HOUSE OF REPRESENTATIVES STAFF FINAL BILL ANALYSIS

BILL #: CS/CS/HB 1289 Autonomous Vehicles
SPONSOR(S): Commerce Committee, Tourism, Infrastructure & Energy Subcommittee, McFarland and others
TIED BILLS: **IDEN./SIM. BILLS:** CS/CS/SB 1620

FINAL HOUSE FLOOR ACTION: 116 **Y's** 0 **N's** **GOVERNOR'S ACTION:** Approved

SUMMARY ANALYSIS

CS/CS/HB 1289 passed the House on April 23, 2021. The bill was amended in the Senate and subsequently passed the Senate on April 26, 2021. The House concurred in the Senate amendments and subsequently passed the bill as amended on April 29, 2021. The bill includes parts of CS/CS/HB 57, CS/SB 138, and HB 817.

Current Florida law defines and provides requirements and restrictions applicable to autonomous vehicles and low-speed vehicles. Federal law defines a "low-speed vehicle" as a motor vehicle:

- That is 4-wheeled,
- Whose speed attainable in 1 mile is more than 20 miles per hour and not more than 25 miles per hour on a paved level surface, and
- Whose gross vehicle weight rating is less than 3,000 pounds.

The bill defines the term "low-speed autonomous delivery vehicle" (LSADV) as a fully autonomous vehicle that meets the current federal definition of low-speed vehicle, and is not designed for, or capable of human occupancy. The bill authorizes LSADVs to operate only on streets or roads with a posted speed limit of 35 miles per hour or less but does not prohibit such vehicles from crossing a road or street at an intersection where the road or street has a posted speed limit of more than 35 miles per hour. An LSADV may operate on a street or road with a posted speed limit of more than 35 miles per hour, but no more than 45 miles per hour, under certain conditions.

The bill provides equipment requirements for LSADVs and provides that these requirements are superseded by any conflicting federal regulations. The bill also provides minimum insurance requirements, which are the same as those currently in law for autonomous vehicles. The bill provides that any motor vehicle equipment laws or regulations relating to or supporting motor vehicle operation by a human driver but not relevant for an automated driving system are inapplicable to fully autonomous vehicles designed to be operated exclusively by the automated driving system for all trips. The bill also clarifies that low-speed autonomous delivery vehicles are not subject to certain statutory provisions applicable to low-speed vehicles, including provisions related to seasonal deliveries and driver license requirements.

The bill revises the current definition of the term "autocycle" to provide that it must have a "steering mechanism" rather than a "steering wheel," and have brakes meeting federal safety standards for motorcycle brakes, rather than specifying antilock brakes. The bill revises the current definition of "personal delivery device" by removing the 80 pound weight limit and providing that such devices may not exceed the maximum weight to be established by Department of Transportation rule.

The fiscal impact of the bill is indeterminate because the number of LSADVs that will be deployed in Florida is unknown; however, the state likely will see an insignificant positive fiscal impact.

The bill was approved by the Governor on June 29, 2021, ch. 2021-233, L.O.F., and became effective on July 1, 2021.

I. SUBSTANTIVE INFORMATION

A. EFFECT OF CHANGES:

Autonomous Vehicles

Current Situation

Florida Autonomous Vehicle Law

Florida law defines the term "autonomous vehicle" as any vehicle equipped with an automated driving system.[1]

Under Florida law, a fully autonomous vehicle may operate regardless of whether a human operator, or any human at all, is physically present in the vehicle. For purposes of state uniform traffic control,[2] the automated driving system, when engaged, is deemed the operator of an autonomous vehicle, regardless of whether a person is physically present in the vehicle while the vehicle is operating with the automated driving system engaged.[3] If the autonomous vehicle is fully autonomous, it must be able to achieve a minimal risk condition[4] if a failure of the automated driving system occurs which renders that system unable to perform the entire dynamic driving task relevant to its intended operational design domain.[5,6]

A driver's license is not required when a fully autonomous vehicle is operated with the automated driving system engaged and without a human operator.[7] In current law, there is no statute specific to the registration of autonomous vehicles; however, autonomous vehicle owners pay the same license tax as owners of other vehicles, generally based on vehicle type and weight.[8] A fully autonomous vehicle with the automated driving system engaged while logged on to an on-demand autonomous vehicle network or engaged in a prearranged ride must be covered by a policy of automobile insurance which provides:

- Primary liability coverage of at least $1 million for death, bodily injury, and property damage.
- Minimum personal injury protection benefits required under current law.
- Uninsured and underinsured vehicle coverage.[9]

An autonomous vehicle or a fully autonomous vehicle equipped with a teleoperation system[10] may operate without a human operator physically present in the vehicle when the teleoperation system is engaged and, if so equipped, is exempt from certain laws applicable to vehicle drivers, such as the duty to provide information and render reasonable assistance in a crash, the duty to give notice of the crash

[1] S. 316.003(3)(a), F.S. Section 316.003(3), F.S., defines the term "automated driving system" as 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.
[2] Ch. 316, F.S.
[3] S. 316.85, F.S.
[4] Section 319.145(2), F.S., defines the term "minimal risk condition" as a reasonably safe state, such as bringing the vehicle to a complete stop and activating the vehicle's hazard lamps.
[5] Section 316.003(3)(d), F.S., defines the term "operational design domain" as a description of the specific operating domain in which an automated driving system is designed to properly operate, including, but not limited to, roadway types, speed ranges, environmental conditions such as weather and time of day, and other domain constraints.
[6] S. 319.145, F.S.
[7] S. 322.015, F.S.
[8] *See* s. 320.08, F.S.
[9] S. 627.749(2)(a), F.S.
[10] Section 316.003(90), F.S., defines the term "teleoperation system" as the hardware and software installed in a motor vehicle which allow a remote human operator to supervise or perform aspects of, or the entirety of, the dynamic driving task. The term "remote human operator" means a natural person who is not physically present in a vehicle equipped with an automated driving system who engages or monitors the vehicle from a remote location. A remote human operator may have the ability to perform aspects of, or the entirety of, the dynamic driving task for the vehicle or cause the vehicle to achieve a minimal risk condition as defined in s. 319.145(2), F.S. A remote human operator must be physically present in the United States and be licensed to operate a motor vehicle by a United States jurisdiction.

to appropriate law enforcement, and the prohibition against leaving an unattended motor vehicle without first setting the brake.[11]

An autonomous vehicle registered in this state must meet all of the following requirements:

- When required by federal law:
  - Have been certified in accordance with federal regulations in 49 C.F.R. part 567 as being in compliance with applicable federal motor vehicle safety standards.
  - Bear the required certification label or labels including reference to any exemption granted under applicable federal law.
- Be capable of being operated in compliance with the applicable traffic and motor vehicle laws of this state, regardless of whether the vehicle is operating with the automated driving system engaged.[12]

Florida and Federal Low-Speed Vehicle Laws

Federal law defines the term "low-speed vehicle" to mean a motor vehicle:

- That is 4-wheeled,
- Whose speed attainable in 1 mile is more than 20 miles per hour and not more than 25 miles per hour on a paved level surface, and
- Whose gross vehicle weight rating is less than 3,000 pounds.[13]

Federal regulations require each low-speed vehicle to be equipped with certain safety equipment, including various lamps, reflectors, mirrors, a windshield, vehicle identification number, seat belts and an alert sound for pedestrians to detect and recognize the vehicle.[14]

Florida law defines the term "low-speed vehicle," as any four-wheeled vehicle whose top speed is greater than 20 miles per hour but not greater than 25 miles per hour, including, but not limited to, neighborhood electric vehicles. Low-speed vehicles must comply with the safety standards in 49 C.F.R. ss. 571.500 and 316.2122, F.S.[15]

Florida law authorizes the operation of a low-speed vehicle on any road in this state with the following restrictions:

- A low-speed vehicle may be operated only on streets where the posted speed limit is 35 miles per hour or less but is not prohibited from crossing a road or street at an intersection where the road or street has a posted speed limit of more than 35 miles per hour.
- A low-speed vehicle must be equipped with headlamps, stop lamps, turn signal lamps, taillamps, reflex reflectors, parking brakes, rearview mirrors, windshields, seat belts, and vehicle identification numbers.
- A low-speed vehicle must be registered, insured, and titled.
- Any person operating a low-speed vehicle or mini truck must have in his or her possession a valid driver license.
- The Department of Transportation (DOT), counties, and municipalities, if necessary in the interest of safety, may prohibit the operation of low-speed vehicles on any road under their respective jurisdictions.[16]

[11] The exemptions are contained in ss. 316.062(5), 316.063(4), 316.065(5), 316.1975(3), and 316.303(1). F.S.
[12] S. 319.145(1), F.S.
[13] 49 C.F.R. s 571.3.
[14] 49 C.F.R. s. 571.500.
[15] S. 320.01(41), F.S.
[16] S. 316.2122, F.S.

