MARYLAND DEPARTMENT OF TRANSPORTATION

STATE HIGHWAY ADMINISTRATION

# IMPACTS OF **CONNECTED & AUTOMATED VEHICLES** ON CHART OPERATIONS

**Scott Yinger**

Deputy Director, Operations, Office of CHART & ITS Development

Statewide CAV Working Group Meeting
August 11, 2020

# WHO WE ARE

- **CHART's mission**
  - Improve mobility and safety on Maryland's major highways through the application of ITS technology and interagency teamwork

- **Operational branch of the MDOT State Highway Administration**
  - Maryland 511
  - Statewide Operations Center & Traffic Management Centers
  - ITS planning, deployment, operation and maintenance
  - 24/7 Patrols statewide responding to an incident or motorist every 8 minutes

- **Capabilities**
  - Real-time feeds and information to over 200 stakeholders & to the public
  - Traffic incident management
  - Emergency weather and major event coordination of operations

- Learn more: https://chart.maryland.gov/

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

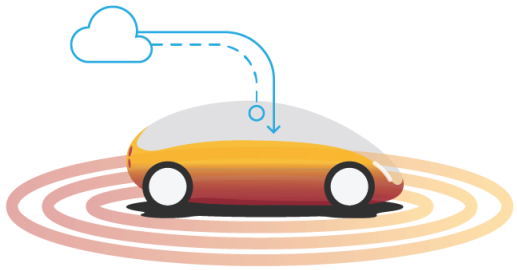
# CHART CAV PRIORITIES

## Agency Preparedness

- Championing integration of CAV
- Developing strategies for ecosystem optimization

## Real-Time Operations

- Improving situational awareness
- Increased infrastructure to vehicle (I2V) notification for improved safety



MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

# EXAMPLES OF CAV APPLICATIONS IN EMERGENCY OPERATIONS SCENARIOS

- **Pre-emptive**
  - Developing TIM strategies with Automated Vehicles operating within a crash scene
  - Notification of an approaching emergency vehicles to a crash scene would facilitate vehicle reaction times by making drivers shift lanes ahead of time
  - Notification of emergency vehicles at a crash scene to reduce vehicle run ins & reinforce 'Slow down. Move over.'
  - Receiving vehicle telematics, such as increased harsh braking, would allow CHART to send resources to respond more quickly to a location with higher probability of crashes or to remove/correct whatever is causing harsh braking

- **Reactive**
  - Notification of collision with an emergency vehicle

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

EMERGENCY PATROL
StateFarm

StateFarm
Sponsored by
StateFarm

# CHART CAV INVOLVEMENT

- Maryland Statewide CAV Working Group & Subgroups
- US DOT Highway Automation Concept of Operations
- Cooperative Automated Transportation (CAT) Coalition
- Connected Vehicle TPF-5(389) & Automated Vehicle TPF-5(453)
- AASHTO (e.g. Committee on Transportation System Operations)
- Eastern Transportation Coalition (e.g. Mid-Atlantic CAV group & TSMO)
- Transportation Research Board (TRB) Committees
- ITS America

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

# QUESTIONS?

**Scott Yinger**
Deputy Director, Operations, Office of CHART & ITS Development
Maryland Department of Transportation State Highway Administration
syinger@mdot.Maryland.gov

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION