

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 353 Autonomous Vehicles

SPONSOR(S): Fischer and others

TIED BILLS: IDEN./SIM. **BILLS:**

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Transportation & Infrastructure Subcommittee	13 Y, 0 N	Roth	Vickers
2) Appropriations Committee			
3) Government Accountability Committee			

SUMMARY ANALYSIS

Florida law currently authorizes the operation of autonomous vehicles equipped with the defined autonomous technology on the public roads of this state by any person holding a valid driver license. The physical presence of an operator in the autonomous vehicle is not required under specified conditions. Autonomous vehicles registered in this state must continue to meet federal standards and regulations that apply to such vehicles.

The bill removes the requirement for a person to possess a valid driver license to operate an autonomous vehicle. Additionally, the bill provides that "autonomous technology" rather than a person is deemed the operator of an autonomous vehicle operating in autonomous mode.

The bill specifies that certain provisions of law do not apply to autonomous vehicles operating in autonomous mode if, in the event of a crash involving the vehicle, the vehicle owner, a person on behalf of the vehicle owner, or the autonomous vehicle, promptly contacts law enforcement to report the crash. Similarly, the bill specifies statutory provisions relating to unattended motor vehicles do not apply to autonomous vehicles operating in autonomous mode.

The bill provides that regardless of whether a human operator is physically present in the vehicle, the vehicle is required to have a system to safely alert a human operator physically present in the vehicle if an autonomous technology failure is detected while the autonomous technology is engaged. When the alert is given, the system must:

- If a human operator is physically present in the vehicle, require the human operator to take control of the autonomous vehicle; or
- If a human operator does not, or is not able to, take control of the autonomous vehicle, or if a human operator is not physically present in the vehicle, be capable of bringing the vehicle to a complete stop.

The bill creates an exemption to driver licensing requirements when an autonomous vehicle is operated in autonomous mode without a human operator physically present in the vehicle.

The bill is not expected to have a fiscal impact on state or local governments.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Current Situation

Vehicle Automation

While there are multiple definitions for levels of vehicle automation, the National Highway Traffic Safety Administration (NHTSA) has adopted the SAE International (SAE) definitions for levels of automation.¹ The SAE definitions² divide vehicles into levels based on “who does what, when.” Generally:

- At SAE Level 0, the human driver does everything;
- At SAE Level 1, an automated system on the vehicle can sometimes assist the human driver conduct some parts of the driving task;
- At SAE Level 2, an automated system on the vehicle can actually conduct some parts of the driving task, while the human continues to monitor the driving environment and performs the rest of the driving task;
- At SAE Level 3, an automated system can both actually conduct some parts of the driving task and monitor the driving environment in some instances, but the human driver must be ready to take back control when the automated system requests;
- At SAE Level 4, an automated system can conduct the driving task and monitor the driving environment, and the human need not take back control, but the automated system can operate only in certain environments and under certain conditions; and
- At SAE Level 5, the automated system can perform all driving tasks, under all conditions that a human driver could perform them.

Federal Policy

In an announcement on January 14, 2016, the U.S. Department of Transportation (USDOT) outlined the following 2016 autonomous vehicle milestones:³

- NHTSA will work with industry and other stakeholders within six months of the announcement to develop guidance on the safe deployment and operation of autonomous vehicles, providing a common understanding of the performance characteristics necessary for fully autonomous vehicles and the testing and analysis methods needed to assess them;
- In the same six months, NHTSA will work with state partners, the American Association of Motor Vehicle Administrators, and other stakeholders to develop a model state policy on automated vehicles that offers a path to consistent national policy;
- Manufacturers are encouraged to submit rule interpretation requests where appropriate to help enable technology innovation;⁴
- When interpretation authority is not sufficient, manufacturers are encouraged to submit requests for use of the agency’s exemption authority to allow the deployment of fully autonomous

¹ SAE International, *NHTSA Adopts SAE International Standard Defining Autonomous Vehicles; SAE Releases New Version for Free - J3016 states and defines six levels of automation in on-road motor vehicles* (October 3, 2016), available at <https://www.sae.org/news/3550/> (last visited October 30, 2017).

² SAE International, *Automated Driving: Levels of Driving Automation are Defined in New Safe International Standard J3016* (2014), available at https://www.sae.org/misc/pdfs/automated_driving.pdf (last viewed October 30, 2017).

³ National Highway Traffic Safety Administration, *Secretary Foxx Unveils President Obama’s FY17 Budget Proposal of Nearly \$4 Billion for Automated Vehicles and Announces DOT Initiatives to Accelerate Vehicle Safety Innovations* (January 14, 2016), available at <https://www.nhtsa.gov/press-releases/secretary-foxx-unveils-president-obama%E2%80%99s-fy17-budget-proposal-nearly-4-billion> (last visited October 30, 2017).

