

**J00B01**  
**State Highway Administration**  
**Maryland Department of Transportation**

***Operating Budget Data***

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	(\$ in Thousands)				
	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 03 - 04</u>	<u>FY 03 - 04</u>
	<u>Actual</u>	<u>Approp.</u>	<u>Allowance</u>	<u>Change</u>	<u>% Change</u>
Special Funds	\$615,751	\$607,917	\$631,948	\$24,031	4.0%
Contingent & Back of Bill Reductions	0	-55	-102,992	-102,937	187,334.5%
<b>Adjusted Special Funds</b>	<b>\$615,751</b>	<b>\$607,862</b>	<b>\$528,956</b>	<b>-\$78,906</b>	<b>-13.0%</b>
Federal Funds	11,870	8,877	9,532	655	7.4%
Contingent & Back of Bill Reductions	0	0	-23	-23	0.0%
<b>Adjusted Federal Funds</b>	<b>\$11,870</b>	<b>\$8,877</b>	<b>\$9,509</b>	<b>\$632</b>	<b>7.1%</b>
<b>Adjusted Grand Total</b>	<b>\$627,621</b>	<b>\$616,739</b>	<b>\$538,465</b>	<b>-\$78,274</b>	<b>-12.7%</b>

- Highway user revenue grants to local jurisdictions decrease \$73.5 million reflecting the administration's proposal to transfer \$102,440,128 in highway user revenues to the general fund and estimated increases in revenues that fund these grants.
- When the proposed transfer of highway user revenue grants is not taken into account, the unadjusted fiscal 2004 allowance increases \$24.7 million. This increase is attributable to the normal growth in revenues for highway user revenues, before the transfer. If the transfer occurs, the operating budget for the State Highway Administration (SHA) in fiscal 2004 actually decreases \$78.3 million.
- SHA advises that reductions were made to spending that will impact services provided by SHA such as mowing or mulching along State highways but will not impact safety as those items will be given higher funding priority with remaining funding.

Note: Numbers may not sum to total due to rounding.

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## Paygo Capital Budget Data

(\$ in Thousands)					
	<u>FY 2002</u> <u>Actual</u>	<u>FY 2003</u> <u>Approp.</u>	<u>FY 2004</u> <u>Allowance</u>	<u>F Y03 - 04</u> <u>Change</u>	<u>FY 03 - 04</u> <u>% Change</u>
Special Funds	352,180	358,781	381,779	22,998	6.4%
Contingent & Back of Bill Reductions	0	-57	-427	-370	646.5%
<b>Adjusted Special Funds</b>	<b>\$352,180</b>	<b>\$358,724</b>	<b>\$381,352</b>	<b>\$22,629</b>	<b>6.3%</b>
Federal Funds	563,822	491,001	487,220	-3,781	-0.8%
Contingent & Back of Bill Reductions	0	-24	-422	-398	1656.2%
<b>Adjusted Federal Funds</b>	<b>\$563,822</b>	<b>\$490,977</b>	<b>\$486,798</b>	<b>-4,179</b>	<b>-0.9%</b>
<b>Adjusted Grand Total</b>	<b>916,002</b>	<b>849,701</b>	<b>868,150</b>	<b>18,450</b>	<b>2.2%</b>

- The capital program increases by \$18.5 million in fiscal 2004 due to normal fluctuations in cash flow for large projects, including the Woodrow Wilson Bridge.

## Personnel Data

	<u>FY 02</u> <u>Actual</u>	<u>FY 03</u> <u>Working</u>	<u>FY 04</u> <u>Allowance</u>	<u>Change</u>
Regular Positions	3,500.50	3,350.00	3,350.00	0.00
Contractual FTEs	12.09	20.00	24.00	4.00
<b>Total Personnel</b>	<b>3,512.59</b>	<b>3,370.00</b>	<b>3,374.00</b>	<b>4.00</b>

### Vacancy Data: Regular Positions

Budgeted Turnover: FY 04	116.58	3.48%
Positions Vacant as of 12/31/02	115.00	3.43%

Note: Reflects personnel data for all operating and PAYGO capital positions.

- SHA advises that during fiscal 2003 after final approval of the budget, it abolished three contractual positions. These contractual positions, traffic engineers, were returned to the fiscal 2004 allowance and will support traffic operations at district offices. However, data received from the Department of Budget and Management (DBM) and SHA indicate an increase of four contractual positions in fiscal 2004, resulting in erroneous total contractual positions data reported here and in the State Budget books.
- Per requirements of Chapter 439, Acts of 2002 (fiscal 2003 budget bill), SHA abolished 153.5 regular positions.

## *Analysis in Brief*

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### Major Trends

***Road System Usage Has Grown:*** Vehicle miles traveled increases significantly over calendar 1993 while population and lane mileage grow at more modest rates. In addition SHA has made progress in reducing the average age of its equipment, providing safer highways as evidenced by the reduction in traffic fatalities and injury accidents. **Given the fiscal constraints facing SHA, it should brief the committees as to the potential impact on meeting its objectives in the near future.**

### Issues

***New Woodrow Wilson Bridge Begins to Emerge:*** After years of planning, construction is underway to replace the aging Woodrow Wilson Bridge. Maryland will soon select a contractor to build the first part of the superstructure, following the rejection of a single bid last year because it exceeded the State's estimate by over \$300 million. The State modified the contract to encourage more contractors to apply and reduce construction costs. The price tag for the contract has also risen by approximately \$100 million to adjust for market factors that inhibit competition. Planners had originally expected the new bridge to be completed in early 2007; the completion date has now been pushed back to late 2007 or early 2008. **The department should advise the committees as to the current status of the bridge project, the status of bidding and bid opening for the remaining contracts, and the potential for additional cost overruns for which Maryland will be responsible.**

***Administration Intends to Fund Intercounty Connector:*** The Intercounty Connector (ICC) is a proposed, east-west, limited-access road that would connect I-270 in Montgomery County and I-95 in Prince George's County. The proposed alignment of the road runs approximately five to eight miles north of the Capital Beltway (I-495). The ICC is not officially part of the submitted fiscal 2003-2008 capital program; however, several smaller projects related to the ICC are included. **The department should discuss with the committees the department's intentions to restart the ICC planning and construction process, the department's intended actions during fiscal 2004 with respect to the ICC project, how the department intends to fund the project, and the possibility of federal aid to support the project.**

***Federal Penalty for Lack of Appropriate Motor Carrier Safety Laws:*** The Maryland Department of Transportation (MDOT) advises that the State is not in compliance with federal law requiring that states impose penalties on drivers and employers regarding highway grade crossing violations. Federal motor carrier laws require all states to have laws disqualifying individuals from obtaining or retaining commercial drivers licenses (CDL) if the license holder has been convicted of violating certain federal, state, or local law or regulation pertaining to rules-of-the-road offenses at railroad crossings. **The department should brief the committees regarding the need for commercial driver licensing disqualifications and changes to rules-of-the-road at railroad crossings laws at this time. The department should also**

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**discuss the potential for other federally mandated changes to State laws in the future.**

***Better Road Congestion Management Practices Are Needed:*** The Washington, DC metropolitan area ranks in the top ten cities with the worst traffic congestion problems in a study done by the Texas Transportation Institute. Many jurisdictions have had success in reducing road congestion by employing tactics such as road pricing, expanding the capacity of existing roads, building new roads, high-occupancy vehicle (HOV) lanes, or transit solutions. More creative uses of highways to increase capacity and relieve congestion need to be identified. This does not necessarily have to mean building new and bigger roads. **The department should provide the committees with a better understanding of congestion mitigation measures it intends to undertake in the coming years.**

**Operating Budget Recommended Actions**

	<u><b>Funds</b></u>	Positions
1. Delete funding for employee awards.	\$ 37,150	
2. Add annual budget bill language stipulating Prince George's County repayment for road improvements for Jack Kent Cooke Stadium infrastructure.		
<b>Total Reductions</b>	<b>\$ 37,150</b>	

**Capital Budget Recommended Actions**

	<u><b>Funds</b></u>	Positions
1. Delete funds for National Harbor project.	\$ 21,541,000	
2. Delete funds for Neighborhood Conservation program.	27,400,000	
3. Delete funding for employee awards.	35,800	
4. Delete unnecessary certificates of participation payment for SHA facilities.	881,185	
<b>Total Reductions</b>	<b>\$ 49,857,985</b>	

## **Updates**

***SHA Will Upgrade Certain Guardrails Across the State:*** During the 2002 legislative session, the budget committees requested that SHA prepare a report on the use of “Texas-twist” type guardrails, which may intensify some motor vehicle accidents. SHA has estimated the replacement cost for the 3,400 turned down terminals on State-owned roads with a speed limit of higher than 40 mph to be \$34.3 million. SHA will continue to replace barriers when necessary due to other road work and has dedicated \$2 million in fiscal 2003 to begin a limited barrier replacement program.

***Safe Routes to School Action Plan:*** Chapter 678, Acts of 2001 required the Bicycle and Pedestrian Advisory Committee to initiate a pilot program focusing on the routes children take to reach school in target areas and develop an action plan. The department submitted its action plan in June 2002 and will submit a final report after evaluating the progress in July 2003. The action plans for the two pilot schools identify \$3 million in improvements to be funded by local governments, the schools, parents, and the State.

***Bicycle and Pedestrian Access Master Plan:*** Chapter 670, Acts of 2000 required the department to prepare a statewide 20-year bicycle and pedestrian master plan. The plan is to provide, preserve, improve, and expand access to transportation facilities in the State for pedestrians and bicycle riders. The plan identifies key goals, the actions that will be necessary to achieve each goal, the cost of achieving these goals, and performance measures to evaluate the success in meeting the goals of the program.

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## ***Budget Analysis***

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### **Program Description**

The State Highway Administration (SHA) is responsible for over 5,200 miles of interstate, primary, and secondary roads, and over 2,400 bridges. SHA employees plan, design, build, and maintain these roads and bridges to safety and performance standards while paying attention to social, ecological, and economic concerns.

The administration employs personnel in seven engineering districts throughout the State and at the Baltimore City headquarters. Each district encompasses a number of adjacent counties, with a district office serving as its headquarters. There is at least one maintenance facility in each county. The districts are responsible for the management of highway and bridge construction contracts, and maintenance functions such as pavement repairs, bridge repairs, snow removal, roadside management, equipment maintenance, and traffic engineering operations.

