Emerging Law Enforcement Roles
Supporting Safe Testing & Deployment

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New York State Police
Autonomous Vehicles State Actions

- 29 States + D.C.
- 11 states Executive Order
- 4 states Both
- 4 states None

National Council of State Legislatures
First Responder Actions

- Identify
- Immobilize
- Disable
California

- 2012: Legislation directs the CA DMV to enact regulations for testing of autonomous vehicles on California roads. CHP to adopt safety standards and performance requirements to ensure safe testing/operation.
- Regulations for testing with a safety driver effective Sept. 2014
- Regulations for testing without a safety driver effective April 2018

- Local authorities provided written notification;
- A communications link and a process to communicate between law enforcement and the test entity;
- Identify the ODD(s);
- Maintain a training program for remote operators
- Submit annual disengagement reports;
- Submission of a Law Enforcement Interaction Plan
Law Enforcement Interaction Plan: California CCR 227.38(e)

Made available to Law Enforcement and other first responders in the vicinity of the ODDs to instruct those agencies how to interact with the vehicle in emergency and traffic enforcement situations.

Shall include but not be limited to:

(A) How to communicate with a remote operator, who is available at all times;
(B) Where in the vehicle to obtain owner information, vehicle registration, proof of insurance;
(C) How to safely remove the vehicle from the roadway;
(D) How to recognize whether the vehicle is in autonomous mode, & how to disengage;
(E) How to detect and ensure the autonomous mode has been deactivated;
(F) How to safety interact with electric and hybrid vehicles, when applicable;
(G) A description of the ODD
(H) Any additional information regarding safety risks.
New York

- 2017 Legislation enacted through state budget process.

- Authorizes DMV Commissioner to approve autonomous vehicle tests and demonstrations provided such tests and demonstrations occur under the direct supervision of the New York State Police.
  (State Police perform criminal history and driver record checks of safety drivers)

- Such tests and demonstrations shall only take place under the direct supervision of the New York State Police and in a form and manner prescribed by the Superintendent of State Police. Additionally, a Law Enforcement Interaction Plan shall be included as part of the application, that includes information for law enforcement and first responders regarding how to safely interact with such vehicles in emergency and traffic enforcement situations.
To inform law enforcement officers and first responders how to safely interact with test vehicles in emergency and traffic enforcement situations. The plan shall include the ODDs and shall also include, but not be limited to the following:

1. Contact phone number;
2. How the vehicle will be distinguished from other conventional vehicles;
3. How to safely immobilize, disable, and tow the vehicle;
4. How to recognize if the vehicle is in autonomous mode;
5. How to disengage an autonomous mode if the operator is incapacitated;
6. Any other public safety concerns during operation or in the event of a crash, including any that may impact law enforcement, fire, EMS, or tow professions.
Pennsylvania

July 23, 2018 – new testing guidance released
Pennsylvania law requires a natural person in physical control of a vehicle; No Driverless Testing
Test entity must submit Notice of Testing to PennDOT

Notice of Testing Acknowledgements:
- Vehicle tested and capable of operation in ODDs it which it intends to operate;
- HAV has mechanism to engage/disengage ADS easily accessible to safety driver, secondary safety associate, law enforcement and other emergency personnel;
- HAV has audio or visual display indicating the ADS is engaged;
- HAV equipped to record operational data before collision that shall be made available to PennDOT and law enforcement upon request;
- Has implemented reasonable measures to mitigate cybersecurity risks;

Must also submit either:
Voluntary Safety Assessment as established by NHTSA (2017); or
A Safety and Risk Mitigation Plan
Safety and Risk Mitigation Plan: Pennsylvania

“Plan developed by an HAV Tester to provide adequate safety in case of ADS failure. The Plan should include no proprietary information regarding the ADS.”

