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SB 219 - Autonomous Vehicles

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MOTOR VEHICLES AND TRAFFIC

General Provisions: To Amend Title 40 Chapter 1 Section 1 of the Official Code of Georgia Annotated, Relating to Motor Vehicles, so as to Provide for Definitions; Exempt Persons Operating a fully autonomous Motor Vehicle with the Automated Driving System Engaged from the Requirement to Hold a Driver's License; Provide for Satisfaction of Requirement to Notify Law Enforcement in certain Instances of Accidents by fully autonomous Motor Vehicles; Provide for certain Equipment and Insurance Requirements for fully autonomous Motor Vehicles; Provide for Registration Requirements for such Vehicles; Provide for **Exemptions from Seat Belt Requirements; Provide for** Applicability; Provide for Limitations on Adoption of certain Rules and Regulations; Provide for Related Matters; Repeal Conflicting Laws; and for Other Purposes

CODE SECTIONS:	O.C.G.A. §§ 40-1-1 (amended), 40-5-21 (amended), 40-6-279 (new), 40-8-11 (new)
BILL NUMBER:	SB 219
ACT NUMBER:	214
GEORGIA LAWS:	2017 Ga. Laws 549
SUMMARY:	The Act amends Georgia's Motor
	Vehicles and Traffic Code to create a
	legal framework for autonomous
	vehicles to operate in Georgia. Persons
	responsible for operating fully
	autonomous vehicles are exempted
	from holding a driver's license. In the
	event of an accident involving an
	autonomous vehicle, the vehicle must
	remain at the scene and the operator of
	the autonomous vehicle must provide
	necessary information to law
	enforcement. Minimum liability
	insurance requirements for autonomous
	vehicles will be the same as minimum

coverages required for the taxi and limousine industry after January 1, 2020. Minimum coverages are set at 250 percent of those coverages until December 31, 2019. Owners must register their autonomous vehicles with the state. July 1, 2017

EFFECTIVE DATE:

History

Autonomous vehicles (AVs) are an important emerging technology with the potential to revolutionize how Americans travel.¹ As the technology has evolved, policymakers across the country have recognized it as a possible paradigm shift for increasing individual mobility;² improving public safety and reducing roadway fatalities caused by human error;³ and sparking new technological developments that spur economic growth.⁴ As a result, state legislatures across the country have worked to bring state laws up to speed with the new technology and provide a legal framework that permits automated driving on public roadways.⁵

Since 2012, at least forty-one states have considered AV-related legislation, and fifteen states—including Georgia, with the passage of

^{1.} See Olivia Solon, Self-Driving Trucks: What's the Future for America's 3.5 Million Truckers?, GUARDIAN (June 17, 2016), https://www.theguardian.com/technology/2016/jun/17/self-driving-trucks-impact-on-drivers-jobs-us ("Driverless trucks will be safer and cheaper than their human-controlled counterparts..."); Will Self-Driving Cars Put Cab Drivers, Truckers Out of Business? CBS NEWS (Nov. 3, 2016), http://www.cbsnews.com/news/self-driving-cars-cab-drivers-truckers-out-of-business/ (statement of Uber CEO) ("Self-driving Ubers will be on the road 24 hours a day...").

^{2.} See, e.g., GEORGIA HOUSE AUTONOMOUS VEHICLE TECHNOLOGY STUDY COMMITTEE, 2014 REPORT, at 8 (Dec. 2014) [hereinafter House Report] ("Not only would the mobility of the elderly and disabled be increased by AV, other populations could see substantial changes in their community interaction, health, and job opportunities.").

^{3.} See David Schaper, Human Errors Drive Growing Death Toll In Auto Crashes, NPR (Oct. 20, 2016), http://www.npr.org/2016/10/20/498406570/tech-human-errors-drive-growing-death-toll-in-autocrashes. In 2015, more than 35,000 people died in automobile accidents in the United States, and the rate of driver fatalities is continuing to increase. *Id.* Critically, "[n]inety-four percent of crashes can be tied back to a human choice or error." *Id.*

^{4.} See House Report, *supra* note 2, at 2–4; see also AV: Self-Driving Vehicles Enacted Legislation, NAT'L CONF. OF STATE LEGISLATURES (Aug. 29, 2017),

http://www.ncsl.org/research/transportation/autonomous-vehicles-self-driving-vehicles-enacted-legislation.aspx [hereinafter Self-Driving Legislation].

^{5.} See Self-Driving Legislation, supra note 4.

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Senate Bill (SB) 219—have passed such legislation.⁶ AV technology has also caught the attention of policymakers at the federal level.⁷ In 2016, the National Highway and Transportation Safety Administration (NHTSA) updated its policy language on AVs and issued updated guidance for the safe development of the technology.⁸ The new NHTSA guidance makes clear that "states retain their traditional responsibilities for vehicle licensing and registration, traffic laws and enforcement," underscoring the critical role state legislatures play in promoting—or restricting—the development of AV technology.⁹

Yet not all states have embraced AV technology with equal enthusiasm.¹⁰ Concerns about privacy, cyber security, proper chains of liability, and the ethics of driverless technology (which must be programmed to make life-or-death decisions) have caused some policymakers to give the industry a yellow light before it brings fleets of fully autonomous vehicles to public roadways.¹¹ For these reasons, states like California stopped short of allowing full proliferation of AV technology, opting instead to limit the industry to only government-regulated testing until the law changes.¹² Specifically,

9. Self-Driving Legislation, supra note 4.

^{6.} *Id*.

^{7.} See id.

^{8.} *Id.* The policy provides a set of fifteen best practices regarding the safe design, development, and deployment of AV technology on public roads. *Id.* Those fifteen best practices emphasize technology that can be designed to support the following: data sharing, privacy, system safety, digital security, human-machine interfacing, crashworthiness, consumer education, certification, post-crash behavior, laws and practices, ethical considerations, operational design, detection and response, fallback, and validation. Cecilia Kang, *The Fifteen-Point Federal Checklist for Self-Driving Cars*, N.Y. TIMES (Sept. 20, 2016), https://www.nytimes.com/2016/09/21/technology/the-15-point-federal-checklist-for-self-driving-cars.html.