SHA attempts to manage traffic and congestion through the Coordinated Highways Action Response Team (CHART) program. CHART provides information about traffic conditions and clears incidents on major roadways.

The highway safety program funds the Motor Carrier Division and the State Highway Safety Office. The Motor Carrier Division manages the State's enforcement of truck weight and age limits by inspecting drivers, trucks, and cargo, as well as auditing carriers. The State Highway Safety Office administers highway safety programs and grants to State and local agencies.

The administration has identified the following key goals:

- Improve the quality of pavements and bridges in Maryland.
- Support smart growth and enhance quality of life in our communities.
- Develop and maintain Maryland's highways in an environmentally sensitive manner.
- Reduce the time it takes to restore normal traffic flow along State highways after incidents occur.
- Reduce recurring congestion at priority locations.
- Provide a safe State highway system.
- Provide a highway system that supports Maryland's economy.
- Improve workplace safety in our work environment.

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- Reduce the average weighted age of the heavy equipment fleet.
- Provide products and services to customers that meet or exceed their expectations.

**Performance Analysis: Managing for Results**

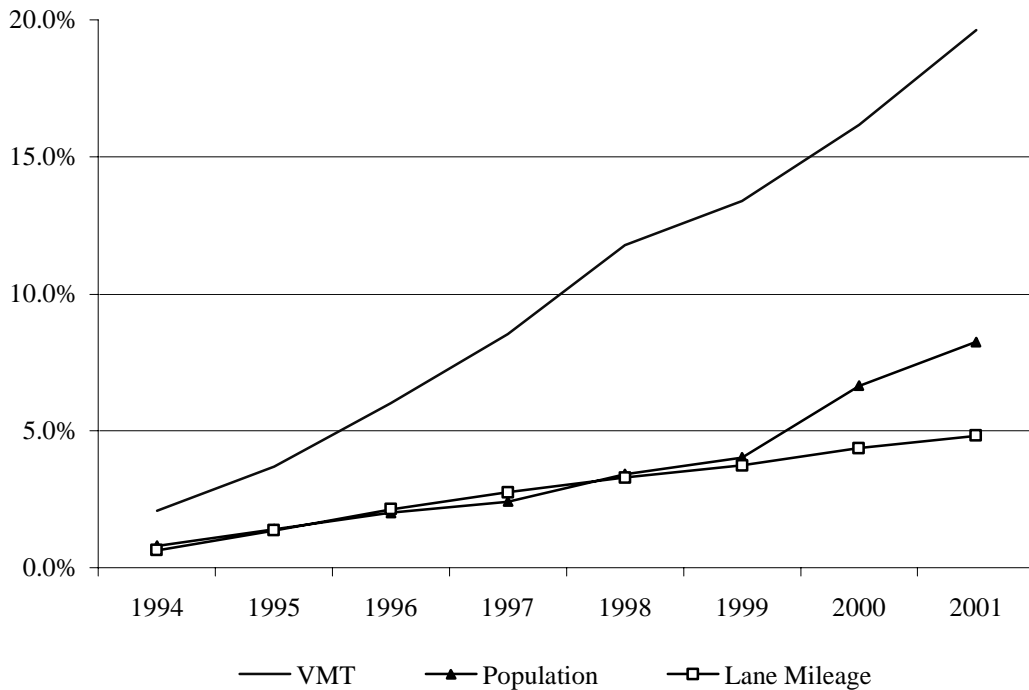
Several factors influence SHA's ability to meet its primary mission, to maintain and construct safe roads. For example factors such as the amount of traffic on a given road at a given time, the number of vehicles registered in the State, the total number of lane miles in the State, total vehicle miles traveled each year, the rates of vehicle accidents including fatal accidents or injury-producing accidents, the condition of roadway pavement, and the percent of bridges that are functionally obsolete are important.

SHA reports some of this data in its annual Managing for Results submission; however, a comprehensive look at the health and quality of the State road system is difficult given the wide variety of uncontrolled circumstances that ultimately affect when and whether an unsafe condition on a roadway is present. **Exhibit 1** presents information on vehicle lane miles traveled and other system information for calendar 1994 through 2001. Vehicle miles traveled increases significantly over calendar 1994 while population and lane mileage grow at more modest rates.

**Exhibit 1**

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**Percent Growth in Road System as Compared to Calendar 1992**  
**State Highway Administration**  
**Calendar 1994 through 2001**



VMT: 100 million vehicle miles traveled

Source: Maryland Department of Transportation

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As people drive more on the highways, this increases the potential for highway accidents. **Exhibit 2** presents data on the rates of injury producing accidents and fatal accidents per 100 million vehicle miles traveled.

In addition, SHA works to ensure that the road infrastructure is in good repair so as to provide safe journey. Exhibit 2 shows information on the rate of structurally deficient bridges on the National Highway System (NHS) and pavement quality ratings. The rate of structurally deficient bridges continues to be below the national average; one of SHA's objectives. The rate of structurally deficient bridges has slowly declined from 7% of total bridges in calendar 1993 to a low of 3.8% in calendar 2002. The national rate was 5.8% for calendar 2001. SHA expects that the rate will grow slightly to 4% of total bridges on the NHS in calendar 2004. SHA also rates pavement quality from poor to very good using peer group ratings.

The SHA states as an objective that it will work to increase the portion of State roads rated as fair to very good from 82% to 86% by calendar 2005. Absent significant decreases in road maintenance, SHA should be able to meet this objective.

**Exhibit 2**

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**Select Performance Indicators  
State Highway Administration  
Fiscal 1998 through 2002**

	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>Annual Change</u>
Injury Accident Rate	79.1	77.4	75.0	74.3	71.5	-2.5%
Fatal Accident Rate	1.3	1.2	1.2	1.3	1.2	-2.0%
Percent of structurally obsolete bridges	6%	6%	6%	4%	4%	-9.6%
Percent of pavements rated fair to very good (CY)	80.6	81.7	82.9	83.0	83.0	0.7%
Average age of bucket trucks	n/a	6.5	6.2	6.2	5.3	-6.6%
Number of jobs due to highway construction	11,787	10,933	10,273	13,380	15,350	6.8%

Source: State Budget books; Maryland State Police

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**Heavy Equipment and Highway Construction Economic Benefit**

Ancillary to SHA's ability to maintain and construct safe roads are factors such as the age of the heavy equipment used and the economic impact of highway improvements. The SHA reports the age of three major classes of equipment (tractor mowers, bucket trucks, and dump trucks) and monitors the aging of the fleet with the thought that the older the equipment, the greater cost to the agency in maintenance and lost time. Industry standards for highway maintenance organizations suggest that the age of heavy equipment is a prudent tool with which to manage its fleet. In fiscal 2001 the average age of its bucket trucks was 6.2 years, and in fiscal 2004 the average age is expected to drop to 5.2 years. The objective for this time period is to reach an average age of bucket trucks of 4.2 years by fiscal 2006. Additional resources will be needed to attain this goal, as well as the goal to reduce the average age of tractor mowers and dump trucks.

**Given the fiscal constraints facing SHA, it should brief the committees as to the potential impact on meeting its objectives in the near future.**

## **Fiscal 2003 Cost Containment**

SHA advises that it intends to take cost containment actions totaling \$6.7 million in fiscal 2003; however, neither the Board of Public Works nor the General Assembly has approved the reduction of the SHA working appropriation for these items. Fiscal 2003 cost containment actions, when finalized, will reduce spending in the following areas:

- Road maintenance and roadside activities (\$765,000) including pavement sealing, pavement markers, line striping, mowing, insect control, and road patching.
- Landscape maintenance (\$500,000) including weeding, mulching, replanting, and insect control.
- Traffic (\$250,000) including reducing the number of inspections per project and eliminating the traffic sensor project.
- Inmate services and janitorial services (\$350,000) including reduced contract hours.
- Minor bridge repair delays (\$250,000) including replacing rusted parts, steel plating on rusted beams, and deck joints.
- Equipment purchase delays (\$1.8 million) including tractor mowers, tow trucks, dump trucks, and other equipment.
- Administrative reductions (\$1.1 million) including reduced travel, supplies and materials, utilities, and maintenance and repair costs.

In addition fiscal 2003 cost containment reflects the cancellation of appropriations to support free transit ridership for State employees, contingent upon enactment of a provision in the Budget Reconciliation and Financing Act of 2003.

## **Governor's Proposed Operating Budget**

The fiscal 2004 operating allowance decreases by \$78.2 million below the fiscal 2003 working appropriation. The majority of the decrease is attributable to the planned transfer of \$102,440,128 in highway user revenues from the SHA budget to the State's general fund. **Exhibit 3** provides additional detail regarding the changes between the fiscal 2003 working appropriation and the fiscal 2004 allowance.

The fiscal 2004 allowance reflects the elimination of the appropriation for matching employee deferred compensation contributions up to \$600, contingent upon enactment of a provision in the Budget Reconciliation and Financing Act of 2003.

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**County and Municipal Funds**

**Fiscal 2003**

For fiscal 2003 the local share of highway user revenues exceeded the estimate by \$17.9 million. As part of the plan to balance the budget, the administration proposed to transfer the over attainment to the general fund via the 2003 BFRA.

**Fiscal 2004**

A portion of transportation revenues are deposited into the Gasoline and Motor Vehicle Revenue Account (GMVRA), of which 70% is provided to the Transportation Trust Fund (TTF) and 30% is distributed to Baltimore City and the other local jurisdictions. Funding for the 23 counties is distributed based on local road mileage and vehicle registration.

The fiscal 2004 allowance for highway user revenue aid to local transportation programs shows a decrease of \$73.5 million, or -17.0% to an aggregate funding level of \$358.2 million. The fiscal 2004 estimate is based on an assumed transfer of \$102.4 million from the local portion of the GMVRA, thereby effectively reducing highway user revenue grants from \$460.7 million to \$358.2 million, offset by a projected increase in State transportation tax and fee revenue of \$28.9 million, for a net decrease of \$73.5 million. As a result the fiscal 2004 allowance reflects no change over the fiscal 2003 working appropriation.

