

Summary:  
October  
2019  
Update

# Summary of October 2019 Update of the Autonomous Vehicle Legislative Survey

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## Acronyms

<i>Abbreviation</i>	<b>Explanation</b>
3.0	Preparing for the Future of Transportation: Automated Vehicles
A&M	Texas A&M University
ACAT	Advisory Committee on Automation Transportation
ACM	American Center for Mobility at Willow Run
ADOT	Arizona Department of Transportation
ADS	Automated Driving System
ADV	Autonomous Delivery Vehicle
ANPRM	Advanced Notice of Proposed Rulemaking
AV	Autonomous Vehicle; Automated Vehicle <sup>1</sup>
<i>AV Policy Task Force</i>	Autonomous Vehicle Policy Task Force
AVGR	Grand Rapids Autonomous Vehicle Initiative
AVL	Autonomous Vehicle Laboratory
CALTRANS	California Department of Transportation
CANVAS	Connected and Autonomous Networked Vehicles for Active Safety
CAT	Connected and Autonomous Technology
CAV	Connected and Automated Vehicle
<i>CAV Plan</i>	Strategic Plan for Connected and Automated Vehicles
CAVS	Center for Advanced Vehicular Systems
<i>CAV Strategic Plan</i>	Joint Statewide Connected and Automated Vehicles Strategic Plan

<sup>1</sup> **Disclaimer:** While the authors of the Survey are aware that the terms Autonomous Vehicle and Automated Vehicle have different connotations, the use of these terms have been unfortunately intermixed and used interchangeably by the public. Therefore, unless specifically designated, the Survey will not make a distinction regarding these terms.

<i>CCTA</i>	Contra Costa Transportation Authority
<i>CDOT</i>	Colorado Department of Transportation
<i>CHAPTA</i>	Collaborative Human-Automated Platooned Truck Alliance
<i>CITR</i>	Control and Intelligent Transportations Research Lab
<i>CV</i>	Connected Vehicle
<i>CMU</i>	Carnegie Mellon University
<i>CMV</i>	Commercial Motor Vehicle
<i>CU-ICAR</i>	Clemson University International Center for Automotive Research
<i>DD</i>	Designated Drivers
<i>DMV</i>	Department of Motor Vehicles
<i>DOL</i>	Department of Licensing
<i>DOMI</i>	Department of Mobility and Infrastructure
<i>DOT</i>	Department of Transportation
<i>FAV</i>	Fully Automated Vehicle
<i>FAVTPP</i>	Fully Autonomous Vehicle Testing Pilot Program
<i>FDOT</i>	Florida Department of Transportation
<i>FHWA</i>	Federal Highway Administration
<i>FMCSA</i>	Federal Motor Carrier Safety Administration
<i>FMCSR</i>	Federal Motor Carrier Safety Regulations
<i>FMVSS</i>	Federal Motor Vehicle Safety Standards
<i>FTC</i>	Following-too-closely
<i>GoMed</i>	Las Vegas Medical District Automated Circulator and Pedestrian Safety Project
<i>HAV</i>	Highly Automated/Autonomous Vehicle
<i>HB</i>	House Bill
<i>HDOT</i>	Hawaii Department of Transportation
<i>I-ACT</i>	Illinois Automated and Connected Track

<i>IAM</i>	Institute of Automated Mobility
<i>iCAVE2</i>	Connected and Autonomous Vehicle Evaluation and Experimentation
<i>i-CAV Team</i>	Interagency Connected and Automated Vehicle Team
<i>ICT</i>	Illinois Center for Transportation
<i>IDOT</i>	Illinois Department of Transportation
<i>ITS</i>	Intelligent Transportation Systems
<i>JTA</i>	Jacksonville Transportation Authority
<i>KDOT</i>	Kansas Department of Transportation
<i>KSTC</i>	Kansas Senate Transportation Committee
<i>LaDOTD</i>	Louisiana Department of Transportation and Development
<i>LTRC</i>	Louisiana Transportation Research Center
<i>MassDOT</i>	Massachusetts Department of Transportation
<i>MDOT</i>	Maryland Department of Transportation
<i>MnDOT</i>	Minnesota Department of Transportation
<i>MOA</i>	Memorandum of Agreement to Test Automated Driving Systems on Public Roadways in Massachusetts
<i>MoDOT</i>	Missouri Department of Transportation
<i>MSU</i>	Michigan State University
<i>MTC</i>	Metropolitan Transportation Commission
<i>NCDOT</i>	North Carolina Department of Transportation
<i>NCAR</i>	The University of Nevada, Reno's Center of Applied Research
<i>NDMV</i>	Nevada Department of Motor Vehicles
<i>NDOT</i>	Nevada Department of Transportation
<i>NHTSA</i>	National Highway Transportation Safety Administration
<i>NMDOT</i>	New Mexico Department of Transportation
<i>Northland</i>	Northland Community and Technical College

<i>NREL</i>	National Renewable Energy Lab
<i>PSU</i>	The Pennsylvania State University
<i>ODOT</i>	Ohio Department of Transportation
<i>OPM</i>	Office of Policy and Management
<i>PAVE</i>	Princeton Autonomous Vehicle Engineering
<i>PennDOT</i>	Pennsylvania Department of Transportation
<i>RIDOT</i>	Rhode Island Department of Transportation
<i>RPG</i>	Regional Proving Ground
<i>RTC</i>	Commission of Southern Nevada
<i>RTD</i>	Regional Transportation District
<i>SB</i>	Senate Bill
<i>SDV</i>	Self-driving Vehicle
<i>SCDOT</i>	South Carolina Department of Transportation
<i>SJR</i>	Senate Joint Resolution
<i>SMVI</i>	Smart Automated Vehicle Initiative
<i>SOAR</i>	Student Organized Autonomy Research Group
<i>THEA</i>	Tampa Hillsborough Expressway Authority
<i>TPEC</i>	Transportation Policy and Economic Competitiveness Program
<i>TRC</i>	Transportation Research Center, Inc.
<i>TRIP</i>	Rhode Island Transportation Innovation Partnership
<i>TSU</i>	Texas Southern University
<i>TTI</i>	Texas A&M Transportation Institute
<i>TxDOT</i>	Texas Department of Transportation
<i>UB</i>	University at Buffalo
<i>UDOT</i>	Utah Department of Transportation
<i>U-M</i>	University of Michigan



<i>UMTRI</i>	University of Michigan Transportation Research Institute
<i>UNH</i>	The University of New Hampshire
<i>U of I</i>	University of Illinois
<i>USDOT</i>	United States Department of Transportation
<i>UTC</i>	Safety through Disruption University Transportation Center
<i>UW-Madison</i>	University of Wisconsin-Madison
<i>V2I</i>	Vehicle to Infrastructure
<i>V2V</i>	Vehicle to Vehicle
<i>VAC</i>	Virginia Automated Corridor
<i>VDOT</i>	Virginia Department of Transportation
<i>VDRPT</i>	Virginia Department of Rail and Public Transportation
<i>Virginia Tech</i>	Virginia Polytechnic Institute and State University
<i>VTI</i>	Virginia Tech Transportation Institute
<i>WG</i>	Working Group
<i>WisDOT</i>	Wisconsin Department of Transportation
<i>WYDOT</i>	Wyoming Department of Transportation

## Introduction

This is a summary of the top updates included in the October 2019 version of the legislative Survey. This legislative survey is an evolving product of the law firm of Eckert Seamans Cherin & Mellott, LLC and is maintained on behalf of PLAC. This legislative survey provides an overview of laws, regulations, and research relating to Autonomous Vehicles (AV).<sup>2</sup>

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<sup>2</sup> **Disclaimer:** This Survey is made available by the lawyer or law firm publisher for educational purposes only as well as to give you general information and a general understanding of the law, not to provide specific legal advice. By using this Survey, you understand that there is no attorney-client relationship between the Survey publisher and you. The Survey should not be used as a substitute for competent legal advice from a licensed professional attorney in your state.

## Federal Legislative Actions

## United States

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### Congress

In July 2019, the House Energy and Commerce Committee and the Senate Commerce Committee announced they were working together to draft a bipartisan, bicameral self-driving car bill, which has yet to be introduced in either chamber of Congress to date.

On May 9, 2019, Congresswoman Suzan DelBene (D-WA), Senator Maria Cantwell (D-WA), and Congressman Ben Ray Lujan (D-NM) reintroduced the [Smart Cities and Communities Act](#). First introduced in 2017, but subsequently stalled in committees, the 2019 bill aims to:

- improve federal coordination of smart city programs, including reporting and showing their value;
- help local governments interested in implementing smart city technologies;
- build the workforce's technology skills to support smart cities;
- improve smart city technology's quality, performance and safety; and

- foster international collaboration and trade of smart city technologies.

The bill would authorize \$200 million for smart city investments over five years.

### U.S. Chambers of Congress

On August 9, 2019, the U.S. Chambers of Congress' Technology Engagement Center released its [Automated Vehicle Policy Principles](#). The Principles are meant to prioritize safety while ensuring that the United States remains a global leader in AV innovation. Representing a whole-of-industry perspective, the principles provide policymakers with an innovation-focused national framework to safely develop, test, and deploy AVs. Below is a summary of the Principles:

- ensure a safety-first approach to regulating AVs;
- encourage certainty through clearly delineating state, local, and federal regulatory responsibilities;
- promote technology and stakeholder neutrality in testing, deployment, and standards development;
- support a consensus-based and industry-led approach to advance safe AV testing; and

- modernize motor vehicle regulations and strengthen the existing exemption process.

