

MARYLAND STATE  
HIGHWAY ADMINISTRATION

**FY14 ANNUAL REPORT**



**Maryland Department of Transportation  
State Highway Administration**

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## MESSAGE FROM THE ADMINISTRATOR

Dear fellow Marylander:

On behalf of the men and women of the State Highway Administration (SHA), thank you for your interest in our accomplishments and goals. Millions of people travel through the State every day and our mission is to help them reach their destinations safely. Most never think about SHA services unless there is an obstacle or impending severe weather.

SHA's highway system is the backbone of the transportation network, connecting the Port of Baltimore, BWI Thurgood Marshall Airport, east to west and north to south and of course, the nation's capital. SHA manages about one-fifth of the State's roads, carrying approximately 66 percent of the traffic. Our roads are busy.

Safety is our top priority. Our efforts focus on keeping people safe – whether driving, walking, biking or riding, we want everyone to return to their loved ones each day. Even though 2013 saw a 50-year record low of 466 traffic fatalities, SHA, along with our partners, will not rest until that number is zero.

Operationally, we support safety in many ways. SHA transitioned this year to 24/7 metro-area emergency traffic patrols. The program helps keep people safe and prevents crashes by assisting stranded drivers and managing incidents. As the thousands of complimentary letters and emails received each year attest, the program's greatest value is coming to the rescue of travelers and has the added benefit of reducing congestion - saving travelers \$1.16 billion in user costs savings last year.

SHA invests in safety by investing in road improvements – this year starting \$774 million in new projects including upgrading MD 404 on the Eastern Shore, replacing the I-695 Bridge over Milford Mill Road, reconstructing the intersections at MD 175 and Mapes and Reese roads and improving access from MD 5 to the Branch Avenue Metro Station. We continued our commitment to keeping our bridges structurally sound, reaching 97 percent rated fair or better and keeping our pavements smooth with 86 percent highway pavement in acceptable ride condition. SHA does it right - all work completed and underway is performed within the highest environmental protection requirements.

Perhaps the most visible service SHA provides is snow removal. The winter of 2014 certainly provided SHA the opportunity to deliver – record snow levels and SHA still reached bare pavement on interstate and primary highways within 2 hours after the last flakes fell.

Again, thank you for taking the time to read SHA's FY14 annual report. As you travel through Maryland, please drive carefully and remain alert, always buckle up and share the roads with cyclists, pedestrians, motorcyclists and other drivers. We're all in this together.

Sincerely,  
Melinda B. Peters



## SHA OVERVIEW

The Maryland State Highway Administration (SHA) roads provide mobility and access for people and goods from and through Maryland. SHA operates, maintains and rebuilds the numbered, non-toll routes in Maryland's 23 counties – more than 17,000 lane-miles and 2,570 bridges. SHA roads carry 66 percent of the state's traffic. SHA delivers more than \$1 billion of work annually that is competitively awarded to private entities, sustaining thousands of jobs in the highway industry for contractors, suppliers, engineering firms and small and minority businesses.

## SHA MISSION

Provide a safe, well-maintained, reliable highway system that enables mobility choices for all customers and supports Maryland's communities, economy and environment.

## SUPPORTING MARYLAND'S ECONOMY

An important goal for the SHA is to "Support Maryland's Economy and Communities with Reliable Movement of People and Goods." Improving mobility enhances commerce throughout the state. SHA has numerous programs to enhance not only vehicular transportation but also multi-modal options to ensure the safety and accessibility of all users. With a focus on policies, programs and projects that systematically address both recurring (every day congestion) and non-recurring (congestion due to weather, crashes, vehicle breakdowns, etc.) congestion, SHA uses a data driven performance based approach to provide a high quality, reliable highway system.

## SAFETY GOOD NEWS

One of SHA's top goals is improving safety. We use the three "E's" of safety (engineering, education and enforcement), often working with partners and stakeholders.

CY 2013 saw a five-decade record low in traffic fatalities – 466. In the same year, Ocean City recorded a 50 percent decrease in traffic-related injuries and no fatalities compared to two fatalities the prior summer. In part, the improvement is due to the Walk Smart! Campaign, a joint SHA / Ocean City / Police education and enforcement effort with local businesses and agencies. Coastal Highway has six to eight lanes of traffic and the town hosts up to 8 million visitors – essentially short-term new residents - during the summer. This successful campaign continued in summer 2014 with Delaware joining to improve safety at the beaches along US 1.