^{10.} See *id.* Nevada passed the nation's first AV legislation in 2011. *Id.* Since then, twenty states and Washington D.C. passed AV legislation, including Alabama, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Illinois, Louisiana, Michigan, New York, North Carolina, North Dakota, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, and Vermont. *Id.* Additionally, governors in Arizona, Massachusetts, Washington and Wisconsin have issued executive orders related to AV technology. *Id.*

^{11.} Telephone Interview with Rep. Ed Setzler (R-35th) (Mar. 27, 2017) (on file with Georgia State University Law Review) [hereinafter Setzler Interview] (noting that legislation from various states can either promote or restrict free proliferation of AV technology); House Report, *supra* note 2, at 6; *see also, e.g.,* Zeninjor Enwemeka, *Five Key Issues Massachusetts Lawmakers Are Considering on Self-Driving Cars*, WBUR (June 6, 2017), http://www.wbur.org/bostonomix/2017/06/06/self-driving-carbills-massachusetts.

^{12.} Setzler Interview, *supra* note 11 (describing California's regulatory scheme that imposes data submission requirements on AV testing).

California's AV legislation requires special permits for AV technology, limits AV testing to certain prescribed locations, and imposes a number of regulatory and data submission requirements on developers.¹³ Critics argue such bills are largely "symbolic," and although they purport to broadly encourage testing, their tight regulatory restrictions put a "straight jacket" on AV technology.¹⁴ Even some California lawmakers fear their AV regulations might chill innovation and send an anti-technology message to the industry.¹⁵ Such fears might be well founded; Uber recently shipped its San Francisco-based fleet of driverless Volvos to Arizona, a state that does not require the special permits required in California.¹⁶

Other states, meanwhile, passed incomplete legislation that requires lawmakers to revisit existing bills in order to keep pace with the industry as it evolves over time. Florida, for example, passed legislation in 2012 that required the presence of a driver in all AVs at all times.¹⁷ Florida lawmakers later revisited the legislation in 2016 to remove that requirement and make the law consistent with the purpose of driverless technology—that is, eliminating the need for a human driver in the vehicle.¹⁸

Still other states have passed legislation that grants greater freedom for testing, but creates significant barriers to market entry that may ultimately limit private proliferation of AV technology.¹⁹ Michigan's AV laws, for example, include provisions that some contend heavily favor traditional automobile manufacturers at the expense of new players.²⁰ One such provision permits testing only for

^{13.} Id.; see also Russ Mitchell, California Regulations for Driverless Cars Stall as Other States Speed Ahead, L.A. TIMES (Jan. 26, 2017, 12:10 PM), http://www.latimes.com/business/autos/la-fi-hy-driverless-regulations-california-20170126-story.html; Self-Driving Legislation, supra note 4.

^{14.} Setzler Interview, *supra* note 11 (expressing his concerns about overly restrictive regulatory schemes making it difficult to proliferate AV technology); *see also* Mitchell, *supra* note 13.

^{15.} Mitchell, *supra* note 13 (reporting that Silicon Valley state senator Jerry Hill worries California could be perceived "as anti-innovation, slow and behind the times").

^{16.} *Id.* ("The robot cars required state permits to operate in California, but Uber refused to apply. Officials ordered them off public roadways in late December. So Uber shipped the cars to a state where such permits aren't required.").

^{17.} Setzler Interview, *supra* note 11 (describing the original Florida bill as a "non-law" because it still required a driver to be present in the driverless vehicle); Self-Driving Legislation, *supra* note 4.

^{18.} See Self-Driving Legislation, supra note 4.

^{19.} Setzler Interview, *supra* note 11 (explaining how the Michigan AV bill raised concerns for non-traditional auto manufacturing companies).

^{20.} Greg Gardner, Google Wants to Amend Michigan Autonomous Vehicle Bills, DETROIT FREE PRESS (Sept. 13, 2016, 6:21 PM), http://www.freep.com/story/money/cars/2016/09/13/google-wants-

companies which previously distributed motor vehicles in Michigan; another provision requires AVs operating in Michigan to be "supplied or controlled by a motor vehicle manufacturer."²¹ According to critics, these requirements could be used to exclude technology companies that modify vehicles they did not manufacture.²²

Against this backdrop, Georgia legislators saw an opportunity to craft a different type of bill that promotes full proliferation of AVs without requiring significant future deregulation to make the technology commercially viable.²³

Recognizing that advancements in AV technology could reduce roadway fatalities and bring new businesses to Georgia, in 2014 the Georgia House of Representatives passed House Resolution 1265 to create the House Autonomous Vehicle Technology Study Committee.²⁴ Chaired by Representative Trey Kelley (R-16th), the committee heard testimony in three public hearings from "experts, researchers, auto industry representatives, and legal advisors" to address the variety of policy issues related to AVs, including public safety, infrastructure, the economy, and civil liability.²⁵

The Committee identified unique challenges presented by AVs, including new cybersecurity threats and potential hacking, unpredictable interactions between humans and driverless vehicles, the loss of driver-related jobs, and infrastructure changes necessary to accommodate driverless technology.²⁶ On the other hand, the Committee noted Georgians would enjoy a number of meaningful benefits from driverless technology, including reduced auto accidents from human error, more efficient traffic flow, and increased economic investment.²⁷

amend-michigan-autonomous-vehicle-bills/90326284/.

^{21.} Id.

^{22.} Id.

^{23.} Setzler Interview, *supra* note 11 (explaining how Georgia's SB 219 was the first bill to deliberately bring all stakeholders together to craft a "consensus bill" that could be used as a national template going forward); Telephone Interview with Rep. Trey Kelley (R-16th) at 20 min., 3 sec. (Apr. 7, 2017) (on file with Georgia State University Law Review) [hereinafter Kelley Interview].

^{24.} House Report, *supra* note 2, at 2.

^{25.} Id.

^{26.} See id. at 6–10.

^{27.} Id. at 3, 5.