### **United States Department of Transportation**

In April 2019, the United States Department of Transportation (USDOT) released several publications related to connected vehicles (CVs) and intelligent transportation programs:

- [Connected Vehicle Pilot Phase 2 - Interoperability Test Report](#): Phase 2 of the Connected Vehicle Pilot Deployment Program calls for stakeholder outreach activity that includes an interoperability activity showing successful interaction between the local Connected Vehicle Pilot site and in-vehicle devices from one or more of the other Connected Vehicle Pilot sites. The Report outlines a summary of the test cases, results, and recommendations for future interoperability testing.
- [Connected Vehicle Pilot Deployment Program, Phase 2 Outreach Plan Update -- Tampa](#): The update presents the Outreach Plan for the Tampa Connected Vehicle Pilot site.
- [Connected Vehicle Pilot Deployment Program, Driving Towards Deployment: Lessons Learned from the Design/Build/Test Phase](#): The report covers experiences and lessons learned from the pilot deployment sites during Phase 2 of the Connected Vehicle Pilot Program.
- [V2I Hub Deployment Guide](#): - The guide provides a detailed approach for deploying the Vehicle to Infrastructure (V2I) Hub solution at a signalized intersection. It walks through each phase of the deployment step-by-step to ensure successful implementation.
- [EU-US-Japan International Accomplishments Report](#): The European Commission, USDOT, and the Ministry of Land, Infrastructure, Transport, and Tourism of Japan have a long history of collaboration on intelligent transportation systems research and development initiatives. The report provides an overview of the formal collaboration structure and highlights key accomplishments, milestones, and meetings of each working group for 2017 -- the Deployment Working Group; the Architecture and Standards Harmonization Working Group; the Human Factors Working Group; and the Automation in Road Transport Working Group.

In September 2019, USDOT announced [\\$60 million in Federal grant funding to 7 recipients for the Automated Driving Systems \(ADS\)](#)

Demonstration Grant. Recipients include: [Texas A&M Engineering Experiment Station](#); [University of Iowa](#); [Virginia Tech Transportation Institute](#) (two grants); [Ohio Department of Transportation](#); [Pennsylvania Department of Transportation](#); [City of Detroit](#); and [Contra Costa Transportation Authority \(CCTA\)](#).

### **National Highway Traffic Safety Administration**

In May 2019, the National Highway Traffic Safety Administration (NHTSA) filed an advanced notice of proposed rulemaking (ANPRM) seeking comments on the proposed testing and verification rules for automated driving system-dedicated vehicles with Federal Motor Vehicle Safety Standards (FMVSS). (See [84 FR 24433](#)) The document only addresses the 100-series FMVSS, with a stated intention by NHTSA to release further documentation to address the 200-series FMVSS. The comment period closed on July 29, 2019.

### **Federal Motor Carrier Safety Administration**

The Federal Motor Carrier Safety Administration (FMCSA) filed an [ANPRM](#) in May 2019, considering amendments to its rules to account for significant differences between human operators and ADS. FMCSA's preliminary approach is to avoid

development of an entirely separate set of rules for ADS equipped commercial motor vehicles and their operation. The comment period for the ANPRM remained open until August 26, 2019.

### **Federal Highway Administration**

The Federal Highway Administration presented awards for a [Phase 1 Truck Platooning Early Deployment Assessment](#) in March 2019. The project is being conducted to understand how truck platoons will operate in a realistic, operational environment. It is hoped that the project will provide insight into actual truck platooning operations that can be used to inform state and local stakeholders that are making decisions related to truck platooning regulations.

The nine-month Phase 1 project awards will perform detailed planning and team building and develop Phase 2 proposals. The Phase 2 project awards will execute the plans, collect data. The Phase 1 awards are summarized below.

- **Team Lead:** Battelle  
**Key Team Members:** Center for Automotive Research, Pennsylvania State University, SAE International, Saia LTL Freight, Volvo Group, University of Michigan Transportation Research Institute  
**Proposed Location:** Indiana; Ohio; Pennsylvania

**Contract Amount:** \$499,878

- **Team Lead:** California PATH  
**Key Team Members:** California Department of Transportation (Caltrans), California Highway Patrol, Cambridge Systematics, I-10 Corridor Coalition, Volvo Group, Westat  
**Proposed Location:** California; Arizona  
**Contract Amount:** \$499,290

- **Team Lead:** CDM Smith  
**Key Team Members:** Anheuser-Busch, BGM Consulting, Columbus Region Logistics Council, Ohio Department of Transportation, Drive Ohio, Ohio State University, Ohio Turnpike Commission, Robert Bosch, Sutra Research and Analytics  
**Proposed Location:** Indiana; Ohio  
**Contract Amount:** \$497,379

### **Non-Traditional and Emerging Transportation Technology Council**

In April 2019, USDOT announced the creation of a new council to help further the advancement of AVs, among other technologies. The [Non-Traditional and Emerging Transportation Technology Council](#) (NETT) will identify and resolve jurisdictional and regulatory gaps that may impede the deployment of new technology, such

as tunneling, hyperloop, AVs and other innovations.

The NETT is seen as a step forward for USDOT in reducing regulatory burdens and paving the way for emerging technologies in the transportation industry.

## Territories of the United States

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### Guam

In May 2019, Sony Corporation and NTT DOCOMO, INC. announced the beginning of a joint trial of Sony's conceptual driverless vehicle, the New Concept Cart SC-1, which leverages 5G mobile technologies for various remotely controlled functions. The test will be conducted using the trial network in DOCOMO 5G Open Lab™ GUAM, which will provide test facilities and an outdoor verification environment.



## State Legislative Actions

## Alabama

In 2019, [SJR 21](#) re-established the AV [Committee](#) “to study all aspects of self-driving vehicles, including specifically, the issues of public safety and state and local economic impact regarding such vehicles.” There is no deadline for a report listed for the current Committee, but it is to automatically dissolve at the end of the Legislative Session in 2022.

The re-established Committee held its first meeting on September 26, 2019. Its members reiterated that the goal of the committee is to look at all aspects of self-driving cars and their impact on the economy. The lawmakers brought up some unanswered questions that need to be investigated, including who would be liable in a crash, whether someone should drink alcohol in the car and whether drivers’ licenses are important.

In May 2019, the Alabama Legislature passed [SB 47](#) which authorizes certain autonomous commercial vehicles to be operated by an ADS, defined as:

*the hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether it is*

*limited to a specific operational design domain.*

In order to qualify for usage on Alabama roads, the autonomous commercial vehicle must meet the following criteria:

1. capable of operating in compliance with applicable federal law and the traffic and motor vehicle laws in Alabama, including applicable laws concerning the capability to safely navigate and negotiate railroad crossings;
2. be registered and titled in accordance with the laws of Alabama;
3. certified in accordance with FMVSS and bears the required certification label or labels, including reference to any exemption granted under applicable federal law;
4. can achieve a minimal risk condition if a failure occurs rendering the vehicle unable to perform the dynamic driving task relevant to its intended operational design domain or if the vehicle exits its operational design domain; and
5. covered by motor vehicle liability coverage in an amount not less than two million dollars (\$2,000,000).

The Legislature specifically noted that the allowance of the autonomous commercial vehicles under this bill shall not be interpreted to abrogate or amend any statutory or regulatory provisions or any aspects of common law pertaining to liability for any harm or injury caused.

It should be noted, a similar House Bill ([HB 160](#)) regarding operation of AVs by the same method (i.e. not just exclusive to autonomous commercial vehicles as in SB 47), was introduced just prior to SB 47, but was not enacted by the Legislature.

## Arizona

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The House introduced [HB 2684](#) in 2019, in relation to the duties of the Director of ADOT with respect to AVs. The bill is currently being held in committee.

### Phoenix

Waymo's taxi services have since expanded to the city of Mesa. Waymo also begun to test self-driving tractor-trailers in Phoenix in May 2019.

### Academic Institutions

In June 2019, Pima Community College and self-driving truck

company TuSimple announced the launch of the first autonomous driving certificate program for truck drivers, the [Autonomous Vehicle Driver & Operations Specialist Certificate](#).

## Arkansas

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In 2019, Arkansas Legislature enacted [Act 468](#) authorizing the operation of AVs under an AV pilot program. After submission and approval of safety plans to the State Highway Commission, an organization may test fully operational AVs on state roads. The safety plans must include the following information, which will be found in the newly proposed Arkansas Code 27-51-1410:

- a statement of the commercial purpose of the AV pilot program;
- identification of any additional requirements for proof of insurance under the Motor Vehicle Safety Responsibility Act; and
- statement acknowledging that:
  - the AV or fully AV is capable of complying with all applicable traffic and motor vehicle safety laws of the state and rules adopted by the Office of Motor Vehicle;

- the fully AV is capable of achieving a reasonably safe state if a failure of the ADS occurs that renders the ADS unable to perform the entire dynamic driving task; and
- a fully AV involved in a motor vehicle accident is capable of meeting the requirements of §§ 27-53-101, 27-53-102, 29 and 27-53-105.

A fully AV that is not equipped with seat belts; steering wheel; or rearview mirror is allowed to operate on Arkansas roadways if it complies with the above. However, the legislature placed a limit of three (3) AVs or fully AVs simultaneously on the streets and highways of the state by any one person or entity.

Also enacted in 2019, [Act 1052](#) governs the operation of AVs at railroad crossings. All AVs must be capable of following all laws and rules concerning the capability to safely negotiate railroad crossings.

Following the passage of Act 468, Walmart announced that, working with Gatik, a self-driving car startup, it would begin an AV pilot project in Arkansas. The pilot project will be conducted on a two-mile route in Bentonville, between two of Walmart's stores using an AV.

