



2017 YEAR IN REVIEW

INNOVATIVE. MODERN. CUSTOMER-DRIVEN.

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MESSAGE FROM THE GOVERNOR

Our Administration is transforming Maryland and delivering a transportation system that spurs growth, fosters job creation and economic development, and provides opportunities for our citizens to achieve a better quality of life. The Maryland Department of Transportation is committed to providing reliable, safe and efficient transportation to all who live in and travel throughout our state. We are investing \$14.7 billion and applying innovation and ingenuity to improve our highways, the Port of Baltimore, BWI airport, and our public transportation system. We are reaching every jurisdiction across the state, with attention to priority projects and infrastructure needs that touch every community and citizen.



Larry Hogan
Governor

We made a promise to improve commuter and traveler experiences by reducing traffic congestion to move Maryland forward – and we have delivered. With the largest construction program in state history, modernized processes, and innovative projects, we are providing taxpayers a strong return on their investment. Moreover, we are delivering these results in record time. For example, in 2015 we dedicated \$158 million to improving safety on MD 404 and reducing travel times on an 11.3 mile stretch uniting three counties on the state's Eastern Shore. We completed this vital project in time for the 2017 holiday season, a remarkable 18 months earlier than expected.

In the year ahead, we will build on our hard work and success by advancing a Public Private Partnership for the Capital Corridor and Greater Baltimore Area. Our \$9 billion Traffic Relief Plan will bring innovative solutions to the heavily traveled highways of I-495, I-270 connecting Frederick with Washington D.C., and MD 295 running north from the nation's capital. Most recently, we announced an additional \$461 million to add a lane on each loop of the Baltimore Beltway, install ramp metering to better control traffic flow, and expand the northbound I-95 express toll lane into Harford County. We've already started work along the I-270 corridor and will introduce active traffic management and smart signals, harnessing the latest in intelligent transportation technologies.

Our Administration remains focused on connecting more people to more places, with a better customer service experience and improved transportation systems that meet the demands of the 21st century and ensure Maryland remains Open for Business.

MESSAGE FROM THE SECRETARY

Under Governor Larry Hogan's leadership, we are transforming transportation. The Maryland Department of Transportation (MDOT) is a customer-driven agency that directly touches the lives of our State's residents and visitors. Each day, we facilitate the movement of people and the flow of goods and services, helping to connect our customers to life's opportunities. Through our new Excellerator program, MDOT is focused on customer priorities through 10 tangible results to make MDOT the best transportation agency in America.

We serve our customers through a network of six transportation units. We strive to ensure Maryland residents and visitors enjoy a transportation system that is safe and reliable, as well as a major contributor to the State's economic vitality.

In this spirit, the MDOT State Highway Administration (MDOT SHA) has taken bold steps over the last three years to relieve congestion and expedite travel along key corridors around the State. In late 2017, we fulfilled our commitment to open four travel lanes along 11.3 miles of the MD 404 corridor, completing the project well ahead of schedule.

Following the investment of nearly \$2 billion in highways and bridges in 2015, the Hogan Administration applied \$100 million to the I-270 Innovative Congestion Management project, awarding the project to the firm that committed to moving the most traffic, the farthest and the fastest. Turning to better ways of funding and expediting much-needed projects, Governor Hogan and MDOT recently announced a Traffic Relief Plan for new lanes on I-270 and the Capital Beltway through public-private partnerships, state ownership and upgrade of MD 295, Smart Signals along 14 corridors, and new lanes on the Baltimore Beltway and I-95 into Harford County. In an effort to protect our infrastructure, MDOT SHA has paved, treated, and improved nearly half the lane miles across Maryland since the Hogan Administration took office.

As you read MDOT SHA's Year in Review, you will learn that we have assembled an excellent team that is committed to getting the most out of every taxpayer dollar we spend. MDOT delivers for its customers through innovation, teamwork, accountability, and enhanced communication. I invite you to review this Annual Report and welcome your feedback. Our Department will continue to work hard every day to meet and exceed your transportation needs and expectations.



Pete K. Rahn
Secretary

TRANSFORMATIVE
BOLD

MESSAGE FROM THE ADMINISTRATOR

“Pardon our Dust. Pardon our Progress.” We see this statement all the time at construction sites and where businesses are being renovated. It is a throw-away statement of sorts. Sorry for the inconvenience, but please go about your daily lives. Pardon our dust.

Supporting the daily lives of Marylanders is our mission at MDOT and SHA. We connect them to life's opportunities. And they may see cones and lane closures and detour signs. They see our dust. But the effort and results behind that dust are MAKING A DIFFERENCE in this state. We are becoming a NATIONAL LEADER in transportation. That's how I see the last year at this organization. A record number of projects. Bringing transformative change. Delivering the Power of GO.

Welcome to a new MDOT SHA. We are making history with the most active construction projects in the history of the agency and delivering on Governor Hogan's commitment to bring real and transformative congestion relief to Marylanders. We have a record level of construction underway across Maryland, with more than 550 projects totaling \$4 billion.

The Hogan Administration is investing \$14.7 billion in Maryland's transportation network as a whole with 56 percent of that budget going to our roads and bridges.

Governor Hogan announced his \$1.97 billion investment in MAJOR road and bridge projects in June 2015. We have started 16 of those 22 promised highway projects. We have also treated and improved 8,500 lane miles across the state. That is half of the entire system. This is unprecedented progress and needed attention on our roads. We've been busy. That's a lot of dust.

And why? Why the investment? Why the effort? Why all the dust?

This past year we hit 60 billion Vehicle Miles Traveled (VMT) – meaning collectively everyone who drove in Maryland clocked 60 billion miles. More people are traveling. The nature of our country...the economy...and mobility of citizens in their later years...the advent of travel technology and a host of other elements are propelling more and more citizens out on the roads. Our roads. And the safety and quality of those roads are our responsibility. We owe a high bar. A high standard. And delivery on Governor Hogan's Customer Service Promise.

In my first year as Administrator, I chose four focus priorities to move the needle to create a new MDOT SHA, an organization where we hold ourselves to the highest of standards and achieve sustained excellence – **Innovation, Modernization, Communication** and **Customer Experience**.

We have done a lot in the last year to build on these priorities and inculcate them into our daily operations at this organization. We will do even more in the next year. We will drive forward and be recognized for our dedication, professionalism and quality of customer experience for the people of Maryland. They are trusting us. It's on us to deliver. We will.



Greg Slater
MDOT SHA Administrator

YOUR MDOT SHA...BY THE NUMBERS

A safe, well-maintained highway system is crucial to a strong economy, enabling mobility and access for people and goods from and throughout the State of Maryland, keeping people safe as they travel, and improving the quality of life of Maryland's citizens.

MDOT SHA
owns and maintains the Interstate,
U.S., and Maryland numbered,
non-toll routes in



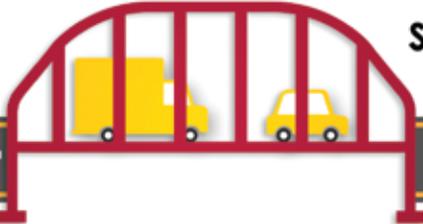
23 MARYLAND COUNTIES

17,000+



Lane Miles² of Roads and Ramps

2,564
State Maintained
Bridges



38 billion ton-miles of goods carried

Estimated to carry **219** million tons of freight with over **\$32.4** billion in value





More than **\$1 billion** of work annually delivered by private entities



MDOT SHA roads carry **66%** of state traffic



17% of road mileage



that translates to **60,000,000,000** vehicle miles traveled¹ in Maryland in 2017

2,959 employees



7 engineering districts



28 maintenance shops



MDOT SHA funding



¹ Vehicle miles of travel (VMT) is the number of miles traveled by all vehicles on all roads.

² Lane-miles is the term used for the mileage down the center line, multiplied by the number of lanes.

TOP TEN ACCOMPLISHMENTS OF 2017

1 THE INVESTING IN HIGHWAYS AND BRIDGES PROGRAM DELIVERS HISTORIC NUMBERS OF CONSTRUCTION PROJECTS AND TOP COUNTY PRIORITIES

Better, faster, and cheaper

Managing its largest highway construction program ever, MDOT SHA handled \$4 billion in construction projects including bridge replacements, interchanges, resurfacing and safety upgrades.

- In 2015, the Governor's Program funded top transportation priorities in local jurisdictions across the state.
- In 2017 MDOT SHA actively constructed 16 of the major projects and planned the remaining six, which will be underway in 2018.
- MDOT SHA addressed safety and eased congestion for millions of travelers.



2 MD 404 UPGRADE IN QUEEN ANNE'S, CAROLINE AND TALBOT COUNTIES - \$158 MILLION: LANES OPEN TO TRAFFIC A YEAR AND HALF EARLY!

MDOT SHA delivered the four-lane divided highway with a median and shoulders by the Thanksgiving holiday, as promised. The 11.3 miles of the dualized MD 404 provide a direct route between US 50 and the Town of Denton. The project improved safety with a median that separates the eastbound and westbound sides, as well as four travel lanes instead of two. This project is a critical link – along with projects such as the Dover Bridge replacement, the Salisbury Bypass replacement, and US 113 widening – that connect residents to the Eastern Shore safely.

In 2015, the Hogan Administration directed MDOT SHA to deliver the project before Thanksgiving 2017. MDOT developed a fast-track process and solicited teams of contractors and designers to deliver the project within the time frame. MDOT SHA selected MD 404 Safety Corridor Constructors in June 2016. The crews began relocating utilities, coordinating with area property owners and local law enforcement, and constructing the new travel lanes while maintaining traffic in fall 2016. Workers were permitted to work seven days a week to stay on schedule. Local outreach staff met with emergency services personnel and the agricultural community to keep them informed.



3 HOW DO YOU SPELL "RELIEF?" INNOVATION! THE POWER OF GO - A NEW APPROACH TO EASING TRAFFIC CONGESTION →

The Innovative Congestion Management (ICM) project broke ground on busy I-270 between Frederick and Washington, D.C. ultimately eliminating 14 bottlenecks. Combining intelligent transportation and infrastructure improvements, ICM adds 23 new lane miles, more than 25 real-time traffic communication signs, and more than 30 intelligent signals.

- In a national first, MDOT SHA pioneered an innovative procurement method with a completely open scope for a highway project.
- MDOT SHA set a budget at \$100 million and asked for ideas to move the most people the farthest and the fastest.
- The winning proposal includes 16 expert firms that proposed solutions to bring up to 30 minutes less travel time to the I-270 southbound morning commute.



4 STRONGER CONNECTIONS: KEEPING PEOPLE SAFELY MOVING BY REHABILITATING MARYLAND'S BRIDGES →

When Governor Hogan's Administration took office in 2015, there were 69 structurally deficient bridges. The Governor promised to repair or replace each and every one. By the end of 2017, 41 were rehabilitated or replaced and were no longer structurally deficient. The remaining 28 are in design and actively moving toward construction or repair, with all addressed by mid-2018.