From October 15 through January 1, seasonal delivery personnel,[17] may use low-speed vehicles, subject to certain package size and weight restrictions, on any public road within a residential area with a posted speed limit of 35 miles per hour or less. The vehicle must be:

- Marked in a conspicuous manner with the name of the delivery service;
- Equipped with, at a minimum, the equipment required under s. 316.212(6), F.S., which includes a reliable steering apparatus, safe tires, a rearview mirror, and red reflectorized warning devices in both the front and rear.
- Equipped with head lamps and tail lamps, in addition to the safety requirements in s. 316.212(6), F.S., if operated after sunset.[18]

The license tax for an electric low-speed vehicle is the same as that prescribed for any other vehicle, generally based on vehicle type and weight.[19] Low-speed vehicles must have a license plate that complies with the requirements for standard motor vehicles of s. 320.06, F.S., relating to, among other things, plate symbols and numbers, and renewal and replacement.

Low-Speed Autonomous Delivery Vehicles

Convenient delivery of goods to households is increasingly popular, particularly so during the current pandemic. New types of vehicles designed specifically for such purposes are emerging. One such vehicle is produced by Nuro, Inc., which is an autonomous delivery vehicle called the R2X.[20] Nuro indicates the vehicle is about half the width and weight of a typical car.[21]

The National Highway Traffic Safety Administration (NHTSA) has granted Nuro temporary exemptions from three of the federal low-speed vehicle equipment requirements.

- The exterior and interior mirror requirements.
- The windshield glazing requirements.
- The rear visibility requirements (relating to backup camera "linger time").[22,23]

The exemption was granted for two years under a number of terms and conditions and authorizes Nuro to produce 2,500 of the exempted R2X vehicles during any 12-month period of the exemption, or a maximum of 5,000 exempted vehicles over the full two-year period of the exemption. The exemption expires on February 10, 2022.[24]

Effect of the Bill

The bill defines the term "low-speed autonomous delivery vehicle," (LSADV) as a fully autonomous vehicle that meets the federal definition of a low-speed vehicle, and is not designed for, or capable of, human occupancy.

The bill authorizes an LSADV to operate on any road with the following restrictions:

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[17] Section 316.2126, F.S., defines the term "seasonal delivery personnel" as employees of a licensed commercial delivery service that has at least 10,000 persons employed in this state.
[18] S. 316.2126(3), F.S.
[19] Section 320.08, F.S., provides the statutory license tax based on vehicle type and weight.
[20] *See* Nuro, *About,*: https://nuro.ai/about (last visited Mar. 24, 2021).
[21] *See* Nuro, *Delivery Safety: Nuro's Approach,* p. 9, https://static1.squarespace.com/static/57bcb0e02994ca36c2ee746c/t/5b9a00848a922d8eaecf65a2/1536819358607/delivering_safety_nuros_approach.pdf (last visited Mar. 24, 2021).
[22] Back-up camera linger time is how long that the image from the back-up camera must remain on the screen. https://www.cnet.com/roadshow/news/u-s-requiring-back-up-cameras-in-cars-by-2018/#:~:text=For%20linger%20time%2C%20NHTSA%20mandates,a%20trailer%20or%20parallel%20parking. (last visited Mar. 29, 2021).
[23] *See* Federal Register, Volume 85, No. 28, Tuesday, February 11, 2020, available at Federal Register : Nuro, Inc.; Grant of Temporary Exemption for a Low-Speed Vehicle With an Automated Driving System https://www.federalregister.gov/documents/2020/02/11/2020-02668/nuro-inc-grant-of-temporary-exemption-for-a-low-speed-vehicle-with-an-automated-driving-system (last visited Mar. 24, 2021).
[24] *Id.*

- An LSADV may operate only on streets or roads where the posted speed limit is 35 miles per hour or less, but is not prohibited from crossing a road or street at an intersection where the road or street has a posted speed limit of more than 35 miles per hour.
- An LSADV may operate on a street or road with a posted speed limit of more than 35 miles per hour, but no more than 45 miles per hour, if:
    - The vehicle travels no more than 1 continuous mile on such a street or road, but the vehicle may travel in excess of 1 continuous mile if authorized by the entity with jurisdiction over the street or road;
    - The vehicle operates exclusively in the right lane, other than for the purpose of completing a turn; and
    - On a two-lane street or road where overtaking and passing another vehicle is unsafe because of traffic moving in the opposite direction or because of other unsafe conditions, and five or more vehicles are formed in a line behind the LSADV, the LSADV must exit the roadway wherever a sufficient area for a safe turn-out exists, to permit the vehicles following to proceed.

