

Traffic Signal System Modernization -- No. 500704

Category
Subcategory
Administering Agency
Planning Area

Transportation
Traffic Improvements
Transportation
Countywide

Date Last Modified
Required Adequate Public Facility
Relocation Impact
Status

January 12, 2010
No
None.
Under Construction

EXPENDITURE SCHEDULE (\$000)

Cost Element	Total	Thru FY09	Est. FY10	Total 6 Years	FY11	FY12	FY13	FY14	FY15	FY16	Beyond 6 Years
Planning, Design, and Supervision	5,633	1,828	517	3,288	548	548	548	548	548	548	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	30,227	800	6,443	22,984	6,952	7,452	3,112	2,564	1,452	1,452	0
Construction	0	0	0	0	0	0	0	0	0	0	0
Other	37	37	0	0	0	0	0	0	0	0	0
Total	35,897	2,665	6,960	26,272	7,500	8,000	3,660	3,112	2,000	2,000	0

FUNDING SCHEDULE (\$000)

Current Revenue: General	1,625	355	1,270	0	0	0	0	0	0	0	0
Federal Aid	0	0	0	0	0	0	0	0	0	0	0
G.O. Bonds	14,309	600	2,209	11,500	5,500	6,000	0	0	0	0	0
Recordation Tax Premium	7,963	1,710	3,481	2,772	0	0	1,660	1,112	0	0	0
State Aid	12,000	0	0	12,000	2,000	2,000	2,000	2,000	2,000	2,000	0
Total	35,897	2,665	6,960	26,272	7,500	8,000	3,660	3,112	2,000	2,000	0

OPERATING BUDGET IMPACT (\$000)

Maintenance				1,605	105	300	300	300	300	300	
Program-Other				21	0	3	3	3	6	6	
Net Impact				1,626	105	303	303	303	306	306	
WorkYears					6.0	6.0	6.0	6.0	6.0	6.0	

DESCRIPTION

This project provides for the modernization of the county's aged traffic signal system. Phase I consisted of planning, requirements development, systems engineering and testing. Phase II consists of acquisition of central system hardware and software, acquisition and implementation of control equipment and communications for intersections, as well as reconfiguration of the communications cable plant.

Phase I was completed in FY08. Phase II, implementation, commenced in FY09. As a result of the November 2009 failure of the existing system, Phase II is now refined into two sub-phases, A and B, so that replacement of the existing system can be accelerated. Phase IIA encompasses critical work that is necessary to deactivate the existing system. Phase IIB will include all other work that is not critical to replacement of the existing system.

ESTIMATED SCHEDULE

Phase I - complete, FY07-08
Phase IIA - In progress, FY09-12
Phase IIB - FY13-16

COST CHANGE

Increase due to implementation of Phase IIA and accelerating the replacement of the existing system by the end of FY12. Federal earmark of \$269,000 was recalled by the Federal Highway Administration (FHWA) requiring a reduction in expenditures and appropriation.

JUSTIFICATION

The existing traffic signal control system, though it has been highly reliable, is an aging system dependent on dated technology. Central and field communications devices are obsolete and problematic to maintain. As the technologies employed in the Advanced Transportation Management System (ATMS) have advanced, it has become increasingly difficult to interface with the existing traffic signal control system (COMTRAC). Because of the limited functionality of the COMTRAC, the system is not able to take advantage of the capabilities of the current generation of local intersection controllers. These capabilities provide a greater level of flexibility to manage traffic demands.

In November 2009, the existing traffic signal system experienced a failure that caused significant congestion and delays throughout the County for nearly two days. This event has necessitated that the existing system be replaced sooner than was planned in the original project schedule.

The following reports were developed as part of the research, planning and system engineering work on this project. These reports documented the existing condition and need to modernize the existing signal control system, as well as the evaluation and engineering of specific components of the replacement system:

APPROPRIATION AND EXPENDITURE DATA	COORDINATION	MAP												
<table border="1"> <tr> <td>Date First Appropriation</td> <td>FY07</td> <td>(\$000)</td> </tr> <tr> <td>First Cost Estimate</td> <td>FY11</td> <td>35,897</td> </tr> <tr> <td>Last FY's Cost Estimate</td> <td></td> <td>35,897</td> </tr> </table>	Date First Appropriation	FY07	(\$000)	First Cost Estimate	FY11	35,897	Last FY's Cost Estimate		35,897	<p>Traffic Signals Project Advanced Transportation Management System Maryland State Highway Administration Department of Technology Services</p>				
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Total Partial Closeout		0												

Traffic Signal System Modernization -- No. 500704 (continued)

- White paper on the status and future of the traffic signal system in Montgomery County, March 2001;
- Traffic signal system replacement white paper, January 2002
- Concept of operations (rev 1.4), October 2007
- TSSM requirements (rev g), October 2007
- TSSM communications master plan (rev c), February 2009
- TSSM risk assessment and analysis (rev e), April 2009

FISCAL NOTE

The county's traffic signal system supports approximately 800 traffic signals, about 550 of which are owned by the Maryland State Highway Administration (MSHA) and maintained and operated by the County on a reimbursement basis. MSHA plans to separately fund and implement other complimentary work and intersection upgrades amounting to approximately \$12.5 million that are not reflected in the project costs displayed above.

Project appropriations have been reduced in FY09 (-\$106,000) and FY11 (-\$269,000) to reconcile the recall of a \$375,000 federal earmark that was originally programmed in FY07.

MSHA has committed to provide \$12 million in State aid to this project. This aid was originally programmed during FY09-14, but has not materialized due to the State's fiscal situation. MSHA remains committed to the full \$12 million in aid for this project, and the State aid as displayed is the best estimate of the schedule of the aid becoming available.

\$2,000,000 has been moved to the TSSM project from the State Transportation Participation CIP (No. 500722) with repayment to that project in FY17.

The project schedule and costs for Phase IIB have not been finalized due to the emphasis on Phase IIA activities and will be adjusted in the future.

Operating budget impacts are expected as a result of this project and will be identified as the project continues to develop.

OTHER DISCLOSURES

- The Executive asserts that this project conforms to the requirements of relevant local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.