For these reasons, Committee testimony largely emphasized the benefits of AV technology over the risks and cautioned against rushed legislation that might "shock the market and cause delay in this exciting technology."²⁸ Georgia State University College of Law Professor Yaniv Heled recommended to the Committee that Georgia should create its own laws instead of duplicating what other states had already done.²⁹ The Committee agreed and concluded that a bad bill would be worse than no bill at all, and Georgia should "allow the market to further mature and grow without government intervention."³⁰ The Committee ultimately recommended that Georgia legislators carefully craft legislation that would "best promote the development of this technology in Georgia" by "provid[ing] a pro-business climate with low taxes and minimal regulation."³¹

By the 2017 session, Georgia lawmakers had been approached by a large auto manufacturer promoting a bill similar to the AV legislation passed in Michigan.³² As in Michigan, this proposed bill was opposed by technology and ride-share companies including Google and Uber, who saw the Michigan-style bill as disproportionately favoring traditional auto manufacturers.³³ Instead, Google and Uber hoped for a bill that would accommodate broader proliferation of AV technology by providing a more level playing field to both traditional and non-traditional manufacturers.³⁴

Georgia lawmakers heeded the lessons from the 2014 study and from the impact of legislation in other states. In 2017, they decided to

^{28.} Id. at 11.

^{29.} Id. at 7.

^{30.} Setzler Interview, *supra* note 11 (explaining that in 2014, Georgia concluded a multi-year study on AV technology and determined that "a bad bill is worse than no bill at all," and that, as a result, Georgia lawmakers concluded it was better to hold off at the time); House Report, *supra* note 2, at 11.

^{31.} House Report, *supra* note 2, at 11.

^{32.} Setzler Interview, *supra* note 11 (explaining that a large automobile manufacturer came to Georgia proposing a manufacturer-centric bill that had high barriers to entry, such as a \$10M capital requirement, and kept the industry locked into testing without private proliferation); Kelley Interview, *supra* note 23, at 2 min., 24 sec. (explaining that the new House bill had been initially modeled after the Michigan bill, before lawmakers changed course and decided to develop a bill that would bring together all stakeholders).

^{33.} Setzler Interview, *supra* note 11 (explaining that Google, Uber, and others opposed the Michigan-modeled bill because they wanted a bill that did not favor traditional auto manufacturers); *see also* Gardner, *supra* note 20.

^{34.} Setzler Interview, *supra* note 11 (explaining that Google, Uber, and others wanted a bill more accommodating to non-traditional auto companies); *see also* Gardner, *supra* note 20.

reject the manufacturer-centric Michigan approach that they saw as "tilti[ng] the scale[s]" in favor of some manufacturers over others.³⁵ Lawmakers also hoped to avoid California's stringent regulatory scheme, which they considered overly restrictive and stifling to innovation.³⁶

Instead, Georgia sought to develop "a consensus bill" that would bring together all stakeholders to craft legislation that could serve as a national model for AV bills across the country.³⁷ The major auto manufacturers saw the opportunity in Georgia's approach and ultimately joined the coalition of stakeholders that included traditional auto manufacturers, technology companies, ride-share companies, engineers, trial attorneys, and insurance companies.³⁸ This allowed Georgia lawmakers to craft a bill that immediately facilitates full proliferation of AV technology without locking the industry into a testing-only phase, while protecting public safety through an appropriate chain of responsibility.³⁹

Bill Tracking

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In large part, Georgia's bill truly is homegrown law.⁴⁰ After many hours of conference calls between lawmakers and other stakeholders, Representative Trey Kelley (R-16th) introduced House Bill (HB) 248 on February 2, 2017, officially putting Georgia's AV legislation in motion.⁴¹ Senator Steve Gooch (R-51st) subsequently introduced SB 219, the Senate version of the bill, on February 22, 2017, which House representatives agreed had a clearer path to passage in the

^{35.} Kelley Interview, *supra* note 23, at 2 min., 24 sec. (explaining that historically there can be divisions between auto manufacturers, tech companies, and ride-share companies, and that Georgia lawmakers did not want to "tilt the scale[s]" in favor of any one industry).

^{36.} Setzler Interview, *supra* note 11 (expressing his concerns with the California bill's overly bureaucratic regulatory scheme that requires government authorization, data submission, and so on).

^{37.} Setzler Interview, supra note 11; Kelley Interview, supra note 23, at 15 min., 18 sec.

^{38.} Setzler Interview, *supra* note 11 (explaining that after Georgia said no to the auto industrycentric proposed bill in 2017, the auto manufacturers understood this and joined the coalition that Georgia built with other stakeholders).

^{39.} *Id.* (explaining that Georgia wants to avoid giving a red light to the development of AV technology, so long as the legal framework provides adequate safeguards).

^{40.} Kelley Interview, *supra* note 23, at 11 min., 42 sec. (emphasizing the "Georgia-grown" nature of SB 219).

^{41.} State of Georgia Final Composite Sheet, HB 248, May. 11, 2017.

current session.⁴² SB 219 passed the Senate without opposition on March 3, 2017,⁴³ and was subsequently approved in the House on March 24, 2017, by a vote of 151 to $17.^{44}$

Although the bill passed the Senate without opposition, SB 219 saw minor opposition in the House.⁴⁵ Among the seventeen representatives who voted against the bill, the primary concern of one vocal opponent focused on cybersecurity and the threat of potential hacking.⁴⁶ Such concerns echoed the risks identified in the House Committee's 2014 study. In its report, the Committee identified "privacy, cyber security, and radio frequency concerns" among the top policy issues implicated by driverless technology.⁴⁷ However, proponents argue that all new technology comes with safety concerns and that today's roadways are already "inherently unsafe" in ways that could be improved through AVs.⁴⁸ "When was the horseless carriage safe enough?" wondered Representative Ed Setzler (R-35th), a member of the 2014 House Study Committee and sponsor of the House's predecessor to SB 219.49 "Georgia wants to avoid giving a red light to the development of this technology. Give it a green light, as long as public safety is protected through appropriate chain of responsibility."50

^{42.} State of Georgia Final Composite Sheet, SB 219, May, 11, 2017; *see also* Kelley Interview, *supra* note 23, at 6 min., 41 sec. (explaining that after Rep. Kelley introduced HB 248, it became clear that the House version could not realistically get through the House in time).

^{43.} State of Georgia Final Composite Sheet, SB 219, May, 11, 2017; Georgia Senate Voting Record, SB 219, Vote #148 (Mar. 3, 2017).