## MARYLAND FOOD BANK

In the second statewide effort of its kind, SHA joined forces with the Maryland State Police (MSP), the Maryland Food Bank, and other MDOT agencies to collect food donations during "Hunger Action Month." Partners collected non-perishable food from employees and the public at 16 SHA locations, 23 MSP barracks, toll facilities, as well as all MVA and vehicle emissions inspection locations. SHA employees packed and delivered this food to three Maryland Food Bank warehouses. The team collected more than 33,000 pounds of food and several thousand dollars in online donations to provide over 30,000 meals to Maryland citizens in need.



## FUNDING IN FY 2014

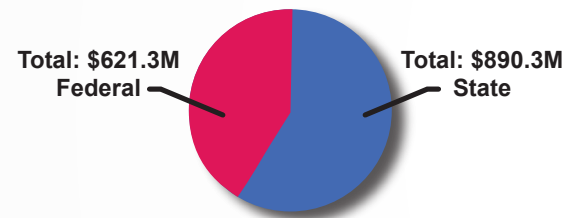
SHA roads carry more than 37 billion vehicle-miles of travel\* a year and more than 243 million tons of freight cargo a year. Funding is used to:

- Operate and maintain more than 17,000 lane-miles\*\* of roads (25 percent of the state's total lane-miles)
- Maintain and inspect 2,570 bridges, and assist local governments with 2,321 locally owned bridges
- Connect transportation facilities such as bike and walking paths, bus, light rail and subway stations, the Port of Baltimore and the Baltimore-Washington International Thurgood Marshall Airport
- Collaborate with citizens, communities and elected officials to deliver hundreds of high-quality projects, from system preservation to major investments through planning, design and construction
- Operate 37 facilities, including shops and offices
- Manage the 24/7 Statewide Operations Center in Hanover, along with testing laboratories, maintenance and traffic and safety functions.

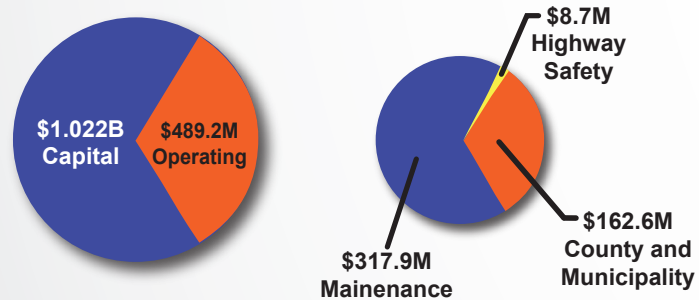
\*Vehicle miles of travel (VMT) is the number of miles traveled by all the vehicles on all roads (for example, two vehicles traveling two miles equals four VMT).

\*\*Lane-miles is the term used for the mileage down the center line multiplied by the number of lanes.

SHA Sources of Funding for FY 2014  
Total: \$1.512 Billion



SHA Use of Funding for Operating FY 2014



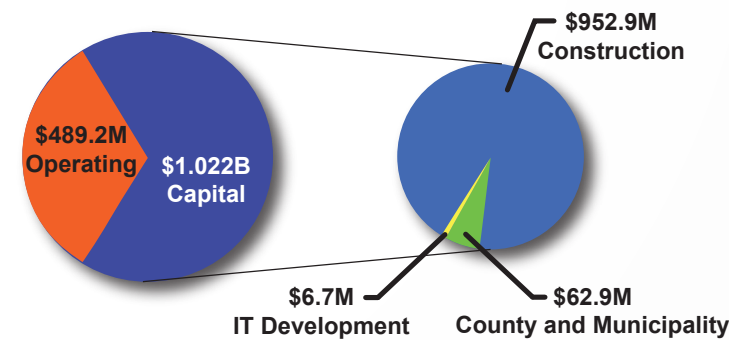
OPERATING MAINTENANCE FUNDS SPENT	FY 2014
Routine Maintenance	\$110.6M
Environmental Design and Compliance	\$3.9M
Traffic/CHART Operations	\$19.3M
Winter Operations	\$149.7M
Other	\$34.4M
<b>TOTAL</b>	<b>\$317.9M</b>

## FY 2014 ACCOMPLISHMENTS – MAJOR PROJECT COMPLETIONS

SHA completed numerous major projects in FY 2014:

- I-70 bridges over South Street; replaced bridges / interchange improvements (Frederick) – **\$46.8 million**
- US 40 (Pulaski Highway) Interchange at MD 715 (BRAC/APG access improvements) – (Harford) – **\$32.7 million**
- US 40 (Baltimore National Pike); replaced bridge over Patapsco River (Baltimore, Howard) – **\$20.8 million**
- I-70, Eisenhower Memorial Highway; replaced bridge over Conococheague Creek (Washington) – **\$18.7 million**
- I-695 (Baltimore Beltway); replaced bridge over MD 372 (Wilkins Avenue) (Baltimore) – **\$17 million**
- I-695 (Baltimore Beltway); replaced bridge on MD 144 (Frederick Road) over I-695 (Baltimore) – **\$17.3 million**
- MD 175 (Annapolis Road); BRAC intersection improvements at Rockenbach/Disney roads (Anne Arundel) – **\$14.6 million**
- I-95 (Capital Beltway); resurfaced roadway from D'arcy Road to Arena Drive (Prince George's) – **\$10.2 million**
- I-83 (Harrisburg Expressway); replaced bridge on Middletown Road over I-83 (Baltimore) – **\$7.5 million**
- MD 287 (Sandtown Road); replaced bridge over the Choptank River (Caroline) – **\$6.7 million**
- MD 140 (Taneytown Pike); replaced bridge over Monocacy River (Frederick) – **\$5.6 million**
- MD 185 (Connecticut Avenue); BRAC Intersection Improvements at Jones Bridge Road/Kensington Parkway (Montgomery) – **\$5.0 million**
- US 40 (Pulaski Highway); BRAC intersection improvements at MD 7/MD 159 (Harford) – **\$4.1 million**
- MD 68 (Lappans Road); replaced bridge over James Run (Washington) – **\$1.8 million**
- MD 32 (Patuxent Parkway); new interchange at Linden Church Road (Howard) – **\$16.7 million**

SHA Use of Funding for Capital FY 2014



CAPITAL CONSTRUCTION FUNDS SPENT	FY 2014
Major Projects (planning, design, right of way and construction phases)	\$138.7M
Bridge Rehabilitation Projects	\$172.1M
Pavement Resurfacing/Rehabilitation Projects	\$253.4M
Safety-related Infrastructure Projects	\$96.1M
Multi-modal Access Projects	\$28.7M
Traffic Management	\$80.0M
Environmental Projects	\$57.7M
Facilities, Equipment, Research	\$89.3M
Reimbursable Expenses, Other	\$36.9M
<b>TOTAL</b>	<b>\$952.9M</b>

## HIGHLIGHTS OF PROJECTS AWARDED BY SHA IN FY 2014

- I-83 from I-695 to Shawan Road; safety and resurfacing improvements (Baltimore) – **\$10.3 million**
- I-695 at Milford Mill Road; bridge replacement (Baltimore) – **\$27.6 million**
- MD 404 from MD 309 to Cemetary Road; roadway widening (Caroline/Queen Anne's) – **\$30.1 million**
- MD 272 over Amtrak; bridge replacement (Cecil) – **\$20.9 million**
- U.S. 219 over Cherry Creek; bridge replacement (Garrett) – **\$3.2 million**
- MD 22 at Old Post Road; intersection improvements (Harford) – **\$8.8 million**
- MD 22 at Beards Hill; intersection improvements (Harford) – **\$15.9 million**
- U.S. 29 Seneca Drive to MD 75; road widening – (Howard) – **\$35.2 million**
- MD 97 at Randolph Road; interchange improvements (Montgomery) – **\$73.8 million**
- MD 5 from Auth Way to I-495/95; metro access improvements – (Prince George's) – **\$47.2 million**
- MD 500 from MD 208 to MD 410; safety improvements (Prince George's) – **\$10.1 million**
- U.S. 13 over Pocomoke River; bridge rehabilitation (Somerset/Worcester) – **\$17.1 million**
- MD 822 at MD 675 UMES Roundabout; roundabout construction (Somerset) – **\$4.5 million**

## TOP ACCOMPLISHMENTS BY KEY PERFORMANCE AREA (KPA)

### HIGHWAY SAFETY KPA

- Implemented numerous strategic highway safety plan strategies, including partnership in the “Toward Zero Deaths” Campaign. Maryland traffic fatalities dropped to a record low of 466 in 2013 – the lowest number in 50 years.
- Maryland’s fatality rate (loss of life in relation to traffic volume) decreased to 0.83 per 100 million miles of travel from 0.91 the prior year. Fewer people sustained injuries from crashes in 2013; and the number of severe injuries also decreased.
- Multi-disciplinary teams performed safety audits at high pedestrian crash locations in Ocean City and Montgomery, Prince George’s and Baltimore counties, resulting in implementation of innovative engineering techniques and other proactive initiatives.
- Developed a statewide bicycle safety campaign known as “We’re on this Road Together – Expect and Respect” and promoted it at many events such as Artscape and Tour Du Port. SHA facilitated an advisory group that includes some of the state’s most active advocates.
- With an increase in work zones on Maryland roads during FY 2014, SHA conducted a public information and education campaign to remind drivers of their role in work zone safety. The campaign “Safer Driving. Safer Work Zones. For Everyone” achieved more than 5.5 million impressions through billboards, radio public service announcements, earned media coverage and grassroots outreach.
- The state’s Motor Carrier Safety Assistance Program partners conducted 121,900 truck inspections in CY 2013. Maryland ranked #1 in the nation for inspections per lane miles traveled.
- Completed 7th Virtual Weigh Station (VWS) site for commercial vehicles/trucks.