5 INTEGRATED HAULING PERMITS: GETTING GOODS TO MARKET – IN A FLASH, NO MORE WAITING, NO FEES → Maryland One

Trucks freely come in, out and through Maryland carrying everything consumers want and need. Hauling permits allow businesses to move oversize and overweight loads throughout the state. MDOT SHA is saving Maryland businesses money and saving truckers time with its innovative automated truck hauling permit system for state, toll and Baltimore City roads. The Maryland One System, which eliminates the final vestiges of manual paper processing, has reduced overweight hauling permit processing from weeks and days to hours and minutes, along the way eliminating engineering fees for those applications that pass a simple test. Maryland receives nearly 140,000 overweight/oversize permit applications each year. Now, 99.1% of all applications are issued within 48 hours or less. Maryland One savings are tremendous: in FY 2017, Maryland One saved the State of Maryland **\$2,169,840**, while savings to the industry were **\$19,570,340**.



TOP TEN ACCOMPLISHMENTS (CONTINUED)

6 MODERNIZING THE CONSTRUCTION PROJECT BIDDING PROCESS

Bid Express

Maryland's new E-Bidding system modernizes a core business function, saving taxpayers time and money. Contractors can now securely submit highway project bids from any computer, download contract documents, and receive addenda to advertisements. Maryland joins 40 other transportation departments in using this system, which is already used by thousands of contractors. The industry is set to save \$800,000 collectively each year, and will realize considerable time savings. Bid Express provides MDOT SHA with savings of five days in processing each bid and \$68,000 a year in data entry costs.

7 PAPERLESS? – E-CONSTRUCTION

E-Construction, the cloud-based system for managing projects that MDOT SHA implemented in 2017 with five pilot projects, will continue in 2018 and be complete in 2019. E-Construction has already reduced the length of time that contractors wait for approvals, thus speeding processes and, ultimately, completing highway projects earlier so that the public can benefit sooner. The system lowers costs, too. Moving from the previous pen-and-paper to tablets increases productivity and speeds the flow of information.



8 TIME IS MONEY: COST + TIME FACTORS FOR CONSTRUCTION PROJECT BIDDING

A + B Bidding

To pick the right contractors for the right job, MDOT SHA employs a new innovative bid process for many projects. MDOT SHA selects a contractor by examining both the cost of work and the expected time for project completion, which minimizes inconvenience to the traveling public by reducing the time that roadwork is done and lanes are closed. It delivers improvements for safety, capacity, and economic development faster than a traditional award based solely on low bidding, and provides overall better value.

- Uses a cost-plus-time bidding procedure that selects contractors by estimating:
 - o cost of work (the A element) while factoring in
 - o expected length of time to completion (the B in the equation) and the impact/cost of that time for customers
- Examples of time and dollar savings for:
 - o I-270 at Watkins Mill Interchange: six months, a savings of \$5.6 million
 - o MD 32: almost nine months, a savings of \$4.6 million
 - o US 113: seven months, a savings of nearly a half million dollars

9 COMING TO THE RESCUE ON BUSY HIGHWAYS

CHART – Coordinated Highways Action Response Team

CHART's emergency response patrols come to the aid of drivers in disabled vehicles and support traffic control at crash scenes to open lanes quickly while assuring the safety of all.

In 2017 CHART:

- responded to 30,314 incidents
- provided 42,048 motorist assists
- averted 43.6 million hours of delays
- saved drivers \$1.5 billion in the cost of delays
- prevented 557 secondary crashes
- **set a milestone by answering our one millionth call for roadway assistance since the program began 27 years ago. This milestone was recognized by Governor Hogan with a small ceremony at the State House.**



10 INNOVATIVE WINTER OPERATIONS – SENSIBLE SALTING

With a goal of clearing the highways quickly when it's snowing, MDOT SHA introduced new, more modern applications of salt brine and pre-wetted salt that prepare roads before storms and target salt exactly where it's needed. MDOT SHA added infrared weather sensors, replacing older technology, to provide an early warning about freezing road conditions. All of this helps reach bare pavement for drivers more rapidly (average 1.69 hours) after snow and sleet ends.

- With better deployment MDOT SHA saved the state \$11 million last year in winter operating expenses
- MDOT SHA lowered the average salt usage to 420/pounds/lane-mile/inch of precipitation across the state – that is a 58 percent drop in salt usage over the past three years and a 32 percent decrease in the past year



GOVERNOR PRIORITY PROJECTS



Governor Hogan announced an unprecedented \$1.97 billion investment in transportation funding for highways and bridges in June 2015, ushering in a year of historic construction in FY 17. Breaking bottlenecks, easing congestion, and adding lanes and new interchanges opened roads to opportunity in every corner of the State.



INVESTMENT IN HIGHWAYS AND BRIDGES FOR SAFETY AND CONGESTION RELIEF

MD 404 Upgrade in Queen Anne's, Caroline and Talbot counties - \$158 Million: Lanes open to traffic a year and half early! MDOT SHA delivered the four-lane divided highway with a median and shoulders by the Thanksgiving holiday, as promised. The entire 11.3-mile widening project extends from US 50 to the Denton Bypass. The wider roadway improves safety and operations and reduces traffic congestion caused by high seasonal peaks associated with summer resort traffic. Construction began in summer 2016 with an expedited design-build contract and innovative partnership with industry partners.

US 113 Corridor Improvements – Phase 4 in Worcester County - \$82.3 Million: Featuring A + B Bidding, which factors both time and costs, MDOT SHA is expediting delivery of an upgraded US 113 from two to four lanes with a median and shoulders wide enough to accommodate bicycles from Five Mile Branch Road to north of Public Landing Road. The wider roadway will improve safety and operations, and reduce traffic congestion caused by high seasonal peaks associated with summer resort traffic. Phase 4 began as a design-build project fall 2017, and will be complete in fall 2019.

I-270 Interchange at Watkins Mill Road in Montgomery County - \$97.71 Million: Breaking ground in mid-summer, MDOT SHA is constructing a new I-270 interchange at Watkins Mill Road. Improvements along I-270 will extend from MD 124 to Middlebrook Road. Bicycle and pedestrian improvements along Watkins Mill Road will be included within the project area and to the Metropolitan Grove MARC station. The project will support economic development and relieve congestion along I-270, MD 124 and MD 355. The new interchange also will provide access from I-270 to the Metropolitan Grove MARC station, as well as improve bicycle and pedestrian access through the area.





MD 4 Interchange at Suitland Parkway in Prince George's County - \$78 Million: MDOT SHA is constructing a new interchange at MD 4/Suitland Parkway, which will replace the existing at-grade intersection. The project will relieve existing congestion, enhance safety, improve mobility and accommodate increasing traffic volumes along MD 4. Once complete, it will reduce congestion for those merging from MD 4 onto Suitland Parkway and other connecting local roads surrounding Joint Base Andrews. Construction began in Fall 2017.

US 50 Severn River Bridge in Anne Arundel County - \$22.8 Million: To reduce congestion along the US 50 corridor, highway design engineers developed an innovative approach to add an additional lane along eastbound US 50. By shifting the existing median barrier, reinforcing the structure, and restriping by May 2018, MDOT SHA will provide drivers with four established lanes.

INVESTMENT IN HIGHWAYS AND BRIDGES (AWARDED PROJECTS)

- I-270 Bridge Improvement and Interchange Project over MD 85 (Buckeystown Pike) in Frederick County
- MD 2/4 Widening and Safety Improvements between north of Stoakley Road and south of MD 765A (Main Street) in Calvert County
- US 219 Interchange and Highway Realignment in Garrett County

INVESTMENT IN HIGHWAYS AND BRIDGES (UNDER CONSTRUCTION)

- US 40 / MD 159 / MD 7 BRAC Intersection Improvements at Aberdeen Proving Ground (Phase 2) in Harford County
- I-695 Outer Loop Widening between MD 144 and US 40 in Baltimore County
- MD 30 Business Urban Reconstruction Project in Carroll County
- MD 175 Highway Widening between Disney and Reece Roads at Fort Meade in Anne Arundel County
- I-81 Bridge Replacement and Widening at the Maryland / West Virginia State line in Washington County
- MD 5 Interchange Improvements at MD 373 and MD 381 (Brandywine Road) in Prince George's County



THE MDOT SHA TRAFFIC RELIEF PLAN – A “SYSTEM OF SYSTEMS”



MDOT SHA drove forward with significant transportation announcements in 2017, projects which represent transformative, innovative and first-of-their kind solutions to congestion in Maryland.

THE TRAFFIC RELIEF PLAN

The Traffic Relief Plan is critical to spurring increased economic development and restoring quality of life for countless Marylanders who have been negatively affected by traffic congestion for decades. Maryland has the second-longest commuting times in the country, and the National Capital Region is the most congested region in the nation, based on annual delay and congestion cost per auto-commuter. The statewide cost of congestion based on auto



delay, truck delay, and wasted fuel and emissions was estimated at \$2 billion in 2015. This is an increase of 22 percent from the \$1.7 billion estimated cost of congestion in 2013. More than 98 percent of the weekday congestion cost was incurred in the Baltimore/Washington region.

BALTIMORE/DC REGION

On September 21, the largest highway Public-Private Partnership Request For Information (RFI) in America was released by MDOT as Governor Larry Hogan announced the \$9.078 billion Traffic Relief Plan for I-270, I-495 and MD 295 (Baltimore/Washington Parkway) to reduce congestion for millions of motorists and mark the beginning of a transformative effort to change Maryland's roads and highways for years to come.

The announcement started the process to solicit the Public-Private Partnership (P3) industry for input and solutions to provide major congestion relief to these key transportation arteries for the state. Valued at \$7.6 billion, the P3 project to add new lanes on I-495 and I-270 is the largest P3 highway project in North America. The P3 seeks private



developers to design, build, finance, operate and/or maintain new lanes on: I-495 between American Legion Bridge and Woodrow Wilson Bridge and on I-270 between I-495 and I-70. As 2017 ended, MDOT SHA received historic interest from industry with 27 responses to the RFI.

In total, the \$9.078 billion Traffic Relief Plan will deliver new express toll lanes, in addition to existing lanes, on I-495, I-270 and MD 295. The first step to build new express toll lanes on MD 295 will be to seek to transfer MD 295 from the U.S. Department of the Interior to the Maryland Transportation Authority (MDTA). Following the MD 295 transfer, the MDTA will build, operate and maintain new express lanes and maintain existing lanes between Baltimore and Washington, D.C.

MARYLAND/BALTIMORE REGION

Governor Larry Hogan announced \$461 Million for 27 miles of highway to address traffic and congestion issues on I-695 (Baltimore Beltway) and I-95 as part of the statewide Traffic Relief Plan. The Baltimore Plan involves MDOT and MDTA pursuing three innovative design-build projects to achieve the greatest amount of peak-hour congestion relief on the Baltimore Beltway and I-95. The \$461 million investment brings the Administration's investment in new transportation projects in the Baltimore region to \$7 billion.



