



MARYLAND TRANSPORTATION SYSTEMS MANAGEMENT & OPERATIONS

WORKING TOWARDS TSMO

Summary: Regional Operations Forums in Maryland

Systems Performance, Operations & Technology Subcommittee Meeting
September 8, 2022

Presented By:

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AGENDA

- i Overview of Regional Operations Forums**
- ii District by District Findings**
- iii Key Findings and Next Steps**



Overview of Regional Operations Forums (ROF)

TIMELINE OF EVENTS



FORUM GOALS

The goals of the Regional Operations Forum were to:

GOAL 1

Educate attendees about about **T**ransportation **S**ystems
Management and **O**perations (**TSMO**)

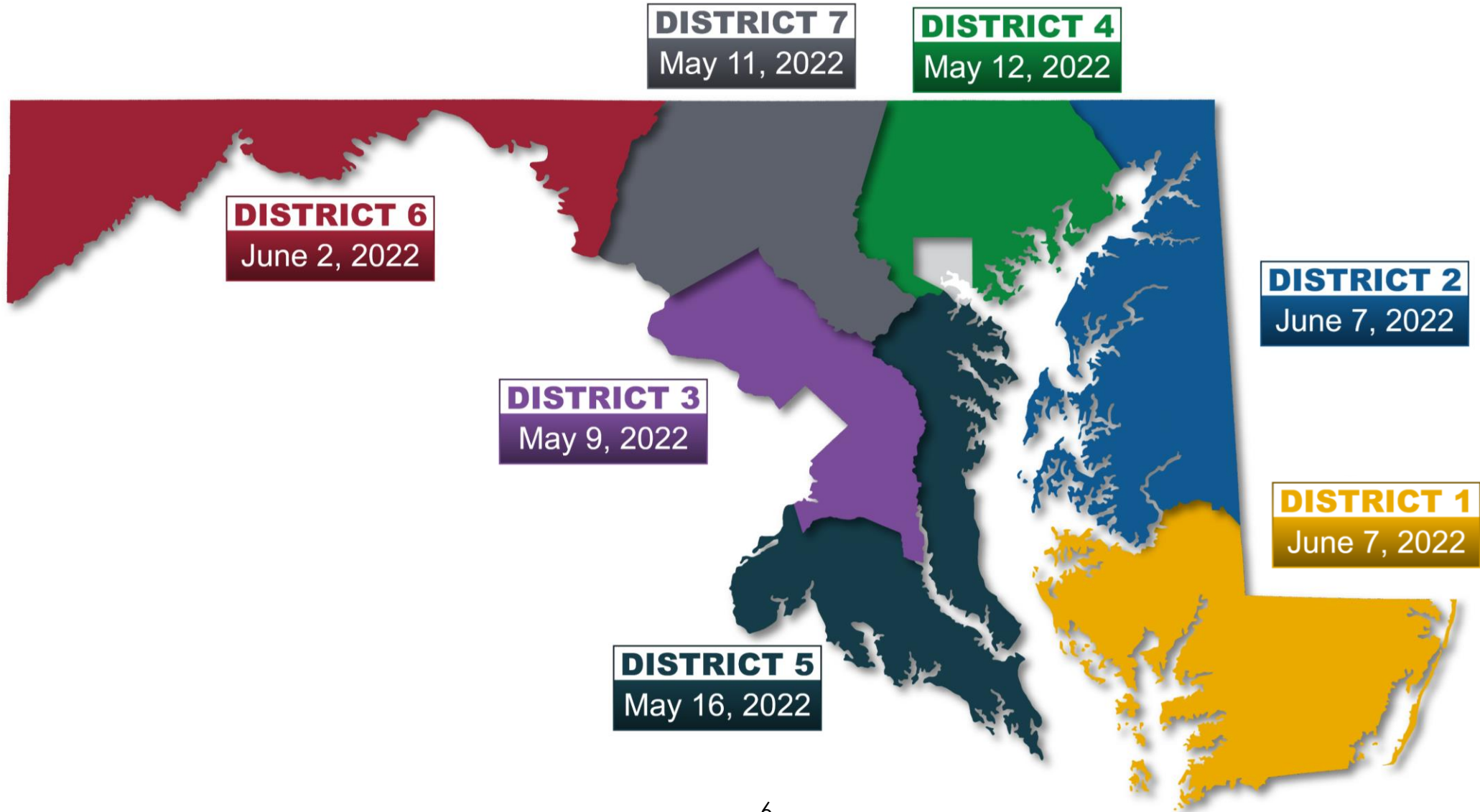
GOAL 2

Increase TSMO opportunities in attendees' day-to-day jobs

ROF MEETING STRUCTURE



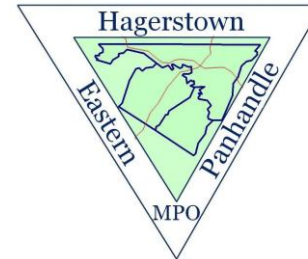
DATES / LOCATIONS



WHO ATTENDED



Federal Highway Administration



COMMON THEMES

improved ITS infrastructure

communications

multi jurisdiction coordination and cooperation

truck traffic

enhanced ssp equipment deployment

weather (flooding, resilience, etc.)

planning for operations

congestion **truck parking**

coordinated signal system

active traffic management

improved towing response

traffic incident management

improved accident location reporting

hard shoulder traffic
running constraints



District by District Findings

DISTRICTS 1 & 2 SUMMARY

Regional Discussion **Operational Highlights**

- Challenges predicting and adjusting in real time to Bay Bridge / summer traffic (e.g., queues, diversions & clearance)
- Use of community liaisons and text messaging to inform residents of issues
- Increase in population during summer season, including busing in of workforce from cities to summer destinations



DISTRICTS 1 & 2 SUMMARY

Recommendations

- Revisit / provide training regarding existing Eastern Shore Evacuation Plan and potentially update TIMS plans and evacuation route plans
- Examine the opportunity to pilot Variable Speed Limits leading up to Bay Bridge to reduce queues at the Bay Bridge
- Examine possibility of managing eastern shore traffic congestion by working with Airbnb / VRBO, etc. to notify vacationers before they depart (and/or allow flex departure times)

DISTRICT 3 SUMMARY

Regional Discussion Operational Highlights

- Special Events are common in the region causing unreliability of systems
- Frequent maintenance of traffic during construction in high density urbanized area results in additional unreliability
