculated. The do nothing scenario includes necessary enhancements to the current service center and ongoing operations of that center.

The Net Present Value (NPV) of the capital plus five years of operations and maintenance costs is \$31.9 million above the do nothing scenario.

The NPV of the 5 year cash benefits anticipated from additional income, including additional toll revenues and administrative fees are \$43.3 million.

The NPV of the 5 year cost savings including facility personnel reductions and savings associated with reduced equipment maintenance and replacement are \$1.3 million.

This gives an overall Cost/Benefit ratio of 0.71

Non-monetary benefits include:

- improved ability to collect tolls to service bonds and help maintain VDOT's bond rating;
- improved ability to support toll funded public private partnerships; and;
- improved customer service through CSC system enhancements.

The VES functions will also be offered to non-VDOT toll roads, permitting additional offset of operating and capital costs.

b. Summarize the results of the Return on Investment Analysis. Provide ROI for 5 years and 10 years. If the project does not have a positive expected return on investment, explain why this project proposal should be approved. Attach the detailed Return on Investment Analysis as Appendix B.

5 year investment over do nothing scenario = \$31.89 million

5 year benefits = \$44.63 million

5 Year ROI = 40%

10 year investment over do nothing scenario = \$55.73 million

10 year benefits: \$87.3 million

10 year ROI = 57%

[Note – this conservatively assumes no changes in toll rates or administration fees over 10 year period. Changes in either of these will result in greater benefits]

2. Estimate of Execution Expenditures and Funding

Provide an Estimate of the Expenditures and Funding required for execution and close out of the project.

Estimated Expenditures (\$000)						
	<i>FY 2005</i>	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>Total</i>	<i>Comments</i>
<i>Internal Staff Labor</i>	60	80	28		168	
<i>Services</i>	460	5,135	100		5,695	Project management, software and installation
<i>Software Tools</i>		-			-	
<i>Hardware</i>		3,144			3,144	Central systems plus field hardware for VES
<i>Materials and Supplies</i>		-			-	
<i>Facilities</i>		1,121			1,121	
<i>Telecommunications</i>		265			265	
<i>Training</i>		447			447	
<i>IV&V</i>	100	50	22		172	
<i>Contingency (Risk)</i>		1,101			1,101	
<i>Total</i>	620	11,343	150		12,113	
This estimate is accurate to: 50% [] 60% [] 70% [] 80% [] 90% [X]						
Explanation: System will be procured from one or more vendors. Most cost categories will be included in their contract. Cost includes consultant for project management and vendor oversight. FY2005 expenditures were related to conducting the RFP, preparing the cost/benefit analysis, refining the Proposal and Charter, and conducting IV&V reviews.						
Anticipated (proposed) Funding Source (\$000)						
	<i>FY 2005</i>	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>Total</i>	<i>Comments</i>
<i>General Fund</i>						
<i>Non-General Fund</i>	620	11,343	150		12,113	
<i>Federal</i>						
<i>Other</i>						
<i>Total</i>	620	11,343	150		12,113	
This estimate is accurate to: 50% [] 60% [] 70% [] 80% [] 90% [X]						
Explanation: Revolving Toll Fund						

3. Estimate of Operations Expenditures and Funding

Provide an Estimate of the Expenditures and Funding for Operations and Maintenance of the asset(s) delivered upon project completion.

Estimated Expenditures (\$000)						
	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>FY 2009</i>	<i>Total</i>	<i>Comments</i>
<i>Internal Staff Labor</i>	120	124	127	131	502	
<i>Services</i>	10,277	10,301	10,462	10,998	42,038	
<i>Software Tools</i>	-	-	-	-	-	
<i>Hardware</i>	266	266	266	282	1,080	
<i>Materials and Supplies</i>	122	128	133	141	524	
<i>Facilities</i>	297	297	297	308	1,199	
<i>Telecommunications</i>	551	574	598	634	2,357	
<i>Training</i>	-	-	-	-	-	
<i>Contingency (Risk)</i>	582	584	594	625	2,385	
<i>Total</i>	12,215	12,273	12,478	13,120	50,086	
This estimate is accurate to: 50% [] 60% [] 70% [] 80% [] 90% [X]						
Explanation: Since the project will upgrade the existing Smart Tag Customer Service Center and a violation system, operating expenditures for those operations are listed for the project execution period (FY06 and FY07).						
Anticipated (proposed) Funding Source (\$000)						
	<i>FY 2006</i>	<i>FY 2007</i>	<i>FY 2008</i>	<i>FY 2009</i>	<i>Total</i>	<i>Comments</i>
<i>General Fund</i>						
<i>Non-General Fund</i>	12,215	12,273	12,478	13,120	50,086	
<i>Federal</i>						
<i>Other</i>						
<i>Total</i>	12,215	12,273	12,478	13,120	50,086	
This estimate is accurate to: 50% [] 60% [] 70% [] 80% [] 90% [X]						

Explanation: Revolving Toll Fund

G. Project Risk

After completing a Preliminary Risk Analysis Worksheet for this project, determine the level of risk for the project and the risk score. On the chart below, circle the resulting risk level and record the risk score for each risk item. Attach the Preliminary Risk Analysis Worksheet as Appendix C.

Risk Item	Risk Level	Risk Score
<p>Budget Risk</p> <p>What level of risk does the proposed budget represent to the project?</p>	<p>High (18-25)</p> <p>Medium (9-17)</p> <p>Low (1-8)</p> <p>None (0)</p>	6
<p>External Dependencies Risk</p> <p>How dependent is the project on other projects or work efforts?</p>	<p>High (11-15)</p> <p>Medium (6-10)</p> <p>Low (1-5)</p> <p>None (0)</p>	7
<p>Management Risk</p> <p>What level of risk does the organization's project management capability represent?</p>	<p>High (11-15)</p> <p>Medium (6-10)</p> <p>Low (1-5)</p> <p>None (0)</p>	2
<p>Mission Critical Risk</p> <p>How critical is the project success to the success of the organization?</p>	<p>High (11-15)</p> <p>Medium (6-10)</p> <p>Low (1-5)</p> <p>None (0)</p>	3
<p>Failure Risk</p> <p>What is the risk of failure?</p>	<p>High (11-15)</p> <p>Medium (6-10)</p> <p>Low (1-5)</p> <p>None (0)</p>	6
<p>Complexity Risk</p>	<p>High (11-15)</p>	9

	Low (1-5)	
	None (0)	
Preliminary Risk Assessment	High (73-100)	Total Risk Score:
<i>What is the overall risk of the project?</i>	Medium (36-72)	33
	Low (1-35)	
	None (0)	

H. Approvals

Obtain the Project Sponsor's and Agency Head's signatures indicating approval to submit this Project Proposal for investment consideration. If the Agency Head's signature is the only signature provided, the Agency Head is assumed to also be the Project Sponsor.

Position/Title	Signature	Date
Project Sponsor	<i>Barbara W Reese</i>	<i>11/8/05</i>
Agency Head	<i>Gregory S. Whaley</i>	<i>12/05/05</i>