## California

Currently pending in the Senate are the following AV related bills proposed in the 2019:

- [SB 59](#): creation of an AV advisory committee known as the California Council on the Future of Transportation; and
- [SB 336](#): requires fully-automated transit vehicles be staffed by at least one employee who has had specified training, while the vehicle is in service.

On April 12, 2019, the California DMV published [proposed AV regulations](#) that allow the testing and deployment of autonomous motor trucks (delivery vehicles) weighing less than 10,001 pounds on California's public roads. The California DMV held a public hearing on May 30, 2019, at its headquarters in Sacramento to gather input and discuss the regulations. The proposed regulations continue to exclude the autonomous testing or deployment of vehicles weighing more than 10,001 pounds. The California DMV is following the same approach the department used while developing past AV regulations and is targeting to complete this new rulemaking by the end of 2019.

In August 2019, the California Public Utilities Commission (CPUC) granted approval to Waymo’s application to not just test self-driving vehicles on public roads, but to also be able to transport passengers in them. A list of all current permits granted by the CPUC can be found [here](#).

### **Rancho Cordova**

Local Motors is debuting its new [Olli](#) self-driving shuttle at a business park in Rancho Cordova. The 12-passenger shuttle is available to the general public and the White Rock Corporate Campus’ 1,600 workers during a three-month pilot program that ends on November 7, 2019. The pilot is being funded by the Sacramento Area Council of Governments through a \$90,000 grant, with an additional \$10,000 in funding assistance from the City of Rancho Cordova.

### **Los Angeles**

Los Angeles’ Mayor released a [Sustainability Report 2019](#) for the City, taking AVs into consideration in the City’s future.

### **Contra Costa County**

CCTA was awarded a \$7.5 million grant from the [USDOT ADS Demonstration Grant](#). CCTA will use

the [grant](#) to demonstrate Level 3 and Level 4 vehicles using shared on-demand, wheelchair accessible ADS equipped vehicles.

### **San Francisco**

In March 2019, the San Francisco Metropolitan Transportation Commission (MTC) selected intelligent transportation systems technology company, Iteris, to prepare five cities in the San Francisco Bay Area for future connected and automated vehicle (CAV) technologies. The three-year project supports the San Francisco MTC’s [Innovative Deployments to Enhance Arterials](#) program, which seeks to enhance and upgrade the intelligent transportation systems and enable the continuous improvement of arterial operations.

In August 2019, Bosch and Daimler announced they have chosen a city located in the San Francisco Bay in Silicon Valley as the pilot location for a test fleet developing fully-automated and driverless capabilities. They will offer customers a shuttle service with AVs on selected routes.

### **Colorado**

On May 31, 2019, Colorado’s Governor signed [SB 19-239](#) into law. The act requires CDOT to convene and

engage in robust consultation with a stakeholder group comprised of representatives of specified industries, workers, governmental entities, planning organizations, and interest groups that will potentially be affected by the adoption of new and emerging transportation technologies and business models, including AVs. A report of policy recommendations is to be provided no later than November 1, 2019.

### Denver

The Regional Transportation District (RTD) of Denver and its partners began the [61AV](#) project on January 29, 2019, a pilot AV program, that was Colorado's first on-road AV shuttle operating between RTD's 61st and Peña Park-n-Ride to the offices of Panasonic and EasyMile. The program concluded August 2, 2019 and findings will be presented to the RTD Board of Directors in mid-September 2019, with the intent of exploring other opportunities to test self-driving shuttles as an option for moving RTD passengers.

### Golden

The AV shuttle EZ10 is being introduced into circulator service during peak demand hours at the federal [National Renewable Energy Lab](#) (NREL) campus in Golden, and

will travel on a one-mile loop connecting multiple buildings and remote parking on the campus. The shuttle can carry up to 12 passengers and is designed to travel along a pre-programmed route and is equipped with a sensor and intelligent vehicle system to detect obstacles and avoid collisions. During the first year of operation, NREL will collect and analyze vehicle and charging system operational data from the shuttle to help researchers better understand associated energy usage, charging and energy storage needs and autonomous system operation and control.

## Connecticut

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Connecticut enacted [Public Act No. 17-69](#) in 2017 (subsequently amended in July 2019 by [Public Act 19-119](#)), which established a Task Force to study AVs and make recommendations related to AV regulation in the state. The Task Force is charged with preparing interim and final reports, which are due, by amendments in Public Act 19-119, no later than July 1, 2020 and January 1, 2021 respectively. The Task Force will dissolve when the final report is submitted, or by January 1, 2021, whichever is later.

The OPM also released the [Required Minimum Framework for Agreements between Municipalities](#)

[and Autonomous Vehicle Testers](#) which have been approved for participating in the FAVTPP. A copy of the application can be found [here](#). Windsor Locks, Stamford and New Haven have applied for the FAVTPP. Manchester and Bridgeport, have indicated they will also be vying for a spot in the program.

## Florida

The Florida Legislature passed numerous bills pertaining to AVs in 2019. In June, with passage of [HB No. 311](#), Florida became one of the few states to allow a fully AV to operate without a person present in the vehicle. The Bill provides that the automated driving system, rather than a person, is deemed the operator of an AV when operating with the ADS engaged. Starsky Robotics was the first company to test its fully unmanned autonomous truck in Florida on June 16, 2019.

HB No. 311 also authorized the Florida Turnpike Enterprise to fund, construct, and operate facilities for the advancement of autonomous and connected innovative transportation technologies.

Effective October 1, 2022, [HB No. 385](#) (which was signed by the Governor in April 2019) revises the authorized uses of the Charter County

and Regional Transportation [Surtax](#) in Miami-Dade County, to include, “the planning, design, engineering, or construction of, or the acquisition of rights-of-way for fixed guideway rapid transit systems, rail systems, and bus systems, and for the development of dedicated facilities for autonomous vehicles.”

[HB No. 107](#), relating to wireless communications while driving, was also enacted in 2019 and provides an exception for AVs from the statutory ban on texting while driving.

Two separate bills were introduced to the House to fund AV projects, but neither were enacted. ([HB No. 4043](#), proposed to create a smart corridor with an autonomous shuttle in Altamonte Springs, was vetoed by the governor; and [HB No. 3923](#), regarding an Autonomous Vehicle Research Program and Elite Transportation at Jacksonville University died in committee).

FDOT has selected [HDR](#) to help ensure Florida remains a leader in the integration of CAVs. As general engineering consultant, HDR will develop, implement, deploy and evaluate a statewide investment in CAV technology that’s touted as being among the most robust in the nation.

Several AV developers are taking advantage of Florida’s

favorable AV laws and conducting testing within the state.

- Voyage Auto, a California-based company, is testing its second-generation cars, two Chrysler Pacifica Hybrid minivans, in [The Village](#) of Virginia Trace, Florida. The company is receiving feedback from four residents chosen as test passengers.
- On September 4, 2019 Beep hosted a launch event to debut its public transit service in southeast Orlando's [Lake Nona](#) neighborhood. The shuttles, which can carry 10 passengers and an attendant, will travel at a maximum speed of 15 miles per hour between the Lake Nona Town Center at the Pixon apartments and Laureate Park Village Center on Tavistock Lakes Boulevard.
- Waymo announced it plans to begin testing in Florida in 2019. Waymo is especially interested in testing its vehicles in the rain during Florida's hurricane season.

In April 2019, Iteris was selected by the [Lee Board of County Commissioners](#) to assess new technology and enhance intelligent transportation systems in the County.

## Jacksonville

In effort to work with the community along with the expansion of AVs, JTA (which was previously issued a \$25 million BUILD Grant by USDOT to implement an AV program), Beep, Jacksonville First Transit, and NAVYA, hosted a day-long training session in July, 2019 at the North Florida Transportation Planning Organization campus, focusing on the latest AV technology and how first responders should address emergency situations.

## Tampa

The [Tampa Hillsborough Expressway Authority \(THEA\)'s Connected Vehicle Pilot](#), which was part of the [USDOT Connected Vehicle Pilot Deployment Program](#), is deploying a multimodal project using connected vehicle technology, using both V2I and vehicle-to-vehicle (V2V) and communication. THEA has equipped 10 buses, 8 streetcars and the cars of 1000+ individual volunteers with this new technology. (See [Connected Vehicle Pilot Deployment Program Phase 2.](#))

## Academic Institutions

Florida Poly and Tallinn University of Technology signed a memorandum of agreement in Washington, D.C., to collaborate on



ways to develop AV technology for public transportation in 2019.

## Georgia

In 2019, the Senate adopted [Senate Resolution 133](#), which urges the Atlanta-region Transit Link Authority to prioritize and encourage the use of technological innovation and the development of intelligent transportation systems, including AV technology.

In March 2019, Waymo announced it will begin a pilot program in Atlanta where the company's autonomous technology will power Peterbilt Class 8 trucks to carry cargo bound for Google's data centers.

The City of Chamblee released its [Automated Shuttle Detailed Design Plan](#) in May 2019. The report sets forth operational details, risks, and the conditional improvements needed for the plan.

Gwinnett City's funded research project, headed by [Curiosity Lab](#), has begun testing two AV Olli shuttles manufactured by Local Motors on a self-driving test track. The \$2 million test track is 1.5 miles in length and runs along both sides of Technology Parkway.