- Local jurisdictions frequently have to deal with cut through traffic, some have relationships, but not ubiquitous
- Proximity to Nation's capital brings its own challenges, including high number of entry/exit points into District



DISTRICT 3 SUMMARY

Recommendations

- Establish a TIM Coordination Committee to include: MDOT SHA, Montgomery County DOT, Prince George's County DPWT, Maryland State Police, County Law Enforcement, County Fire & EMS, MWCOG, MATOC, etc.
- Re-examine State and County level TMC-to-TMC communications and system level data feeds to ensure they are robust and easily digested by local and state stakeholders
- Identify proactive solutions for preventing overturned trucks at high recurring locations
- Integrate State and local road weather management systems including snowplow AVL and real-time road condition status (applicable to other Maryland counties with AVL)
- Examine ways to improve / enhance signal operations and coordination between state and locally operate signal systems
- Recommendation that MDOT SHA share MOT plans with locals for major construction projects prior to accepting the MOT plans (in case local traffic diversions occur)

DISTRICT 4 SUMMARY

Regional Discussion Operational Highlights

- Port of Baltimore generates high level of short and long-haul truck trips (e.g., Amazon)
- Pedestrian mobility hindered from City to suburban regions and high level of trucks in neighborhoods
- Lack of roadway system redundancy for detours on I-695 due to lack of parallel arterials
- Desire for increased multimodal trip options



DISTRICT 4 SUMMARY

Recommendations

- Examine technologies/solutions that can alleviate truck neighborhood cut-through traffic around the port and lack of parking around port.
 - Smart signals, parking technologies, monitoring of high truck volumes, restricting trucks by time of day in a dynamic fashion, etc.
- Consider a BMC TIMBR Committee to address incident response coordination and communication between MSP and Baltimore County Police Department
- Pursue grant opportunities to improve safety, calm traffic and improve transit

DISTRICT 5 SUMMARY

Regional Discussion **Operational Highlights**

- Challenges with Bay Bridge traffic diversions
- Strong communication between emergency services at various levels
- Recurring weather events, including downed trees / wires and flooding
- Significant development growth, including river port and warehouses
- Concerns of long-term traffic congestion



DISTRICT 5 SUMMARY

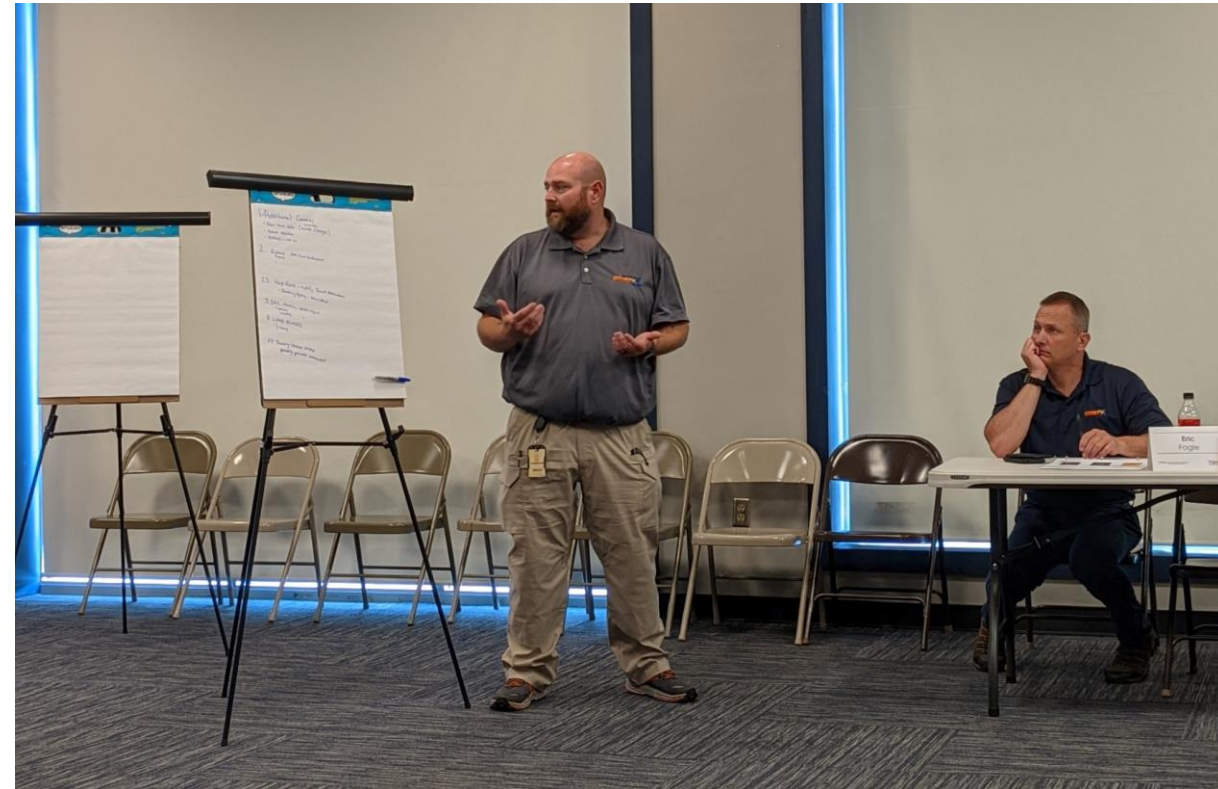
Recommendations

- Identify how local jurisdictions that post road closures on county maps can show up in Maryland 511 system for statewide situational awareness.
- Desire from local jurisdictions to adopt / upskill using the CHART ATMS and see how they can contribute to statewide situational awareness.
- Continue trying to work with navigation applications to keep traffic off local roads
- Explore opportunities to address land use and development issues, specifically related to the lack of infrastructure

DISTRICT 6 SUMMARY

Regional Discussion **Operational Highlights**

- Long Detours (FITM) due to lack of redundant roadway networks
 - I-81 complexities due to limited rerouting options
- High number of long-haul truck traffic, truck crashes, and lack of infrastructure to support safe movement
- Heavy seasonal recreational travel
- Very strong communication system across emergency agencies at all levels and state/local executive leadership



