

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: CS/HB 311 Autonomous Vehicles
SPONSOR(S): State Affairs Committee, Fischer
TIED BILLS: **IDEN./SIM. BILLS:** CS/SB 932

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR or BUDGET/POLICY CHIEF
1) Transportation & Infrastructure Subcommittee	14 Y, 0 N	Roth	Vickers
2) Transportation & Tourism Appropriations Subcommittee	9 Y, 0 N	Cobb	Davis
3) State Affairs Committee	20 Y, 1 N, As CS	Roth	Williamson

SUMMARY ANALYSIS

Current law authorizes the operation of autonomous vehicles equipped with autonomous technology on Florida roads 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 replaces the term “autonomous vehicle” with “automated driving system,” and defines the term “On-Demand Autonomous Vehicle Network” as a passenger transportation network that uses a digital means to connect passengers to fully autonomous vehicles for-hire.

The bill provides that a licensed human operator is not required to operate a fully autonomous vehicle and removes the requirement that a person possess a valid driver license to operate a fully autonomous vehicle. The bill also provides that the automated driving system, rather than a person, is deemed the operator of an autonomous vehicle when operating with the automated driving system engaged.

The bill requires autonomous vehicles to comply with applicable federal laws and regulations and allows an on-demand autonomous vehicle network to operate pursuant to state laws with the same insurance requirements applicable to a transportation network company. The bill also requires the automated driving system of a fully autonomous vehicle to be capable of achieving a minimal risk condition if a failure of the system occurs.

The bill prohibits local governments from imposing a tax, fee, or other requirement on automated driving systems or autonomous vehicles, and clarifies that this prohibition does not exempt autonomous vehicles from a tax or fee applied to non-autonomous vehicles.

The bill authorizes the Florida Turnpike Enterprise to fund, construct, and operate facilities for the advancement of autonomous and connected innovative transportation technologies and enter into agreements with private entities to provide services and concessions to benefit the traveling public.

The bill does not appear to have a fiscal impact on state or local governments.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Autonomous Vehicles, Generally

Current Situation

While multiple definitions for levels of vehicle automation exist, the National Highway Traffic Safety Administration (NHTSA) has adopted the Society of Automotive Engineers (SAE) International's¹ Levels of Automation and other applicable terminology.² The SAE International Standard J3016³ focuses on automated driving systems that function at Levels 3, 4, and 5 of driving automation and, along with related terminology, specifies the following six levels of driving automation:

- 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.

To prevent confusion and support consistent terminology, the United States Department of Transportation encourages state legislatures to use terminology already developed through voluntary, consensus-based, technical standards, such as SAE terminology.⁴

Florida Law

Florida law defines the term "autonomous vehicle" as any vehicle equipped with autonomous technology, and defines the term "autonomous technology," as 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.⁵

Florida law contains general requirements related to autonomous vehicles. In general, autonomous vehicles registered in Florida must continue to meet applicable federal standards and regulations for such motor vehicles.⁶

¹ The SAE's website describes itself as follows: "SAE International is a global association of more than 128,000 engineers and related technical experts in the aerospace, automotive, and commercial-vehicle industries. SAE International's core competencies are life-long learning and voluntary consensus standards development. SAE International is a global body of scientists, engineers, and practitioners that advances self-propelled vehicle and system knowledge in a neutral forum for the benefit of society." See the SAE's website available at <http://www.sae.org/about/> (last visited January 25, 2019).

² See NHTSA's Automated Driving Systems 2.0, A Vision for Safety, available at https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf (last visited January 25, 2019).

³ See the SAE's website available at https://www.sae.org/standards/content/j3016_201806/ (last visited January 25, 2019).

⁴ United States Department of Transportation, *Preparing for the Future of Transportation: Automated Vehicles 3.0*. (October 2018), at 20, available at <https://www.transportation.gov/sites/dot.gov/files/docs/policy-initiatives/automated-vehicles/320711/preparing-future-transportation-automated-vehicle-30.pdf> (last visited March 1, 2019).

⁵ Section 316.003(3), F.S.

⁶ Section 319.145, F.S.