**Exhibit 3**

**Governor's Proposed Budget  
State Highway Administration  
(\$ in Thousands)**

	<u>FY 2002 Actual</u>	<u>FY 2003 Approp.</u>	<u>FY 2004 Allowance</u>	<u>FY 03 - 04 Change</u>	<u>FY 03 - 04 % Change</u>
Special Funds	\$615,751	\$607,917	\$631,948	\$24,031	4.0%
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<b>Adjusted Grand Total</b>	<b>\$627,621</b>	<b>\$616,739</b>	<b>-\$538,465</b>	<b>-\$78,274</b>	<b>-12.7%</b>

**Where It Goes:**

**Personnel Expenses**

Employee and retiree health insurance .....	\$1,858
Retirement contribution rate change .....	105
Turnover and cost containment adjustments .....	74
Workers' compensation premium assessment .....	-616
Other fringe benefit adjustments .....	-1,144

**Other Changes**

Increased janitorial services for highway rest areas .....	300
Increased insurance premiums for SHA property .....	174
Reduced inmate labor along State highways .....	-500
Decrease maintenance supplies and sign supplies based on three-year average .....	-930
Reduced landscape and roadside activities include mowing, weeding, and mulching .....	-1,246
Reduced expenditures for replacement computers, software, and hardware maintenance .....	-1,395
Decreased heavy equipment purchases including gas and oil .....	-1,579

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**Where It Goes:**

Decrease in highway user revenue grants to local jurisdictions based on planned \$102.4 million transfer in fiscal 2004 and revenue growth of \$28.9 million.....	-73,506
Other .....	133
<b>Total</b>	<b>-\$78,272</b>

Note: Numbers may not sum to total due to rounding.

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## **PAYGO Capital Program**

### **Program Description**

The State System Construction program provides funds for the capital program of the SHA. Financing is available from current revenues, federal aid, and bond proceeds for construction and reconstruction projects on the State highway system, program-related planning and research, acquisition of major capital equipment, and all other capital expenditures. Funding is also provided for local capital programs through the State Aid in Lieu of Federal Aid program and various federal grants, including bridge replacement and rehabilitation, and the national highway system.

The *Consolidated Transportation Program* (CTP) includes a development and evaluation program (D&E) and a construction program. Generally, projects are first added to the D&E program. In the D&E program, projects are evaluated by planners/engineers, and rights-of-way may be purchased. The Maryland Department of Transportation (MDOT) also prepares final and draft Environmental Impact Statements for projects in the D&E program. These studies examine a number of alternatives, which include a no-build option and a number of different alignments. Spending on a project while in the D&E program is usually less than 15% of the total project cost. When MDOT wants to move a project forward and begin construction, it is moved into the construction program.

### **Fiscal 2003 to 2008 Consolidated Transportation Program**

SHA added eight projects to the fiscal 2003 through 2008 construction program and one project to the development and evaluation program. The majority of the new projects are related to bridge rehabilitation or replacement.

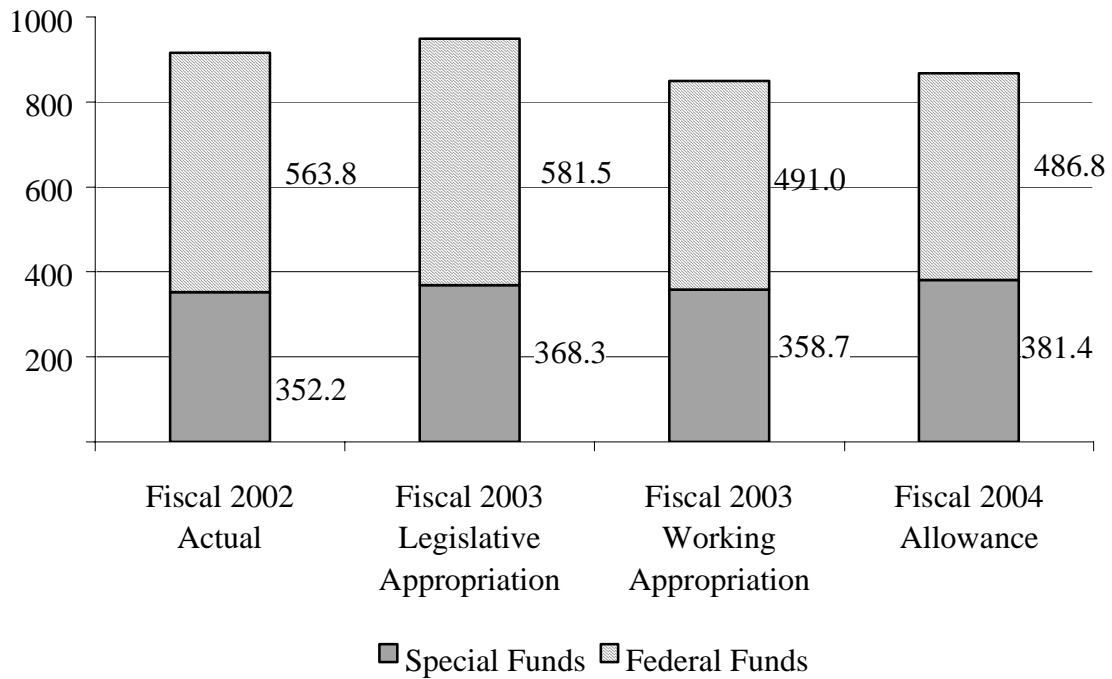
### **Fiscal 2003 and 2004 Cash Flow Analysis**

Since the 2002 CTP, cash flow for the SHA capital program has changed substantially. **Exhibit 4** shows that the fiscal 2004 allowance is \$868.2 million, which is \$18.5 million greater than the fiscal 2003 working appropriation. The fiscal 2003 working appropriation has decreased by \$100.1 million to \$849.7 million, compared to the fiscal 2003 legislative appropriation.

The largest project in the SHA capital program, construction of a new Woodrow Wilson Bridge, contributes largely to the cash flow changes experienced during fiscal 2003. While work on the bridge is currently progressing with the foundations for the bridge 90% complete, contractors are not billing the SHA as quickly as anticipated. The status of the Woodrow Wilson Bridge project is discussed in more detail in the *Issues* section of this analysis.

**Exhibit 4**

**SHA Capital Program Cash Flow Changes  
Fiscal 2002 to 2004**



Source: Maryland Department of Transportation, 2003 *Consolidated Transportation Program*

Cash flow changes are attributable to a number of different factors, including new projects added to the CTP, projects deferred to later years, and project delays. **Exhibit 5** shows how these changes have affected total capital program cash flows.

**Exhibit 5**

**State Highway Administration  
Fiscal 2003 and 2004 Project Cash Flow Changes  
(\$ in Thousands)**

	<b>Fiscal 2002 Leg. <u>Approp.</u></b>	<b>Change Leg App. to Work</b>	<b>Change Work to Allow.</b>	<b>Fiscal 2004 <u>Allow.</u></b>
<b>New Projects Added to the D&amp;E and Construction Programs</b>				
MD 807, Bedford Road; Bridge 1056 over Pea Vine Run (Allegany)	\$0	\$420	-\$420	\$0
MD 935, Legislative Road; Bridge 1016 over George's Creek (Allegany)	0	901	-745	156
MD 506, Sixes Road; Bridge 4023 over Battle Creek (Calvert)	0	405	12	417
MD 84, Baust Church Road; Bridge 6016 over Meadow Branch (Carroll)	0	318	114	432
US 40, Pulaski Highway (Cecil)	0	28	-28	0
I-95/I-495 University of MD Connector Rd; Bus access to College Park campus (Prince George's)	0	0	500	500
I-95/I-495 Capital Beltway, Interchange at Arena Drive (Prince George's)	0	0	750	750
I-70, Dwight D. Eisenhower Highway; Bridge 21092 over Great Tonoloway Creek (Washington)	0	1,416	3,836	5,252
US 13, Ocean Highway; Bridge 22002 over Leonards Mill Pond (Wicomico)	0	1,377	-322	1,055
<b>Projects Moved from D&amp;E to Construction Program</b>				
MD 404, Shore Highway; Create four-lane divided highway from south of Legion Road to south of Double Hills Road	216	1,843	1,772	3,831
<b>Project Phasing</b>				
Woodrow Wilson Bridge (Prince George's)	277,710	-171,689	60,133	166,154
National Harbor (Prince George's)	7,925	-2,370	15,986	21,541

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	<b>Fiscal 2002 Leg. <u>Approp.</u></b>	<b>Change Leg App. to Work</b>	<b>Change Work to Allow.</b>	<b>Fiscal 2004 <u>Allow.</u></b>
US 50 – Install high occupancy vehicle lanes (Prince George’s)	10,106	1,541	-11,647	0
MD 450, Annapolis Road (Prince George’s)	1,162	1,935	11,147	14,244
I-95/I-495 – New Interchange at Ritchie Marlboro (Prince George’s)	4,602	-655	-3,312	635
East-West Intersection Improvements (Montgomery and Prince George’s)	7,858	5,550	2,748	16,156
University of Maryland Access Improvements (Prince George’s)	2,467	1,684	-4,151	0
I-270 East Spur – New interchange at Rockledge Driver Connector (Montgomery)	10,334	-1,992	-8,342	0
I-495 – Replace bridge 15115 over MD 187 (Montgomery)	3,445	1,800	-3,112	2,133
US 29 – New interchange at Randolph/Cherry Hill Roads (Montgomery)	9,871	1,087	-4,541	6,417
US 29 – New interchange at Briggs Chaney Road (Montgomery)	2,862	2,512	3,811	9,185
MD 28 – Upgrade a portion to a four or six lane divided highway (Montgomery)	11,242	2,448	-8,762	4,928
MD 235 – Upgrade to six lanes from MD 246 to MD 4 (St. Mary’s)	2,661	10,727	-13,388	0
MD 32 – New interchange at Canine and Samford Roads (Anne Arundel)	7,276	-1,149	-941	5,186
MD 2 – Upgrade to a four or six lane highway (Anne Arundel)	6,569	2,000	-1,379	7,190
I-695 – Additional lane from MD 144 to I-95 (Baltimore)	17,722	-1,431	1,623	17,914
MD 7 – Widen from MD 43 to Campbell Blvd (Baltimore)	3,813	-1,211	-2,602	0
MD 43 – Construct access controlled highway between MD 150 and US 40 (Baltimore)	7,491	-3,104	13,475	17,862
I-70 – Construct relocated MD 85 and eastbound ramps from MD 355 (Frederick)	6,666	2,000	-1,476	7,190