## Hawaii

[House Concurrent Resolution 220](#) (along with companion resolution [House Resolution No. 195](#)) was adopted in 2019, requesting that the Attorney General convene an AV Legal Preparation Task Force (Task Force) to prepare Hawaii with laws and regulations required for AVs. The Task Force will examine the adaptation and testing of AVs, existing laws relating to legal and insurance regulation of AVs, and make recommendations for AVs in Hawaii. The Task Force will submit a preliminary report of its findings and recommendations to the Legislature by December 1, 2019. The final report, including proposed legislation, is due by December 1, 2020. Numerous interest groups, including the HDOT submitted statements to the Legislature supporting the Task Force. (see [March 22, 2019 Statements to House Committee on Transportation](#); [April 16, 2019 Statements to House Committee on Judiciary](#))

Still pending is [HB 1183](#), which was introduced in January 2019. If enacted, it would authorize, for testing purposes, the operation of AVs in the State of Hawaii. It would also require HDOT to establish an application and approval process and report annually to the legislature.

Additionally, the [Hawaii AV Institute](#) was created as a collaborative effort with the University of Hawaii’s Manoa iLab to study and address all aspects of AVs including: technology, social impacts, economic impacts, law, and policy.

## Illinois

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### Academic Institution

The University of Illinois (U of I) announced in October 2019 that it has partnered with global electronics manufacturer, Foxconn, on a \$100 million smart technology research center headquartered on the Urbana-Champaign campus. The company’s Foxconn Interconnect Technology subsidiary will contribute \$50 million over 10 years toward the effort, while the U of I system’s statewide initiatives, including the Discovery Partners Institute and Illinois Innovation Network, will invest another \$50 million. The [Center for Networked Intelligent Components or C-NICE](#) will focus on the development of technology for smart devices, including those used in manufacturing, medical environments, as well as homes and self-driving vehicles.

## Indiana

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The Indianapolis Motor Speedway and Energy Systems Network hosted some of the world’s leading AV technology researchers at the Speedway on May 23, 2019 to explore the potential for a global AV competition in Indianapolis.

## Iowa

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In 2019, [Senate File 302](#) was signed into law by the Governor and outlines the parameters for operation of AVs in Iowa. An AV may operate without a human present in the vehicle if it meets the following:

- a. is capable of achieving a minimal risk condition if a malfunction of the ADS occurs that renders the system unable to perform the entire dynamic driving task within the system’s intended operational design domain, if any;
- b. is capable of operating in compliance with the applicable traffic and motor vehicle safety laws and regulations of the state; and
- c. is certified by the vehicle’s manufacturer to be in compliance with all applicable FMVSS.

## Academic Institutions

The University of Iowa was awarded a [\\$7 million grant from USDOT](#) in 2019 for AV research. The [project](#) will connect rural, transportation-challenged populations using a mobility-friendly ADS built on a commercially available platform.

## Kansas

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The Joint Legislative Transportation Vision Task Force (created to, among other things, to make recommendations regarding the needs of the transportation system in Kansas over the next ten years and beyond – See [House Substitute for SB No. 391](#)), released its [Report](#) in January 2019.

The Task Force recommended, among other things, that the 2019 Legislature study possible statutory changes to authorize testing of AVs, connected vehicles such as trucks operating in platoons, or both in Kansas and also review in-vehicle technology and traffic management systems. Related to implementation of these new technologies is broadband infrastructure across the state, and the Task Force recommended the Senate Committee on Utilities and the House Committee on Energy, Utilities and Telecommunications also review

transportation needs related to broadband.

[HB 2373](#) was introduced on February 18, 2019 to create a transportation planning program, which provides for studies of emerging technologies, including AV. After a hearing on March 19, 2019, the House Committee on Transportation recommended on March 22, 2019 that the bill be passed as [amended](#). The Bill was not passed before the Legislature recessed for the 2019 Session. The Legislature remains in recess until January 13, 2020.

In August 2019, KDOT released [the Long Range Transportation Plan 2045](#), as an amendment to the State’s previously release Long Range Transportation Plan. A component of the amended plan included the need for CAV preparedness.

## Louisiana

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On June 11, 2019, the Governor of Louisiana signed [HB 455 \(Act 232\)](#) authorizing autonomous commercial vehicles, which are those used for the purposes of compensation, employment or trade, to operate in the state without a conventional driver physically present in the vehicle, if the vehicle meets all of the requisite criteria relating to safety and insurance. The law also sets

forth standards that must be followed when remote drivers are used.

LaDOTD has created a [Connected and Automated Vehicle Technology Team](#) to help in the development and deployment of CAVs in the state.

LaDOTD also signed a \$2 million contract with Arcadis, Iteris, Inc. and Alliance Transportation Group Inc. to provide technical support services and facilitate planning activities related to CAVs and their impact on highway infrastructure.

## Maine

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### Academic Institutions

University of Maine's [VEMI Lab](#) received a National Science Foundation \$500,000 grant to research fully self-driving vehicles which started in the Fall 2019 semester. The aim of the research is to improve the public's trust in AVs.

## Maryland

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At the AV Group's August 2019 meeting, it presented [Planning for Connected Automated Vehicles](#) in Maryland. The Group set forth the following recommendations for the state:

- participation in [National Household Travel Survey](#) to include CAV in future surveys;
- further involvement with partners to perform behavioral surveys;
- invite companies to survey Maryland drivers and bring in the new behavioral piece to how users wish to use the system;
- put forward public workshops to investigate scenarios for Maryland; and
- perform more model sensitivity runs to attempt better representation of impacts that leads to data driven decision making.

In January 2019, Local Motors was the first company to receive a permit to test self-driving shuttles in Maryland. The following month, Local Motors began private test runs of its self-driving shuttle Olli on a 1.5-mile loop on the outskirts of National Harbor.

## Massachusetts

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In January 2019, the legislature introduced several bills related to AVs.

- [Senate No. 2115](#) and [House No. 3013](#) establish a framework to

promote the safe integration of AVs into the Commonwealth's transportation system.

- [House No. 3417](#) (introduced in 2017) and [House No. 2991](#) (introduced in 2019): limiting autonomous driving capabilities to zero emission and electric vehicles.
- [Senate No. 2056](#): addressing the cybersecurity of internet connected devices and AVs.
- [House No. 3089](#): regarding requirement that all AVs operating within the Commonwealth remain in compliance with all federal regulations.
- [House No. 3143](#): regarding procedures for testing, insurance and liability for AVs.
- [House No. 3672](#): addressing data event recorders for AVs.

All the above Bills were referred to and have remained with the Joint Committee on Transportation since January 22, 2019.

The AV Working Group released its [Report](#) in February 2019, which included the following recommendations:

- establishment of a CAV Committee;

- engagement of first responders and law enforcement in CAV development;
- movement from an Executive Order to regulations; and
- establishment of legislation.

### **Boston**

A consortium of four Australian Universities have been awarded \$3 million in funding from the Australian [Next Generation Technologies fund](#) to collaborate with Boston University and Massachusetts Institute of Technology to develop the next generation of AVs. The autonomous capabilities of these next generation vehicles will be bio-inspired to mimic human or animal movement.

## **Michigan**

[Michigan Council on Future Mobility's 2019 Report](#) was published on March 15, 2019. The Report provided a list of issues the Council would review throughout 2019 in order to provide future recommendations including:

- mobility on demand;
- electric vehicle charging infrastructure development;

- automobile insurance;
- transportation infrastructure funding;
- talent attraction, retention and education;
- public acceptance of HAVs;
- state law revision; and
- cross-border mobility.

In June 2019, [SB 378](#) was introduced into the Senate proposing a tax credit to encourage automated driving. The Bill has been referred to the Senate Committee on Economic and Small Business Development.

### **Grand Rapids**

Grand Rapids has created the [Grand Rapids Autonomous Vehicle Initiative](#) (AVGR). AVGR brings four electric shuttles to downtown Grand Rapids streets in 2019 for a yearlong pilot program through the summer of 2020. AVGR partnered with May Mobility and launched its pilot on July 26, 2019. The goal of the program is to understand how AVs work in a variety of weather conditions, as well as define accessibility standards for these types of vehicles.

### **Detroit**

USDOT Awarded the City of Detroit a [\\$7.5 million grant](#) in September 2019 for AV study. The [study](#) will implement the Cooperative Automation Research Mobility Applications Level 3 software platform for demonstration testing focused on mobility, safety and endurance.

### **Academic Institutions**

The Student Organized Autonomy Research Group, or [SOAR](#), is a student-organized research group under the CANVAS umbrella focused on building a highly autonomous Chevrolet Bolt capable of traversing an urban scenario by 2020 as part of the [SAE/GM AutoDrive Challenge Competition](#).

A multidisciplinary research team from [MSU will use a \\$2.49 million grant from the National Science Foundation](#) to conduct a four-year study looking at the impacts of AVs on the future workforce.

The team will look at:

- driving jobs and how they will change in response to automation of vehicles and what new skills will be required;

- how willing and able workers are to adapt to the changing nature of driving jobs, and whether the changing nature of jobs will disadvantage some groups of workers more so than others; and
- the anticipated downstream impacts on drivers (i.e., employment trends and income inequality) in the transportation industry, organizations and society.

General Motors has partnered with Kettering University to create the [Kettering University GM Mobility Research Center](#). The Center is a vehicle and mobility systems development proving ground and outdoor research facility on Kettering University's campus in Flint, Michigan. The unique facility – which is touted as the only one of its kind on a college campus in the country – puts Kettering and Flint at the forefront of AV research/development, safety and technology.

Oakland University, following a \$103,600 [PlanetM Mobility grant](#) from the Michigan Economic Development Corporation, will begin an [AV shuttle in Fall 2019](#). Continental, in partnership with AV technology company EasyMile and the city of Auburn Hills, will launch the pilot at the University to be run by students while data gathered during the pilot

program will be used in autonomous engineering courses.

