USDOT State Model Policy for Highly Automated Vehicles (HAVs)

I. Administration	
NHTSA Model Guidance	Maryland Status
A. Each State should identify a lead agency responsible for consideration of any testing of HAVs.	
B. Each State should create a jurisdictional automated safety technology committee that is launched by the designated lead agency and which includes representatives from the governor's office, the motor vehicle administration, the State department of transportation, the State law enforcement agency, the State Highway Safety Office, office of information technology, State insurance regulator, the State office(s) representing the aging and disabled communities, toll authorities, and transit authorities.	
C. Other stakeholders should be consulted as appropriate, such as transportation research centers located in the State, the vehicle manufacturing industry, and groups representing pedestrians, bicyclists, consumers and other interested parties.	
D. The designated lead agency should keep its state automated safety technology committee informed of the requests from manufacturers to test in their jurisdiction and the status of the designated agency's response to the manufacturers.	
E. The designated lead agency should take necessary steps to use or establish statutory authority to implement a framework and regulations. Each jurisdiction should examine its laws and regulations to address unnecessary barriers to safe testing, deployment, and operation of HAVs in the areas of: • licensing/registration; • driver education/training; • insurance and liability; • enforcement of traffic laws/regulations; and • administration of motor vehicle inspections	
F. Each State should develop an internal process that includes an application for manufacturers to test in the jurisdiction as described below.	
G. The motor vehicle agency should establish an internal process for issuing test vehicle permits as described in sections II and III of the federal AV policy.	
H. The designated lead agency should review State statutes to identify any legal issues that need to be addressed prior to the deployment and operation of	

automated vehicles.	

II. Application for Manufacturers or Other Entities to Test HAVs on Public Roadways	
NHTSA Model Guidance	Maryland Status
A. A "manufacturer" is an individual or company that manufactures HAVs for testing and deployment on public roadways. Manufacturers include original equipment manufacturers (OEMs), multiple- and final-stage manufacturers, alters (individuals or companies making changes to a complete vehicle prior to first retail sale or deployment), and modifiers (individuals or companies making changes to existing vehicles after first retail sale or deployment).	
B. An "other entity" is any individual or company that is not a manufacturer, and is involved with designing, supplying, testing, selling, operating, deploying, or helping to manufacture HAVs.	
C. Each manufacturer or other entity should submit an application to the designated lead agency in each jurisdiction in which they plan to test their HAVs.	
D. The application should state that each vehicle used for testing by manufacturers or other entities follows the Performance Guidance set forth by NHTSA and meets applicable Federal Motor Vehicle Safety Standards.	
E. The application should include the name of the manufacturer or other entity, the corporate physical and mailing addresses of the manufacturer or other entity, the in-State physical and mailing addresses of manufacturer, if different than corporate address, the name of the program administrator/director and the contact information for the program administrator/director.	
F. The application should identify each vehicle that will be used on roadways for testing purposes by VIN, vehicle type, and other unique identifiers such as the year, make, and model.	
G. The application should identify each test operator, their driver's license number, and the jurisdiction or country in which the operator is licensed.	

H. The application should include the manufacturer's or other entity's safety and compliance plan for testing vehicles, which should include a self-certification of testing and compliance to NHTSA's Vehicle Performance Guidance for the technology in the test vehicles under controlled conditions that simulate the real-world conditions (various weather, types of roads, times of the day and night, etc.) to which the applicant intends to subject the vehicle on public roadways (e.g., a copy of the summary Safety Assessment submitted to NHTSA per the Vehicle Performance Guidance).	
I. The application should include evidence of the manufacturer's or other entity's ability to satisfy a judgment or judgments for damages for personal injury, death, or property damage caused by a vehicle in testing in the form of an instrument of insurance, a surety bond, or proof of self-insurance, for no less than 5 million U.S. dollars.	
J. The application should include a summary of the training provided to the employees, contractors, or other persons designated by the manufacturer or other entity as operators of the test vehicles. Approval should be granted by the designated lead agency if evidence of insurance, operator training, and self-certification is demonstrated.	

III. Jurisdictional Permission to Test	
NHTSA Model Guidance	Maryland Status
A. Each jurisdiction's lead agency should involve the jurisdictional law enforcement agency before responding to the request from the manufacturer or other entity.	
B. The lead agency may choose to grant authorization to test in a jurisdiction with restrictions, and/or may prohibit manufacturers or other entities from testing in certain areas or locations, such as school zones, construction zones, or other safety-sensitive areas.	
C. The authorization may be suspended if the manufacturer or other entity fails to comply with the State insurance or driver requirements, or fails to comply with its self-certification compliance plan.	
D. The lead agency may request additional information or require the manufacturer or other entity to modify its application before granting authorization.	

E. The lead agency should issue a letter of authorization to the manufacturer or other entity to allow testing in the State, and the State's motor vehicle agency should issue a permit to each test vehicle. The authorization and permits may be renewed periodically. The jurisdiction may determine that it is appropriate to charge fees for the application and for each vehicle-specific permit.	
F. The vehicle-specific permit must be carried in the test vehicle at all times.	
G. Each test vehicle should be properly registered and titled in accordance with the State's laws.	