The projects include:

- \$151 million for Innovative Congestion Relief on both inner and outer loops of I-695 from I-70 to MD 43, shifting the inside shoulder into a new available lane of traffic realigned from existing pavement with adaptive ramp metering along all 19 miles. This addresses six of 15 congested road segments in the State of Maryland.
- \$100 million for the design and construction of a new configuration of the I-695 and I-70 interchange, often referred to as the "triple bridges."
- \$210 million to extend the northbound I-95 Express Toll Lane (ETL) for 7.75 miles from north of MD 43 in Baltimore County to MD 24 in Harford County.

This plan was one more giant step forward with the Traffic Relief Plan to bring transportation solutions to Maryland.

TRP AND P3 OR PUBLIC-PRIVATE PARTNERSHIP

P3 will allow for an aggressive and innovative traffic relief solution for Maryland's most congested roadways, in this case I-495 and I-270. Entering into a P3 agreement with private companies allows Maryland to provide these projects sooner to the public with no new taxes to citizens. Only drivers choosing to use the new lanes would pay a toll. Those choosing to use the existing lanes would not pay a toll and would see an improved trip over today's conditions.



Partnering with the private sector stands to bring the transportation infrastructure back to world-class levels, particularly in Maryland, where we are leading the way nationally in finding and implementing innovative transportation solutions. Other states have used P3s to build new roads or lanes, generally through arrangements where a private company designs, builds, finances, operates and maintains the new roads or lanes. In turn, the private company collects toll revenue at the completion of the project.

MDOT SHA PRIORITIES: COMMUNICATION



Communication is the “central nervous system” of MDOT SHA. The citizens we selflessly serve across the state expect and deserve constant, accurate and transparent communication. Our dialogue with our audiences is a prime mover in our success. Great engineering solutions cannot succeed without communication. Innovative design solutions go nowhere if not communicated effectively internally and externally. Communication is outlined and identified as one of the four basic mission areas of MDOT SHA. Communication, however, is at the root of the other three mission areas. Innovation, Modernization and the Customer Experience find the roots of their operation and success in communication.

Through the avenues opened by communication, we share the journey of our new, transformative agency with the people of Maryland, with elected officials, with the media and with our own organization. Communication is one of MDOT SHA's priorities because it impacts everything we do. At MDOT SHA we are personalizing communication and really listening and enhancing the customer experience both internally and externally. Credibility and trust are built on a foundation of good, solid and transparent communication.

We are telling our story and putting context and perspective in our mission and vision – helping people, delivering highway solutions and projects and delivering people to life's opportunities. Within that tapestry is a series of stories. Whether it's providing project updates; educating drivers, pedestrians and bicyclists to enhance traffic safety; meeting with leaders in each county to discuss transportation priorities; or explaining a technical engineering decision, we are actively conversing and listening to our customers. This dialogue goes a long way to build and maintain a better, stronger and more impactful agency. With focus on frequent, quality communication, whether hosting a public meeting, attending a community forum, issuing a press release, or providing material on an array of social media platforms, we converse with our customers to keep them informed and give them a voice in what matters to them. Their feedback is the fuel which drives us forward to better performance and better solutions.



TRAFFIC RELIEF THROUGH TRAFFIC INFORMATION

New this year, MDOT SHA consolidated its 511 traveler information center with the Coordinated Highways Action Response Team (CHART) web site. Together these powerful traffic information tools provide customers real-time, updated information, including traffic incidents, via the 511 hotline and online at md511.org. The web site provides estimated travel speeds, travel times and access to live traffic cameras.



COMMUNICATION • INNOVATION • MODERNIZATION • CUSTOMER EXPERIENCE

SOCIAL MEDIA

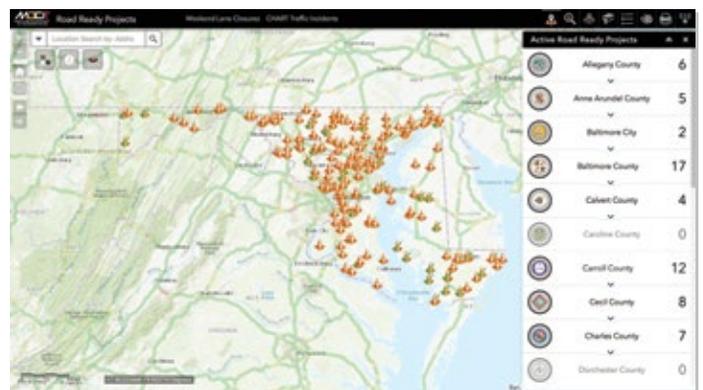
Social Media is the new television, magazine, newspaper and radio all in one medium. Organizations not relevant in the social media sphere are not relevant...period.



Our customers are engaged and EXPECT information and updates. The information is critical in getting them to their jobs, to their kids' soccer practices and to their vacation spots. And those customers expect to get that information on social media. MDOT SHA has more than 65,000 likes on our Facebook page and 46,600 Twitter followers. Customers embrace the highway system as part of their community and want to know what is happening on the road. MDOT SHA will continue to grow its social media presence, and use more unique ways to communicate the mission of the organization using these resources.

ROAD READY – A DIGITAL GUIDE TO NAVIGATING WORK ZONES

E-Road Ready 2017 is an annual e-brochure which integrates GIS-based technology and provides both internal and external customers with a comprehensive, detailed listing of major road projects. Project details include data points such as: roads affected, project scope, timeline, traffic impacts, high-resolution location maps, average daily traffic volumes, live traffic cameras and digital audio that complies with the Americans with Disabilities Act (ADA).



MDOT SHA also added a real-time congestion map layer, further enhancing the user experience. The application is mobile-friendly, which expands usability and adds value to the overall project as most people have "smart" mobile devices. E-Road Ready 2017 is a "living and breathing" application that is updated regularly to bring the most current, relevant information to our customers.



COMMUNICATION • INNOVATION • MODERNIZATION • CUSTOMER EXPERIENCE

THE POWER OF VIDEO

Audiences want to watch change and progress...see it...and feel it through the image. MDOT SHA is working to help customers experience the story in a more visual dialogue. The advent of social medium like Instagram and YouTube shows that the wave of the future is a more engaging form of communication through images.

Considering those factors, MDOT SHA used FY17 as an opportunity to use more video. The Severn River Bridge project in Annapolis served as a fantastic opportunity to educate citizens, answer questions and dispel myths and rumors through one video. A 4-minute video encapsulated the project from conception to design to tactical-level lane reconfiguration decisions. It was an animated video which captured conceptual ideas of what the project would look like when complete. It was met with very positive reception from affected citizens and elected officials.



MDOT SHA used a similar effort to show progress and success of the 404 project on the Eastern Shore. And we captured the 1,000,000th assist for CHART with a video to show the citizens and elected officials of Maryland the significance of the milestone.

MOMENTUM

This year MDOT SHA introduced Momentum, a monthly web-based e-newsletter to communicate major events to all employees. MDOT SHA is moving at an unprecedented, energetic pace, and Momentum is sharing the pulse of our major milestones. With features on the four priority areas of Communication, Customer Experience, Innovation and Modernization, we are keeping the MDOT SHA team aware of major events, accomplishments and progress. Momentum is tracking the journey of our new, transformative agency!



COMMUNICATION - ADMINISTRATOR'S MESSAGE: Transparency and Efficiency - A New CTP Season

Every year, the Maryland Department of Transportation visits every county to present the Consolidated Transportation Program (CTP) and receive important feedback from elected officials and citizens about our projects and efforts in their community.

The CTP details MDOT's draft six-year capital budget. The annual total of 23 Maryland counties and Baltimore City serves to update local officials and the public on Governor Hogan's \$14.7 billion investment over the next six years in highways, as well as the other Transportation Business Units in MDOT.

The tour lets us engage with our customers about their transportation priorities. That is an important point. You've heard me talk about my priorities for MDOT SHA. Those priorities include empathetic and effective communication, as well as an enhanced customer service experience.

That is what the CTP is all about. We are crosscussing the state to listen to our customers and talk about our projects, challenges and successes with transparency. CTP tours are an opportunity to hear about how we are effectively serving communities.

I am in the middle of my 10th CTP tour season and over that decade at every single meeting the district team receives kudos and compliments from the local elected officials. That is another benefit to me as a leader - hearing our local elected officials compliment our District Engineers and the hard-working men and women in their districts.



Greg Slater

MODERNIZATION - MDOT SHA Employs New Pavement Technology To Enhance Vehicle Traction

Employing the latest, proven technological innovation, MDOT SHA is piloting a new pavement treatment process proven to enhance vehicle traction and reduce crashes, particularly on curves. The \$1.1 million High Friction Surface Treatment (HFST) pilot project is underway. Featured as part of Federal Highway Administration's "Everyday Counts" initiative, the surface treatment has reduced crashes in three different trial projects: by a whopping 100 percent in Pennsylvania, 90 percent in Kentucky and 57 percent in South Carolina.

A more economical and efficient alternative to reconstruction or major rehabilitation, HFST increases roadway friction, which provides vehicle traction on pavement surfaces. The greater the surface friction, the more control drivers have of their vehicles, which is especially important in wet conditions.

COMMUNICATION - ADMINISTRATOR'S MESSAGE: Say No to the Status Quo

What do you want to see in 2017? "I'd like to see a lot of change," said a recent survey respondent. "I'd like to see a lot of change," said a recent survey respondent. "I'd like to see a lot of change," said a recent survey respondent.

CUSTOMER SERVICE EXPERIENCE: CHART Senior ERMT Jimmy Harlock Receives District Star

Recognition for Jimmy Harlock, a Senior ERMT at the Severn River Bridge project, for his exceptional customer service and dedication to the project.

COMMUNICATION - Thank You, Veterans - Today, This Month, This Year and Always

MDOT SHA is proud to have a number of veterans working for us. We are proud to have a number of veterans working for us. We are proud to have a number of veterans working for us.

CUSTOMER SERVICE EXPERIENCE - Ready Hearing Our Customers

As a result of providing exceptional customer service, MDOT SHA is proud to have a number of customers who are satisfied with our service. We are proud to have a number of customers who are satisfied with our service.

COMMUNICATION - ADMINISTRATOR'S MESSAGE: Delivering the Power of Change to Maryland Citizens - One Project at a Time

On Tuesday, August 15, the Maryland Department of Transportation State Highway Administration (MDOT SHA) issued a request for proposals for the reconstruction of MDOT SHA's State Route 103 in the State of Maryland. This project is a key component of the state's transportation infrastructure.