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	<b>Fiscal 2002 Leg. <u>Approp.</u></b>	<b>Change Leg App. to Work</b>	<b>Change Work to Allow.</b>	<b>Fiscal 2004 <u>Allow.</u></b>
US 29 – New interchange at Johns Hopkins/Forman Roads (Howard)	6,445	466	-6,911	0
<b>Major Project Delays</b>				
MD 732, Guilford Road; Replace bridge 13029 over CSX Railroad (Anne Arundel, Howard)	553	70	-258	365
<b>Ongoing Statewide Programs</b>				
CHART	9,600	-2,600	800	7,800
Neighborhood Conservation	32,600	-4,000	-1,200	27,400
Sidewalk Replacement	3,349	251	-800	2,800
Sound Barriers	13,300	-100	5,200	18,400
Minor Project Cash Flow Changes	346,000	28,000	-22,600	351,400
Development and Engineering Changes	30,700	11,500	16,100	58,300
Federal Funds for Local Roads/Bridges	27,411	439	-930	26,920
<b>Other</b>	<i>77,777</i>	9,551	-21,691	65,637
<b>Total Changes</b>	<b>\$949,733</b>	<b>-\$100,032</b>	<b>\$18,449</b>	<b>\$868,150</b>

Source: Maryland Department of Transportation, 2003 *Consolidated Transportation Program*

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## ***Issues***

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### **1. New Woodrow Wilson Bridge Begins to Emerge**

The Woodrow Wilson Bridge provides a critical link for commuters traveling between Maryland and Virginia and for interstate commercial traffic on the East Coast. Designed to accommodate approximately 75,000 daily vehicle crossings when it opened in 1961, the bridge now carries almost 200,000 vehicles, including 20,000 trucks. The bridge also suffers an accident rate twice as high as other area interstates, and traffic backups average three to five miles daily.

This growing burden has also accelerated the deterioration of the bridge and requires increasingly expensive maintenance to ensure that it remains safe and open to all traffic. Virginia spent \$7 million in 2001 to replace the deck on the bridge. The replacement design calls for twin six-lane bridges with 70-foot high drawspans that parallels the existing structure, as well as the reconstruction of four Maryland and Virginia interchanges on the Capital Beltway. The new bridge will contain two lanes for mass transit or high-occupancy vehicles and will offer bicycle and pedestrian access that is now unavailable.

#### **Project Status**

As of January 2003, SHA has received bids on six construction contracts of the Woodrow Wilson Bridge project. Under the first contract (completed), contractors dredged 350,000 cubic yards of soil to create an east-west construction channel. The second contract, awarded for \$125 million, constructs most of the new bridges' foundations and is 90% complete. The third contract is to conduct soil pre-consolidation work for the Maryland abutment of the bridge at the I-295 interchange and is expected to be completed by February 2004. The fourth contract is for the construction of ramps connecting the I-295 and MD 210 interchanges and is expected to be complete by February 2004. The fifth contract constructs the connection to the new outer loop bridge and the ramps to the National Harbor development. This contract will be complete by summer 2006. The sixth contract is to construct the drawspans of the new bridge and will be complete in 2008. The low bid for this contract was for \$186 million, 10.7% over the estimate. All other received bids within the estimated cost, and the dredging contract finished under budget.

#### **Replacement Costs and Funding**

The total project cost has risen from the Initial Financial Plan estimate (August 2001) of \$2.443 billion, to the current estimate of \$2.564 billion. This estimate includes funds for the construction of the bridge, the interchanges, enhancements, and approach roads on the Maryland and Virginia sides. Virtually all of the \$121 million change in cost is attributable to the increase in the cost of the superstructure of the bridge. Virginia's share of the costs has not changed since last year. **Exhibit 6** details the committed and anticipated funding sources for the bridge over the next six years.

**Exhibit 6**

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**Approved and Anticipated Woodrow Wilson Bridge Funding  
Federal Fiscal 1996 - 2011  
(\$ in Millions)**

<u>Sources</u>	<u>Approved</u>	<u>Additional Expenditures (Anticipated)</u>
Maryland	\$244	\$168
Virginia	258	247
District of Columbia	16	0
Transportation Equity Act-21 (federal)	900	0
Dept of Defense FFY 2002 appropriations act (federal)	599	
Federal (additional)	116	16
Total	2,133	\$431
Total Approved and Anticipated Costs	\$2,564	

Source: State Highway Administration

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### **The Superstructure Contract**

The construction of the bridge's superstructure was initially advertised as a single contract in August 2001. In December 2001, a team of contractors submitted the only bid on the bridge structure for \$860 million, 75% over the engineer's estimate. SHA rejected the bid and established an Independent Review Committee (IRC) made up of industry experts to review the bid and identify alternatives. After interviewing contractors and reviewing the project, the committee concluded that the bid was too high and that the original estimate did not fully account for market forces that are difficult to quantify but will make the bridge more expensive. The sheer size and scale of the bridge inherently limits the number of available firms to bid; factors such as the need for specialized equipment, oversight from multiple governments, and other contract commitments restrict competition even further.

The IRC suggested that SHA divide the superstructure into smaller contracts to increase the opportunities for competition and make the specifications more "contractor friendly." The superstructure was repackaged as three separate contracts – one for the drawbridge section or bascule, one for the Maryland approach, and one for the Virginia approach. SHA also adopted value-engineering changes to make the bridge less expensive to build. On the recommendation of the IRC, the budget for the bridge contractors was also increased to \$589 million to account for some of the market factors not addressed in the first estimate.

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Bids for the first of these three contracts, the bascule spans, were received in November 2002. The estimate for this first contract was \$168 million. SHA received five bids ranging from a low of \$186 million to a high of \$245 million. SHA awarded this contract in late-January 2003. The second contract for the Virginia approach was advertised in mid-October with bids due February 13, 2003. The estimate for that project is \$130 to \$160 million. Bids on the last section, the Maryland approach, will be opened in May 2003. The estimate for the last section is \$230 to \$260 million.

In addition, the second contract to construct ramps in the I-295 interchange was bid in October at \$46 million, \$14 million below the engineer's estimate. This contract is necessary to provide access to the National Harbor development.

### **Potential Cost Overruns and Federal Funding**

When Congress approved the requested federal appropriation, it stipulated that no more federal funds would be available for the project. The elimination of future federal aid raises serious concerns about the states' capacity for sharing the burden of any cost overruns.

Under the financing agreement, Maryland is responsible for all overruns associated with the contracts for the bridge structure and the two interchanges (I-210 and I-295). The problems experienced with the initial bid for the structure and the potential for cost overruns prior to issuance of contracts demonstrates the State's vulnerability to substantial cost hikes not envisioned in the agreement. According to the Secretary of Transportation, changes that were made to the contract to increase competition, such as reducing insurance and bond requirements, increases Maryland's share of risk for increased costs. If future bids are beyond reasonable estimates, the State may seek an adjustment to the financing plan.

To accommodate the potential \$100 million increase in the cost of the superstructure, the State will allocate \$30 million in fiscal 2002 federal funds and \$50 million assigned to the Route 210 interchange by postponing work on the interchange. The State has also identified \$20 million in savings from contracts bid under estimate and a lower construction contingency.

A related issue is the federal government's standard practice of withholding a percentage of approved funds for TEA-21 projects. Of the \$900 million in TEA-21 money approved for the bridge, approximately \$103 million is expected to be withheld. The states expect that these funds will eventually become available, but it is unclear how the states will compensate for this loss should the funds not be released.

MDOT's January 2003 forecast assumes no general fund support for the construction of the Woodrow Wilson Bridge. Instead MDOT will fund the State's share of construction costs through federal aid and the TTF. Previously the Glendening Administration had agreed to provide \$205 million in State general funds to MDOT for this project; however, given the State's fiscal condition, the general fund assistance is no longer expected. **Exhibit 7** shows the expected State and federal fund support for the bridge.

**Exhibit 7**

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**Woodrow Wilson Bridge Projected Expenditures by Fund Source  
Fiscal 2001 through 2008  
(\$ in Millions)**

<u>Fiscal Year</u>	<u>General Funds</u>	<u>Special Funds</u>	<u>Federal Funds</u>	<u>Total Funds</u>
2002*	\$3	\$13	\$178	\$193
2003	0	12	94	106
2004	0	24	142	166
2005	0	38	152	190
2006	0	51	158	208
2007	0	44	144	189
2008	0	16	116	132
Total	\$3	\$198	\$984	\$1,184

\* Includes funds spent in fiscal 2001.

Note: Numbers may not sum to total due to rounding.

Source: Maryland Department of Transportation, January 2003

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**The department should advise the committees as to the current status of the bridge project, the status of bidding and bid opening for the remaining contracts, and the potential for additional cost overruns for which Maryland will be responsible.**

## **2. Administration Intends to Fund Intercounty Connector**

The Intercounty Connector (ICC) is a proposed, east-west, limited-access road that would connect I-270 in Montgomery County and I-95 in Prince George's County. The proposed alignment of the road runs approximately five to eight miles north of the Capital Beltway (I-695).

### **General History of the ICC**

The National Capital Planning Commission first proposed the plan for an east-west road running parallel to the Capital Beltway in 1950. Planning studies were initiated in the 1980s and a Master Plan for developing the roadway was selected. However, federal review and permitting agencies rejected MDOT's plan in 1989. During the Glendening administration, a second project planning study was undertaken. In September 1999, based on federal agency environmental concerns, the project was dropped from the SHA capital program.