[Western Michigan University](#) began research involving an autonomous electric shuttle on September 21, 2019. The \$2.1 million project, funded through the [Michigan Mobility Challenge](#), announced by former Governor Rick Snyder last year and administered by MDOT, focuses on improving transportation options for people with disabilities.

## Minnesota

In January 2019, [House File No. 242](#) was introduced to establish a micro transit rideshare pilot program. One facet of the pilot would explore the use of AVs to deliver mass transit to the people of Minnesota. A companion bill was introduced to the Senate in March 2019, [Senate File 2020](#). Both bills have since been referred to the House/Senate Transportation Finance and Policy Committees.

2019 saw several other bills introduced to the legislature regarding AVs:

- [Senate File 674](#): seeking a prohibition on the use of AV systems.

- Companion Bills- [House File 1996](#) and [Senate File 2173](#): setting regulations for AV testing.
- Companion Bills: [House File 1995](#) and [Senate File 2177](#): relating to vehicle platooning.

All of the above were referred to and remained with House/Senate Transportation Finance and Policy Committees.

On April 1, 2019, Governor Tim Walz signed [Executive Order 19-18](#), rescinding Governor Dayton’s AV Executive Order 18-04, and establishing a [Governor’s Council on Connected and Automated Vehicles](#). The Council is directed to study, assess and prepare for the opportunities and challenges associated with widespread adoption of AVs. An annual report must be submitted to the Governor by February 1, 2020 and each year thereafter, including an update on actions that are needed to ensure that Minnesota is advancing CAVs, as well as other intelligent transportation and emerging technologies.

In May 2019, MnDOT released a report entitled [Preparing Local Agencies for the Future of Connected and Autonomous Vehicles](#). The main goal of the report is to assist local agencies in preparing for CAVs in the short term—5 to 10 years. The report lists descriptions and recommendations for

addressing infrastructure needs by local agencies, including:

- pavement markings;
- signing;
- traffic signals;
- maintenance;
- consistency and standardization;
- data capture and information sharing and inventory;
- communications infrastructure; and
- high-resolution mapping.

MnDOT’s Office of Connected and Automated Vehicles released its [Connected and Automated Vehicle Strategic Plan](#) in July 2019. The Plan addressed 9 areas of interest regarding AVs in Minnesota:

1. Capital Investment: What projects and capital investments should MnDOT be making or stop investing in?
2. Research and Development: What should MnDOT research and develop to address Minnesota’s challenges and help advance CAVs statewide and nationally?
3. Partnerships: How can MnDOT partner with public and private entities to develop a statewide vision for CAVs?



4. Regulation and Policy. What law and policy changes are needed to safely test CAVs in Minnesota?
5. Operations and Maintenance. How do CAVs impact MnDOT operations and how does it plan for these changes?
6. Strategic Staffing: How does MnDOT's workforce need to change to support CAV technological advancements?
7. Multimodal: How does MnDOT engage cyclists, pedestrians, transit, rail and other modal partners to prepare for CAVs?
8. Communications: How does MnDOT engage the public, legislators, employees, and state and local agencies about CAVs?
9. Long Range Planning. How should MnDOT's long range plans address CAVs?

[H.F. No. 6](#) was passed in 2019 to allow for platooning of commercial vehicles. Sec. 31. Minnesota Statutes 2018, section 169.011, was also amended to add the definition of vehicle platoon as:

*a group of commercial vehicles traveling in a unified manner through use of a platooning system or systems. A vehicle platoon consists of a lead*

*vehicle and following vehicles. A vehicle platoon is not a combination vehicle under this chapter.*

A vehicle platoon is limited to three (3) commercial vehicles. A person wishing to use a vehicle platoon, must first submit a vehicle platoon plan for approval by MnDOT.

### **Academic Institutions**

In July 2019, Minnesota's Northland Community and Technical College (Northland), along with five other partner agencies, was awarded a \$7 million National Science Foundation grant from the [National Center for Autonomous Technologies](#) which will be located on Northland's Aerospace site in Thief River Falls, MN.

Northland will partner with St. Cloud State University, Marine Advanced Technology Education Inspiration for Innovation, Center for Advanced Automotive Technology, National Geospatial Technology Center of Excellence, and the Minnesota State Transportation Center of Excellence to educate and promote autonomous technologies throughout the United States.

## Missouri

In January 2019, [SB No. 186](#) (identical to [HB No. 748](#)) was introduced to permit vehicle platooning on Missouri roads. This bill would exempt non-lead vehicles, in a group of motor vehicles using V2V communications to travel in a unified manner at electronically coordinated speeds from certain requirements relating to minimum following distance.

[HB No. 1192](#) was also introduced in January 2019, which would allow businesses that employ more than 50 people to use driverless vehicles. The vehicles would be required to be of minimal risk if it malfunctions, be compliant with Missouri's vehicle laws and regulations and adhere to federal vehicle safety standards.

Both of the 2019 Bills were referred to and remain with the Transportation, Infrastructure and Public Safety Committee.

## Montana

In 2019, [House Joint Resolution 34](#) was passed requiring an interim study on ways to improve passenger transportation within the state. The study involves the creation of an interim commission to look at ways to improve passenger transportation and review laws that may need changing to allow use of AVs and provide for public safety. The study, including presentation and review requirements, is to be concluded prior to September 15, 2020.

The [Transportation Interim Committee](#) was established in response to House Joint Resolution 34. At its first meeting in July 2019, [Meeting Minutes](#) provide that members determined that the Committee should start with gathering information on the laws currently passed by other states. As a result of its review, the Committee published a report entitled the Automated Driving Systems (ADS) A Snapshot of State and Federal Policies<sup>3</sup> which was discussed at its September 2019.

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<sup>3</sup> The actual report could not be linked in the Survey, but can be founded under the [AV Background Report tab](#).

## Nebraska

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In January 2019, [Legislative Bill No. 521](#) was introduced to repeal certain portions of Legislative Bill No. 989, and require a human driver to be physically present in an AV and able to take control of the vehicle at all times. The Bill remains with the Transportation/Telecommunications Committee.

[Legislative Bill 142](#) was also introduced in 2019. The Bill seeks to, among other goals:

- a) update the old Society of Engineers (SAE) definitions to match the SAE June 2018 definitions;
- b) establish proof of financial responsibility requirements for manufacturers of at least five million dollars, with minimum coverage of one million dollars per vehicle, per occurrence;
- c) clarify liability between driver and manufacturer in the event of a crash or collision, based on whether the automation system is engaged; and
- d) authorize the Department of Motor Vehicles to issue guidance on the operation of driving automation-system-equipped vehicles and, to adopt and promulgate rules and regulations to carry out this act.

[Amendments](#) to the Bill were filed in February 2019 and remain pending in the Legislature.

## Nevada

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### Las Vegas

Partnerships exist between Las Vegas and Lyft and Aptiv, allowing both companies to operate AVs within Las Vegas. Both companies recently revealed in 2019 they have tested over 50,000 miles each within the City over the past year.

Zoox received permission from the Nevada DMV in early 2019 to drive autonomously on state roads. The permit also allows Zoox to transport passengers, although that is not happening at this time. The company is currently mapping and test-driving new routes in the greater Las Vegas region.

### Academic Institutions

In April 2019, the University of Nevada announced its new partnership with Filament and NCAR for the development of a blockchain AV research project. The project will attempt to develop new standards for blockchain-powered AVs. The University will begin simulated testing of Filament's Blocklet® technology,

with plans to soon integrate the technology into both an AV and the sensor infrastructure placed along defined routes to deliver a trustworthy record of events, enabling attested data exchange via blockchain transactions.

## New Hampshire

In August 2019, [Act No. 2019-310](#) was enacted to establish an AV testing pilot program. The Act provides that a testing entity seeking to test ADS-equipped vehicles must provide notice to the New Hampshire DMV, upon forms furnished by the department and accompanied by the following information:

1. name and business address of the testing entity;
2. name, phone number, email address, and physical address in state, if present, of lead staff contact for the testing entity with oversight of the testing project;
3. identification information about the vehicles to be used in testing, including the make, model, and license plate numbers;
4. description of the operating design domain in which the ADS-equipped vehicle has been designed to operate, including limitations on the types of roadways, weather,

time of day, or geographic locations, if any;

5. the geographic areas within the state in which the entity plans to test ADS-equipped vehicles;
6. copy of the testing entity's Voluntary Safety Self-Assessment as defined by the USDOT's Federal Automated Vehicles Policy or a detailed summary of the types of safety training given to test drivers, including copies of any documentation or illustration provided;
7. proof of the testing entity's financial ability to satisfy judgment for damages for personal injury or property damage of at least \$5 million; and
8. acknowledgment, via official form furnished by the department, that:
  - a. the ADS-equipped vehicle is in compliance with all applicable federal laws and regulations, or has an exemption under federal law;
  - b. the ADS-equipped vehicle is designed to comply with all traffic and motor vehicle safety laws and regulations of this state that govern the performance of the dynamic driving task, unless an exemption has been granted by the department;

- c. the ADS has been tested in controlled conditions and has demonstrated functionality ready to test on public roads;
- d. the ADS-equipped vehicle shall only be operated or monitored by trained employees, or other authorized persons as agents of the testing entity who have received instruction on the safe operation of vehicle systems; and
- e. the ADS-equipped vehicle test driver holds a valid driver's license that is recognized by the state.

The Act also creates the Autonomous Vehicle Advisory Commission. The AV Advisory Commission is responsible to:

- advise relevant state agencies and the general court on AV administration;
- develop training curriculum for law enforcement and first responders;
- review National Transportation Safety Board reports on AV incidents and action recommendations;
- propose modifications to the AV testing and development pilot program when necessary; and

- maintain up-to-date information on AV technology, statutes, and regulations and exchange information regarding unique challenges posed by roads in New Hampshire through interaction with USDOT and NHTSA.