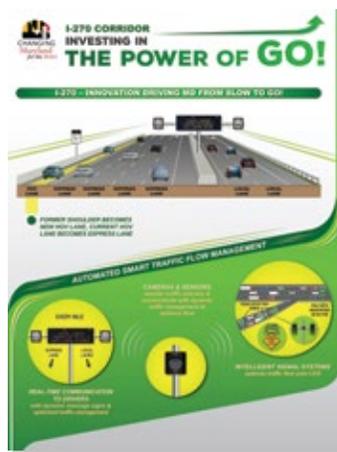
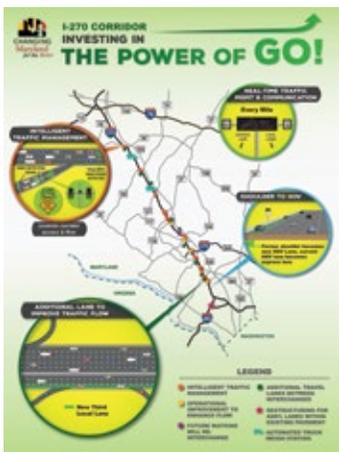
CUSTOMER SERVICE EXPERIENCE - Making a Difference Every Day

One of our core values at MDOT SHA is to make a difference every day. We are proud to have a number of employees who are making a difference every day. We are proud to have a number of employees who are making a difference every day.

COMMUNICATION • INNOVATION • MODERNIZATION • CUSTOMER EXPERIENCE

MDOT SHA PRIORITIES: INNOVATION

At MDOT SHA we are exploring new technologies and methods to improve how we do business. We are building a new direction and momentum at MDOT SHA. An environment where the bar is set high, the standards are exceeded and in which MDOT SHA remains a national leader in transportation. We have a new culture where we include the customer experience in all that we do and reward innovation and creativity in solutions that deliver it. Our mission is to harness change and provide positive, real, impactful results for our customers. In the quest to usher in a new transformative, innovative, and empowered agency that delivers the best possible product to our taxpayers and customers, we are embracing the power of innovation – the “Power of Go.” Where can we take you?



COMMUNICATION • **INNOVATION** • MODERNIZATION • CUSTOMER EXPERIENCE

E-BIDDING GOES LIVE – MODERNIZES PROJECT BIDDING PROCESS AND SAVES MONEY FOR STATE AND INDUSTRY PARTNERS

MDOT SHA's E-bidding, or electronic bidding, streamlines the bidding process - saving the State and contractors time and money. Gone are the days when contractors mailed and personally delivered bid requests to the doors of MDOT SHA. Just in time for the largest construction season in history, e-bidding provides industry partners with Bid Express, an electronic platform to submit bids for work, a process that could save contractor partners as much as \$800,000 annually, by avoiding document printing, travel and other expenses. The new system is secure. Bids include bond verifications and are instantly tabulated. The results are ranked and reports are easily generated. There are roughly 275 bids on SHA contracts annually.

“E-Bidding is going to significantly help engage potential bidders and help make doing business with MDOT SHA a great deal easier. MDOT SHA has a record number of contracts on the road and e-bidding will help streamline the bidding process for interested contractors.” — MDOT SHA Administrator Gregory Slater

NEW AUTO-FLAGGING TECHNOLOGY ENHANCES WORKER SAFETY

Last summer MDOT SHA began a pilot in western Maryland to explore Automated Flagger Assistance Devices, an innovative technology that will make work zones safer for flag persons.

The devices are mechanically operated signals that function under the same operational principles as traditional flagging. The machine replaces the human flag person with a trailer-mounted device that displays the same STOP and SLOW signs used in traditional flagging. A human still manages the system, just at a safe location out of traffic, greatly reducing the risk for injury.



COMMUNICATION • *INNOVATION* • MODERNIZATION • CUSTOMER EXPERIENCE



MDOT SHA LIGHTS THE WAY FORWARD WITH PROJECT GREEN LIGHT

MDOT SHA launched Project Green Light, an innovative program that allows employees to submit ideas for review and implementation. Ideas had to address the four focus areas of MDOT SHA: Communication, Innovation, Modernization and Customer Experience, and were categorized as Approved for Immediate Action, Moving Forward to Additional Discussion or Not Moving Forward. Presentations were handled like those on the popular television show, *Shark Tank*. Senior Managers will work with winning Project Green Light participants on implementation and topics approved for further investigation. By empowering employees to submit ideas for a better MDOT SHA, we are creating a better workplace for everyone. Submitted ideas included streamlined approaches to utility relocations and electronic rating systems that will replace laboriously handwritten reports. The first round of Project Green Light netted more than 30 submissions, with 16 selected for presentations.



Ray Wheeler presents his idea to Greg Slater and the Project Greenlight team

UNMANNED AERIAL VEHICLES PILOTED IN MD 404 PROJECT

In a first, MDOT SHA piloted Unmanned Aerial Vehicles (UAVs – also known as drones) to review environmental compliance for MD 404, an accelerated, high-visibility project. Efficient use of resources and inspections within a short time were key to making this project successful. Using a UAV provided MDOT SHA the ability to quickly identify areas of concern instead of walking or reviewing the entire 11-mile project on foot. It also led to a time-and-resource saving while giving MDOT SHA a better overall product. MDOT SHA continually employs innovative technologies to do more – and more efficiently.

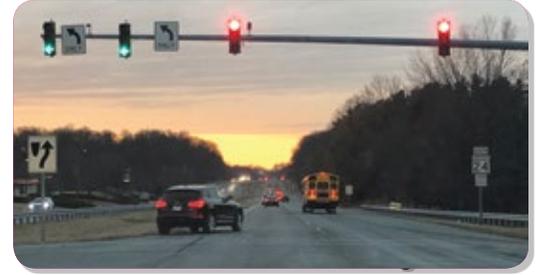


Aerial Views of MD 404 Captured by UAV

COMMUNICATION • **INNOVATION** • MODERNIZATION • CUSTOMER EXPERIENCE

MDOT SHA DEPLOYS SMART SIGNALS TO EASE CONGESTION

MDOT SHA is deploying cutting-edge Smart Traffic Signals that will improve traffic operations and ease congestion for approximately 700,000 drivers per day on 14 major corridors across the state. The system examines real-time traffic conditions and uses computer software that adjusts the timing of traffic signals, synchronizes the entire corridor and effectively deploys artificial intelligence to keep traffic moving.



Smart Signals operate with an adaptive signal control system, which uses enhanced detection to monitor traffic conditions and alter the timing of traffic signals. The smart signals will replace existing controls that are over 20 years old and unresponsive to changes in traffic flow, operating instead on programmed timing. This innovative technology quickly considers crashes, construction and congestion, adjusting signal timing accordingly.



Preliminary results indicate a travel time reduction of 13 percent for the 40,000 daily drivers in one pilot study. **With deployment of Smart Signals on 14 routes, more than 679,000 drivers will benefit.**

ROUTE	TRAFFIC VOLUME	COUNTY/ROUTE LIMIT
MD 2	60,000	Anne Arundel County - Annapolis - Annapolis Harbor Center to Tarragon Lane
MD 2	38,700	Anne Arundel County - Brooklyn Park - Hammonds Lane to 11th Avenue
MD 3	70,000	Anne Arundel County - Crofton - MD 450 to St. Stephens Church Road
MD 139	30,000	Baltimore County - Towson - Kenilworth Avenue to 1-695 Outer Loop Ramp
US 40	48,000	Baltimore County - Catonsville - Coleridge Road to Nuwood Drive
MD 5 Business	45,000	Charles County - Waldorf - Post Office Drive to US 301
MD 228	30,000	Charles County - Waldorf - Western Parkway to US 301
US 301	97,000	Charles County to Prince George's - Waldorf Area - Chadds Ford Drive to MD 227
US 1 Business	32,400	Harford County - Belair - Tollgate Road to Atwood Road
MD 22	28,000	Howard County - Aberdeen - Technology Way to North Rogers Street US 40 Ramp
US 1	36,600	Howard County - Jessup/Elkridge - Montgomery Road to MD 175
US 301	65,000	Prince George's County - Bowie - Excalibur Road to Governor's Bridge Road
MD 202	70,000	Prince George's County - Landover - McCormick Drive to Arena Drive
MD 108	28,500	Montgomery County - Olney - MD 182 to Volunteer Drive
Approximate number of drivers benefited per day	679,200	

COMMUNICATION • *INNOVATION* • MODERNIZATION • CUSTOMER EXPERIENCE

MDOT SHA PRIORITIES: MODERNIZATION

Breaking free of antiquated policies and procedures, MDOT SHA is modernizing its approach to doing business and delivering for our customers. A common goal for all of those at MDOT SHA is to build upon what is already great here: modernizing to realize greater service, safety and efficiency for our customers. From agency reorganizations to harnessing electronic platforms for conducting business, MDOT SHA is ready now to face tomorrow's transportation business needs and challenges.

MDOT SHA EMPLOYS NEW PAVEMENT TECHNOLOGY TO ENHANCE VEHICLE TRACTION

Employing the latest, proven technological innovation, MDOT SHA is piloting High Friction Surface Treatment (HFST), a new pavement treatment process proven to enhance vehicle traction and reduce crashes, particularly on curves. Investing \$1.1 million, MDOT SHA has completed the application at the I-695 (Baltimore Beltway)/MD 295 (Baltimore-Washington Parkway) interchange, the westbound US 15/US 340 ramp to southbound US 15 and the MD 75 (Green Valley Road)/ Ed McClain Road intersection in Frederick County, and the I-97/MD 100 interchange.



Road crews apply high friction surface coating.

A more economic and efficient alternative to reconstruction or major rehabilitation, HFST provides vehicle traction on pavement surfaces. The greater the surface friction, the more control drivers have of their vehicles, especially important in wet conditions.

E-CONSTRUCTION AND THE ONLINE MEDIAWIKI

E-Construction – a paperless construction administration delivery process is coming to MDOT SHA for a more modernized, streamlined and transparent approach to managing construction projects. Faster approvals ultimately equates overall faster project delivery. The e-construction platform provides electronic document routing/approvals (e-signature), digital management of all construction documentation in a secure environment, and distributes documents to all project stakeholders through mobile devices. The overall major benefits include time and costs savings – the system reduces paper use, printing, and document storage costs, expedites communication and approvals, as well as enhances accuracy, document tracking and transparency.

In FY 17 MDOT SHA placed the 2017 Standard Specifications for Construction and Materials exclusively online, saving 900 trees in the process. The online version is available in Media Wiki format, allowing users to link directly – instead of flipping through pages in a physical book – to sections dealing with maintenance, contractors and contract requirements. Part of e-construction, the online modernization, allows partners inside and outside MDOT SHA instant access to guidelines and requirements, thus hastening prompt completion of project timelines.

UNIVERSITY OF BALTIMORE SCHAEFER CENTER HELPS MDOT SHA MODERNIZE ORGANIZATIONAL STRUCTURE

With modernization one of our four priorities, MDOT SHA is partnering with the Schaefer Center for Public Policy at the University of Baltimore College of Public Affairs to help the administration modernize the entire organization. The effort will look at MDOT SHA's organizational structure and assess how each office and district can better support the agency's core functions and workforce strategies that will provide this support.

WHEN BORING IS NOT BORING – MODERNIZING SOIL TESTING

Maryland's diversity thrives at every level, including its very foundation — soil. From the rocky, granite and limestone deposits to the west, clay in the metro regions and sand on the shore, Maryland's soil variety dictates the need for soil bore sampling before any major construction activity — including utility relocation. MDOT SHA is introducing a new soil boring request tool that streamlines the current process. The new tool also tracks statewide soil boring/drilling using GIS technology. This new modernized process will enable MDOT SHA to save time and improve efficiency.