An individual must possess a valid driver license to operate an autonomous vehicle in autonomous mode if the vehicle is equipped with autonomous technology. In addition, an individual, rather than the autonomous technology, is considered the operator of the vehicle when the vehicle is operated in autonomous mode.⁷

Proposed Changes

The bill amends s. 316.003, F.S., to incorporate SAE terminology adopted by NHTSA and replace the term “autonomous vehicle” with “automated driving system.” In addition, the bill includes the following definitions to provide clarity and uniformity:

- “Automated driving system” means the hardware and software that are collectively capable of performing the entire dynamic driving task of an autonomous vehicle on a sustained basis, regardless of whether it is limited to a specific operational design domain.⁸
- “Autonomous vehicle” means any vehicle equipped with an automated driving system.
- “Dynamic driving task” means all of the real-time operational and tactical functions required to operate a vehicle in on-road traffic within its specific operational design domain, if any, excluding strategic functions such as trip scheduling and selection of destinations and waypoints.⁹
- “Fully autonomous vehicle” means a vehicle equipped with an automated driving system designed to function without a human operator.¹⁰
- “Operational design domain” means a description of the specific operating domain in which an automated driving system is designed to operate properly, including, but not limited to, roadway types, speed ranges, environmental conditions such as weather and time of day, and other domain constraints.

The bill also defines “On-Demand Autonomous Vehicle Network” as a passenger transportation network that uses a software application or other digital means to connect passengers to fully autonomous vehicles, exclusively or in addition to other vehicles, for transportation, including for-hire transportation and transportation for compensation.

The bill amends s. 316.85, F.S., to provide that a fully autonomous vehicle does not require a licensed human operator and that such vehicle may operate regardless of whether a human operator is physically present in the vehicle.

The bill provides that the automated driving system, rather than a human, is deemed the operator of the autonomous vehicle when operating with the automated driving system engaged, and provides that motor vehicle laws may not be construed otherwise.

The bill authorizes on-demand autonomous vehicle networks to operate pursuant to state laws governing the operation of transportation network companies (TNC) and TNC vehicles. However, any provision that reasonably applies only to a human driver does not apply to the operation of a fully autonomous vehicle with the automated driving system engaged in an on-demand autonomous vehicle network.

The bill requires a fully autonomous vehicle with the automated driving system engaged in an on-demand autonomous vehicle network to meet the same insurance requirements applicable to a TNC.

⁷ Section 316.85, F.S.

⁸ This definition is identical to the SAE definition, except that the SAE definition expressly provides that the term be used specifically to describe a level 3, 4, or 5 driving automation system. “Driving automation system” refers to any level 1-5 system or feature that performs part or the entire dynamic driving task on a sustained basis. This term should be distinguished from the term “automated driving system.” See the SAE International Standard J3016, *Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles*, (Revised June 15, 2018) at p. 3, (Copy on file in the Transportation & Infrastructure Subcommittee)

⁹ This definition is similar, but not identical to the SAE definition of the term. *Id.* at 6.

¹⁰ The SAE standard does not define this term. However, the standard assumes that the automated driving system performs the entire dynamic driving task, while engaged, for levels 3, 4, and 5 of driving automation. *Id.* at 19.

Such vehicle must be covered by automobile insurance that provides primary automobile coverage of at least \$1 million for death, bodily injury, and property damage; personal injury protection benefits required of a limousine; and uninsured and underinsured vehicle coverage.

The bill prohibits local governments from imposing a tax, fee, or other requirement on automated driving systems or autonomous vehicles, and clarifies that this prohibition does not exempt autonomous vehicles from a tax or fee applied to non-autonomous vehicles.

The bill amends s. 319.145, F.S., to provide that autonomous vehicles must comply with applicable federal laws and regulations, such as requiring all autonomous vehicles to bear the required certification labels when required by federal law. The bill also requires fully autonomous vehicles to be able to achieve a minimal risk condition if a failure of the automated driving system occurs. The term “minimal risk condition” means a reasonably safe state, such as bringing the vehicle to a complete stop and activating the vehicle’s hazard lamps.

The bill creates additional requirements for autonomous vehicles that are not fully autonomous and requires all autonomous vehicles to be capable of being operated in compliance with the applicable traffic and motor vehicle laws of the state.

The bill creates s. 322.015, F.S., to exempt fully autonomous vehicles operated with the automated driving system engaged and without a licensed human operator physically present in the vehicle from the provisions of Chapter 322, F.S., relating to driver licenses.

The bill amends s. 338.2216, F.S., to authorize the Florida Turnpike Enterprise to fund, construct, and operate facilities for the advancement of autonomous and connected innovative transportation technologies and enter into agreements with private entities to provide services and concessions to benefit the traveling public.

Finally, the bill makes changes to conform to the use of new terminology.