The AV Advisory Commission's reports are due by November 1 of each year.

In July 2019, [House Bill No. 522](#) was enacted into law to establish a Commission to Study Environmental and Health Effects of Evolving 5G Technology. Recognizing that wireless technology is intended to greatly increase device capability and connectivity, the law sets forth concerns about the risks that it may pose for humans, animals and the environment. The law requires the commission to receive testimony from businesses working on the development of AV vehicles which will rely on 5G technology.

## New Jersey

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In March 2019, [Assembly Joint Resolution 164](#) was signed by the Governor to establish the New Jersey Advanced Autonomous Vehicle Task Force, the purpose of which would be to conduct a study of AVs and make recommendations on laws that New Jersey may enact to safely integrate AVs on the State's roads. The NJ

Advanced Autonomous Task Force would be required to meet within 90 days after its creation and issue a report to the Governor within 180 days after the initial meeting.

Several other bills relating to AVs were also introduced, referred to and remain with committees in 2019:

- [Assembly Joint Resolution No. 188](#): to establish the New Jersey Advanced Autonomous Vehicle Insurance Task Force to investigate automobile issues that may arise from the use of AVs;
- [SB 3367](#): to establish a fully AV pilot program; and
- [Assembly Bill 4977](#): regarding an AV training program for law enforcement.

## New Mexico

In January 2019, [SB No. 332](#) was introduced to authorize the use of AVs and platooning vehicles using AV technology within New Mexico. Although the [Corporation and Transportation Committee](#) recommended the Bill be passed, the Bill is listed as being “postponed indefinitely.”

## New York

In 2019, numerous bills related to AVs were introduced into the Assembly and Senate, all of which have been referred to and remain with Committees.

- [Assembly Bill No. 1554](#): establishes the New York State Autonomous Vehicle Task Force to study AV usage on the roads located within the State;
- [Assembly Bill No. 7980](#): (similar – [SB No. 6014-A](#)): creates the New York task force on automated vehicle technology to study and assess the future of AV technology;
- [SB No. 1159](#): creates an AV committee to guide the enactment of a study to assess the future of AV technology;
- [Assembly Bill No. 301](#): requires the Department of Labor to conduct a study on the potential impact of driverless vehicles on occupations and employment;
- [SB No. 1779](#), defines autonomous technology and sets forth the drivers’ license requirements for operating an AV upon a public highway;

- [Assembly Bill No. 1808](#): authorizes the Commissioner of the DOT to enroll New York State in any federal pilot program for the collection of transportation data, including AV projects;
- [Assembly Bill No. 8460](#) (companion - [SB No. 6052-B](#)): authorizes the DOT Commissioner to conduct a comprehensive study on designation of private roads on the University at Buffalo North Campus and public roads in the town of Amherst for the purposes of AV technology testing; and
- [Assembly Bill No. 2643](#): regulates the operation and testing of motor vehicles with autonomous technology.

In June 2019, The New York State Bar Association (NYSBA), announced the creation of the [Task Force on Autonomous Vehicles and the Law](#) to study and understand the impact that AVs will have on the legal system and society. The study will also make recommendations on how New York State and its legal institutions can prepare for this change. The topics to be studied include:

- potential impact AVs may have on lawyers, their clients, courts and the civil justice system;

- what laws and regulations may need to be enacted;
- potential privacy and data protection issues;
- safety concerns; and
- potential impact on injury and insurance law and licensing.

### **New York City**

Optimus Ride announced in August 2019 that it has brought the first public AVs to New York. The vehicles are called “Neighborhood Electric Vehicles” and will help shuttle 10,000 plus workers through the 300-acre [Brooklyn Navy Yard](#), an industrial complex and shipyard located in northwest Brooklyn, along the East River.

### **Academic Institutions**

UB unveiled a new AV on September 24, 2019. Several organizations partnered with UB to equip a Lincoln MKZ with self-driving technology. The \$250,000 car was made possible through several donations including one from Monro Muffler Brake and West Herr Auto Group. The car is what’s called ‘drive by wire’, meaning it can be controlled by a computer, but the computer is self-contained in the trunk. The

vehicle will be used for hands-on training of students from high school students through graduate students.

## North Carolina

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The Centralia Council of Governments (located in the Central Piedmont area of North Carolina and encompasses nine counties and 74 municipalities, representing almost two million people and headquartered in the City of Charlotte) has created a [CAV Regional Task Force](#) to address CAVs within this region. The Task Force released a report entitled [Preparing the Greater Charlotte Region for Connected and Autonomous Vehicles](#) in the spring of 2019.

## North Dakota

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[HB No. 1418](#) was enacted in 2019 to create and enact chapter 8-12 and section 39-01-01.2 of the North Dakota Century Code relating to AV network companies and AV operations in the state. The enacted bill will allow AVs to operate in the state without a human driver present.

[HB No. 1199](#) was also enacted in 2019 to create an exception to the FTC law for platooning vehicles. Platoon is defined as “a group of motor vehicles using vehicle - to - vehicle

communications to travel in a unified manner at close following distances on a multilane, limited-access, divided highway.”

In an attempt to readdress the data ownership issue from 2017, [HB No. 1197](#) was introduced for the 2019 legislative session, but again failed to pass.

[HB No. 1543](#), also introduced but failed to pass in 2019, to address requirements of having insurance, surety bond, a human driver and ability to engage and disengage the autonomous mode required to test AVs. It would have also addressed the liability of a manufacturer of a vehicle modified by a third party.

## Ohio

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Ohio announced in September 2019, that it has been awarded a [USDOT \\$7.5 million grant to study](#) the use of [AVs on rural roads](#). The four-year project will focus on running AVs on roads in 32 counties in the state's Appalachian region, including on unpaved roads. The testing will occur in all seasons, day or night and in challenging conditions like work zones. The project will be led by DriveOhio, ODOT, and partners including The Ohio State University, Ohio University and the University of Cincinnati. Combined with funding



from state and academic partners, total funding for the project will be \$17.8 million.

### East Liberty

East Liberty is the site of the [Transportation Research Center, Inc.](#) (TRC), the largest independent automotive proving ground in North America. TRC constructed the [SMARTCenter](#) designed to test advanced automotive and mobility technologies. The SMARTCenter opened in July 2019, consisting of:

- the longest (1.2 miles) and widest (six lanes) connected, signalized intersection in the industry;
- an urban network consisting of movable intersections, roundabouts and oblique intersection scenarios; and
- access to Dedicated Short-Range Communications and high-speed wireless communication.

### Columbus

As of now, it has been reported that 15,000 people have taken a ride on self-driving shuttles along the Scioto Mile “[Smart Circuit](#)” in downtown Columbus, all while [Smart Columbus](#) collected data to fine tune this new

technology. The shuttle’s service concluded on September 27, 2019.

### Linden

After completion of the AV shuttle program in Columbus, two new, larger shuttles holding about a dozen people will launch on a free-of-charge route through Linden in November 2019. The goal is to close any gaps that residents might encounter when getting around on public transit and to better connect people in Linden with jobs and services throughout the community.

## Oklahoma

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In 2019, for the first time, Oklahoma’s lawmakers passed legislation regarding AVs with [SB 365](#). The Bill created the Oklahoma Driving Automation System Uniformity Act, which preempts local laws and asserts that only the State may enact laws or regulations regarding the use of motor vehicles equipped with driving automation systems in Oklahoma.

[SB 189](#) was also enacted in 2019, exempting platoons, defined as a group of individual motor vehicles traveling in a unified manner at electronically coordinated speeds, from spacing requirements on state highways.

[The Office of Mobility and Public Transit](#) was created in 2019 via [HB 1365](#). The new Office is responsible for, among other things, promulgating rules and procedures to implement innovative pilot programs in microtransit and AVs in the following systems:

- EMBARK;
- Tulsa Transit;
- Little Dixie Transit; and
- other transit systems as determined by the Oklahoma DOT.

## Oregon

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The AV [Task Force](#) recently released its [2019 Report](#) on September 12, 2019. The Task Force prepared materials and recommendations on six topics related to AVs:

1. vehicle code amendments and public safety;
2. cybersecurity, privacy and data;
3. road and infrastructure design;
4. land use;
5. public transit; and
6. workforce changes.

The Task Force work was informed by national guidance, studies and recommendations by national organizations and research institutions, best practices in other jurisdictions and presentations by experts.

In 2019, [HB 2770](#) was introduced to permit testing of highly AVs on highways. If passed, it would require manufacturers to obtain additional umbrella liability insurance policies prior to testing and direct Oregon DOT to adopt rules for testing of highly AVs on highways of the state. The Bill currently remains in Committee.

### Academic Institutions

Oregon State University announced in October 2019 it will begin [research to build infrastructure for the safety, performance and security of driverless cars](#), supported by a \$1.5 million grant from the National Science Foundation. The project, a collaborative effort with the University of Pennsylvania and Clemson University, will put one-tenth-scale autonomous cars, which are less expensive and safer to test new technology with, into the hands of researchers nationwide.

Over the next three years, investigators will develop a fleet of about 80 cars; a simulator for autonomous driving supporting

multiple cars, environments and configurations to test the cars; a comprehensive manual; a community Q&A site; lecture notes and videos for a course based on the scaled-down cars; and a demonstration kit for community-building events such as talks, tutorials and short courses. The main product of the grant project is not the cars themselves, which will ultimately be donated to high schools and other groups, but the infrastructure that allows researchers to buy parts, download code and documentation, and build their own research or teaching platforms.