MARYLAND FIRST THIRD PHASE IS COMPLETE

Cooperation between emergency services from different departments is essential, but it can be tricky to pull off seamlessly, especially if different communications equipment is used. As a solution, MDOT SHA helped build Maryland First Responders Interoperable Radio System Team, or "Maryland FiRST," while demonstrating the system's capabilities. This third phase of Maryland FiRST became fully operational and completes the coverage of Central Maryland. The connection covers Cecil, Harford, Baltimore, Anne Arundel, Howard, Carroll and Frederick counties. Now MDOT SHA responders on the frontlines can communicate with each other and other key agencies during emergencies.



COMMUNICATION • INNOVATION • *MODERNIZATION* • CUSTOMER EXPERIENCE

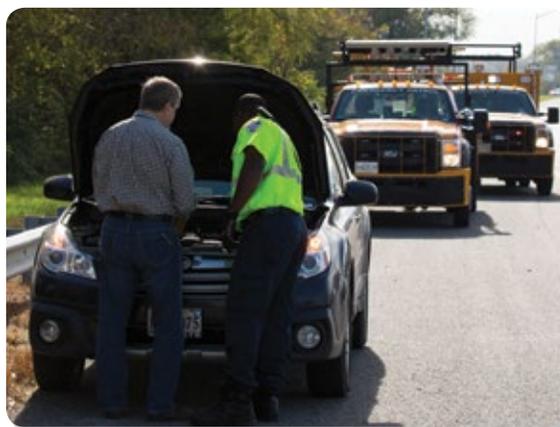
MDOT SHA PRIORITIES: ENHANCING THE CUSTOMER EXPERIENCE



MDOT SHA is embarking on a new, bold commitment to customer service. One of our main missions at MDOT SHA is to continually improve the “Customer Experience” – our customers’ perception of how we serve them. Feedback is important and emblematic of what MDOT SHA continues to see across the entire organization and with every project managed – a positive momentum and a soaring trajectory in performance and customer satisfaction. MDOT SHA is delivering positive change to the people of Maryland – one project and customer interaction at a time.

MDOT SHA works every day to provide outstanding customer service to Marylanders and the traveling public. With our largest construction program in history underway, we are delivering the projects that matter to you – breaking bottlenecks, reducing travel times and making travel more efficient, smoother and safer. This effort includes the maintenance and improvement of the aesthetics of the travel experience, ensuring proper lighting on the highways, a dedicated mowing effort across the state and a robust anti-litter campaign and program.

We improve customer-focused services and assistance to motorists (such as the Coordinated Highways Action Response Team - CHART - incident management program), customer communications (such as the **C**ustomer **C**are **M**anagement **S**ystem, or CCMS), and business processes (such as access permits and hauling permits). We improve travel by laying smooth pavements and providing safe, well-maintained roadways, which aids in mobility. We use tools (such as signal retiming and smart signals) to ease travel congestion.



COMMUNICATION • INNOVATION • MODERNIZATION • *CUSTOMER EXPERIENCE*

UNDERSTANDING OUR CUSTOMERS

Through a comprehensive survey conducted by the University of Baltimore, we better understand what is important to our customers and what we need to improve as an agency. The MDOT SHA services that rated the highest in satisfaction include plowing, salting, and sanding of snow-covered roadways; maintaining traffic with signs, signals, and passing and turn lanes; keeping the highway system safe; building and maintaining roadside rest areas; providing emergency roadside assistance; and providing travel information.



Of the eight MDOT priorities listed from the survey, safety and security of people using the transportation system was rated the most important priority, followed by reducing congested travel conditions.

BETTER, FASTER: TIME + COST BIDDING MEANS FASTER PROJECT DELIVERY AND LESS DELAY

With the State's largest construction season ever underway, MDOT SHA is minimizing impact to the traveling public and offering an overall better value through "A + B" contracting, which considers both cost and construction time in the bidding processing. Using this method shown to save taxpayer dollars, MDOT SHA selects a contractor by examining both the cost of work and the expected time for project completion. Short construction duration minimizes inconvenience to the traveling public by reducing the active construction time and lane closures. It delivers improvements for safety, mobility, and economic development faster than a traditional award based solely on low bidding.



With expediting projects and open roads sooner, MDOT SHA is reducing delays, detours and driver frustration, reaping cost savings that can continue for years.

KNOWING WHAT'S IMPORTANT: THE POWER OF GO

Too many customers have lost time in recurring traffic congestion, especially on the notoriously slow I-270 corridor. Responding with a bold first for a state transportation department, the Maryland Department of Transportation (MDOT) is heading the nation's first innovative procurement for a highway project with a completely open scope. The original, landmark contracting strategy set a budget at \$100 million and asked for ideas to move the most people the farthest and fastest. The winning proposal brings together 16 expert firms that proposed solutions that will bring a potential 30 minutes less travel time to the I-270 southbound morning commute. The project will break 14 bottle necks through an Innovation Congestion Management Plan (ICM), which includes:

- infrastructure (extending and adding lanes within existing pavement);
- technology (introducing "smart traffic" with the help of cameras and sensors); and
- information (real-time communication traffic management to provide real-time communication with drivers).



COMMUNICATION • INNOVATION • MODERNIZATION • *CUSTOMER EXPERIENCE*

CHART: EASING CONGESTION, ENHANCING SAFETY EVERY DAY THROUGHOUT THE STATE

CHART incident management program is a comprehensive and advanced traffic management system with an advanced command-and-control heart, the Statewide Operations Center (SOC). The SOC is the “hub” of the CHART system, functioning 24 hours-a-day, seven days a week with satellite Traffic Operations Centers (TOCs) and Emergency Traffic Patrols spread across the state to handle peak-period traffic. CHART Emergency Traffic Patrols respond to traffic crashes, vehicle breakdowns, and other traffic incidents. Recently celebrating its one millionth assist at the close of 2017, CHART continues as one of the longest standing statewide traffic incident management and motorist assistance programs in the nation, developing into a model and benchmark for other states.

In CY 2016, CHART saved drivers \$1.512 billion in user costs, up from \$1.356 billion the year before. It helped reduce delay by 43.6 million hours in CY 2016.*

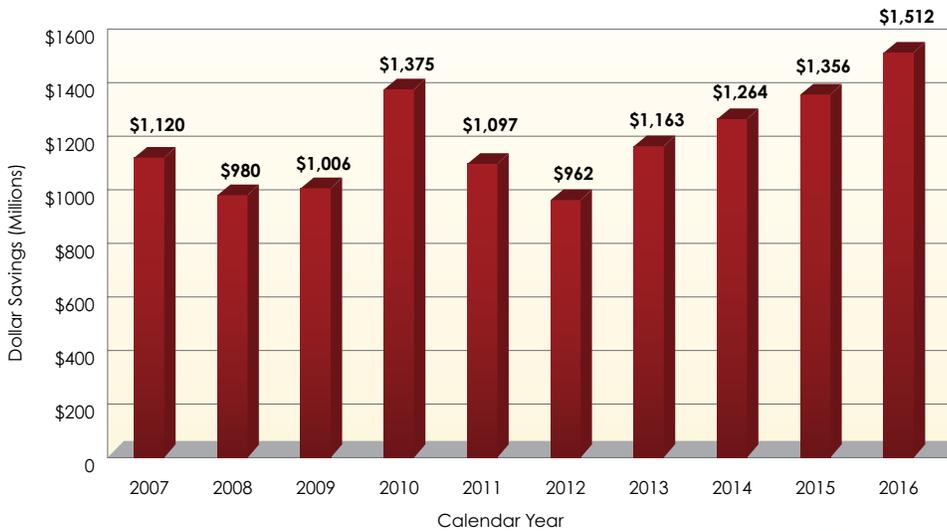
Recognizing the critical importance of CHART patrols, MDOT SHA increased patrol hours to 101,061 hours in CY 2016,* nearly 10,200 more hours annually since CHART expanded its patrol program in 2014.

CHART handled 141,607 events, including incident responses, assistance with disabled vehicles, and traffic management operations for special and weather-related events in FY 2017.

- 635,000 motorists helped
- over 365,000 traffic incidents
- 1,000,000 total assists
- saved drivers \$1.5 billion in 2017 alone

CHART Service EXCELLENT or VERY GOOD 99% of the time
 CHART Technicians EXTREMELY or VERY Courteous 100% of the time
 ALL Motorists had a more favorable opinion of MDOT SHA after receiving assistance

User Cost Savings to the Traveling Public Due to Incident Management



*According to the most recent data available.

COMMUNICATION • INNOVATION • MODERNIZATION • CUSTOMER EXPERIENCE

DELIVERING SAFE AND SMOOTH ROADWAYS: SMOOTH ROADWAYS ENHANCE THE DRIVER EXPERIENCE AND INCREASE MOBILITY THROUGHOUT MARYLAND

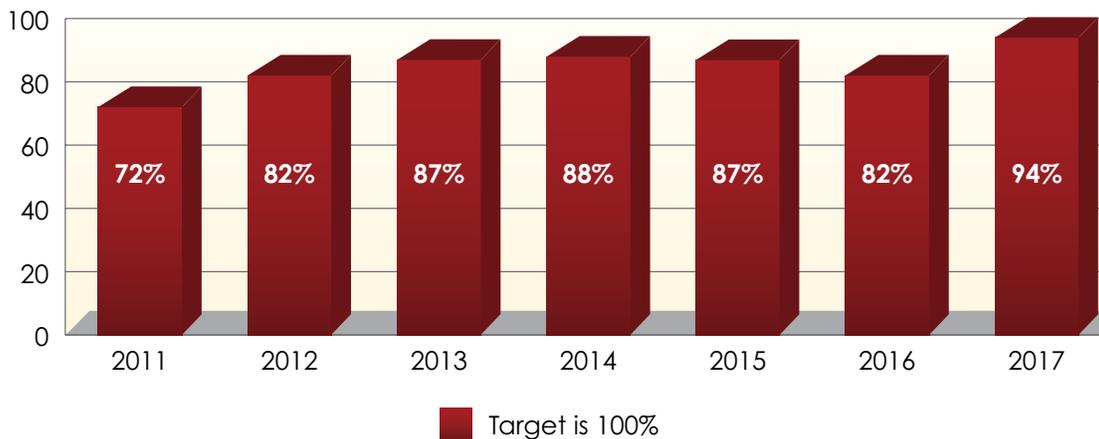
By the end of 2018, MDOT SHA will have improved half of the state's lane miles of highways — 8,500 lane miles. MDOT SHA recorded 88 percent of its roadway miles in “acceptable” or “better” ride quality condition in CY 2016.* Roadways in good condition mean less wear and tear on vehicles and a better overall customer experience for drivers.