The bill provides that an LSADV must be equipped with headlamps, stop lamps, turn signal lamps, taillamps, reflex reflectors, and vehicle identification numbers. However, the bill also provides that federal regulations adopted by NHTSA supersede this provision. Thus, only those LSADVs that comply with the federal equipment requirements or are granted an exemption from the requirements are authorized to operate under the bill.

An LSADV must be covered by a policy of automobile insurance providing the following coverage, which is the same as required for an autonomous vehicle:
- Primary liability coverage of at least $1 million for death, bodily injury, and property damage.
- Minimum personal injury protection benefits required under current law.
- Uninsured and underinsured vehicle coverage.[25]

The above coverage requirements may be satisfied by automobile insurance maintained by the owner of the LSADV, the owner of the teleoperation system, the remote human operator, or a combination thereof.

The bill amends s. 316.2126, F.S., providing that LSADVs are not subject to certain statutory provisions regarding low-speed vehicles, including provisions relating to seasonal deliveries and driver license requirements.

The bill amends s. 316.215, F.S., making the provisions of any motor vehicle equipment laws or regulations of this state, relating to or supporting motor vehicle operation by a human driver but not relevant for an automated driving system, inapplicable to fully autonomous vehicles designed to be operated exclusively by the automated driving system for all trips.

Autocycles

Current Situation

An "autocycle" is a three-wheeled motorcycle that is equipped with a roll cage or roll hoops, a seat belt for each occupant, antilock brakes, a steering wheel, and seating that does not require the operator to straddle or sit astride it. An autocycle must be manufactured in accordance with the applicable federal motorcycle safety standards by a manufacturer registered with the National Highway Traffic Safety Administration.[26] An autocycle driver is not required to hold a motorcycle endorsement on his or her driver license.[27]

[25] S. 627.749(2)(a), F.S.
[26] S. 316.003(2), F.S.
[27] Ss. 322.03(4) and 322.12, F.S.

Federal Motor Vehicle Safety Standard No. 122[28] provides standards for all motorcycle braking systems.

Effect of the Bill
The bill amends the definition of the term "autocycle" to provide that it must have a "steering mechanism" rather than a "steering wheel." The bill also requires an autocycle to have brakes meeting federal safety standards for motorcycle brakes, rather than specifying antilock brakes.

Personal Delivery Devices

Current Situation
A personal delivery device (PDD) is an electrically powered device that:
- Is operated on sidewalks and crosswalks and intended primarily for transporting property;
- Weighs less than 80 pounds, excluding cargo;
- Has a maximum speed of 10 miles per hour; and
- Is equipped with technology to allow for operation of the device with or without the active control or monitoring of a natural person.[29]

A PDD may operate on sidewalks and crosswalks where it has all the rights and duties applicable to a pedestrian, except that a PDD may not unreasonably interfere with pedestrians or traffic and must yield the right-of-way to pedestrians on the sidewalk or crosswalk.[30]

A PDD must obey all official traffic and pedestrian control signals and devices, display identifying information, and be equipped with a braking system.[31] A PDD may not:
- Operate on a public highway except to the extent necessary to cross a crosswalk;
- Operate on a sidewalk or crosswalk unless the PDD operator is actively controlling or monitoring its navigation and operation; or
- Transport hazardous materials.[32]

Effect of the Bill
The bill amends the definition of personal delivery device by removing the 80 pound weight limit and providing that a PDD may not exceed the maximum weight established by DOT rule. The bill also gives DOT rulemaking authority to implement this provision.

The bill also amends ss. 316.306 and 655.960, F.S., to conform cross-references.

The bill has an effective date of July 1, 2021.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

   Indeterminate. The fiscal impact of the bill is indeterminate because the number of LSADVs that will be deployed in Florida is unknown; however, the state likely will see an insignificant positive fiscal impact from registration and titling fees.

2. Expenditures:

[28] 49 C.F.R. 571.122
[29] S. 316.003(56), F.S.
[30] S. 316.2071(1), F.S.
[31] S. 316.0271(2), F.S.
[32] S. 316.2071(3), F.S.

None.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

None.

D. FISCAL COMMENTS:

None.