## Pennsylvania

In 2019, [HB 1078](#) was introduced regarding the operation of an AV shuttle on an approved route. The Bill was referred to the Transportation Committee in April.

The [Autonomous Vehicle Policy Task Force](#) has organized a yearly [PA Automated Vehicle Summit](#) within the Commonwealth since 2017. The most recent Summit was held in September 2019 in Pocono Manor, PA.

PennDOT received an \$8.4 million [federal grant](#) in September 2019, that it will use

over four years to develop a system to allow self-driving vehicles to [navigate safely through work zones](#). The grant was the largest of eight awards worth nearly \$60 million announced by USDOT to study various safety factors for self-driving vehicles. PennDOT, the Pennsylvania Turnpike Commission, Carnegie Mellon University (CMU), Pennsylvania State University (PSU) and several other partners will work together on this four-year project, slated to begin in 2020.

## Pittsburgh

In March 2019, Mayor Peduto issued an [Executive Order](#) (Pittsburgh Principles) outlining the objectives and expectations from the city for testing AVs.

The Pittsburgh Principles include:

- instituting transparent lines of communication between the City and partners testing AVs, and annual reports on the implementation of AV policies;
- promoting ADS that encourage high vehicle occupancy with lower or no emissions, and lower cost and

equitable transportation options;  
and

- engaging industry leaders and community stakeholders to collaboratively facilitate the further development and deployment of self-driving technology.

The [Department of Mobility and Infrastructure](#) (DOMI) will be in charge of the oversight of AV testing and charged with, among other things, to publish guidelines for the testing of self-driving technology on public streets, which, at a minimum:

- complement the AV testing guidance adopted by PennDOT, Legislature or Office of the Governor;
- identify the testers and the anticipated time, place, and manner testing is to occur;
- increase public transparency and knowledge of the testing occurring on public streets;
- ensure reliable communication between testers and city authorities in the event of emergency; and
- identify the data reasonably necessary to be collected from testers in order for public agencies to understand the impact and

opportunity of testing on public safety.

DOMI is also charged with publishing recommendations with regard to HAV use of city managed and controlled assets and facilities. DOMI must regularly report to the public, at least annually, regarding the development of and compliance with guidelines and policies, results of data analysis and recommendations for continued public advancement of these technologies.

The Knight Foundation awarded [DOMI a \\$400,000 grant](#) in 2019. The grant is to be used to increase public engagement and outreach on the testing and deployment of AVs.

Mayor Peduto also released [Pittsburgh's Shared and Autonomous Mobility Principles](#) and the [City of Pittsburgh Autonomous Testing Guidelines and Submission Process](#).

The City released its [Self-Driving Vehicle Testing in Pittsburgh Summary of Findings](#) in April 2019 based upon surveys sent to testers by DOMI in response to Mayor Peduto's Executive Order. The Summary includes information regarding issues such as impact on local employment and safety.

## South Fayette Township

Developers have announced plans to construct a track for an AV testing site at the former Campbells Airport site between Cecil-Sturgeon and Mohawk roads in South Fayette Township. The developers pitched the idea on behalf of Uber to township Planning Commissioners at a public hearing on August 21, 2019 as part of the process to obtain a conditional use for 429 of the 537 acres at the site. The South Fayette Board of Commissioners unanimously voted in favor of the testing ground the following month.

## Academic Institutions

In 2019, CMU and Argo AI announced a five-year, \$15 million sponsored research partnership. Argo AI and CMU will establish the [Carnegie Mellon University Argo AI Center for Autonomous Vehicle Research](#), which will pursue advanced research projects to help overcome hurdles to enabling self-driving vehicles to operate in a wide variety of real-world conditions, such as winter weather or construction zones.

PSU's researchers aim to develop a [driver-in-the-loop vehicle simulator tool](#) in order to better understand the effects that CAV technology has on commuting behavior, by utilizing a \$60,000 Multidisciplinary Research Seed

Grant. The one-year project will conclude in January 2020.

## South Carolina

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### Academic Institutions

In July 2019, Clemson University announced new research led by Yunyi Jia, an assistant professor of automotive engineering and the director of [Collaborative Robotics and Automation Lab](#). Professor Jia received a \$500,000 CAREER award from the National Science Foundation to study what it will take to make people more comfortable with robots, including AVs that drive themselves and collaborative robots involved in advanced manufacturing.

## South Dakota

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[HB 1068](#) was signed by the Governor in March 2019 regarding platooning. The Bill provides that the Transportation Commission shall promulgate rules to authorize the testing and operation of groups of individual motor vehicles traveling in a unified manner at electronically coordinated speeds and distance intervals that are closer than otherwise allowed under State law.

## Tennessee

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### Memphis

In 2019, Memphis partnered with Extreme Networks, Inc. to roll out autonomous trucks and an intelligent routing system transporting both citizens and goods to enhance transit and the city's network infrastructure. The AV roll-out is part of a larger partnership between the city and Extreme Networks to give Memphis a Smart City advantage. The company will be providing the city with switching, management and analytics technology as well as a simplified network management, meeting the city's growing bandwidth demands and supporting new technologies as they come online.

### Academic Institutions

DENSO, recently presented a check for \$45,000 to Tennessee Tech's College of Engineering to support the University's [new autonomous electric vehicle platform](#) and competitive Baja SAE and Formula SAE teams.

## Texas

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Several bills were introduced at the beginning of the 2019 legislative session to address Texas' self-driving

car laws, none of which were enacted into law:

- [HB 119](#): increased liability of manufacturers in the event of a crash involving an AV;
- [HB 113](#): requires providers to equip vehicles with a failure alert system and the latest software;
- [HB 568](#): relating to the regulation of automated neighborhood electric vehicles; and
- [HB 2219/SB 1135](#): relating to the operation of public transit vehicles equipped with connected braking systems.

In January 2019, the Texas DOT (TxDOT) announced the formation of the [Connected And Automated Vehicle Task Force](#). The task force is designed to be a one-stop resource for information and coordination on all ongoing CAV projects, investments and initiatives in Texas. In addition to documenting public and private entity efforts and facilitating partnerships, the CAV Task Force will host industry forums and report lessons learned to facilitate progress and encourage greater collaboration.

## Austin

In August 2019, [Austin-Bergstrom International Airport](#) announced that the electric AV called [Easy Mile EZ10](#) will be tested for six months in an environmental and people-moving project. An airport attendant will be present to help travelers and for safety purposes. The shuttle, with seating for six and room for other passengers to stand, has a pre-programmed route between the Barbara Jordan Terminal and the rental car/ground transportation sites. The shuttle also complies with the Americans with Disabilities Act and has wheelchair accessibility.

Ford announced in September 2019 that would bring a fleet of self-driving cars to Austin to make the city a proving ground for their attempt to develop the budding technology. Ford will begin deploying the prototypes sometime between mid-November and the end of 2019. The cars will first be deployed in East Austin and downtown as Ford develops technology that could ultimately lead to its first full-purpose, self-driving model. Every car will have a safety driver ready during the testing. Ford also announced it plans to launch newly designed commercial AVs in Austin by 2021. The vehicle won't have a steering wheel or pedals.

## San Antonio

In 2019, the city [partnered with Brooks and VIA Metropolitan Transit](#) on plans to use two autonomous shuttles in a pilot program centered around the Brooks Transit Center, located in the former U.S. Air Force base turned mixed-use development. The intent is to get the six- to eight-person passenger shuttles into action by the end of 2019.

The Texas-based supermarket chain, [H-E-B, has teamed up with Udelv to launch their first pilot program together later in 2019.](#) To begin with, the pilot program will have a single AV and run out of one of H-E-B's grocery stores in San Antonio delivering to residents in Olmos Park. When the pilot program launches, there will be a driver in the car, for "safety and technical purposes."

## Houston

In Spring 2019, grocery store Kroger's autonomous delivery pilot transfers its collaboration with tech firm Nuro to Houston. The grocer will offer delivery from two stores, reaching customers across four zip codes in the metropolitan market. By the end of 2019, the next generation of AVs for Nuro, the bot called the R1 will begin operation in Houston.

In addition, Nuro has partnered with Dominos to begin pizza delivery in Houston in the fall of 2019. This would be the first major brand time-sensitive delivery testing Nuro is undertaking.

Kodiak Robotics announced in August 2019 it began using its self-driving technology to operate semi-trucks on the more than 200 mile stretch of I-45 between Dallas and Houston. The trucks are hauling freight for commercial clients. The self-driving trucks are operating with a “safety driver” at the wheel. The safety driver is also responsible for more complicated city driving and navigating shipping facilities.

### **Frisco**

Drive.ai operated a small fleet of autonomous Nissan NV200s shuttles on a single route between an office park and a high-end shopping complex in Frisco beginning in the summer of 2018. The program ended in March 2019.

### **Arlington**

At the completion of the program in Frisco in March 2019, four additional Drive.ai shuttles joined the three already deployed in Arlington. The shuttles operate within Arlington's Entertainment District, using an on-

demand system to connect passengers with employment centers, restaurants, entertainment venues and public recreational spaces.

### **Dallas**

Uber announced it will bring its self-driving vehicle operation to Dallas in November 2019, starting with manual driving to collect data on the city's roads. For now, the vehicles will not operate in full autonomous mode. Instead, each car will be driven by a human who will maintain control at all times to allow the cars' systems to map city streets and help ready the vehicles for the open road.

### **Academic Institutions**

This fall, [A&M is adding Designated Drivers](#) (DD) remote-control technology to its autonomous shuttle fleet, the first commercial deployment on public roads for a teleoperation system. In the first phase of the deployment, DD's Remote Assistance will be integrated into the A&M shuttle to authorize the shuttle to proceed at four-way intersections and stops. The DD system will remotely provide guidance and way points to A&M shuttles operating in the downtown district in Bryan, Texas.