^{44.} Georgia House of Representatives Voting Record, SB 219, Vote #306 (Mar. 24, 2017).

^{45.} *See id.*; Kelley Interview, *supra* note 23, at 17 min., 15 sec. (explaining that SB 219 faced minor resistance in the House even while leadership remained comfortable with the bill).

^{46.} *See, e.g.*, Kelley Interview, *supra* note 23, at 18 min., 15 sec. (explaining that one of Sen. Kelley's colleagues in particular simply could not get comfortable with the technology).

^{47.} House Report, *supra* note 2, at 6.

^{48.} *See* Kelley Interview, *supra* note 23, at 18 min., 15 sec. (recognizing that there is always resistance to new technologies); *see also* House Report, *supra* note 2, at 5 ("[W]ith any new disruptive technology new complications and liabilities would certaintly arise.").

^{49.} Setzler Interview, *supra* note 11 (expressing that SB 219 is meant to avoid the restrictive regulatory burdens that other states impose on autonomy vehicles technology).

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Consideration and Passage by the Senate

Senator Gooch sponsored SB 219 in the Senate.⁵¹ The Senate first read SB 219 on February 22, 2017.⁵² SB 219 was assigned to the Senate Committee on Transportation, which made a number of amendments to the bill.⁵³

The Senate Committee significantly altered the substance and length of the bill. The Committee reduced the original version's twenty-two sections down to only four sections. It removed such substantive requirements as mandatory data collection, pre-authorization of testing, pre-authorization of testing sites limited to prescribed geographical areas, and annual reporting requirements.⁵⁴

The Senate Committee on Transportation favorably reported the bill by substitute on February 28, 2017.⁵⁵ The Senate read the bill for the second time on March 1, 2017, and for the third time on March 3, 2017.⁵⁶ Senators Gooch and Butch Miller (R-49th) offered a floor amendment to modify the definition of "operator" to include one "who causes an automated motor vehicle to move or travel with an automated driving system engaged."⁵⁷ No additional floor amendments were introduced. On March 3, 2017, the Senate adopted the floor amendment and passed the Committee substitute of SB 219, as amended, by a vote of 51 to 0.⁵⁸

Consideration and Passage by the House

Representative Kelley sponsored SB 219 in the House.⁵⁹ The House read the bill for the first time on March 6, 2017, and

^{51.} Georgia General Assembly, SB 219, Bill Tracking, http://www.legis.ga.gov/legislation/en-US/Display/20172018/SB/219. Senators Brandon Beach (R-21st), Jeff Mullis (R-53rd), Tyler Harper (R-7th), and Ben Watson (R-1st) cosponsored the bill. *Id.*

^{52.} State of Georgia Final Composite Status Sheet, SB 219, May 11, 2017.

^{53.} Id.

^{54.} Compare SB 219 (SCS), 2017 Ga. Gen. Assemb., with SB 219, as introduced, 2017 Ga. Gen. Assemb.

^{55.} State of Georgia Final Composite Status Sheet, SB 219, May 11, 2017.

^{56.} Id.

^{57.} SB 219 (SCSFA), 2017 Ga. Gen. Assemb.

^{58.} Georgia Senate Voting Record, SB 219, Vote #148 (Mar. 3, 2017).

^{59.} Georgia General Assembly, SB 219, Bill Tracking, http://www.legis.ga.gov/legislation/en-US/Display/20172018/SB/219.

committed the bill to the House Committee on Transportation.⁶⁰ The House read the bill a second time on March 9, 2017.⁶¹ On March 16, 2017, the House Committee favorably reported the bill by substitute.⁶²

The House Committee substitute contained a separate definition for "dynamic driving task" that lists the operational and tactical functions necessary for an "automated driving system," including lateral motion and steering, longitudinal acceleration and deceleration, and environmental response.⁶³ The Committee also made a substantive change to the minimum liability insurance requirements, which had formerly been set at the same levels required for the taxi and limousine industry, by adding a provision that requires 250 percent of those taxi and limousine coverages until December 31, 2019.⁶⁴

The House read the bill for the third time on March 24, 2017, and passed the Committee substitute on the same day by a vote of 151 to $17.^{65}$

The Senate agreed to the House's amended version of the bill on March 27, 2017, by a vote of 53 to $0.^{66}$ The Senate sent the bill to Governor Nathan Deal (R) on April 7, 2017. The Governor signed the bill into law on May 8, 2017, and the bill became effective on July 1, 2017.⁶⁷

The Act

The Act amends the following portions of Georgia's code: Article 1 of Chapter 1 of Title 40, relating to motor vehicle definitions; and Article 2 of Chapter 5 of Title 40, relating to exemptions to the requirement for a drivers license.⁶⁸ The Act also adds two new Code

^{60.} State of Georgia Final Composite Status Sheet, SB 219, May 11, 2017.

^{61.} *Id*.

^{62.} *Id*.

^{63.} *Compare* SB 219 (HCS), § 1, p. 1, ll. 15–28, 2017 Ga. Gen. Assemb., *with* SB 219 (SCSFA), pp. 1–2, ll. 14–29, 2017 Ga. Gen. Assemb.

^{64.} SB 219 (HCS), § 3, p. 4, ll. 120–31, 2017 Ga. Gen. Assemb.

^{65.} State of Georgia Final Composite Status Sheet, SB 219, May 11, 2017; Georgia House of Representatives Voting Record, SB 219, Vote #306 (Mar. 24, 2017).

^{66.} State of Georgia Final Composite Status Sheet, SB 219, May 11, 2017.

^{67.} O.C.G.A. § 1-3-4 (2017).

^{68. 2017} Ga. Laws 549, §§ 1-2, at 550-52.