Motor Vehicle Crashes – Driver Duties

Current Situation

Chapter 316, F.S., provides certain duties relating to vehicle operation by a driver¹¹ who is involved in a crash. In any crash resulting in injury or death of a person or damage to a vehicle or property, the driver must provide his or her name, address, registration number of the vehicle, and driver license to those involved in the crash as well as to law enforcement.¹² Any person responsible for such a crash must render aid to the injured person, including getting the injured person medical attention if treatment is needed or requested.¹³

A driver of any vehicle that collides with any unattended vehicle or property and results in damage must notify the owner of the damaged vehicle or property and the driver must provide his or her name, address, and registration number of the vehicle in person or by attaching a note to the vehicle or property.¹⁴

The driver of a vehicle involved in a crash resulting in injury or death of any person, or damage to any vehicle or property in an amount of at least \$500, must immediately give notice of the crash to law enforcement.¹⁵

¹¹ “Driver” is defined as any person who drives or is in actual physical control of a vehicle on a highway or who is exercising control of a vehicle or steering a vehicle being towed by a motor vehicle. Section 316.003(20), F.S.

¹² Section 316.062(1), F.S.

¹³ Section 316.062(1), F.S.

¹⁴ Section 316.063(1), F.S.

¹⁵ Section 316.065(1), F.S.

Proposed Changes

The bill amends ss. 316.062, 316.063, and 316.065, F.S., to exempt fully autonomous vehicles, operating with the automated driving system engaged, from providing law enforcement and persons involved in the crash, information, notification, and aid as long as the vehicle owner promptly contacts law enforcement to report the crash or the autonomous vehicle has the capability of alerting law enforcement.

Unattended Motor Vehicle

Current Situation

Motor vehicle drivers are prohibited from leaving their cars unattended without first stopping the engine, locking the ignition, and removing the key. Additionally, a vehicle is not permitted to stand unattended upon any perceptible grade without being turned off, having the emergency brake set, and turning the front wheels.¹⁶

Proposed Changes

The bill amends s. 316.1975, F.S., to exempt owners of fully autonomous vehicles operating with the automated driving system engaged.

B. SECTION DIRECTORY:

Section 1: Amends s. 316.003, F.S., relating to definitions.

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. 316.303, F.S., relating to television receivers.

Section 7: Amends s. 316.305, F.S., relating to wireless communications devices; prohibition.

Section 8: Amends s. 316.85, F.S., relating to autonomous vehicles; operation.

Section 9: Amends s. 319.145, F.S., relating to autonomous vehicles.

Section 10: Creates s. 322.015, F.S., relating to exemption.

Section 11: Amends s. 338.2216, F.S., relating to Florida Turnpike Enterprise; powers and authority.

Section 12: Amends s. 339.175, F.S., relating to metropolitan planning organization.

Section 13: Amends s. 339.64, F.S., relating to strategic intermodal system plan.

Section 14: Amends s. 339.83, F.S., relating to enrollment in federal pilot programs.

Section 15: Amends s. 627.0653, F.S., relating to insurance discounts for specified motor vehicle equipment.

Section 16: Amending s. 655.960, F.S., relating to definitions.

¹⁶ Section 316.1975, F.S.
STORAGE NAME: h0311e.SAC
DATE: 4/5/2019

Section 17: Provides an effective date of July 1, 2019.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

The bill does not appear to have a fiscal impact on the state; however, the bill allows, but does not require the Florida Turnpike Enterprise to fund, construct, and operate facilities for the advancement of autonomous and connected innovative transportation technologies. The bill authorizes the Florida Turnpike Enterprise to enter into agreements with private entities to provide services and concessions to benefit the traveling public. To the extent the Florida Turnpike Enterprise utilizes this authorization, there would be an indeterminate negative impact on state expenditures.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

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. This bill does not appear to require counties or municipalities to spend funds or take action requiring the expenditures of funds; reduce the authority that counties or municipalities have to raise revenues in the aggregate; or reduce the percentage of state tax shared with counties or municipalities.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

None.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

On April 4, 2019, the State Affairs Committee adopted a strike-all and reported the bill favorably as a committee substitute. The strike-all amendment:

- Provided that an on-demand autonomous vehicle network is required to maintain the same insurance requirements applicable to a TNC.
- Prohibited local governments from imposing a tax, fee, or other requirement on automated driving systems or autonomous vehicles, and clarified that the prohibition does not exempt autonomous vehicles from a tax or fee applied to non-autonomous vehicles.
- Required a vehicle that is not fully autonomous, but is operated with the automated driving system engaged, to achieve a minimal risk condition in the event of an automated driving system failure.
- Authorized the Florida Turnpike Enterprise to enter into agreements with private entities to provide services and concessions that benefit the traveling public.

This analysis is written to the committee substitute as reported favorably by the State Affairs Committee.