[A&M Transportation Services and TTI will lead an AV](#)



[demonstration](#) on campus through Nov. 15, 2019. The eleven passenger shuttle route circles the Corps Quad along Lubbock, Bizzell, Lewis and Coke streets. The purpose of the demonstration is to introduce new mobility options to the campus community and gauge interest and use by students, faculty, staff and visitors.

A&M was also awarded a \$7 million [USDOT Automated Driving Systems Demonstration Grant](#) in September 2019 for its [Engineering Experiment Station](#) proposal. Researchers from A&M, George Washington University and the University of California Davis will use the grant for an extensive data collection effort using Level 4 AVs in Texas, Washington D.C. and Northern Virginia. The proposal team will also partner with General Motors, NVIDIA, National Instruments, and Washington D.C. DOT to conduct the tests.

These tests are targeting the challenges of the current deployment efforts, most of which have focused on large cities, overlooking the multimodal interactions. This project will develop and test ADS for rural roads without high-definition maps and with no or low-quality road signs or markings.

## Utah

[HB 101](#) was enacted in 2019 amending provisions regarding traffic laws, licensing, and titling requirements to add provision regarding the operation of AVs. The Bill, among other things, allows the operation of AVs within the State; exempts AVs from licensure; provides a protocol in case of an accident involving an AV; and preempts political subdivisions from regulating AVs in addition to regulation provided in state statute.

UDOT and the Utah Transit Authority joined forces for a one-year pilot test of an autonomous shuttle bus service. The two agencies jointly manage a [one-year autonomous shuttle bus pilot program](#) that started in May 2019. The shuttle operates up to 15 miles per hour, follows a predetermined route, and reacts to other vehicles, pedestrians, and any obstacles that intervene in its path.

In June 2019, UDOT announced a \$50 million contract with Panasonic to design and implement the next phase of the state's CAV infrastructure. The agreement builds on the state's existing intelligent transportation system, which includes a statewide fiber network connected to 127 intersections equipped with sensors that can communicate with some of its

buses and snowplows. Under the new contract, Utah and Panasonic will search for the geographic areas and software applications imagined to hold the greatest potential for gains in roadway safety.

## Vermont

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The Legislature passed [SB No. 149](#) in 2019, adding a new chapter to codified law providing the Traffic Committee with the responsibility of approving testing of AVs on public highways, directs the Agency of Transportation to identify the municipalities that want to preapprove AV testing and for the Agency to prepare an AV Testing Guide by January 1, 2021.

## Virginia

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Joint Base Myer-Henderson Hall in Arlington has been selected to test pilot an AV shuttle service starting next month. “Olli” will start circling the base from Henderson Hall Gate to Wright Gate and will be open for service members and their guests in 2019. The vehicles are 3D-printed, electronic and seat eight people, according to manufacturer Local Motors. The pilot will assist the U.S. Army and U.S. Marine Corps collect data about AVs on military installations.

In September 2019, Daimler Trucks, along with Torc Robotics, announced it began [testing its SAE level 4 self-driving trucks](#), which it is planning to launch commercially in Virginia. Daimler tested the truck on public roads near Torc’s base in southwest Virginia. Engineers and safety drivers are present during test runs and the vehicles are placed on test runs on public roads only after it performs safety checks and tests on closed-loop tracks.

### Fairfax County

Fairfax County and Dominion Energy are partnering on an [autonomous electric shuttle pilot](#) tentatively planned for the Merrifield area in Fairfax County. The Project was awarded a grant in June 2019 from the Virginia Department of Rail and Public Transportation (VDRPT) for the execution of the pilot, making this pilot the first state-funded autonomous public transportation demonstration project in Virginia. Fairfax County will provide a \$50,000 local match to the VDRPT grant.

### Crozet

Crozet launched the first AV to operate on public streets in Virginia. The vehicle was created by Perrone Robotics, a company founded in Crozet. The pilot program will allow

people to ride the shuttle for free to various points around Crozet. The shuttle, nicknamed [AVNU](#), for Autonomous Vehicle Neighborhood Use, will initially operate only in the Old Trail neighborhood, before branching out to downtown Crozet and Crozet Park. The project is a partnership with Albemarle County, JAUNT, Perrone and Smart Mobility.

### **Academic Institutions**

[The Virginia Tech Transportation Institute \(VTTI\)](#), the transportation research and innovation arm of Virginia Polytechnic Institute and State University (Virginia Tech), has been awarded two [grants from USDOT](#), totaling \$15 million to conduct research on the advancement of AV in the U.S. The funding, with additional support from VDOT, will support two programs: [Automated Driving Systems](#) and [Public Safety and Automated Trucks and Mixed Fleets](#).

## **Wyoming**

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In 2019, [HB 226](#), which would allow the operation of AVs within the State, was received by the House, but the House did not consider the Bill for introduction.

# Appendix

## Laws/Orders/Standards by State - 2019

State	Law	Year
Alabama	<a href="#">SB 47</a>	2019
	<a href="#">SJR 21</a>	2019
Alaska	None	
Arizona	None	
Arkansas	<a href="#">Act 468</a>	2019
	<a href="#">Act 1052</a>	2019
California	None	
Colorado	<a href="#">SB 19-239</a>	2019
Connecticut	<a href="#">Public Act 19-119</a>	2019
Delaware	None	
District of Columbia	None	
Florida	<a href="#">HB No. 311</a>	2019
	<a href="#">HB No. 385</a>	2019
	<a href="#">HB No. 107</a>	2019
Georgia	<a href="#">Senate Resolution 133</a>	2019
Hawaii	<a href="#">House Concurrent Resolution 220</a>	2019
	<a href="#">House Resolution No. 195</a>	2019
Idaho	None	
Illinois	None	

Indiana	None	
Iowa	<a href="#">Senate File 302</a>	2019
	<a href="#">House File 387</a>	2019
Kansas	None	
Kentucky	None	
Louisiana	<a href="#">HB 455 (Act 232)</a>	2019
Maine	None	
Maryland	None	
Massachusetts	None	
Michigan	None	
Minnesota	<a href="#">H.F. No. 6</a>	2019
	<a href="#">Executive Order 19-18</a>	2019
Mississippi	None	
Missouri	None	
Montana	<a href="#">House Joint Resolution 34</a>	2019
Nebraska	None	
Nevada	None	
New Hampshire	<a href="#">Act No. 2019-310</a>	2019
	<a href="#">House Bill No. 522</a>	2019
New Jersey	<a href="#">Assembly Joint Resolution 164</a>	2019

New Mexico	<a href="#">Joint Memorial</a> (SJM-3)	2019
New York	None	
North Carolina	None	
North Dakota	<a href="#">HB No. 1418</a>	2019
	<a href="#">HB No. 1199</a>	2019
Ohio	None	
Oklahoma	<a href="#">SB 365</a>	2019
	<a href="#">SB 189</a>	2019
	<a href="#">HB 1365</a>	2019
Oregon	None	
Pennsylvania	None	
Rhode Island	None	
South Carolina	None	
South Dakota	<a href="#">HB 1068</a>	2019
Tennessee	None	
Texas	None	
Utah	<a href="#">HB 101</a>	2019
Vermont	<a href="#">SB No. 149</a>	2019
Virginia	None	
Washington	None	





## Laws/Orders/Standards by Year - 2019

Year	State	Law
2019	Alabama	<a href="#"><u>SB 125</u></a>
		<a href="#"><u>SB 47</u></a>
		<a href="#"><u>SJR 21</u></a>
	Arkansas	<a href="#"><u>Act 468</u></a>
		<a href="#"><u>Act 1052</u></a>
	Colorado	<a href="#"><u>SB 19-239</u></a>
	Connecticut	<a href="#"><u>Public Act 19-119</u></a>
	Florida	<a href="#"><u>HB No. 311</u></a>
		<a href="#"><u>HB No. 385</u></a>
		<a href="#"><u>HB No. 107</u></a>
	Georgia	<a href="#"><u>Senate Resolution 133</u></a>
	Hawaii	<a href="#"><u>House Concurrent Resolution 220</u></a>
		<a href="#"><u>House Resolution No. 195</u></a>
	Iowa	<a href="#"><u>Senate File 302</u></a>
		<a href="#"><u>House File 387</u></a>
	Louisiana	<a href="#"><u>HB 455 (Act 232)</u></a>
Minnesota	<a href="#"><u>H.F. No. 6</u></a>	
	<a href="#"><u>Executive Order 19-18</u></a>	
Montana	<a href="#"><u>House Joint Resolution 34</u></a>	
New Hampshire	<a href="#"><u>Act No. 2019-310</u></a>	
	<a href="#"><u>House Bill No. 522</u></a>	

<p>2019</p>	<p>New Jersey</p> <p>New Mexico</p> <p>North Dakota</p> <p>Oklahoma</p> <p>South Dakota</p> <p>Utah</p> <p>Vermont</p>	<p><a href="#"><u>Assembly Joint Resolution 164</u></a></p> <p><a href="#"><u>Joint Memorial (SJM-3)</u></a></p> <p><a href="#"><u>HB No. 1418</u></a></p> <p><a href="#"><u>HB No. 1199</u></a></p> <p><a href="#"><u>SB 365</u></a></p> <p><a href="#"><u>SB 189</u></a></p> <p><a href="#"><u>HB 1365</u></a></p> <p><a href="#"><u>HB 1068</u></a></p> <p><a href="#"><u>HB 101</u></a></p> <p><a href="#"><u>SB No. 149</u></a></p>
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