### MOBILITY/ECONOMY KPA

- Expanded CHART traffic patrols to 24/7 in metropolitan areas (Baltimore, Frederick and Washington, D.C. area). The patrols are the best way to quickly respond and help stranded motorists and clear incidents, improving safety and mobility and enhancing commerce throughout the state.
- Effectively managed roadway incidents, saving travelers \$1.16 billion in user costs and reducing delay by 32.7 million vehicle-hours in CY 2013.
- Increased the total number of directional miles improved for bicycles, consisting of marked bicycle lanes, shared-use paths, and shared-lane markings, by 67 miles since FY 2011.
- Supported economic vitality by processing 139,000 oversize/overweight truck load permits, generating \$9.5 million in revenue through the new automated hauling permit system.
- Issued 145 access permits to support private development and coordination with local jurisdictions.
- Doubled the number of truck parking spaces at the I-95 South Welcome Center in Howard County. That brings the total number of truck parking spaces to 61.
- Completed lighting upgrades for park and ride lots statewide, installing 735 LED roadway luminaries.
- Reconstructed 21 miles of existing sidewalk and built 8 miles of new sidewalk in FY 2014, increasing American with Disabilities Act (ADA) compliance and improving safety and mobility by providing access to transit, businesses and services to persons of all abilities.

## SYSTEM PRESERVATION AND MAINTENANCE KPA

- Addressed 11 structurally deficient bridges listed on the Federal Highway Administration (FHWA) submittal in April 2013, resulting in 97 percent of all 2,570 structures in fair or better condition. For the April 2014 FHWA submittal, only 81 bridges were rated structurally deficient, the lowest number since tracking began.
- Ninety-nine percent of all bridges allow legally loaded vehicles to safely traverse.
- Invested \$169 million to resurface and maintain highway pavements; attaining an acceptable or better rating for 86 percent of SHA's roadway mileage.
- Maintained the overall maintenance level of service of 83.4 percent despite the extended winter that prevented typical spring maintenance activities. The statewide level of service rating on SHA roadways includes condition of signs, guardrails, lighting, drainage, pavement markings, mowing, brush and tree trimming, debris collection and other roadside and traffic safety items.
- During the 2013-2014 winter season, 90 percent of SHA shops reached bare pavement on interstate and primary highways within 2 hours after the end of frozen precipitation, exceeding the business plan goal of within four hours.

## MANAGING OUR AGENCY KPA

- Issued "notice to proceed" for \$774 million in construction and maintenance contracts, compared to \$522 million last year.
- Delivered 94 percent of all active construction projects within budget.
- Advertised 86 percent of capital improvement projects valued at \$1 million or more within 30 days of the original published date.
- Opened bids on 94 percent of capital improvement projects valued at \$1 million or more within 21 days of the scheduled date. Bid costs came in at \$940 million, nearly 10 percent less than the original estimate of \$1 billion.
- Awarded 85 architectural and engineering contracts, resulting in \$359.4 million of contract authority for consultant support services compared to 16 contracts valued at \$62.8 million in FY 2013.
- Improved project funding process by creating an electronic approval and validation system; the automated system eliminates several weeks of processing time previously required for original forms to route through interoffice mail.
- Paid 99 percent of all invoices on time.
- Reduced federal inactive project balances to less than two percent federal apportionments.
- Results from an Employee Engagement survey ranked SHA in the top tier compared to more than 20 federal agencies. Agency-wide action plans will assure survey results lead to meaningful improvement strategies.