IV. Testing by the Manufacturer or Other Entity	
NHTSA Model Guidance	Maryland Status
A. Manufacturers or other entities must comply with Federal law and applicable NHTSA regulations before operating vehicles on public roadways, whether or not they are in testing or in "normal" operation.	
B. The vehicle used in testing must be operated solely by persons designated by the manufacturer or other entity, who have received training and instruction concerning the capabilities and limitations of the vehicle. The training provided to the persons designated by the manufacturer or other entity must be summarized and submitted to the lead agency.	
C. The operators testing the vehicles must hold a valid State driver's license.	
D. Before being allowed to operate a test vehicle, the persons designated by the manufacturer or other entity as operators of the test vehicles, may be subjected to a background check including, but not limited to, a driver history review and a criminal history check.	
E. The test operators are responsible for following all traffic rules and will be responsible for all traffic violations.	
F. All crashes involving test vehicles must be reported in accordance with the State laws in which the crash occurred.	

V. Deployed Vehicles: "Drivers"	
NHTSA Model Guidance	Maryland Status
A. States regulate human drivers. Licensed drivers are necessary to perform the driving functions for motor vehicles equipped with automated safety technologies that are less than fully automated (SAE Levels 3 and lower). A licensed driver has responsibility to operate the vehicle, monitor the operation, or be immediately available to perform the driving task when requested or the lower level automated system disengages.	
B. Fully automated vehicles are driven entirely by the vehicle itself and require no licensed human driver (SAE levels 4 and 5), at least in certain environments or under certain conditions. The entire driving operation (under specified conditions) is performed by a motor vehicle automated system from origin to destination.	
C. In order to make the transition from human-driven motor vehicles equipped with automated safety technologies to fully automated vehicles, gaps in current regulations should be identified and addressed by the States (with the assistance of NHTSA). Some examples are: · Law enforcement/emergency response · Occupant safety · Motor vehicle insurance · Crash investigations/crash reporting · Liability (tort, criminal, etc.) · Motor vehicle safety inspections · Education and training · Vehicle modifications and maintenance · Environmental impacts	

VI. Deployed Vehicles: Registration and Titling	
NHTSA Model Guidance	Maryland Status
A. HAV technologies that allow the vehicle to be operated without a human driver either at all times or under limited circumstances should be identified on title and registration documentation by States, using the code HAV in a new data field.	

B. When HAV technologies that allow the vehicle to be operated without a human driver either at all times or under limited circumstances is installed on a vehicle after the initial purchase of the vehicle, the motor vehicle agency should be notified by the installer. The vehicle registration and title should be marked with the code HAV in a new data field.	
C. Regulations governing labeling and identification for HAVs should be issued by NHTSA.	

VII. Law Enforcement Considerations	
NHTSA Model Guidance	Maryland Status
It is important for first responders and law enforcement to understand how HAVs may affect their duties. In addition, there will be a growing need for the training and education of law enforcement regarding their interaction with drivers/operators in both the testing and deployment of these technologies.	
For vehicles that offer less than full automation capabilities, there is potential for increased distracted driving. Dangerous activities that contribute to distracted driving such as using an electronic device, eating, drinking, and conversing with passengers could significantly increase in HAVs. Regulations to limit these activities, especially in vehicles providing less than full self-driving capabilities, should be consistent across jurisdictions. The States should work together to develop a consistent regulatory scheme to limit potential driver distraction. In addition, States should develop methodologies for enforcement to discourage hazardous vehicle operation for the safety of the motoring public. Once HAVs are deployed and operated on roadways, State regulations need to keep pace with the changing technology.	

Although HAVs are expected to provide significant safety benefits by reducing human errors, motor vehicles currently equipped with automation technologies are already involved in traffic crashes and will continue to be, especially during the years of initial introduction and integration with existing motor vehicles. Responders to crashes of HAVs may be placed at risk if they are not trained for unique hazards that they may encounter. These hazards may include, for example, silent operation, self-initiated or remote ignition, high voltage, and unexpected movement. In the interest of safety, it is essential that first responders—including those in police, fire, emergency medical services, and tow and recovery services—receive information and training regarding the potential hazards they may face.	

VIII. Liability and Insurance	
NHTSA Model Guidance	Maryland Status
States are responsible for determining liability rules for HAVs. States should consider how to allocate liability among HAV owners, operators, passengers, manufacturers, and others when a crash occurs. For example, if an HAV is determined to be at fault in a crash then who should be held liable? For insurance, States need to determine who (owner, operator, passenger, manufacturer, etc.) must carry motor vehicle insurance. Determination of who or what is the "driver" of an HAV in a given circumstance does not necessarily determine liability for crashes involving that HAV. For example States may determine that in some circumstances liability for a crash involving a human driver of an HAV should be assigned to the manufacturer of the HAV.	
Rules and laws allocating tort liability could have a significant effect on both consumer acceptance of HAVs and their rate of deployment. Such rules also could have a substantial effect on the level and incidence of automobile liability insurance costs in jurisdictions in which HAVs operate.	
In the future, the States may identify additional liability issues and seek to develop consistent solutions. It may be desirable to create a commission to study liability and insurance issues and make recommendations to the States.	