DISTRICT 6 SUMMARY

Recommendations

- Examine use of VSL to control speed differential and fog/weather events for trucks and cars
- Desire for more strategically places Dynamic Message Signs (smaller pole mounted instead of overhead) to help traveler information, especially in regions with low or lack of cellular coverage
- Desire to expand the CHART patrols to west of Hagerstown
- Explore further coordination with locals regarding continued warehouse expansion and future impacts to state and local roads
- Conduct TIM training for local emergency services and coordination with state

DISTRICT 7 SUMMARY

Regional Discussion **Operational Highlights**

- Roadway capacity not keeping pace with the region's growth
- Commercial traffic is an ongoing issue and some local routes are not able to handle truck traffic
- Co-location of TIM and State Police in Frederick has significantly improved operations and coordination
- Strong communication system across emergency agencies at all levels and state/local executive leadership
- Weather events management



DISTRICT 7 SUMMARY

Recommendations

- Examine possible tech / non-tech solutions for truck parking and routing
- Examine possible ways to mitigate truck incidents on South Mountain during winter weather events
- Increase ITS device deployment on I-70, I-270, US 15
- Incorporate operation staff during planning, example: Hard Shoulder Running



Key Themes

&

Next Steps

KEY THEMES OVERVIEW



Coordination
Across
Agencies



Be Proactive



Standardize



Data
Governance

KEY THEMES: COORDINATION

- Continue to hold annual / bi-annual District ROFs and consider adding additional stakeholders such as transit, freight and others
- Continue working with locals so that they consider TSMO solutions when developing Local Priority Letters
- Consider TSMO presence at major events to increase awareness
- Examine ways in which communication and response with the towing community can be improved and to ensure the right equipment shows up on scene

KEY THEMES: BE PROACTIVE

- Continue TIM related training to account for workforce turnover
- Look for solutions to generate more accurate incident location data (lat/long), which helps with planning and identifying solutions
- Plan for adding more signalized intersections into CENTRACS specifically on arterial and side roads that could serve as alternate route during incident
- Consider tethered drones for better “viewing” of incidents
- Examine technologies and related algorithms for improved incident detection and verification
- Make sure FITM plans are updated and available electronically in the field for both CHART vehicles and Law Enforcement
- Examine expanded use of Smart Work Zone technologies (e.g., iCones, smart arrow panels, etc.) to improve communication with motorists
- Examine feasibility of CHART operated heavy duty wreckers
- Examine use of mile markers (e.g., tenth of a mile) to help with identifying location of incidents
- Examine possibility of funding more TIM efforts using the State Highway Strategic Plan (SHSP)
- Increase deployment of ITS, especially to improve efficient truck mobility and safety

KEY THEMES: STANDARDIZE

- Examine relationship of TSMO Project Purpose and Need development and major construction Purpose and Need
- Examine how TSMO related field elements (fiber conduit, CCTV, etc.) can be included in construction or preservation projects
- Create Maryland Unified Goal for TIM (like National Unified Goal)
- Create towing “Guidelines” and educate stakeholders on how towing call lists work
- Create MARWIS SOP for MDOT SHA Maintenance and integrate MARWIS data into EORS
- Examine current placement of rumble strips with respect to painted roadway edge lines (e.g., could they be closer to the lines to help emergency services?)

KEY THEMES: DATA GOVERNANCE

- Examine how to better distribute information to motorists (en-route and pre-trip) regarding major bridge closures for all bridges (Bay Bridge, Nice, Tydings, etc.)
- Generate a more comprehensive data exchange with standardized data feeds
- Increase number of available data feeds to locals and from locals for broader situational awareness
- Adopt CHART ATMS more widely across jurisdictions (if desired)

NEXT STEPS

Coordination

1. Convene recurring meetings within each region and statewide
2. Increase, improve, or create new communication channels

Proactive

1. Implement technical specifications
2. Assist with identifying and addressing workforce gaps

NEXT STEPS

Transparency

1. Provide regular updates on MDOT SHA Priorities
 - e.g., newsletters and website
2. Explore the use of non-traditional forms of sharing information with communities
 - e.g., Nextdoor, AirBnB, and VRBO

Data Governance

1. Develop standard operating procedures for sharing data across regions
2. Increase number of and use of data feeds



Questions / Discussion



ROF FACILITATION TEAM

Many thanks to:

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Thank you!



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