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sections: Article 12 of Chapter 6 of Title 40, relating to motor vehicle accidents; and Article 1 of Chapter 8 of Title 40, relating to AV insurance liability.⁶⁹ Altogether, the Act sets up a basic framework for AV operation on Georgia roadways,⁷⁰ with the ultimate goal of increasing road safety⁷¹ and creating a flexible framework that would encourage the growth of the AV industry,⁷² while also acknowledging that AV technology may require an adjustment period.⁷³

Section 1

Section 1 of the Act amends Code section 40-1-1, which provides a list of definitions relating to motor vehicles as used within Title $40.^{74}$ The Act revises paragraphs (15.2), (15.3), (17.2), and (38), while adding new definitions in paragraphs (5.1), (15.4), (17.3), (27.1), and (37.1).⁷⁵ The definitions are purposefully "tight" to ensure that any AV operating in Georgia fully complies with all of the rules of the road.⁷⁶

Several of the changes are straightforward and maintain existing language by simply shifting paragraphs to accommodate the new definitions.⁷⁷ Additionally, the Act adopts language similar to that

^{69. 2017} Ga. Laws 549, § 3, at 552.

^{70.} Video Recording of House Transportation Subcommittee Meeting at 1 hr., 21 min., 22 sec. (Mar. 9, 2017) (remarks by Sen. Steve Gooch (R-51st)),

https://livestream.com/accounts/19771738/events/6811894/videos/151342386 [hereinafter

Transportation Subcommittee Video] (stating that the "bill sets up a basic framework for AV to operate on our roads in Georgia").

^{71.} See Video Recording of House Floor Session at 1 hr., 41 min., 7 sec. (Mar. 24, 2017) (remarks by Rep. Trey Kelley (R-16th)), https://www.youtube.com/watch?v=8FBZ9oath7o [hereinafter House Floor Video] (prefacing his discussion of road safety statistics by stating, "This measure, more than anything, is about safety.").

^{72.} House Report, supra note 2, at 7.

^{73.} See Kelley Interview, *supra* note 23, at 6 min., 7 sec. (discussing the importance of the increased insurance coverage minimums during the early years when the technology is not yet perfected).

^{74. 2017} Ga. Laws 549. § 1, at 550–51.

^{75.} Id.

^{76.} House Floor Video, *supra* note 71, at 1 hr., 41 min., 7 sec. (remarks by Rep. Trey Kelley (R-16th)) ("[W]hat this bill does is put some tight definitions into what an automated driving system is and makes clear that, should they be able to be on Georgia roads, that they must continue to comply with all of the rules of our roads here").

^{77.} See 2017 Ga. Laws 549, 1, at 550–51 (shifting paragraph (15.2), "Electric assisted bicycle," to paragraph (15.3); paragraph (15.3), "Electric personal assisted mobility device," to paragraph (15.4); and paragraph (17.2), "Golf car," to paragraph (17.3)).

adopted by the NHSTA from the Society of Automotive Engineers (SAE) International Standard Defining AV.⁷⁸ This includes paragraph (5.1), defining "automated driving system,"⁷⁹ paragraph (37.1), defining "operational design domain,"⁸⁰ and paragraph (15.2), defining "dynamic driving task."⁸¹ After discussions with engineers and industry experts, the legislature crafted the Act's remaining definitions, drawing inspiration from, but not fully integrating, the SAE definitions.⁸² "[A]t the end of the day," many of the critical definitions reflect the legislature's intent to create "Georgia-grown" legislation that consolidated the divided interests of traditional auto manufacturers, technology companies, and ride-share companies.⁸³

Of particular importance is the Act's revision to paragraph (38), which defines an "[o]perator" as "any person . . . who causes a fully autonomous vehicle to move or travel with the automated driving system."⁸⁴ "Person" retains its ordinary meaning as either a natural person or an entity,⁸⁵ while the "who" refers specifically to the

81. Compare O.C.G.A. § 40-1-1(15.2) (Supp. 2017) with J3016, supra note 79, § 3.8.

^{78.} See Kelley Interview, supra note 23, at 11 min., 42 sec. ("We've looked at what's called a ["SAE"] definitions which [NHTSA] has used for guidance. [So], we really tried to copy a lot of those [SAE] definitions"); Press Release, SAE Int'l, NHTSA Adopts SAE International Standard Defining AV (Oct. 3, 2016), www.sae.org/news/3550/ [hereinafter SAE Press Release].

^{79.} Compare O.C.G.A. § 40-1-1(5.1) (Supp. 2017) with SAE INT'L, J3016 SURFACE VEHICLE RECOMMENDED PRACTICE: TAXONOMY AND DEFINITIONS FOR TERMS RELATED TO DRIVING AUTOMATION SYSTEMS FOR ON-ROAD MOTOR VEHICLES § 3.2 (Sept. 2016), http://standards.sae.org/j3016_201609/ [hereinafter J3016].

^{80.} Compare O.C.G.A. § 40-1-1(37.1) (Supp. 2017) with NAT'L HIGHWAY TRAFFIC SAFETY COMM'N, FEDERAL AUTOMATED VEHICLES POLICY 85 (Sept. 2016), https://www.transportation.gov/AV/federal-automated-vehicles-policy-september-2016 [hereinafter NHSTA Policy].

^{82.} See Kelley Interview, supra note 23, at 11 min., 42 sec. ("[W]e've probably had seven, eight hours worth of conference calls with engineers [] and experts in the field [W]e also really worked just to craft language ourselves based on conversations and research we had with experts and engineers."); J3016, supra note 79, § 5.6 (defining level 5 "full driving automation"); NHSTA Policy, supra note 80 (defining "minimal risk condition").

^{83.} See Kelley Interview, supra note 23, at 11 min., 42 sec. ("[A]t the end of the day, [this is a] Georgia-grown bill. So much of this is language that we've created ourselves."); *id.* at 6 min., 7 sec. ("[W]e got everybody in the room [W]e got Google, we got Apple, we got Uber, we got [General Motors], we got Ford"); Electronic Mail Interview with Rep. Ed Setzler (R–35th) (Nov. 3, 2017) (on file with Georgia State University Law Review) (explaining that Georgia legislators consulted leading legal experts with many of these interested parties) [hereinafter Setzler Email Interview]. "[T]his working group was working on a solution that could not only serve Georgia well for decades to come, but that could potentially be used in forty-nine other states nationwide." Setzler Email Interview, supra.

^{84. 2017} Ga. Laws 549, § 1, at 551; Transportation Subcommittee Video, *supra* note 70, at 1 hr., 34 min., 16 sec. (remarks by Rep. Clay Cox (R-108th)).

^{85.} Transportation Subcommittee Video, supra note 70, at 1 hr., 37 min., 27 sec. (remarks by Rep.