## **Current Status of the ICC**

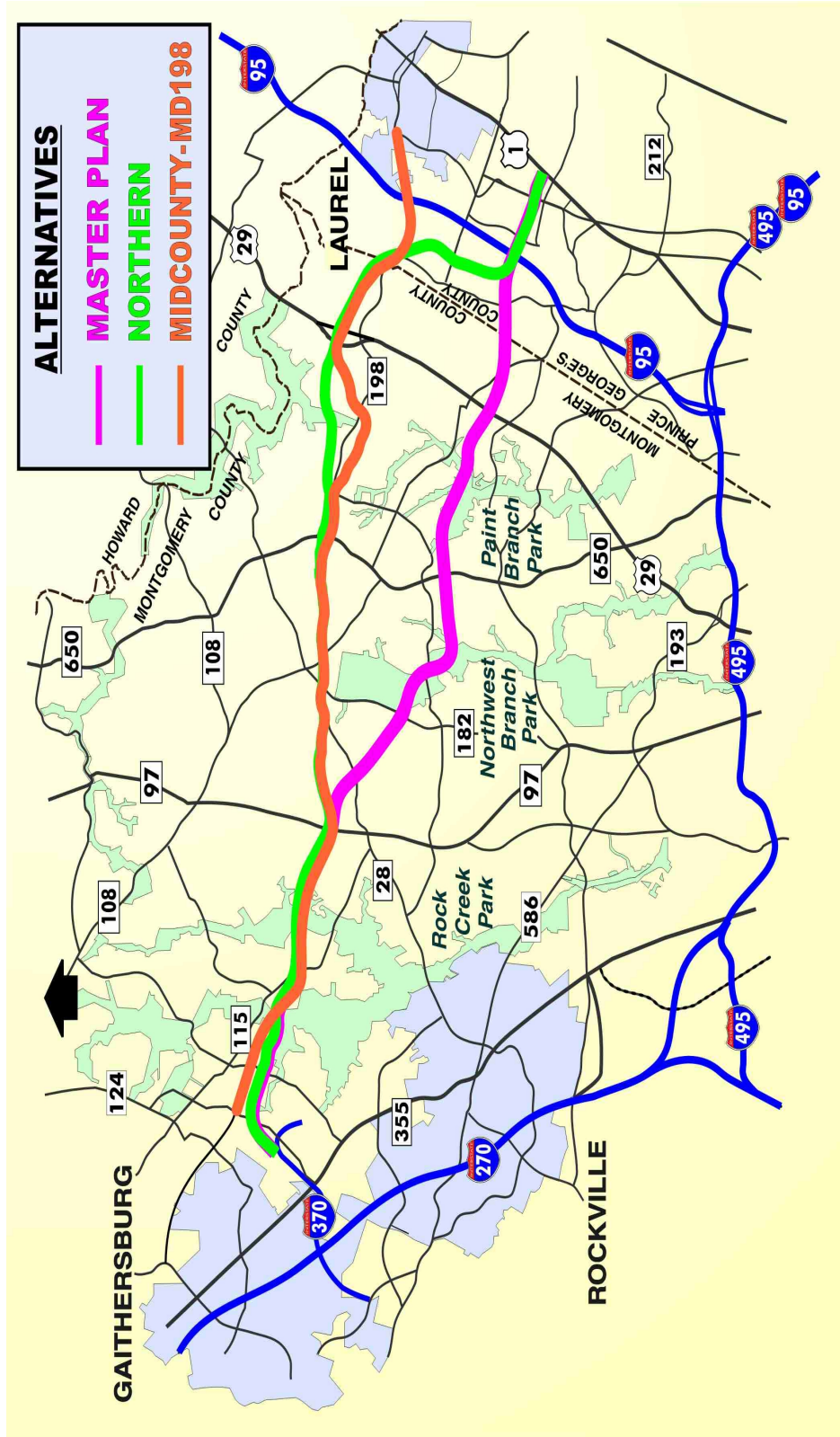
The ICC is not officially part of the submitted fiscal 2003-2008 capital program; however, several projects in the vicinity of the ICC are included. Those projects are listed below.

- MD 28 (Norbeck Road)/MD 198 (Spencerville Road): The six-year capital program includes \$1.1 million for this study of capacity improvements such as bicycle lanes, sidewalks, and other improvements. The fiscal 2004 allowance provides \$358,000.
- East-West Link Improvements: The six-year capital program includes \$51.1 million for a series of minor improvements to the corridor between I-370 and U.S.1. The fiscal 2004 allowance provides \$16.2 million.

In addition, MDOT has indicated that it intends to begin studying the ICC using existing resources and evaluate the following alternatives: no build, master plan alignment (as identified by the Montgomery County Council), northern alternatives, or upgrade existing roads. MDOT advises that all alternatives included high-occupancy vehicle lanes and transit accommodations. In addition, freeway alternatives include studying tolls. Finally the State still owns all land purchased previously with the idea to construct an ICC in the area of the Master Plan alignment. However, if another alignment is identified, additional land purchases, including homes or businesses are possible. **Exhibit 8** provides a map of the area under consideration.

Exhibit 8

Proposed Alternate Routes for ICC  
Fiscal 2004



Source: Maryland Department of Transportation, January 2003

## **Potential Problems with ICC Still a Concern**

The reasons for the previous deletion of the ICC from the State capital program must still be addressed before construction can begin. Potentially the largest challenge will be studying and mitigating the environmental impacts of constructing a road. In addition the large cost is also a concern. In 1997, the anticipated total cost for the project reached \$1.1 billion. It is anticipated that when the federal transportation spending reauthorization bill is debated in the U.S. Congress, this project may be included for federal assistance. Finally, there may be impacts on the community in the area of the potential routes for the project.

**The department should discuss with the committees the department's intentions to restart the ICC planning and construction process, the department's intended actions during fiscal 2004 with respect to the ICC project, how the department intends to fund the project, and the possibility of federal aid to support the project.**

### **3. Federal Penalty for Lack of Appropriate Motor Carrier Safety Laws**

MDOT advises that the State is not in compliance with federal law requiring that states impose penalties on drivers and employers regarding highway grade crossing violations. Federal motor carrier laws require all states to have laws disqualifying individuals from obtaining or retaining commercial drivers licenses (CDL) if the license holder has been convicted of violating certain federal, state, or local law or regulation pertaining to rules-of-the-road offenses at railroad crossings. The railroad crossing offenses are:

- Slowing down and checking that the rail tracks are clear of an approaching train.
- Stopping before reaching the crossing, if the tracks are not clear.
- Attempting to negotiate the crossing only if the crossing and the road beyond the crossing is sufficiently clear of other traffic so that the driver can drive completely through and clear of the crossing without stopping.
- Obeying a traffic control device or the directions of a police officer at the crossing.
- Attempting to negotiate the crossing only if the vehicle has sufficient undercarriage clearance.

Currently Maryland motor vehicle law does not address disqualifying a CDL holder, nor does it provide for up to a \$10,000 penalty for employers who knowingly allow someone who has been convicted of violating railroad crossing rules-of-the-road to operate a commercial vehicle.

The SHA advises that federal penalties totaling \$15.4 million will be assessed if the State does not enact laws relating to highway grade crossing violations by CDL holders by October 2003. The requirements were made final in 1999, and states were given three years to comply. For fiscal 2005, the

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penalty doubles to a loss of 10% of certain construction funds and all highway safety program funds. The types of funds that will be lost are detailed below.

<u>Penalty</u>	<u>Fiscal 2004</u>	<u>Impact</u>
5% of certain categories of federal highway construction funds	\$13.0*	Project delays.
All Highway Safety Program funds	2.4	Reduced financial support for commercial vehicle enforcement programs; no new inspector training classes or initiatives for highway truck safety; delayed construction of inspection pit at weigh stations.
<b>Total</b>	<b>\$15.4</b>	

\* \$ in Millions

Source: Maryland Department of Transportation

Legislation is expected to amend the statute to prevent the assessment of penalties resulting the loss of federal aid for highway projects and programs.

**The department should brief the committees regarding the need for commercial driver licensing disqualifications and changes to rules-of-the-road at railroad crossings laws at this time. It should also address the potential for other federally mandated changes to State laws in the future.**

#### **4. Better Road Congestion Management Practices Are Needed**

The Washington, DC metropolitan area ranks in the top ten of cities with the worst traffic congestion problems in a study done by the Texas Transportation Institute. Road congestion creates a variety of societal issues, including quality of life issues due to lost time at work or home; environmental concerns due to idling cars; and economic problems due to delayed freight. While the State does a lot to manage road congestion, more can be done. There is a need for coordinated intermodal planning, investment, and implementation of congestion measures to solve transportation capacity or congestion problems. Many jurisdictions have had success in reducing road congestion by employing tactics such as road pricing, expanding the capacity of existing roads, building new roads, high-occupancy vehicle (HOV) lanes, or transit solutions. However no one strategy will reduce congestion. One thing is certain, more creative uses of highways to increase capacity and relieve congestion need to be identified and this does not necessarily have to mean building new and bigger roads.

## **Definition of Road Congestion**

One definition of road congestion is slow speeds caused by heavy traffic or narrow roadways due to construction, incidents, or too few travel lanes for the demand. Another definition might be the additional time it takes an individual to complete a trip to work or the grocery store compared to last week, or last year, or ten years ago. And yet another might categorize the problems that congestion creates and keeps the transportation system from functioning at a reasonably efficient level. Regardless of how it is measured or defined, most would agree that, to invoke the words of the Supreme Court standard, “You know it when you see it.”

Maryland collects a wide variety of data on the traffic using the roads. In particular, traffic counts on key highways and intersections allows the department to better plan road improvements to less congested times, timing of traffic signals to aid in traffic flow, or adding turn lanes at severely congested intersections. Also the State collects and uses data on factors such as volume-to-capacity ratios, travel time delays, vehicle miles traveled, population, and the number of vehicles registered. Perhaps more importantly than these status quo measures, is the data on traffic accidents, injury producing accidents, and traffic fatalities. Studying trends in these areas can assist in targeting road improvements to less safe areas of our roads. However, data tracking the exact extent of congestion problems including where, when, and why is lacking.

## **Effects of Road Congestion**

Recurring road congestion has been shown to increase maintenance on vehicles and increase consumption of gasoline. The Washington, DC metropolitan area is a nonattainment area for volatile organic compounds and nitrogen oxides due in part to the number of vehicles traveling the roads and vehicles idling during delays. With these environmental concerns comes the potential loss of federal funds for highway maintenance and construction projects. In addition road congestion introduces serious quality of life issues due to the increased time spent on the roads compared to noncongested travel periods. It can also lead to economic impacts caused by the increased cost of goods due to transportation costs. Obviously congestion related to weather or traffic accidents is difficult to mitigate; however, efforts could be made to reduce recurring road congestion.

## **Congestion Mitigation Measures**

A variety of congestion mitigation measures to increase the efficiency in road use and reduce road congestion have been developed and are in use all over the world. The following is a limited list of accepted practices to address congestion. This includes some efficiency-boosting measures and alternatives to road travel.