## ENVIRONMENTAL COMPLIANCE AND STEWARDSHIP KPA

- Exceeded all pollution reduction targets; kept 70,201 pounds of nitrogen, 11,785 pounds of phosphorus and 5,854,790 pounds of sediment from entering Maryland's waterways.
- Improved water quality in the Chesapeake Bay Watershed by installing bio-swales, upgrading stormwater management facilities, restoring streams, planting trees, street sweeping and inlet cleaning to treat stormwater runoff from highways, driveways, sidewalks and roof surfaces.
- Of 4,000 plus erosion and sediment control (ESC) project inspections, only 17 non-compliance findings were documented (a 0.4 percent non-compliance) through the Quality Assurance Program. SHA has consistently achieved a 99.5 percent or higher since FY 2006.
- Ninety percent of 3,000 stormwater treatment facilities functioned properly; improved 121 that were deficient.
- Prevented more than 186,000 tons of material from entering landfills by recycling 59 percent of solid waste from SHA offices.
- Used more than 153,000 tons of reclaimed asphalt pavement in highway construction projects in CY 2013, which is 13 percent of the total asphalt used (1,180,623 tons).
- Completed construction of two pervious (permeable) pavement projects for two park and ride lots: MD 4 at MD 408 (Anne Arundel County) and I-83 at MD 439 (Baltimore County). These two are SHA's first use of pervious pavement.

## CUSTOMER COMMUNICATIONS, SERVICE AND SATISFACTION KPA

- Researched and responded to more than 25,000 customer service requests ranging from pothole repairs to traffic studies through Customer Care Management System (CCMS).
- Continued and enhanced the 511 traveler information program and upgraded service for truck drivers to customize 511 accounts for commercial trips with multiple stops along a delivery route. The enhanced 511 system provides information about route restrictions, truck weigh and inspection stations, snow emergency plans and winter storm emergency truck parking.
- Created an interactive customer service E-training module for all SHA employees, which is mandatory upon hiring.
- Provided direct, two-way communication for agency and customers through social media platforms. More than 18,000 additional customers chose to become fans of the Facebook page, making the total 37,223, an increase of 95 percent. Others engaged with the agency, expanding the reach to 200,000 at one point. Approximately 7,100 additional customers chose to follow SHA's Twitter account, bringing the total to 18,148, a 64 percent increase. Customers clicked on links for 124,635 social media messages on various platforms.

## CONTINUING PROGRESS

### THE CHESAPEAKE BAY AND SHA

The Chesapeake Bay is a unique and irreplaceable environmental and cultural resource. A healthy Chesapeake Bay benefits Maryland's tourism, recreation, agriculture and fisheries industries; improves the value of our homes, farms and businesses; and creates green jobs. Numerous SHA projects and programs are working to improve water quality in local streams and rivers, and supporting Maryland's leadership in Chesapeake Bay Restoration.

SHA is limiting water runoff from entering the Chesapeake Bay via tributaries by installing bio-swales, planting trees and installing pervious pavement systems to increase filtration of rainwater and decrease the size of traditional water treatment ponds and swales.

Completing a six-year remediation program, SHA brought all buildings and facilities, including underground storage tanks (UST) into environmental compliance. SHA also developed an Asset Management Plan (AMP) to effectively manage a fuel storage program. A well maintained UST system is necessary to prevent contamination of soil and groundwater, to protect property values and promote the economical use of land.

SHA partnered with the Maryland Department of Natural Resources to relocate a rare and threatened species of freshwater mussel in anticipation of road repairs in Rock State Park in Harford County. Freshwater mussels are living filters that play an important role in helping to clean our water bodies and provide food for many types of fish and mammals.



### GOOD NEWS ABOUT BRIDGES

In 2014, SHA owned, maintained and inspected 2,570 bridges, of which 97 percent are in fair or better condition. The number of structures on the structurally deficient bridge list has been steadily declining since 1994, when there were 174, a reduction of over 52 percent.

Structurally deficient does not mean that the bridges are unsafe. Structurally deficient bridges are safe for travel, but need to be funded and scheduled for repairs or replacement.

As the highway system ages, SHA anticipates an increase in the number of structurally deficient bridges in the next 10 years. SHA is proactively evaluating funding needs and designs to address repairs and replacements that will keep currently fair-rated structures at that rating for a considerable, feasible and cost-effective time frame.



### CHART 24/7 EMERGENCY RESPONSE - KEEPING YOU MOVING

In June 2014, the SHA's Coordinated Highways Action Response Team (CHART) implemented an expansion of the Emergency Patrol program to 24 hours-a-day, 7 days-a-week. SHA is reducing traffic congestion and improving safety on weekends, evenings, and early morning hours in the state's major metropolitan areas (Baltimore, Washington suburbs and Frederick) through motorist assistance and incident response.

The CHART Program reduces the impact of traffic congestion and prevents secondary incidents due to excessive delay and "rubbernecking" caused by initial collisions. Reducing incident impacts through quick-clearance strategies and emergency patrols improves traffic congestion and unexpected delays, while enhancing safety.

*"Your responsiveness, clear communication, and outstanding customer service really turned a negative event into a much calmer, hassle-free experience for me," said Mark M. "It's great to know that if incidents do occur that ... employees from SHA are readily available to help."*