NEW DIRECTION FOR ACCESS PERMITS: LOCAL REPRESENTATIVES WORK WITH BUSINESSES

Access permits support economic growth while ensuring safety, ensuring that third party improvements meet safety, operational and engineering standards. With new district management, in FY 2017 MDOT issued 94 percent of roadway access permits within 21 days or less after receipt of a complete application package; this is the highest rate since tracking began in FY 2011. The target was raised from 90 percent to an ambitious 100 percent in April 2017. The increase is due to improved tracking and accountability processes and updated MDOT SHA storm water management guidelines, technical guidance, and supplemental online design guidance. MDOT SHA met with stakeholder groups to assess the effectiveness of these changes and identify resource needs to support access permit approvals.



Percent of Roadway Access Permits Issues Within 21 Days or Less (After Receipt Of A Complete Application Package)



*Most recent data available.

BETTER COMMERCIAL TRUCK SERVICES - GOOD FOR THE INDUSTRY AND CONSUMER: LESS BUREAUCRACY, LESS DELAY, LOWER COSTS AND SWIFTER PRODUCT DELIVERY

Hauling permits allow trucking companies and other customers to move oversize and overweight loads throughout Maryland. MDOT SHA is saving the trucking industry money and time with its award-winning, first-in-the-nation automated truck hauling permit system for state, toll and Baltimore City roads. The Maryland One system, which eliminates the final vestiges of manual paper processing, has reduced overweight hauling permit processing from weeks and days to hours and minutes, eliminating engineering fees for applications that pass auto-analysis for pre-determined thresholds. Maryland receives nearly 140,000 overweight/oversize permit applications each year. Previously, these required a time-consuming manual engineering review. Currently, 99.1 percent of all applications are issued within 48 hours or less, with over 91 percent issued in two hours or less. In FY 2017 Maryland One's estimated savings to the State of Maryland were more than \$2 million, while estimated savings to the industry were more than \$19 million.



CUSTOMER CARE MANAGEMENT SYSTEM (CCMS)

The public's ability to request and receive information is essential for an open and transparent transportation network. MDOT SHA handled nearly 25,000 service requests in CCMS, highlighting the purpose and effective interface of the online customer service system. The percentage of customers who rated MDOT SHA as providing excellent or good customer service via CCMS was approximately 74 percent. The CCMS process is connected to Facebook and Twitter social media platforms, in which a customer can complete an actionable service request following a social media comment. This transparent and open communication is fundamental to the customer service experience.

KEEPING OUR CUSTOMERS ON THE GO IN THE SNOW

In the winter of 2016-2017, MDOT SHA reached bare pavement on interstate and primary highways within an average of 1.69 hours after the end of frozen precipitation, surpassing the target of reaching bare pavement within four hours. MDOT SHA established the removal of heavy, large commercial vehicles in the snow removal process, further enabling MDOT SHA to maintain public safety during poor weather.



GOING ORANGE FOR WORK ZONE SAFETY: MARYLAND LEADS NATIONAL WORK ZONE SAFETY OBSERVANCE

MDOT SHA had the honor of leading partners from the U.S. Department of Transportation (USDOT) and U.S. Department of Labor to launch the 2017 National Work Zone Awareness Week in April, an observance recognized across the country. The event featured the American Traffic Safety Services Association's mobile National Work Zone Awareness Memorial. MDOT SHA developed the national theme and poster: "Work Zone Safety Is in Your Hands – Drive Toward Zero Crashes." This campaign combines work zone safety with the "Toward Zero Fatalities" national effort. Across the country, numerous partners went "orange" as a gesture of support for roadway workers, placing banners, orange lights and hosting dress in orange days. The Government House in Annapolis and M&T Bank Stadium in Baltimore were lit in orange on April 2 and 3.



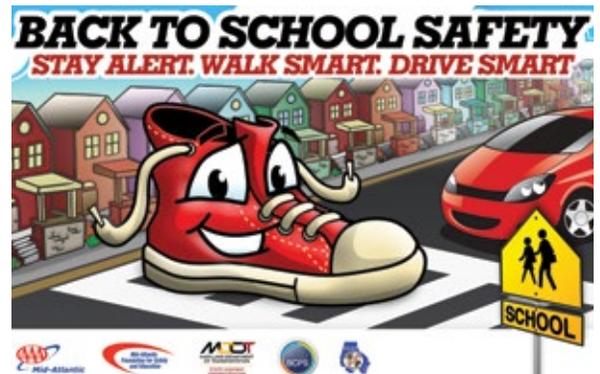
COMMUNICATION • INNOVATION • MODERNIZATION • **CUSTOMER EXPERIENCE**



MDOT SHA employees and our contractors put their lives on the line every day servicing the hundreds of highway construction projects in progress each year. With the largest construction season in history underway, MDOT SHA's campaign continues to promote work zone safety with its public education campaign: *Work zone safety is in your hands*. Six people lost their lives in Maryland work zone crashes in 2016. Nationally, 130 roadway workers were killed in the line of duty in 2015, the second highest amount in a decade.

PEDESTRIAN AND BICYCLE SAFETY

MDOT SHA led award-winning public education campaigns addressing pedestrian safety with the Look Up, Look Out campaign and bicycle safety with its "A Bicyclist Might be Someone You Know" campaigns that included video and radio public service announcements, billboards and community outreach. The education efforts complement MDOT SHA's Complete Streets policy, which supports safe travel for all roadway users.



LITTER – WE LIVE HERE TOO

Litter is a scourge that mars Maryland's beautiful landscape. Ensuring that Maryland remains a viable, clean and attractive place to live, visit and work is an MDOT SHA priority. Not only is litter unsightly, harmful to water quality and wildlife, it also costs Maryland taxpayers millions each year. MDOT SHA spends nearly \$8 million every year to remove litter along Maryland highways, pulling skilled workers off highway repairs to remove trash.

MDOT SHA's Adopt-A-Highway program allows volunteer groups to adopt a portion of a state highway and pledge to remove litter four times per year. MDOT SHA recognizes its nearly 200 volunteer groups by placing the groups' names on signs along their adopted portion of roadway. In addition to the efforts of volunteer groups, the Sponsor-A-Highway (SAH) program provides businesses the ability to join the fight against litter by sponsoring portions of roadways. These businesses are acknowledged with roadside signage along the sponsored interstate or major routes. They have saved more than \$3 million in state funds, which were freed to support other roadway maintenance initiatives.



Work through SAH is performed by independent maintenance providers who have collected nearly 68,000 bags of litter from State highways since the program's inception in 2006. MDOT SHA is also committed to litter prevention through its public education effort: "We Live Here Too."

COMMUNICATION • INNOVATION • MODERNIZATION • CUSTOMER EXPERIENCE

DELIVERING EVERY DAY FOR OUR CUSTOMERS

Maryland's economy is growing, and with more financial flexibility, more and more people are on the roads. Considering record numbers of VMT and the associated congestion, MDOT SHA is more committed than ever to ensuring safety, relieving congestion and delivering solutions in order to serve our customers, delivering them to life's opportunities. Every day our dedicated and talented staff explores new ways to keep those commitments to the people of Maryland and everyone who travels the highways.

PROMOTING AND EMBRACING SAFETY

MDOT SHA focuses our engineering efforts on safe roads and safe bridges. We improve pedestrian safety and mobility with new and reconstructed sidewalks with Americans with Disabilities Act (ADA) compliance, and audible and countdown pedestrian signals. We add bicycle improvements on highway projects which can accommodate them and seek out opportunities to make the roads safer for pedestrians. This effort involves for example – new median fences in College Park and Ocean City and better signals, such as the **H**igh-intensity **A**ctivated Cross**W**alk (HAWK) signal on MD 410 (East West Highway) at the entrance to Bethesda Chevy Chase High School between Chelton Road and Pearl Street. The new pedestrian crossing beacon was activated in September, becoming the first HAWK beacon on a Maryland State roadway.

MDOT SHA invested \$16 million in FY 2017 to improve and construct sidewalks to address ADA accessibility, adding new directional miles of sidewalk in Charlestown and North East, for example.

MDOT SHA improved 43 intersections with audible and countdown pedestrian signals, providing visual and audible information which sight-impaired pedestrians can use to safely cross streets. MDOT SHA increased the percentage of accessible, ADA-compliant pedestrian signals to 82% in FY 2017.



MDOT SHA invested \$3.1 million in FY 2017 to design and construct dedicated bicycle retrofit projects along roadways, including a dedicated bicycle lane project on MD 182 from Poplar Run Drive to MD 200, in addition to many other projects of this nature focused on multi-modal capability.

Concerned that Maryland recorded six work zone fatalities for the second year in a row, MDOT SHA took the lead in programs like National Work Zone Safety Awareness week. Maryland's 2017 "Work Zone Safety is in Your Hands" campaign reminded those behind the wheel that driving carefully near highway workers is everyone's business. Traffic safety education efforts include: back-to-school safety, pedestrian safety, bicycle safety and commercial traffic safety.



MDOT SHA, the Maryland Transportation Authority and the Maryland State Police conducted automated speed enforcement in work zones along 19 major expressway segments as part of the Maryland SafeZones project. This effort sought to reduce and normalize speeds and improve safety conditions for motorists and highway workers on Maryland's most heavily traveled roadways. The compliance rate is high at approximately 90 percent.

MAINTAINING OUR INFRASTRUCTURE

When Governor Hogan took office, MDOT SHA had 69 structurally deficient bridges on its April 1, 2015 report to the Federal Highway Administration (FHWA). Recognizing the need to address these bridges, the Hogan Administration made a significant investment in highways and bridges with \$1.97 billion. By July 1, 2018, MDOT SHA will have addressed (repaired, replaced or in the process of designing and constructing) all 69 structurally deficient bridges from the 2015 list.

MDOT SHA repaired 235 bridges in its minor rehabilitation program to keep them from becoming structurally deficient. MDOT SHA uses a technique called Asset Management to make regular repairs that avert greater costs from postponed work. MDOT SHA's aggressive bridge rehabilitation program has contractor construction crews working full-time, year-round to keep bridges in good condition and safe.





PROTECTING THE ENVIRONMENT

The nearly \$600 million in the MDOT SHA six-year capital budget (FY 2015 – FY 2020) funds a variety of projects for its Chesapeake Bay Restoration program. The efforts reduce nitrogen, phosphorus and sediment from entering the Chesapeake Bay by:

- restoring 62,513 linear feet of streams;
- planting more than 679,000 trees on 2,717 acres;
- removing 76 acres of unneeded pavement;
- upgrading 13 stormwater outfalls; and
- constructing or upgrading 1,780 stormwater treatment facilities to improve the quality of water running off pavement.