⁴ As an example, the announcement links to a NHTSA response to a BMW request for an interpretation confirming that BMW’s remote self-parking system meets the Federal Motor Vehicle Safety Standards. The response notes that NHTSA does not provide approvals of vehicles or vehicle equipment or make determinations as to whether a product conforms to the Federal Motor Vehicle Safety Standards (FMVSSs) outside of an agency compliance test. Instead, federal law requires manufacturers to self-certify that a product conforms to all applicable FMVSSs in effect on the date of product manufacture. See NHTSA response: <http://isearch.nhtsa.gov/files/15-005347%20BMW%20Brake%20Transmission%20Shift%20Interlock%20v5.htm> (last visited October 30, 2017).

vehicles.⁵ Exemption authority allows NHTSA to enable the deployment of up to 2,500 vehicles for up to two years if the agency determines that an exemption would ease development of new safety features,⁶ and

- USDOT and NHTSA will develop the new tools necessary for this new era of vehicle safety and mobility, and will consider seeking new authorities when they are necessary to ensure that fully autonomous vehicles, including those designed without a human driver in mind, are deployable in large numbers when they are demonstrated to provide an equivalent or higher level of safety than is now available.

In September 2016, USDOT issued its model state policy on autonomous vehicles, whose objective is to ensure the establishment of a consistent national framework rather than a patchwork of incompatible laws. The model state policy addresses issues regarding autonomous vehicle testing, what would be considered the “driver” of an autonomous vehicle, registration and titling of autonomous vehicles, law enforcement considerations, and liability and insurance issues.⁷

In September 2017, USDOT released new federal guidance for Automated Driving Systems in a document called *A Vision for Safety 2.0*. The new guidance builds on the previous policy and incorporates feedback received through public comments and Congressional hearings. The document paves the way for the safe deployment of advanced driver assistance technologies by providing voluntary guidance that encourages best practices and prioritizes safety. The document also provides technical assistance to states and best practices for policymakers. Specifically, the new voluntary guidance:

- Focuses on SAE International Levels of Automation 3-5;
- Clarifies the guidance process and that entities do not need to wait to test or deploy their Automated Driving Systems;
- Revises unnecessary design elements from the safety self-assessment;
- Aligns federal guidance with the latest developments and industry terminology; and
- Clarifies federal and state roles going forward.⁸

Current Florida Law

Definitions

Section 316.003(2), F.S., defines “autonomous vehicle” as any vehicle equipped with autonomous technology. That subsection also includes a definition of “autonomous technology,” which means technology installed on a motor vehicle that has the capability to drive the vehicle on which the technology is installed without the active control or monitoring by a human operator.⁹

Operation

Section 316.85(1), F.S., provides for the operation of autonomous vehicles. A person possessing a valid driver license may operate an autonomous vehicle in autonomous mode on roads in this state if the vehicle is equipped with autonomous technology.

For purposes of Ch. 316, F.S., a person is deemed to be operating an autonomous vehicle operating in autonomous mode when he or she causes the vehicle's autonomous technology to engage. This is

⁵ See 49 C.F.R. § 555.

⁶ See 49 C.F.R. § 555.6.

⁷ United States Department of Transportation, *Federal Automated Vehicles Policy* (September 2016), available at <https://www.transportation.gov/sites/dot.gov/files/docs/AV%20policy%20guidance%20PDF.pdf> (last visited October 30, 2017).

⁸ United States Department of Transportation, *U.S. DOT Releases New Automated Driving Systems Guidance* (September 12, 2017), available at <https://www.nhtsa.gov/press-releases/us-dot-releases-new-automated-driving-systems-guidance> (last visited October 31, 2017).

⁹ An autonomous vehicle excludes a motor vehicle enabled with active safety systems or driver assistance systems, including, without limitation, a system to provide electronic blind spot assistance, crash avoidance, emergency braking, parking assistance, adaptive cruise control, lane keep assistance, lane departure warning, or traffic jam and queuing assistant, unless any such system alone or in combination with other systems enables the vehicle on which the technology is installed to drive without the active control or monitoring by a human operator.

regardless of whether he or she is physically present in the vehicle while the vehicle is operating in autonomous mode.¹⁰

Exemption from Liability

Section 316.86, F.S., provides that the original manufacturer of a vehicle converted by a third party into an autonomous vehicle is not liable in, and has a defense to and may be dismissed from, any legal action brought against the original manufacturer by any person injured due to an alleged vehicle defect caused by the conversion of the vehicle, or by equipment installed by the converter, unless the alleged defect was present in the vehicle as originally manufactured.