- ***Information Technology Systems (ITS)***: TEA-21 included greater funding for ITS as a congestion mitigation strategy. ITS attempts to resolve congestion problems by providing up-to-date information regarding traffic congestion to allow motorists to plan accordingly and hopefully reduce the impact of congestion on their lives. ITS solutions include electronic toll collection, traffic advisory radio,

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dedicated cellular phone lines for travelers to report traffic information, cable TV stations dedicated to traffic updates, Internet sites with traffic information, ramp meters that control the flow of traffic on to a highway, variable message signs (VMS) to communicate traffic information to motorists on highways, and transportation management centers. In Maryland for instance, the CHART system is an example of ITS. CHART employees based in regional operations centers or at SHA's traffic operations center, post alerts to recurring congestion or new traffic incidents on variable message boards along major highways. These boards also advise if a road is closed; however, the boards typically only advise individuals who are already stuck in the traffic congestion. CHART information is also published on a web site that drivers can access before getting on the road. Operators seeing incidents via cameras, road patrols, automated systems, or reports by courtesy patrols or passers by notify CHART employees of an incident, and they are able to communicate this information via radio, VMS, and the internet.

- ***HOV/Carpool:*** HOV lanes seek to reduce congestion by reducing the number of single occupant vehicles. In addition HOV lanes help reward travelers with more than one person in a vehicle, creating an incentive to ride share. Benefits of HOV lanes include travel timesavings, increased transit use where bus/rail lines are adjacent to HOV lanes, and ultimately increase the capacity of the highway facility by reducing the number of single cars on the road. Maryland uses single direction HOV lanes on U.S. 50 near Bowie, Maryland and on I-270 near Washington, DC to Frederick, Maryland. Other cities have used reversible HOV lanes that change between morning and evening rush hours; however, the use of HOV should also require a better understanding of peak travel periods.
- ***Construction:*** Building new roads can alleviate congestion on existing routes be it highways or local roads that are used as alternatives to congested highways. However, construction of new roads cannot be the only solution due to the high cost of highway construction, environmental issues, and public perception factors. Studies have shown that new roads end up congested eventually. Rather than build new six or more lane highways, new roads could be built as stacked roads or with separate truck lanes from cars, particularly on high-truck traffic corridors such as I-95; the north/south route for freight. New highways could also take advantage of express lanes that would permit only limited access, thereby reducing congested interchanges, which lead to traffic accidents and can back up on local roads.
- ***Road Improvements:*** Road improvements on both highways and other local roads can reduce the number of traffic incidents that add to congestion troubles. In particular on routes that motorists use as alternatives to congested highways, traffic calming in residential areas such as speed bumps, traffic lights, or signage can be effective. Limiting access by narrowing intersections or removing turn lanes, upgrading traffic signals to provide smooth travel through an area with appropriately timed traffic lights, and providing for dedicated bike and pedestrian paths along roads can aid in traffic flow. For existing highways, adding lane capacity by restriping or reconstruction with the goal of increasing the carrying capacity or constructing express lanes may be solutions to road congestion.
- ***Road Incident Management:*** Road incident management attempts to reduce congestion through surveillance and management of incidents by reducing the time to detect incidents, respond, and clear the incident. Incident management includes freeway safety patrols, call boxes, dedicated cell phone lines, and other ITS solutions. The use of freeway safety patrols or courtesy patrols to assist motorists

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by changing a tire, providing gasoline, towing a vehicle to safety, or protecting a disabled vehicle from being struck has increased in recent years across the country. The use of courtesy patrols to manage road incidents has been shown in other states to reduce peak hour congestion caused by traffic incidents or to increase the peak hour speed on roads. The SHA currently uses CHART teams to patrol certain highways during peak travel hours assisting motorists in distress. Courtesy patrols reduce the higher cost of using state police officers to aid motorists once the investment in equipment such as tow trucks or vans is made.

- ***Public transit:*** Public transit has been a travel method for decades; however, it tends to be most prevalent in heavily urban areas. Traditional methods of transit include light rail or subway lines, commuter trains, and bus service such as traditional urban/suburban bus lines, rapid bus, or commuter buses with few stops. Public transit works well when it is located in close proximity to the places that passengers want to go, namely work and home. Intermodal transit facilities that expand upon several existing transit methods provide the best opportunities for making it possible for people to travel to and from work, school, health care, and grocery stores. Obviously the “hassle factor” of waiting for public transit, rather than getting in a passenger car and just going, transit service quality, and service enhancements all affect the success of transit service. Public transit is typically heavily subsidized by the sponsoring organization and high construction costs for fixed-guideway systems serve as detractors to installing transit lines.
- ***Employer Transportation Reduction Strategies:*** Many employers are responding to employees concerns about the amount of time spent commuting to the office particularly where no alternative transportation methods exist. Solutions tried in other states, besides company sponsored carpools or federal and state tax incentives, include compressed workweeks, flextime and staggered hours, and telecommuting either from home or from regional telework centers.
- ***Congestion pricing:*** Congestion pricing is any pricing structure in which motorists pay a user fee in exchange for driving on a roadway. Congestion pricing includes toll facilities, fees on HOV lanes, fees for using an HOV lane when otherwise a driver would not be eligible to use the road, and fees for using roadways or certain lanes during peak travel hours. Pricing the use of roadways arises from the HOV lanes not being used efficiently, i.e. excess capacity on HOV lanes with gridlock on non-HOV lanes. The idea of charging motorists for the use of a road that some view as a public good paid for with motor fuel taxes and other fees is not popular; however, the counter argument is that travelers willingly pay premiums for last minute air travel, a home in a neighborhood with good schools, or higher car insurance for vehicles stolen frequently. The actual cost of using a road is not recovered completely through vehicle registration fees or fuel taxes. Studies have shown that drivers of all incomes are willing to pay for the use of congestion-free highways when time is important. Electronic toll collection (ETC) systems such as transponders or license plate recognition software have also been shown to reduce congestion and provide a method for collecting the revenue without the additional cost of personnel. Before implementing a congestion-pricing program, it is important to determine how much motorists value additional road capacity. Some congestion mitigation measures if priced appropriately may even reduce congestion while increasing revenues to allow for additional mitigation measures to be implemented.

Pilot programs to charge motorists for their use of roads during peak travel times or for their use of

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roads restricted to only eligible classes of drivers have been implemented. There are a wide variety of congestion pricing models in use across the nation including variable tolls on New York tunnels and bridges depending on the time of day; high occupancy tolls lanes in Houston (HOV lanes where single-occupant vehicles may opt to use the HOV lane for a fee, which is collected by an ETC system); and tolls that vary based on the time of day and the level of congestion present in San Diego (the current toll is noted on VMS signs at entrances to the tolled facility and is collected with ETC). Massachusetts implemented a pilot program to offer participating vehicle owners the opportunity to earn a mileage-reduction auto insurance credit for every mile that their annual mileage is below a certain threshold.

Some of the congestion measures are in use in Maryland; however, some are not and should be looked at as possible solutions to Maryland's congestion problems. In particular the greater use of information technology or road improvements and a program of congestion pricing could be possible solutions. Additional information on the costs of each solution for congestion in a particular area is important and not available without further study.

### **Conclusion**

There are at least four main benefits to employing congestion management techniques including increased mobility, enhanced quality of life, improved fuel efficiency, and improved air quality. Efficient use of the road system without incurring long periods of congestion requires a combination of targeted capacity improvements to the current system as well as innovative methods to improve the efficiency of the current system. So long as population, vehicle miles traveled, and the number of registered vehicles continues to increase, eliminating congestion will not happen by employing only one or two congestion strategies. The measures selected will depend on the situation, resources available, and most likely the political climate for accepting some of the measures. A mix of congestion strategies will be necessary. Not one of the above possible solutions will do it alone.

**The department should provide the committees with a better understanding of congestion mitigation measures it intends to undertake in the coming years.**

***Operating Budget Recommended Actions***

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	<u>Amount Reduction</u>	<u>Position Reduction</u>
1. Delete funding for employee awards. Given the reductions to SHA's operating program due to the proposed transfer of \$300 million in fiscal 2003 and 2004, nonessential expenditures should be reduced. Other State employees are not receiving employee awards, raises, or other salary increases and to prevent against inequitable treatment, these awards should be deleted.	\$ 37,150	SF
2. Add the following language:		
<p><u>. provided that \$1,000,000 of this appropriation, made for the purpose of distributing the share of revenues from the Gasoline and Motor Vehicle Revenue Account to Prince George's County (i.e., highway user revenues) shall be deducted prior to the distribution of funds to the county and be retained by the Transportation Trust Fund. The deduction would occur after the deduction of sinking fund requirements for county transportation bonds from highway user revenues.</u></p>		
<p><b>Explanation:</b> In 1996 an agreement was reached between the State, Prince George's County, and Jack Kent Cooke, Inc. (then owner of the Washington Redskins) concerning road and infrastructure improvements adjacent to a stadium in Prince George's County for the Redskins. The agreement included a State grant for local roadway improvements around the stadium, for which the county agreed to reimburse the State \$1.0 million annually through fiscal 2012. The agreement gives the county the option to choose a \$1.0 million deduction or quarterly payments of \$250,000. Previously, the county opted for the \$1.0 million deduction. The budget bill language adjusts the county's share of highway user revenues, consistent with the 1996 agreement.</p>		
<b>Total Special Fund Reductions</b>	<b>\$ 37,150</b>	

## Capital Budget Recommended Actions

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	<u>Amount Reduction</u>	<u>Position Reduction</u>
1. Delete funds for the National Harbor project by \$21,541,000. The Maryland Department of Transportation indicates that it intends to provide grants totaling \$55.7 million over several years to a private developer for the National Harbor project. This grant is in addition to the \$88.1 million included as part of the reconstruction of the Woodrow Wilson Bridge. The \$88.1 million will fund transportation related ramps and roadways to connect I-495/I-95 to the National Harbor project and is consistent with policies relating the State's responsibility in aiding economic development. However, the provision of \$55.7 million in grants for expenses that are not the responsibility of the State (as they are not related to the State road and interstate network) is fiscally irresponsible and should be deleted from the budget. MDOT advises that due to transfers totaling \$300 million in fiscal 2003 and fiscal 2004 from the TTF to the general fund, it intends to remove projects from the out-years of its capital program, sell debt sooner than estimated, and reduce system preservation spending. This reduction of \$21.5 million lessens the need to delete or delay projects and increase debt outstanding and will assist MDOT in reprioritizing its spending. Through fiscal 2003, the department has provided \$5.8 million of the total \$55.7 million expected grant amount.	\$ 21,541,000	SF
2. Delete funds for Neighborhood Conservation program. The Maryland Department of Transportation advises that due to transfers totaling \$300 million in fiscal 2003 and fiscal 2004 from the TTF to the general fund, it intends to remove projects from its capital program, sell debt sooner than estimated, and reduce system preservation spending. This reduction of \$27.4 million lessens the need to delete or delay projects and increase debt outstanding. This program represents non-core spending by the department.	24,800,000 2,600,000	SF FF