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"entity that furnishes . . . the vehicle and makes it available."⁸⁶ The added clause aims to limit liability to single-point accountability, whether responsibility lies with an auto manufacturer that directly sells and manufacturers the vehicle, a tech company that buys a vehicle and installs an automated driving system, a taxi company that buys or leases an automated vehicle, or an individual owner.⁸⁷ Industry players were willing to embrace liability to promote industry growth.88

Section 2

Section 2 of the Act amends Code section 40-5-21, which relates to persons exempt from having a driver's license.⁸⁹ Specifically, the Act amends subsection (a), adding paragraph (13) and making minor grammatical revisions to paragraphs (11) and (12).⁹⁰

The Act creates an additional exemption to the Uniform Commercial Driver's License Act, whereby neither the "fully autonomous vehicle with the automated driving system engaged" nor its "operator" require a driver's license.⁹¹ In other words, an individual does not need a driver's license to ride in a fully autonomous vehicle.92 This amendment increases the mobility of individuals—such as the elderly, the disabled, or even minors—who, without the help of others, are generally immobile because they lack the ability to drive.⁹³

91. O.C.G.A. § 40-5-21 (Supp. 2017).

Ed Setzler (R-35th)).

⁸⁶ Id

^{87.} See Transportation Subcommittee Video, supra note 70, at 1 hr., 39 min., 22 sec. (remarks by Rep. Ed Setzler (R-35th)).

^{88.} Id. at 1 hr., 39 min., 38 sec. (remarks by Rep. Kevin Tanner (R-9th)).

^{89. 2017} Ga. Laws 549, § 2, at 551-52.

^{90.} Id. at 551-52. (removing the word "and" from the end paragraph of (11) and shifting it to paragraph (12), consistent with the addition of paragraph (13)).

^{92.} Transportation Subcommittee Video, supra note 70, at 1 hr., 21 min., 22 sec. (remarks by Sen. Steve Gooch (R-51st)) ("[T]he day may come where our children and grandchildren will no longer need a driver's license in Georgia Well you wouldn't have to be a licensed driver to ride in [an] autonomous vehicle.").

^{93.} See House Floor Video, supra note 71, at 1 hr., 41 min., 7 sec. (remarks by Rep. Trey Kelley (R-16th)) (reciting the story of the legally blind man who accomplishes his daily errands with the assistance of a fully autonomous vehicle); House Report, supra note 2, at 8 ("Not only would the mobility of the elderly and disabled be increased by AV, other populations could see substantial changes in their community interaction, health, and job opportunities.").

Section 3

Section 3 of the Act adds Code sections 40-6-279 and 40-8-11, relating to accidents and AV insurance liability, respectively.⁹⁴

Code Section 40-6-279

The Act adds Code section 40-6-279, which states that, in the event of an accident with the automated driving system engaged, a fully autonomous vehicle satisfies the various post-accident statutory duties imposed on the vehicle's driver if the vehicle remains at the scene of the accident and the vehicle or its operator promptly contacts law enforcement.⁹⁵

Code Section 40-8-11

The Act adds Code section 40-8-11, which includes both the requirements for operating a fully autonomous vehicle without a human driver present and the motor vehicle liability coverage requirements to do so.⁹⁶ Operation of a fully autonomous vehicle requires the vehicle's complete compliance with all of the "[r]ules of the [r]oad."⁹⁷ The crux of this section, however, is the updated insurance requirement, where the legislature consulted both trial lawyers and the insurance industry.⁹⁸ The Act adds a "sunset" provision, which for the first three years, until December 31, 2019, mandates that motor vehicle liability coverage must be 250 percent of the statutorily required minimum, equivalent to \$750,000 for vehicles containing twelve or fewer passengers.⁹⁹ After three years, the

^{94. 2017} Ga. Laws 549, § 3, at 552–53.

^{95.} *Id.* at 552 ("... the requirements of subsection (a) of Code Sections 40-6-270, 40-6-271, 40-6-273, 40-6-273, and 40-6-273.1 shall be deemed satisfied \dots ").

^{96.} Id. at 552-53.

^{97.} O.C.G.A. § 40-8-11(a)(1) (Supp. 2017) (requiring a fully autonomous vehicle to be "capable of being operated in compliance with Chapter 6 of this title [Uniform Rules of the Road]").

^{98.} See Kelley Interview, supra note 23, at 6 min., 7 sec. ("[W]e got insurance companies in the room, we got the trial lawyers in the room.... [T]hat was a key point[,]... making sure we had the correct insurance requirements in place should [an] accident occur.").

^{99.} O.C.G.A. § 40-8-11(a)(4) (Supp. 2017); O.C.G.A. § 40-1-166(1) (2015) (\$300,000 minimum for capacity of 12 passengers or less); Transportation Subcommittee Video, *supra* note 70, at 1 hr., 40 min., 42 sec. (remarks by Rep. Trey Kelley (R-16th)) (referring to the higher initial minimum insurance coverage requirement as a "sunset").

coverage requirement returns to the \$300,000 minimum generally required for limousines and taxis.¹⁰⁰ The initial increase reflects the legislature's belief that litigation involving a brand new, developing technology will be extremely costly, and the appropriate level of insurance coverage must be available to promote safety and help cover that cost.¹⁰¹

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Georgia's Autonomous Vehicle Legislation: Thorough or Too Complex?

Nevada, California, Florida, and Michigan were the first states to pass AV legislation.¹⁰² Unlike Georgia, all of these states passed legislation before the NHTSA adopted the SAE's standard definitions.¹⁰³ Thus, these states had less guidance, and this lack of guidance is reflected in the less-technical language of their definitions.¹⁰⁴ Additionally, there is no indication that these states, like Georgia, consulted engineers and industry experts while crafting their statutory language.¹⁰⁵

105. See Kelley Interview, supra note 23, at 11 min., 42 sec. (noting lengthy conference calls

^{100.} O.C.G.A. § 40-8-11(a)(4)(B)(i) (Supp. 2017); O.C.G.A. § 40-1-166(1) (2015); Transportation Subcommittee Video, *supra* note 70, at 1 hr., 21 min., 22 sec. (remarks by Sen. Steve Gooch (R-51st)) (stating that the Act adopts the insurance coverage and minimums language that applies to limousines and taxis).