Autonomous Vehicle Requirements

Section 319.145, F.S., requires that an autonomous vehicle registered in this state¹¹ must continue to meet federal standards and regulations for a motor vehicle. The vehicle must:

- Have a means to alert the operator of the vehicle if an autonomous technology failure (impacting the ability of the vehicle to safely operate autonomously) is detected while the vehicle is operating autonomously in order to indicate to the operator to take control of the vehicle or bring the vehicle to a complete stop;¹²
- Have a means, inside the vehicle, to visually indicate when the vehicle is operating in autonomous mode;¹³ and
- Be capable of being operated in compliance with the applicable traffic and motor vehicle laws of this state.¹⁴

This section of law is expressly superseded when in conflict with NHTSA regulations.¹⁵

Driver Licensing

Section 322.03, F.S., generally requires drivers to be licensed and provides penalties for operating a motor vehicle without a valid driver license. However, this statute does not discuss autonomous vehicles operating in autonomous mode.

Proposed Changes

The bill amends s. 316.85, F.S., removing the requirement for a person to possess a valid driver license to operate an autonomous vehicle in autonomous mode.

Additionally, the bill amends s. 316.85, F.S., providing that “autonomous technology” rather than a person is deemed the operator of an autonomous vehicle operating in autonomous mode. The bill creates language in s. 316.85, F.S., providing that unless otherwise provided by law, autonomous technology is deemed the operator of an autonomous vehicle operating in autonomous mode and a licensed human operator is not required to operate an autonomous vehicle while in autonomous mode, except as provided in s. 319.145(1), F.S.¹⁶

The bill specifies the following provisions do not apply to autonomous vehicles operating in autonomous mode if, in the event of a crash involving the vehicle, the vehicle owner, a person on behalf of the vehicle owner, or the autonomous vehicle, promptly contacts law enforcement to report the crash:

- Duty to give information and render aid as provided in s. 316.062, F.S.;
- Duty upon damaging unattended vehicle or property as provided in s. 316.063, F.S.; and
- Crash reports as provided in s. 316.065, F.S.

¹⁰ Section 316.85(2), F.S.

¹¹ Chapter 320, F.S., reflects no vehicle registration provision specific to autonomous vehicles.

¹² Section 319.145(1)(a), F.S.

¹³ Section 319.145(1)(b), F.S.

¹⁴ Section 319.145(1)(c), F.S.

¹⁵ Section 319.145(2), F.S.

¹⁶ Section 319.145(1), F.S., requires autonomous vehicles to meet certain standards.

The bill specifies statutory provisions relating to unattended motor vehicles in s. 316.1975, F.S., do not apply to autonomous vehicles operating in autonomous mode.

The bill amends s. 319.145, F.S., providing that regardless of whether a human operator is physically present in the vehicle, the vehicle is required to have a system to safely alert a human operator physically present in the vehicle if an autonomous technology failure is detected while the autonomous technology is engaged. When the alert is given, the system must:

- If a human operator is physically present in the vehicle, require the human operator to take control of the autonomous vehicle; or
- If a human operator does not, or is not able to, take control of the autonomous vehicle, or if a human operator is not physically present in the vehicle, be capable of bringing the vehicle to a complete stop.

The bill creates s. 322.015, F.S., creating an exemption to driver licensing requirements¹⁷ when an autonomous vehicle is operated in autonomous mode without a human operator physically present in the vehicle.

The bill creates a definition of “human operator,” in ss. 316.85, 319.145, and 322.015, F.S., defining it as “a natural person physically present in the vehicle with immediate access to controls for steering, braking, and acceleration.”

B. SECTION DIRECTORY:

Section 1: Amends s. 316.85, F.S., relating to autonomous vehicles; operation.

Section 2: Amends s. 316.062, F.S., relating to duty to give information and render aid.

Section 3: Amends s. 316.063, F.S., relating to duty upon damaging unattended vehicle or other property.

Section 4: Amends s. 316.065, F.S., relating to crashes; reports; penalties.

Section 5: Amends s. 316.1975, F.S., relating to unattended motor vehicle.

Section 6: Amends s. 319.145, F.S., relating to autonomous vehicles.

Section 7: Creates s. 322.015, F.S., relating to exemptions.

Section 8: Provides an effective date of July 1, 2018.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None

2. Expenditures:

None.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

¹⁷ Chapter 322, F.S.
STORAGE NAME: h0353a.TIS
DATE: 11/8/2017

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

The bill could serve to stimulate private sector investment in Florida and incentivize autonomous vehicle testing and research in Florida.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

Not applicable.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

None.