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3.	Delete funding for employee awards. Given the reductions to SHA's operating program due to the proposed transfer of \$300 million in fiscal 2003 and 2004, nonessential expenditures should be reduced. Other State employees are not receiving employee awards, raises, or other salary increases and to prevent against inequitable treatment, these awards should be deleted.	35,800	SF
4.	Delete unnecessary certificates of participation payment for SHA facilities. In 1992, the Maryland Department of Transportation (MDOT) sold certificates of participation (COPs) to fund the purchase of the SHA headquarters building in Baltimore and other SHA facilities. MDOT advises that during fiscal 2003 it intends to retire COPs issued in 1992 and 1993. As a result, the COPs payment of \$881,185 is not needed in fiscal 2004 and should be deleted from the fiscal 2004 allowance.	881,185	SF
	<b>Total Reductions</b>	<b>\$ 49,857,985</b>	
	<b>Total Special Fund Reductions</b>	<b>\$ 47,257,985</b>	
	<b>Total Federal Fund Reductions</b>	<b>\$ 2,600,000</b>	

## ***Updates***

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### **1. SHA Will Upgrade Certain Guardrails Across the State**

The budget committees have expressed concern about the use of certain guardrails in the State. During the 2002 legislative session, the budget committees requested that SHA prepare a report on the use of “Texas-twist” type guardrails, which may intensify some motor vehicle accidents, the actions to be taken by SHA to eliminate these guardrails, the costs of a replacement program, and a replacement schedule. SHA submitted a draft report in July 2002 and a final report in November 2002 addressing the committees concerns.

Guardrails are used on high-speed roads if the distance between opposing lanes of traffic is limited, making stopping safely after leaving the roadway difficult. The guardrail is meant to reduce the hazard of a motor vehicle driving into oncoming traffic or encountering some other terrain, natural or manmade obstacle (e.g., off a roadside down a steep hill). The use of a traffic barrier such as a guardrail introduces some additional risk of injury to the driver of a vehicle that hits a guardrail; however, that risk is acceptable in terms of reducing the danger of a more violent collision with an unprotected hazard. SHA, in following Federal Highway Administration (FHWA) guidelines, advises that the safety value of traffic barriers is that crashes into barriers are typically far less severe than would be the crashes involving the obstacle itself.

The manner in which a guardrail barrier ends is important to the safety value of the device. In the past guardrails were turned down into the ground to prevent against serious and often fatal injuries to drivers that strike guardrails at the end. However, given the increased speed of vehicles and the increase in the use of vehicles with higher centers of gravity such as SUVs, the turned down end of a guardrail can become a roadway hazard in itself. The FHWA has recommended that states begin to develop plans to replace these barriers; however, the use of Texas-twist barriers is still accepted by the FHWA. The SHA has begun to replace these guardrails when performing significant work along high-speed roadways or when the terminal device is damaged.

#### **Use of Texas-twist Guardrails in Maryland**

In 2002 SHA completed a survey of the use of Texas-twist guardrails on State-owned roads and ramps, with a posted speed limit of 40 mph or higher and found 3,400 turned down guardrail treatments. SHA advises that 2,000 of these are on roads with a posted speed limit of 50 mph or higher. The 40 mph speed limit was chosen because when a turned down barrier is struck at speeds lower than this, the barrier is far less likely to vault a vehicle over the guardrail, or for the vehicle to overturn, than when it is struck at higher speeds. SHA did not inventory the end treatments of guardrails along the 24,000 miles of local roads.

## **Cost of Replacing Texas-twist Guardrails on State-owned Highways**

SHA has estimated the replacement cost for the turned down terminals to be \$34.3 million. The estimate assumes \$10,100 for each terminal. Many sites may require altering the terrain surrounding the barrier end or lengthening the guardrail past the usual ending point, increasing the total cost per barrier end. SHA may alter the guardrail heights were appropriate.

## **Schedule for Replacing Texas-twist Guardrails on State-owned Highways**

SHA intends to continue to replace guardrails when performing significant work, when the traffic barrier is disturbed during other types of work, or when the traffic barrier is damaged. However, it intends to begin a limited blanket-upgrading program. The fiscal 2003 capital budget includes \$2 million to eliminate turned down terminals along the most traveled highways, the Baltimore (I-695) and Capital Beltways (I-495), the SHA portion of I-95, and the BWI parkway (I-295).

## **2. Safe Routes to School Action Plan**

Chapter 678, Acts of 2001 required the Bicycle and Pedestrian Advisory Committee to initiate a pilot program focusing on the routes children take to reach school in target areas and develop an action plan. The department submitted its action plan in June 2002 and will submit a final report after evaluating the progress in July 2003.

The pilot program, initiated in fiscal 2002, aims to improve child pedestrian access at two pilot schools: Rolling Terrace Elementary School in Montgomery County and Montebello Elementary School in the City of Baltimore. The pilot program identifies the following as its key goals:

- Building a broad base of support for recommended improvement projects and determining funding partnerships between the State and local jurisdictions for these projects, and to implement additional physical improvement;
- Implementing educational, promotional, and enforcement recommendations with the support and involvement of school-based Safe Routes committees;
- Reducing the percentage of parents who perceive the pilot school neighborhoods as unsafe for walking and bicycling;
- Reducing the number of child pedestrian crashes; and
- Increasing the percentage of children who walk or bike to school.

## **Actions Plans for Rolling Terrace and Montebello Elementary Schools**

Each action plan presents project descriptions for improvements to the schools broken down by the following categories: engineering and physical improvements; education for parents and students; encouragement and promotion of the concept of walking or biking; and enforcement against speeders and other illegal activity. Both schools also intend to hire a parent coordinator to continue the Safe Routes program.

After reviewing the conditions at both schools, the committee identified improvements ranging from installing sidewalks and extending curbs to organizing a “Walk to School Day” at Rolling Terrace at a total cost of \$908,000 (this does not include some costs that would be annual such as enforcement actions and a parent coordinator salary). At Montebello, the committee identified improvements such as narrowing travel lanes, widening the median, and repainting crosswalks, at a total cost of \$2,049,800 (this also does not include some costs that would be annual such as enforcement actions and a parent coordinator salary).

Both schools noted that it will take several years to implement all of the facets of their plans and to garner sufficient funding.

## **Conclusion**

The Safe Routes to School plan not only identifies two pilot schools but also presents a guidebook for other communities and schools to use to make improvements based on the model of what makes access to a school safer and the lessons learned at Rolling Terrace and Montebello Elementary schools. SHA would not be solely responsible for the costs of the improvements. Local jurisdictions such as Montgomery County and the City of Baltimore as well as parents and teachers, and local police departments will share in expenses. The fiscal 2004 allowance includes no funding for this program. The final report will provide additional information as to the feasibility of implementing a Safe Routes program at other schools across the State.

## **3. Bicycle and Pedestrian Access Master Plan**

Chapter 670, Acts of 2000 required the department to prepare a statewide 20-year bicycle and pedestrian master plan. The plan is to provide, preserve, improve, and expand access to transportation facilities in the State for pedestrians and bicycle riders. The plan identifies the following key goals, the actions that will be necessary to achieve each goal, the cost of achieving these goals, and performance measures to evaluate the success in meeting the goals of the program.

- ***Facility Integration and Expansion (total estimated cost to achieve – \$1.48 to \$1.68 billion):*** Integrate and expand the State’s bicycle and pedestrian facilities, creating a connected network of on-road, off-road and transit-related accommodations that will encourage and facilitate increased levels of bicycling and walking and improve access for individuals with disabilities.

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- ***Facility Preservation and Maintenance (total estimated cost to achieve – \$20.6 million):*** Preserve, protect and maintain the State’s existing bicycle and pedestrian facilities and rights-of-way including bike lanes, roadway shoulders, sidewalks, crosswalks, trails, and side paths.
- ***Safety (total estimated cost to achieve – \$33 million):*** Provide safe and convenient bicycle and pedestrian accommodations for every type of trip, and for all levels of ability.
- ***Education and Encouragement (total estimated cost to achieve – \$12 million):*** Develop education and promotional programs that will increase bicycling and walking and foster a pro-bicycle and pro-pedestrian awareness in individuals, private sector organizations, and all levels of government.
- ***Smart Growth (total estimated cost to achieve – \$6.6 million):*** Work with local communities to increase their understanding of how land use, transportation and other policies and planning processes need to be modified to achieve increased levels of bicycling and walking, especially in Priority Funding Areas.

In preparing the master plan, the department, with the Bicycle and Pedestrian Advisory Committee, completed an inventory of State policies and programs; legal and administrative codes; trails; and 5,000 miles of State highways and roads in the City of Baltimore. The review attempted to identify the specific improvements needed to create a safer system and enhance accessibility for travel by foot, bike, or wheelchair. Factors that contribute to the comfort and safety of all pedestrians include the width and condition of sidewalks, the availability of curb cuts, pedestrian crossings, signalization, and lighting. For bikers, the width of roadway provided to bicycle traffic as opposed to vehicular traffic particularly in high-traffic or high-speed areas is of concern.

In fiscal 2002, MDOT spent \$55 million to improve sidewalks or bike access to roads. Fiscal 2004 spending related to the bicycle and pedestrian master plan totals \$77.8 million.