^{101.} See Kelley Interview, *supra* note 23, at 6 min., 7 sec. ("I felt especially in these early years trying to litigate this issue from a products scenario could be very extensive and very expensive and we need the checks and balances of our civil justice system in my opinion to help perfect this technology I wanted to make sure that there would be insurance coverage available to help cover [an accident]."); House Report, *supra* note 2, at 7 ("[M]aking sure that public safety is a priority by requiring appropriate insurance coverage for manufacturers ... will be essential.").

^{102.} See House Report, supra note 2, at 7. As of the House Autonomous Vehicle Technology Study Committee's 2014 Report, only these four states and the District of Columbia had passed AV legislation. *Id.*

^{103.} See SAE Press Release, supra note 78 (NHTSA adopted SAE's J3016 standard in 2016); Self-Driving Legislation, supra note 4 (Nevada bill enacted in June 2011, California in September 2012, Florida in April 2012, and Michigan in December 2013).

^{104.} See, e.g., FLA. STAT. ANN. § 316.003(2) (LexisNexis 2017) (defining AV, in part, as "[a]ny vehicle equipped with autonomous technology. The term 'autonomous technology' 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."); NEV. ADMIN. CODE § 482A.010 (2012) (interpreting "autonomous vehicle" as a vehicle "enabled with artificial intelligence and technology that allows the vehicle to carry out all the mechanical operations of driving without the active control or continuous monitoring of a natural person.").

While a lay person may understand less complex language, legislatures intend these statutes to provide guidance to the AV industry to ensure that AVs on the roads are safe.¹⁰⁶ This means that, optimally, statutory definitions should provide as much clarity as possible to the AV industry. Multiple lengthy definitions create complexity, but sophisticated parties have the resources to sift through this language to determine exactly what is required of them,¹⁰⁷ rather than dealing with the inherent uncertainties created when simple language defines complex technology.¹⁰⁸ Accordingly, Nevada, the first state to adopt AV legislation,¹⁰⁹ passed A.B. 69 during the 2017 legislative session, amending its AV statutes to include many of the same NHSTA standard definitions adopted within the Act.¹¹⁰

Potential Safety Oversights

The legislature stressed that the Act's purpose is to promote safety.¹¹¹ However, compared to several other states, the Act lacks a provision explicitly requiring the vehicle to alert the operator if, for example, "an autonomous technology failure is detected while the autonomous vehicle technology is engaged."¹¹² Although on its face

discussing language with engineers and industry experts).

^{106.} See, e.g., House Floor Video, supra note 71, at 1 hr., 41 min., 7 sec. (remarks by Rep. Trey Kelley (R-16th)).

^{107.} *See* Kelley Interview, *supra* note 23, at 6 min., 7 sec. (interested parties include Google, Apple, Uber, General Motors, and Ford).

^{108.} Compare CAL. VEH. CODE § 38750(a)(1) (Deering 2012) (defining "[a]utonomous technology" as "technology that has the capability to drive a vehicle without the active physical control or monitoring by a human operator") with O.C.G.A. 40-1-1(5.1), (15.2) (Supp. 2017) (defining "automated driving system" and further providing a detailed definition of a term within that definition, "dynamic driving task").

^{109.} Self-Driving Legislation, supra note 4.

^{110. 2017} Nev. Stat. Ch. 608, §§ 2.3, 2.5, 2.7, 3, 4 (defining "[d]ynamic driving task," "[f]ully autonomous vehicle," "[m]inimal risk condition," "[o]perational design domain," and "SAE J3016").

^{111.} *See* House Floor Video, *supra* note 71, at 1 hr., 41 min., 7 sec. (remarks by Rep. Trey Kelley (R-16th)); Transportation Subcommittee Video, *supra* note 70, at 1 hr., 41 min., 50 sec. (remarks by Rep. Kevin Tanner (R-9th)) ("[O]ur goal here is to protect public safety.").

^{112.} FLA. STAT. ANN. § 319.145(1)(a) (LexisNexis 2016); see also, e.g., 2017 Nev. Stat. Ch. 608, § 9 (amending NEV. ADMIN. CODE § 482A.080(3) ("Equipped with a means to alert the human operator to take manual control of the AV if a failure of the automated driving system occurs ..."); CAL. VEH. CODE § 38750(c)(1)(C) (Deering 2012) (requiring pre-operation certification that "[t]he autonomous vehicle has a system to safely alert the operator if an autonomous technology failure is detected while the autonomous technology is engaged").

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this may seem like a glaring oversight, in reality it may not have any significant ramifications because the "minimal risk condition" requirement effectively accomplishes a similar result. To legally operate a fully autonomous vehicle on Georgia roads, the Act requires the fully autonomous vehicle to satisfy a "minimal risk condition" in the event of a system failure, whereby the vehicle, operating without a human driver, "achieves a reasonably safe state, such as bringing the vehicle to a complete stop "¹¹³ This independent action is consistent with the fact that the Act does not require the presence of a licensed human driver,¹¹⁴ but it also begs the question as to what happens if the minimal risk condition itself fails when there is not a licensed human driver in the car. "Minimal risk condition" has an open-ended definition,¹¹⁵ so multiple potential solutions, such as remote operation, exist in this scenario. Many of these potential solutions, however, would themselves rely on similar technology.¹¹⁶

Additionally, some of the early-adopter states have still not fully embraced widespread AV use.¹¹⁷ California and Nevada, for example, limit AV use to testing purposes.¹¹⁸ Further, during testing on public roads, both of these states also require the physical presence of a licensed driver at all times.¹¹⁹ Florida does not require the operator's physical presence, but it does require the operator be a natural person with a valid driver license.¹²⁰ While the Act demonstrates the legislature's foresight,¹²¹ the lack of a testing limitation or an initial license requirement, even if both expired after

^{113.} O.C.G.A. 40-1-1(27.1) (Supp. 2017).

^{114.} O.C.G.A. 40-5-21(a)(13) (Supp. 2017).

^{115.} See O.C.G.A. 40-1-1(27.1) (Supp. 2017).

^{116.} See, e.g., Vehicle communication and remote system control, U.S. Patent No. 6,028,537, at [57].