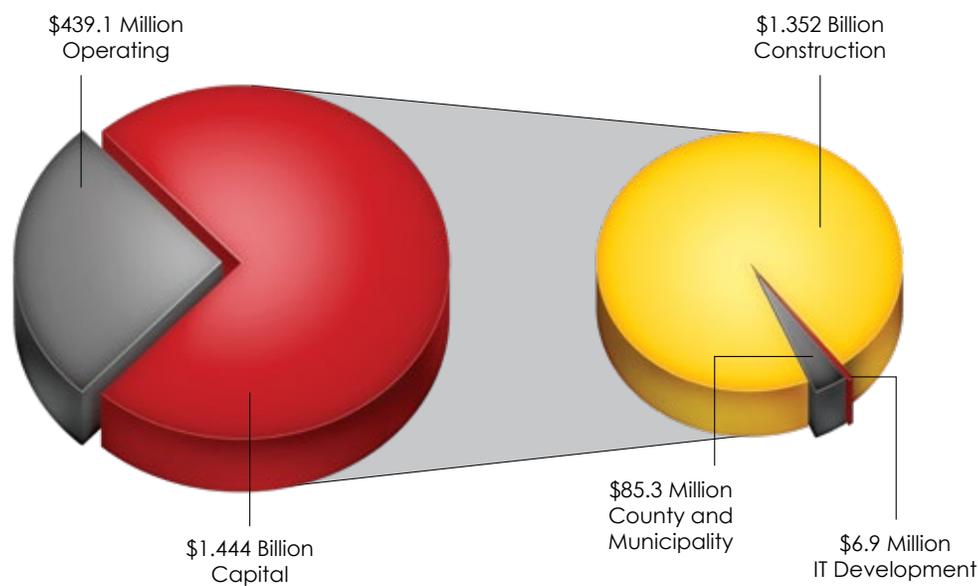


By 2020, this historic investment will allow MDOT SHA to make considerable progress in reaching its goals of reducing Total Maximum Daily Loads by 75 percent.



FUNDING FOR FY 2017

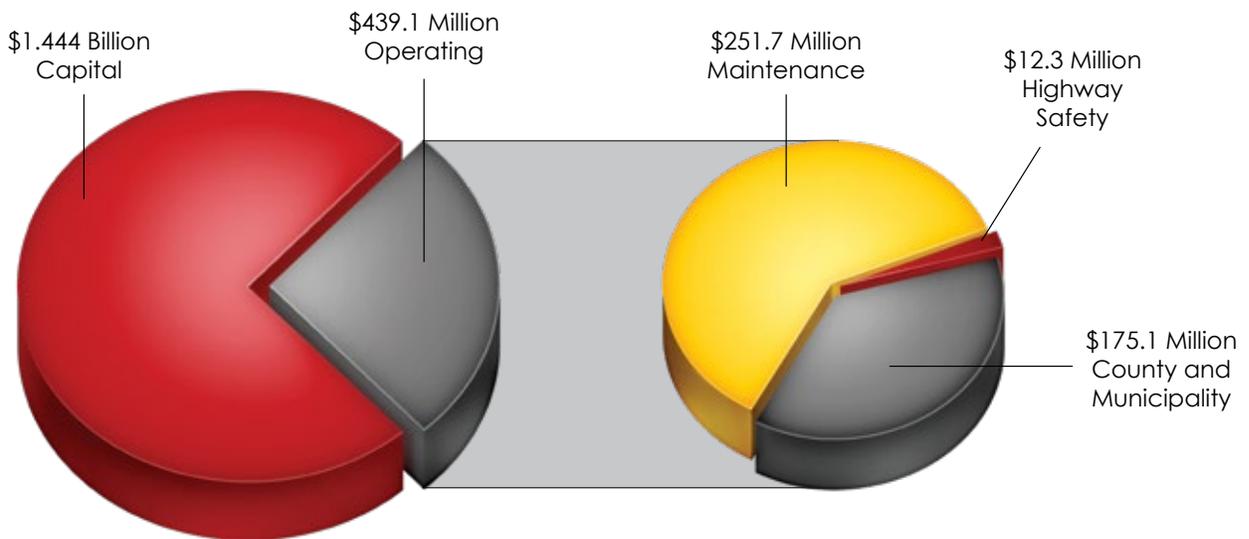
MDOT SHA USE OF FUNDING FOR CAPITAL FY 2017



CAPITAL CONSTRUCTION FUNDS SPENT	FY 2017
Major Projects (planning, design, right of way and construction phases)	\$346.0M
Bridge Rehabilitation Projects	\$198.1M
Pavement Resurfacing/Rehabilitation Projects	\$317.7M
Safety-Related Infrastructure Projects	\$111.2M
Multimodal Access Projects	\$51.7M
Traffic Management	\$83.2M
Environmental Projects	\$113.8M
Facilities, Equipment, Research	\$79.9M
Reimbursable Expenses, Other	\$49.9M
TOTAL	\$1.352B

Funding for MDOT SHA activities originates from State and federal transportation funds. MDOT SHA collaborates with citizens, communities, and elected officials to deliver hundreds of high-quality projects, from system preservation to major investments through planning, design and construction.

MDOT SHA USE OF FUNDING FOR OPERATING FY 2017



OPERATING MAINTENANCE FUNDS SPENT	FY 2017
Routine Maintenance	\$122.6M
Bridge Maintenance	\$4.1M
Environmental Design and Compliance	\$7.2M
Traffic/CHART Operations	\$25.2M
Winter Operations	\$53.7M
Electricity	\$9.2M
Maintenance Support	\$21.1M
Other	\$8.6M
TOTAL	\$251.7M

MDOT SHA COMPLETED PROJECTS HIGHLIGHTS (SUMMER 2016 THROUGH FALL 2017)

DELIVERING PROJECTS

With a new MDOT SHA, there is a renewed focus on delivering projects with effectiveness and skill, but also with speed and efficiency. This involves traditional management of contractors and timelines, but also non-traditional overlapping approaches to project completion, not the traditional phased approach. This was the case on MD 404, where overlapping efforts led to the road opening for dualized traffic on time in November. MDOT SHA is always focused on quality delivery and a great product for the customer, but focusing on mission accomplishment and not necessarily "perfection" is allowing for better delivery.

CENTRAL MARYLAND	
ANNE ARUNDEL COUNTY	AMOUNT
MD 177 (Mountain Road)/Woods Road intersection improvements to add an additional travel lane along westbound MD 177 (funded by Anne Arundel County).	\$3.4 million
SB MD 295 (Baltimore Washington Parkway) between Winterson Road and Hanover Road pavement repair.	\$2 million
BALTIMORE COUNTY	AMOUNT
I-695 (Baltimore Beltway) between MD 41 (Perring Parkway) to MD 147 (Harford Road), interchange reconstruction and widening to replace the Putty Hill Road Bridge over I-695.	\$32 million
I-695 (Baltimore Beltway) Bridge replacement over Milford Mill Road, including sound wall replacement.	\$22.4 million
MD 147 (Harford Road) at Mt. Vista Road/Glen Arm Road, constructing a new roundabout, and removing a STOP condition and potential conflicts, thus enhancing safety.	\$3.7 million
CARROLL COUNTY	AMOUNT
MD 140 (Taneytown Pike) widening to add a second through lane between WMC Drive and Meadow Branch Road/Royer Road.	\$2.9 million
MD 31 (New Windsor Road) at Tahoma Farm Road intersection improvements for a new right turn lane.	\$1.7 million
Northbound MD 27 (Ridge Road) widening to add a right turn lane at Center Street.	\$500,000

HARFORD COUNTY	AMOUNT
MD 22 at Old Post Road (BRAC-related) for additional travel and turn lanes.	\$9.8 million
HOWARD COUNTY	AMOUNT
Northbound US 29 (Columbia Pike) widening for an additional northbound lane between Seneca Drive and south of MD 175.	\$26 million
Eastbound I-70 Resurfacing between Marriottsville Road and Baltimore County line.	\$3.2 million
MONTGOMERY COUNTY	AMOUNT
MD 195 (Carroll Avenue) Bridge rehabilitation over Sligo Creek and Sligo Creek Parkway.	\$12 million
Inner Loop of I-495 (Capital Beltway) resurfacing between I-270 Spur and the Seminary Road overpass.	\$9.5 million
MD 187 (Old Georgetown Road) (BRAC-related) intersection widening at Center Drive and West Cedar Lane/Oakmont Avenue. Intersection Widening to add exclusive right turn and through lanes.	\$3.4 million
MD 586 (Veirs Mill Road) pedestrian and intersection safety improvement at Turkey Branch Parkway (Matthew Henson Hiker/Biker Trail).	\$280,000
MD 410 (East West Highway) intersection Improvements at Bethesda Chevy Chase High School (HAWK Signal).	\$64,000
PRINCE GEORGE'S COUNTY	AMOUNT
MD 5 interchange improvements at Branch Avenue Metro Station and Auth Way – Phase II, building a pedestrian overpass.	\$38.3 million



Setting new steel beams for the Old Harford Road Bridge as part of the I-695 between MD 41 and MD 147 interchange reconstruction project



Completed MD 5 at Auth Way project

EASTERN SHORE MARYLAND

CAROLINE COUNTY	AMOUNT
MD 16 (Harmony Road) resurfacing between MD 331 (Main Street) and Payne Road.	\$522,000
CECIL COUNTY	AMOUNT
MD 222 Bridge Replacement over Rock Run, addressing a structurally deficient bridge.	\$2.8 million
DORCHESTER COUNTY	AMOUNT
MD 16 (Church Creek Road) at Woods Road; roundabout construction.	\$3.5 million
US 50 (Ocean Gateway) resurfacing between Bucktown Road and Austin Road.	\$1.5 million
KENT COUNTY	AMOUNT
MD 213 (Church Hill Road) Bridge cleaning and painting over the Chester River.	\$1.2 million
MD 213 bridge over the Sassafra River bridge rehabilitation.	\$1.2 million
SOMERSET COUNTY	AMOUNT
Southbound US 13 (Ocean Highway) Bridge rehabilitation over Kings Creek.	\$2.3 million



Resurfacing I-495 between I-270 and Seminary Road at night

QUEEN ANNE'S COUNTY	AMOUNT
US 301 (Blue Star Memorial Highway)/MD 304 interchange construction - Opened the new overpass in fall 2017.	\$34 million
TALBOT COUNTY	AMOUNT
MD 33 pavement upgrades (St. Michael's Road) from Knapps Narrows to Beechley Road.	\$1.2 million
WICOMICO COUNTY	AMOUNT
MD 349 (Nanticoke Road) Bridge Replacement over Windsor Creek.	\$2.7 million
MD 54 (Delmar Road) Bridge Construction over Mockingbird Creek to replace an existing culvert.	\$2.3 million
US 13 Business (Salisbury Boulevard) between Dogwood Drive and West College Avenue to lengthen turn lanes and improve the entrance at Salisbury University.	\$2 million
US 13 (Ocean Highway) between Jones Road and Eden Street by adding acceleration and deceleration lanes and reconfiguring concrete islands, and creating a median crossover.	\$1.9 million
WORCHESTER COUNTY	AMOUNT
MD 12 (Snow Hill Road) pavement upgrades between Nassawango Creek to the Wicomico County Line.	\$1.3 million
MD 90 (Ocean City Expressway) pavement upgrades between US 50 (Ocean Gateway) and MD 346 (Old Ocean City Road).	\$367,000



Southbound US 13 Bridge over Kings Creek before replacement

SOUTHERN MARYLAND

CALVERT COUNTY	AMOUNT
MD 231 and MD 765 improvements in Prince Frederick; realignment of MD 231 and MD 765A in Prince Frederick and adding new sidewalk.	\$3.6 million
MD 2/4 (Solomons Island Road) at Mount Harmony Road intersection improvements by adding a left turn lane.	\$3.3 million
CHARLES COUNTY	AMOUNT
MD 224 (Riverside Road) pavement upgrades at various locations.	\$4.7 million
ST. MARY'S COUNTY	AMOUNT
MD 5 (Point Lookout Road) pavement upgrades at various locations.	\$8.7 million
MD 5 Bridge Replacement over Eastern Branch.	\$3.5 million
MD 234 (Budds Creek Road) / MD 242 (Cotton Point Road) roundabout construction.	\$3.3 million



Final paving for the MD 5 Bridge over Eastern Branch replacement project

WESTERN MARYLAND

ALLEGANY COUNTY

I-68 (National Freeway) pavement upgrades between Orleans Road to the Washington County line.