***Current and Prior Year Operating Budgets***

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**Current and Prior Year Operating Budgets  
State Highway Administration  
(\$ in Thousands)**

	<b><u>General Fund</u></b>	<b><u>Special Fund</u></b>	<b><u>Federal Fund</u></b>	<b><u>Reimb. Fund</u></b>	<b><u>Total</u></b>
<b>Fiscal 2002</b>					
Legislative Appropriation	\$0	\$604,590	\$8,791	\$0	\$613,381
Deficiency Appropriation	0	663	0	0	663
Budget Amendments	0	13,654	3,098	0	16,752
Reversions and Cancellations	0	-3,156	-19	0	-3,175
<b>Actual Expenditures</b>	<b>\$0</b>	<b>\$615,751</b>	<b>\$11,870</b>	<b>\$0</b>	<b>\$627,621</b>
<b>Fiscal 2003</b>					
Legislative Appropriation	\$0	\$608,241	\$8,877	\$0	\$617,118
Budget Amendments	0	-379	0	0	- 379
<b>Working Appropriation</b>	<b>\$0</b>	<b>\$607,862</b>	<b>\$8,877</b>	<b>\$0</b>	<b>\$616,739</b>

Note: Numbers may not sum to total due to rounding.

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**Fiscal 2002**

The fiscal 2002 budget for the SHA increased by \$14.4 million, from \$613.4 million to \$627.8 million. The department received a special fund deficiency appropriation of \$662,864 for security costs related to the terror attacks of September 11, 2001. The administration's special fund appropriation increased by \$13.7 million due to additional highway user revenue receipts and costs related to the clean up of the tornado that hit La Plata, Maryland in April 2002. Highway user revenues are distributed to local governments. The administration received additional federal funds above the amount anticipated in the budget totaling \$3.1 million due to the addition of federal grant funds for highway safety programs and the CHART program. Finally SHA cancelled appropriations of approximately \$700,000 in special funds from the maintenance budget due to the mild winter and \$19,000 in federal funds due to the timing of highway safety grants.

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Appendix 2

Object/Fund Difference Report  
MDOT - State Highway Administration

Object/Fund	FY02	FY03	FY04	FY03 - FY04	Percent Change
	<u>Actual</u>	<u>Working Appropriation</u>	<u>Allowance</u>	<u>Amount Change</u>	
<b>Positions</b>					
01 Permanent	1,638.00	1,591.00	1,591.00	0	0%
02 Contractual	3.30	5.00	6.00	1.00	20.0%
<b>Total Positions</b>	<b>1,641.30</b>	<b>1,596.00</b>	<b>1,597.00</b>	<b>1.00</b>	<b>0.1%</b>
<b>Objects</b>					
01 Salaries and Wages	\$ 78,319,708	\$ 79,795,255	\$ 80,590,933	\$ 795,678	1.0%
02 Technical & Spec Fees	9,139,869	8,001,306	7,038,622	-962,684	-12.0%
03 Communication	1,723,554	1,626,246	1,526,438	-99,808	-6.1%
04 Travel	743,351	739,837	747,640	7,803	1.1%
06 Fuel & Utilities	7,561,116	8,124,381	8,175,245	50,864	0.6%
07 Motor Vehicles	18,724,503	18,173,663	16,594,697	-1,578,966	-8.7%
08 Contractual Services	47,102,031	47,020,038	45,136,874	-1,883,164	-4.0%
09 Supplies & Materials	15,086,721	15,572,506	14,811,270	-761,236	-4.9%
10 Equip - Replacement	766,423	489,724	795,193	305,469	62.4%
11 Equip - Additional	507,355	225,077	175,042	-50,035	-22.2%
12 Grants,Subsidies,Contr	446,854,280	436,334,994	465,067,367	28,732,373	6.6%
13 Fixed Charges	1,092,038	691,049	820,227	129,178	18.7%
<b>Total Objects</b>	<b>\$ 627,620,949</b>	<b>\$ 616,794,076</b>	<b>\$ 641,479,548</b>	<b>\$ 24,685,472</b>	<b>4.0%</b>
<b>Funds</b>					
03 Special Fund	\$ 615,751,272	\$ 607,916,903	\$ 631,947,812	\$ 24,030,909	4.0%
05 Federal Fund	11,869,677	8,877,173	9,531,736	654,563	7.4%
<b>Total Funds</b>	<b>\$ 627,620,949</b>	<b>\$ 616,794,076</b>	<b>\$ 641,479,548</b>	<b>\$ 24,685,472</b>	<b>4.0%</b>

Note: Fiscal 2003 appropriations and fiscal 2004 allowance do not include cost containment and contingent reductions.

Fiscal Summary						
MDOT - State Highway Administration						
<u>Unit/Program</u>	<u>FY02 Actual</u>	<u>FY03 Legislative Appropriation</u>	<u>FY03 Working Appropriation</u>	<u>FY02 - FY03 % Change</u>	<u>FY04 Allowance</u>	<u>FY03 - FY04 % Change</u>
01 State System Construction and Equipment	\$ 882,831,581	\$ 922,322,273	\$ 818,600,000	-7.3%	\$ 838,900,000	2.5%
02 State System Maintenance	174,795,974	175,325,116	175,044,392	0.1%	170,801,497	-2.4%
03 County and Municipality Capital Funds	27,367,622	27,410,719	27,850,000	1.8%	26,920,000	-3.3%
04 Highway Safety Operating Program	12,288,526	10,040,827	9,997,639	-18.6%	9,992,172	-0.1%
05 County and Municipality Funds	440,536,449	431,752,045	431,752,045	-2.0%	460,685,879	6.7%
08 Major IT Development Projects	5,803,074	0	3,331,820	-42.6%	3,178,741	-4.6%
<b>Total Expenditures</b>	<b>\$ 1,543,623,226</b>	<b>\$ 1,566,850,980</b>	<b>\$ 1,466,575,896</b>	<b>-5.0%</b>	<b>\$ 1,510,478,289</b>	<b>3.0%</b>
Special Fund	\$ 967,931,063	\$ 976,509,923	\$ 966,697,723	-0.1%	\$ 1,013,726,940	4.9%
Federal Fund	575,692,163	590,341,057	499,878,173	-13.2%	496,751,349	-0.6%
<b>Total Appropriations</b>	<b>\$ 1,543,623,226</b>	<b>\$ 1,566,850,980</b>	<b>\$ 1,466,575,896</b>	<b>-5.0%</b>	<b>\$ 1,510,478,289</b>	<b>3.0%</b>

Note: Fiscal 2003 appropriations and fiscal 2004 allowance do not include cost containment and contingent reductions.

**Budget Amendments for Fiscal 2003**  
**Maryland Department of Transportation**  
**State Highway Administration**

<u>Status</u>	<u>Amount</u>	<u>Fund</u>	<u>Justification</u>
<b>Approved (1)</b>	\$0		Funding for major IT project development is being transferred from existing programs to the new programs as required by Senate Bill 491 which was enacted during the 2002 legislative session.
<b>Pending (2)</b>	\$530,200 <u>\$(713,144)</u> <u>\$(182,944)</u>	FF Oper SF Cap	Allows MDOT's appropriation for major IT projects to match the cash flow projections reflected in the Draft Consolidated Transportation Program (CTP).
<b>Projected (3)</b>	\$9,327,174	SF Oper	Funds for County & Municipalities - based on increased Highway User Revenues to be distributed to the counties and municipalities. This funding is being considered for transfer to the General Fund.
<b>Projected (4)</b>	\$8,622,233	SF Oper	Funds for County & Municipalities - based on increased Highway User Revenues to be distributed to the counties and municipalities. This funding is being considered for transfer to the General Fund.
<b>Projected (5)</b>	\$700,000 <u>\$(700,000)</u> <u>\$0</u>	FF Oper SF Oper	Additional Federal Funding for CHART Special funds will be offset by federal fund increase above.
<b>Projected (6)</b>	\$(9,538,337) <u>\$(90,993,084)</u> <u>\$(100,531,421)</u>	SF Cap FF Cap	Adjusts the amended appropriation to agree with the anticipated expenditures for the current year as reflected in the FY 2003 - FY 2008 Final CTP.
<b>Projected (7)</b>	\$(5,831,757) <u>\$(883,124)</u> <u>\$(6,714,881)</u>	SF Oper SF Cap	FY 2003 Cost containment consisting of delays in equipment purchases and scaling back various maintenance contracts.

Source: Maryland Department of Transportation

**State Highway Administration  
Fiscal 2002 through 2004  
(\$ in Thousands)**

<b>Project Titles</b>	<b>FY 02 Actual</b>	<b>FY 03 Estimated</b>	<b>FY 04 Estimated</b>
<b>Major Projects</b>			
Primary	\$181,454	\$155,600	\$112,300
Secondary	59,919	109,900	123,700
Interstate	87,815	80,900	94,600
Woodrow Wilson Bridge	122,174	106,000	166,200
<b>Subtotal</b>	<b>451,362</b>	<b>452,400</b>	<b>496,800</b>
<b>System Preservation Projects</b>			
Bridge Replacement and Rehabilitation	62,193	54,900	49,400
Safety and Spot Improvements	34,096	35,400	26,800
Resurfacing and Rehabilitation	108,646	94,100	97,300
Traffic Management	29,668	27,400	25,700
Commuter Action Improvement	1,616	4,100	3,900
Environmental Projects	9,379	7,200	8,100
Noise Barriers	19,696	13,200	18,400
Transportation Enhancements	12,298	10,800	9,900
Statewide Planning and Research	19,073	18,700	13,300
Urban Street Reconstruction	12,075	3,300	6,500
Neighborhood Conservation	30,307	28,600	27,400
Sidewalk Projects	5,819	3,600	2,800
Emergency	1,042	1,200	1,300
Drainage Improvements	4,443	5,000	1,700
Truck Weight	764	2,000	2,600
CHART	10,856	7,000	7,800
Intersection Capacity	4,747	7,300	2,900
Bicycle Retrofit	1,061	900	1,100
Pilot Program	7,286	4,900	6,000
Guard Rail Treatment	0	2,000	0
Quick Response	395	3,100	1,700
<b>Subtotal</b>	<b>473,160</b>	<b>334,700</b>	<b>314,600</b>
Facilities and Equipment	17,861	11,500	7,500
Reimbursable Expenditures	38,031	19,000	19,000
Work Performed for Other Modal Administration	118	1,000	1,000
<b>Total</b>	<b>\$980,532</b>	<b>\$818,600</b>	<b>\$838,900</b>
Source: Maryland State Budget Books			