^{117.} See, e.g., CAL. VEH. CODE § 38750(b) (Deering 2012); NEV. ADMIN. CODE § 482A.130 (2012).

^{118.} CAL. VEH. CODE § 38750(b) (Deering 2012); NEV. ADMIN. CODE § 482A.130 (2012); *see also AV*, NEV. DEP'T OF MOTOR VEHICLES, http://www.dmvnv.com/autonomous.htm (last visited Sept. 8, 2017) ("Currently, the DMV is accepting applications for testing only. AV are not available to the general public.").

^{119.} Cal. Veh. Code § 38750(b) (Deering 2012); Nev. Admin. Code § 482A.130(2)(A) (2012).

^{120.} FLA. STAT. ANN. §§ 316.85, .003(46), .003(50) (LexisNexis 2016).

^{121.} *See* Transportation Subcommittee Video, *supra* note 70, at 1 hr., 37 min., 57 sec. (remarks by Rep. Trey Kelley (R-16th)) (discussing the future of vehicle ownership); *id.* at 1 hr., 21 min, 22 sec. (remarks by Sen. Steve Gooch (R-51st)) ("[T]he day may come where our children and grandchildren will no longer need a driver's license in Georgia").

a short period of time, may be too ambitious given other states' reticence.¹²²

No Problems with Pronouns

Arguably the most important definition in the Act, determining "who" is the "operator," ultimately determines liability in the event of an accident involving a fully autonomous vehicle.¹²³ Representative Ed Setzler (R-35th) attempted to expel all ambiguity, making clear that the language defines "who" in terms of ownership, focusing on a single point of accountability.¹²⁴ Therefore, in the event of litigation arising from an accident, determining liability appears, on its face, fairly straightforward. The operator is whomever "furnishes the vehicle and makes it available."¹²⁵

Some states, like California, include the person seated in the driver's seat within the definition of an "operator."¹²⁶ However, this may not be an issue with respect to liability because California restricts AV use to testing solely by agents of the manufacturer.¹²⁷ Conversely, in Georgia, if an individually-owned AV gets into an accident, that individual is the "operator." This creates an issue in the event of a technology-related accident, because, as previously discussed, the Act does not contain a provision requiring AVs to warn owners in the event of a technological failure.¹²⁸ In the future, the Act may need revision if AV technology becomes readily available to the public. However, as noted by Representative Setzler, the Act's focus on single-point accountability does not preclude an operator from subsequently filing suit against the producer of a

^{122.} Georgia legislators knew about the license requirement in other states and intentionally omitted such a requirement from the Act. *See* Setzler Interview, *supra* note 11 (describing the original Florida bill as a "non-law" because it still required a driver to be present in the driverless vehicle).

^{123.} O.C.G.A. 40-1-1(38) (Supp. 2017) (""Operator' means any person... who causes a fully autonomous vehicle to move or travel with the automated driving system engaged.").

^{124.} Transportation Subcommittee Video, *supra* note 70, at 1 hr., 37 min., 27 sec. (remarks by Rep. Ed Setzler (R-35th)).

^{125.} Id.

^{126.} CAL. VEH. CODE § 38750(a)(4) (Deering 2012).

^{127.} CAL. VEH. CODE § 38750(b)(1) (Deering 2012).

^{128.} See supra notes 123-26 and accompanying text.

specific technological component of the autonomous driving system when that component's failure causes the accident.¹²⁹

Additionally, operators are required to carry liability coverage equal to 250 percent of the statutory minimum for the first three years, generally equal to \$750,000.130 In Nevada and California, operators are required to carry liability coverage in the amount of \$5,000,000,¹³¹ dwarfing the Act's requirement. The Act's insurance coverage looks even worse in comparison after the three-year period expires.¹³² One explanation for this discrepancy rests on the fact that Nevada and California are taking a more cautious approach to AV technology.¹³³ The Georgia legislature, on the other hand, has fully embraced AV technology, and this coverage discrepancy highlights an area of the Act that should be monitored going forward, especially once the insurance liability coverage minimums revert to their original amounts. In the future, the legislature may need to consider crafting new legislation in the context of fully autonomous vehicle insurance coverage, rather than basing it on existing limousine and taxi law.¹³⁴

One of the legislature's goals was to create model legislation for the rest of the country.¹³⁵ At the conclusion of the 2017 legislative session, twenty-six states have yet to enact any form of AV legislation.¹³⁶ Whether these states draw inspiration from the Act remains to be seen. The legislature also intended to address AV safety, liability, and insurance.¹³⁷ The Act at a minimum addresses all of these concerns,¹³⁸ but the efficacy of these provisions similarly remains unseen. Overall, the Act represents the Georgia legislature's

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^{129.} See Transportation Subcommittee Video, supra note 70, at 1 hr., 39 min., 22 sec. (remarks by Rep. Ed Setzler (R-35th)).

^{130.} O.C.G.A. 40-8-11(a)(4)(A) (Supp. 2017).

^{131.} CAL. VEH. CODE § 38750(b)(3) (Deering 2012); 2017 Nev. Stats. Ch. 608, § 7.7 (amending NEV. ADMIN. CODE § 482A.060).

^{132.} O.C.G.A. § 40-8-11(a)(4)(B)(ii)(B)(i) (Supp. 2017); O.C.G.A. § 40-1-166 (2015).

^{133.} See CAL. VEH. CODE § 38750(b) (Deering 2012); NEV. ADMIN. CODE § 482A.130 (2012).

^{134.} Transportation Subcommittee Video, *supra* note 70, at 1 hr., 21 min., 22 sec. (remarks by Sen. Steve Gooch (R-51st)) (stating that the Act adopts the insurance coverage and minimums language that applies to limousines and taxis).

^{135.} Kelley Interview, supra note 23, at 15 min., 18 sec.

^{136.} See Self-Driving Legislation, supra note 4.

^{137.} See House Report, supra note 2, at 2; Kelley Interview, supra note 23, at 6 min., 7 sec.

^{138.} See, e.g., O.C.G.A. §§ 40-1-1, 40-8-11(3)-(4) (Supp. 2017).

willingness to take its hand off the wheel, but AV technology has a long road ahead before it realizes its full potential.

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