- General overview of the ODD:
- Description of how the disengagement technology meets industry standards;
- Criminal background and drivers record checks for safety drivers;
- Description of driver training including intended/unintended disengagements of ADS

“The Safety and Risk Mitigation Plan (“safety plan”) is operator focused and aims to ensure the Tester has an adequate program to ensure driver training that encompasses both traditional driver performance expectations and proper driver-HAV test vehicle interaction.”
Arizona – Law Enforcement Protocol for Fully Autonomous Vehicles

- Issued June 4, 2018 by AZ Dept. of Public Safety
- To provide procedural guidance when investigating collisions, traffic or criminal violations, or any incident involving a **fully autonomous vehicle** with no operator present.
- Person operating a fully autonomous vehicle shall provide AZ DPS and the AZ DOT with a **Law Enforcement Interaction Protocol** which will be on file with Operational Communications and available through the AZ DMV.

**Law Enforcement Interaction Protocol**
1. How to communicate with a fleet support specialist who is available when the vehicle is in operation;
2. How to safely remove the vehicle from the roadway;
3. How to recognize whether the vehicle is in autonomous mode and steps to safely tow it;
4. The cities where the vehicle will be in operation;
5. Any additional information the manufacturer deems necessary regarding hazardous conditions or public safety risks associated with the operation of the vehicle.
Arizona – Law Enforcement Protocol for Fully Autonomous Vehicles

Directive to Enforcement Personnel – Traffic Collisions
1. Investigate crashes consistent with AZ statutes
2. The vehicle owner shall be recorded on the Crash Report
3. In the case of property damage or injury to a person, the officer shall report the autonomous vehicle owner’s name, address, and insurance information to all involved parties. (This information is accessed through the AZ DMV.)
4. If the fully autonomous vehicle violates a traffic law resulting in the collision, the officer may issue a citation to the registered owner of the vehicle.

Directive to Enforcement Personnel – Disabled Vehicles
1. If the fully autonomous vehicle is disabled as a result of collision or malfunction and the owner is unable to provide for custody or removal, the officer shall remove it or cause it to be removed consistent with existing laws, ie. obstruction, disabled in gore area, causes a hazard. (instructions on file with DPS and DMV)
2. Officer shall fully inventory any vehicle prior to removal.
Arizona – Law Enforcement Protocol for Fully Autonomous Vehicles

Directive to Enforcement Personnel – Other Violations (title 28)
1. Unregistered/not displaying plates;
2. AV documents not on file with DMV indicating financial responsibility;
3. Equipment violations;

All citations and/or repair orders shall be issued to the registered owner on file.
House Bill 4063 of 2018 established a Task Force on Autonomous Vehicles to recommend legislative actions regarding licensing and registration, law enforcement and crash reporting, cybersecurity, and insurance and liability. The Task Force was multidisciplinary; composed of public, private, and academic sectors.

Recommendations:

1. Test entities must obtain a testing permit from ODOT prior to testing SAE L3-L5 vehicles on public roads (includes commercial vehicles);
   a. Passenger vehicles require decal on rear window for identification
   b. Commercial vehicles must file images of test vehicles, routes of travel, dates, times, etc. with ODOT and the Oregon State Police.
   c. Variety of vehicle safety requirements and self-certifications depending on whether operated with a safety driver or without a human operator onboard.

2. Law Enforcement/First Responder Interaction Plan
   a. Shared with State Police and all local law enforcement and first responders and made available
Law Enforcement Interaction Plan: Oregon

1. How to communicate with a remote operator;
2. Where in the vehicle to obtain the owner information, registration, proof of insurance;
3. How to safely remove the vehicle from the roadway;
4. How to recognize whether the vehicle is in autonomous mode;
5. If possible, how to safely disengage the autonomous mode;
6. How to detect and ensure the autonomous mode has been deactivated;
7. When applicable, how to safely interact with hybrid and electric vehicles;
8. Description of the ODDs of the vehicle.

Additional Recommendations:
- Update crash reports to include SAE Level and if autonomous mode was engaged.
- Require test vehicles record and store operational data prior to collisions in a standardized, non-proprietary format capable of being shared with law enforcement, government entities, and parties involved in the incident subject to appropriate legal process.
Industry Supporting First Responders

Waymo Fully Self-Driving Chrysler Pacifica
Emergency Response Guide and Law Enforcement Interaction Protocol

This document includes material from the FCA 2017 Pacifica Hybrid Emergency Response Guide
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