\$4.6 million

MD 51 (East Industrial Boulevard)/Virginia Avenue intersection improvement, adding a center left turn lane to provide a safer turn lane.

\$1.4 million

FREDERICK COUNTY

MD 144 (Main Street) urban reconstruction between Royal Oak Drive and Bye Alley in New Market.

\$8 million

MD 77 (Rocky Ridge Road) Bridge rehabilitation over Monocacy River, replacing a structurally deficient bridge.

\$2.6 million

Southbound I-270 resurfacing between I-70 to MD 85 (Buckeystown Pike).

\$800,000

GARRETT COUNTY

MD 546 (Finzel Road) Bridge deck replacement over I-68 (National Freeway), addressing a structurally deficient bridge.

\$3.5 million

WASHINGTON COUNTY

Northbound I-81 Improvements between MD 58 (Salem Avenue) and US 40 (Dual Highway) to construct an acceleration lane at MD 58 to southbound I-81, and connection to westbound US 40.

\$10.6 million

I-70 Bridge rehabilitation over Beaver Creek.

\$4.8 million

Eastbound I-70 Bridge over the ramp to westbound I-68 (National Freeway).

\$1.8 million



MD 546 (Finzel Road) Bridge deck project over I-68. Project completed in 10 weeks

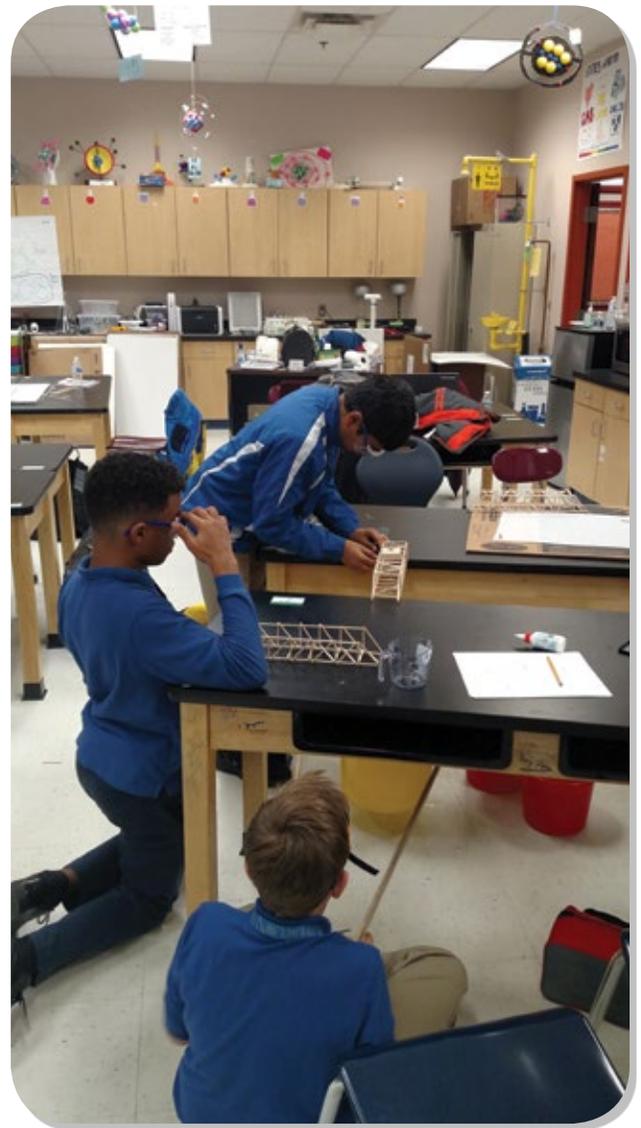
MDOT SHA CARES

At the Maryland Department of Transportation State Highway Administration (MDOT SHA), we touch the lives of our fellow Marylanders, communities, and even our employees every single day, helping them to reach life's opportunities. We embody public service and serve our communities in new and innovative ways. Whether it is inspiring our next generation of engineers or collecting food for families in need or helping our employees attain higher levels of education, our customers can see our commitment to making a difference and opening new roads to opportunity. In our community involvement initiative, MDOT SHA Cares, our team members enrich the lives of our neighbors and provide support and opportunities for our dedicated employees.

TRAC PROGRAM

The National **TR**ansportation and **C**ivil Engineering Program, or TRAC, brings the dynamic, problem-solving world of engineering to students by providing hands-on activities in **S**cience, **T**echnology, **E**ngineering and **M**ath (STEM). MDOT SHA is launching a TRAC program here in Maryland. We are introducing high school students to a wide variety of engineering career opportunities by applying math and science concepts to common transportation engineering problems. Patterson High School, National Academy Foundation School (NAF), Chesapeake Math and IT Academy Middle School (CMIT) and CMIT High School now incorporate the TRAC Program into the school's curriculum. All schools are using the Bridge Design module; they have formed teams that will compete in the May, 2018 TRAC Bridge Competition in Franklin, Tennessee.

MDOT SHA fully supports these schools by providing materials and technical expertise. Moving forward, MDOT SHA professionals will advise teachers and students, both in and out of the classroom. MDOT SHA plans to expand recruitment efforts and bring the program to more schools next year.



GED (GENERAL EQUIVALENCY DIPLOMA) PROGRAM

MDOT SHA is preparing today to build the workforce we will need tomorrow. Realizing that a combination of basic knowledge and applied skills is critical for success in the 21st century, MDOT SHA is launching a workforce literacy program to increase proficiency in foundational skills such as communication, math, reading and writing.

A key component will help interested employees complete their GED, or General Equivalency Diploma. This program, in partnership with Maryland community colleges, will be available to employees during work hours at convenient locations to ensure accessibility to the instruction and an appropriate level of accompanying support.



OPERATION ORANGE FOOD DRIVE

This past September, MDOT SHA Administrator Greg Slater was honored to serve as Chairman of MDOT's Operation Orange Food Drive. The annual event is a partnership with the Maryland Food Bank to help eliminate hunger.

MDOT SHA team members joined colleagues from across MDOT for a kick-off event to sort several thousand food items for distribution to Maryland families in need. Each of MDOT's six business units participated in Operation Orange with over 90 collection sites at the World Trade Center, MVA offices, BWI Marshall Airport and 30 MDOT SHA locations throughout the State of Maryland.

This year, MDOT assumed the role of the primary agency supporting Operation Orange. MDOT donated a record 35,818 pounds of food in 2017, with MDOT SHA donating almost 10,000 pounds of food!



MARYLAND CHARITIES

The Maryland Charity Campaign (MCC) is an annual event that runs from the beginning of October until the middle of December. In the words of Governor Larry Hogan, MCC gives State employees the tools to “make Maryland the best place in America to live, work, and raise a family,” and help change Maryland for the better by pledging donations. State employees pledged via payroll deductions or by providing one-time donations to one or more of the 900+ vetted charities and non-profit organizations. Additionally, MDOT SHA hosted several creative fundraising efforts from pumpkin carving contests to chili cook-offs. MDOT SHA employees donated \$85,208.17 during the campaign. Team MDOT SHA has extraordinary, giving, and thoughtful employees. This kind of caring will make a big difference for all of Maryland's citizens.



GOVERNOR HOGAN'S DAY TO SERVE

Across Maryland, MDOT SHA employees answered Governor Hogan's call to serve others during a four-week “Day to Serve” challenge. During that time, MDOT SHA employees joined together with regional neighbors in Virginia, West Virginia and Washington, D.C. with the shared goal of helping those in need. From serving in soup kitchens to cleaning streams, MDOT SHA employees helped to further enhance the communities in which we live and serve.



MOVING MARYLAND FORWARD – WHERE CAN MDOT SHA TAKE YOU?



Where can MDOT SHA take you? MDOT SHA maintains more than 2,500 bridges and 17,000 miles of non-toll state roads in Maryland.

We have a record 552 projects underway valued at more than \$4 Billion. From intersection improvements to widening and new interchange construction, we are investing in projects to enhance the commute and daily travel for millions of Marylanders.

The roads we build are only as efficient as the systems we design to move people to their destinations. We are delivering transformative solutions for traffic congestion across the state and our Transportation Business Units. Secretary Rahn calls this our “system of systems.” From the Purple Line, to the Port, expansion and improvements at BWI, Baltimore Link, Smart Signal corridors and our recently announced Traffic Relief Plan – we are putting systems in place which will make us a national leader in Transportation, providing a real example of how you can deliver congestion relief by “going big” with your solutions.



Where can MDOT SHA take you? We are in the business of bringing the power of change and Power of Go to the people of Maryland. That is the **CUSTOMER EXPERIENCE**.

Transportation affects almost everyone, and recent survey data indicates we are having as positive an impact on Marylanders as we ever have. Highways are a top priority for our citizens, with some survey data indicating it is the most important agenda item in the lives of Marylanders, eclipsing even education. How do we capitalize on that positive public opinion? By delivering.

We owe a customer experience by setting a high standard for our organization, holding ourselves to that standard and responding to our customers with empathy, transparency and understanding. We are doing that, and we’ll continue to do it.

Going forward into the new year, we will continue to deliver on our projects and our commitment to Governor Hogan’s Customer Service Promise.

WHERE CAN MDOT SHA TAKE YOU?

Our charter is to provide a safe, well-maintained, reliable highway system that enables mobility choices for all customers and supports Maryland’s communities, economy and environment.

But isn’t it so much more?

Our citizens and our industry partners are trusting us. No project is too big. No project is too small. Each road and construction effort means SOMETHING to SOMEONE in this state. And, thus, it is going to mean a lot to us.

We will honor our charter and deliver the people of Maryland to their jobs, schools, vacation spots and homes now and in the future. This is a NEW MDOT SHA. We’re delivering.



Larry Hogan
Governor

Boyd K. Rutherford
Lieutenant Governor

Pete K. Rahn
MDOT Secretary

Greg Slater
MDOT SHA Administrator

Maryland Department of Transportation
State Highway Administration
707 North Calvert Street
Baltimore, Maryland 21202

800-323-MSHA | TTY 800.735.2258

roads.maryland.gov

This document is available in alternative formats upon request.

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION



Printed on recycled paper.