Engaging Maryland toward CAV advancements

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Maryland CAV activities

Overall goal:
Maryland is open for business and seeking to promote innovative safety and economic benefits of CAV technology while ensuring safety for all who travel Maryland roadways

Multi-faceted approach:
- Efforts within MDOT business units
- MDOT strategy and implementation plans
- Maryland Connected & Automated Vehicle Working Group
- Expression of interest and permit process for testing
Maryland CAV Working Group

Formed in late 2015, the Working Group serves as a central point of coordination and information for Maryland CAV activities

- Members from state, local, county, private, technology, academic sectors
- Twelve meetings since December 2015
- Presentation highlights
  - Research nationally and in Maryland
  - Federal policies and guidance documents
  - AAMVA guidelines and initiatives
  - Specific topics like law enforcement and insurance
  - Live demonstrations of CAV technology
MDOT business units – CV focus

Maryland State Highway Administration US 1 corridor initiative

• 8 mile corridor of US 1 (4-lane arterial) with 2 mile cross of MD 175 (2-lane)
  o Arterial CCTV to support incident and traffic management
  o Detection to support arterial travel times
  o Upgraded signal controllers to support better timing and future CV applications
  o DSRC deployment at intersections in support of National Signal Phasing and Timing (SPaT) Challenge
  o Enhanced high-bandwidth communication connectivity to support future needs
• Currently in design phase; full deployment by summer 2019
MDOT business units – CV focus

MDOT SHA is part of two FHWA research pooled funds

• Study #TPF-5(371), Highway Capacity Manual adjustments
  o Identify adjustments for highway capacity based on CAV market penetration
  o Recognition that Connected & Autonomous together can make more significant impact to highway capacity than separately
  o Led by Oregon … nine states involved including CT and MD

• Study #TPF-5(206), Vehicle Infrastructure Integration
  o Supports large-scale Connected Transportation Systems with AASHTO and US DOT
  o Researches state and regional connected system efforts
  o Led by Virginia … 23 agencies, including CT, DE, MD, NJ, NY, PA
CV activities elsewhere in MDOT

Maryland Transportation Authority

- DSRC test installation at tunnels
- Demonstrations planned at 2018 IBTTA conference
- Facilitated Collaboration with US Army Aberdeen Test Center

Maryland Transit Administration

- Piloted advanced Driver Assistance System on core service buses
- Traffic signal and communication hardware implementation (with city of Baltimore) for enhanced transit operations
Other MDOT business units

Maryland Aviation Administration
• Testing self-parking vehicles in BWI Airport lots

Maryland Motor Vehicle Administration
• Leading CAV Working Group & subcommittees
• Leading EOI and permit process
• Organizing MDOT coordination meetings

Maryland Ports Authority
• Participating in freight subgroup
• Examining autonomous vessels
MDOT Secretary’s Office

Developing Maryland Strategic Plan and MDOT Implementation Plan
- Support Maryland to become a national leader in CAV
- Align ongoing CAV planning and implementation efforts
- Identify opportunities for coordination across agencies
- Identify gaps in CAV policy and planning
- Help set a course of implementation

Progress
- Completed interviews with all business units
- Held two webinars to gain external input
Maryland EOI & Permit process

Expression of Interest
• Starting point to alert all appropriate agencies of potential activity
• Facilitates dialogue with potential partners
• Eleven entities have submitted EOIs to Maryland
• May be AV or CV proposals

Highly Automated Vehicle permit
• Required to test on public roadway
• $5 million insurance requirement
• Self-certification and reporting requirements for vehicle, operators and plans
• Unique permit for each vehicle
• One entity has been issued two separate vehicle permits and is actively testing
Maryland EOI & Permit process

Locations to Enable Testing Sites (LETS CAV)

- MDOT business units have collaborated to identify facilities that could be used for CAV testing, including parking lots and park & rides
- Provides a first step in matching testers with potential sites
Lessons learned

• Collaboration is key … no single agency, organization or entity has all the answers

• Every document is a “living” document

• CAV needs to be integrated into long-range planning

• Technology capabilities are just one element; user acceptance and integration into transportation culture will be key for CAV development
More information

mdot.maryland.gov/marylandcav

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Northeast Association of State Transportation Officials http://nasto.org/2018-nasto-conference/

July 9th - 11th, National Harbor