GIBSON DUNN

Connected and Autonomous Vehicles (“CAVs”) Legal Update: U.S. Department of Transportation Seeks Public Comment on Automated Driving System Safety Principles

Client Alert | November 25, 2020

On November 19, 2020, the U.S. Department of Transportation’s National Highway Traffic Safety Administration (“NHTSA”) announced that it is seeking public comment on the potential development of a framework of principles to govern the safe behavior of automated driving systems (“ADS”) for use in connected and autonomous vehicles (“CAVs”).[1] On the same day, NHTSA issued an advance notice of proposed rulemaking (“NPRM”) on a possible ADS framework (the “ADS NPRM”).[2] The ADS NPRM sends a strong signal that vehicles with ADS may in future be subject to a new generation of performance and safety (as well as design) standards.

Background

Last year, NHTSA announced that it was seeking public feedback about the possibility of removing “regulatory barriers” relating to the introduction of automated vehicles in the United States.[3] Subsequently, NHTSA sought stakeholder comments on proposed regulations intended to address the challenges involved in determining which requirements of the existing Federal Motor Vehicle Safety Standards (“FMVSS”)[4] are relevant to the safety needs of ADS-equipped vehicles without traditional manual controls, as well as on “adapting or developing the requirements and the associated test procedures so that the requirements can effectively be applied to the novel vehicle designs that may accompany such vehicles without adversely affecting safety.”[5]

NHTSA started seeking such public comments as a result of increasing confusion in the industry on how NHTSA plans to address ADS technologies. Although wide-scale deployment still may be years away, many companies are actively developing and testing ADS technology throughout the United States. The lack of specific regulatory guidance for ADS has created obstacles for OEMs trying to meet, and certify compliance with, FMVSS while developing and deploying their products in a way that establishes safety equivalence between traditionally operated vehicles and ADS-DVs. Several CAV manufacturers have applied for exemptions from compliance with existing FMVSS.[6] In February 2020, NHTSA announced its first approved exemption—from three federal motor vehicle standards—to Nuro, a California-based company that plans to deliver packages with a robotic vehicle smaller than a typical car.[7] The exemption allows the company to deploy and produce no more than 5,000 of its “low-speed, occupant-less electric delivery vehicles” in a two-year period, which would be operated for local delivery services for restaurants and grocery stores.[8]

Related People

Frances Waldmann

In addition to these actions, on March 17, 2020 (the “March NPRM”), NHTSA issued an earlier NPRM “to improve safety and update rules that no longer make sense such as requiring manual driving controls on autonomous vehicles.”[9] The March NPRM aimed to “help streamline manufacturers’ certification processes, reduce certification costs and minimize the need for future NHTSA interpretation or exemption requests.” Specifically, the March NPRM proposed removing “unnecessary regulatory barriers to ADS-equipped vehicles” in the crashworthiness FMVSS, while seeking to maintain current levels of occupant protection under these standards and also remaining “technology neutral.” For example, the proposed regulation would apply front passenger seat protection standards to the traditional driver’s seat of a CAV, rather than safety requirements that are specific to the driver’s seat. The March NPRM did not propose any changes to existing occupant protection requirements for traditional vehicles with manual controls. NHTSA described the March NPRM as a “[h]istoric first step for the agency to remove unnecessary barriers to motor vehicles equipped with automated driving systems.”

The ADS NPRM

Now, as noted above, NHTSA has issued a new ADS NPRM. According to the ADS NPRM, the contemplated ADS framework would “objectively define, assess, and manage the safety of ADS performance while ensuring the needed flexibility to enable further innovation,” drawing upon “existing Federal and non-Federal foundational efforts and tools in structuring the framework as ADS continue to develop.”

NHTSA is seeking public comments on how to select and design the structure and key elements of a framework and the appropriate administrative mechanisms to achieve the goals of improving safety, mitigating risk, and enabling the development and introduction of new safety innovations, as well as on what aspects of ADS performance are suitable for potential safety standard setting. “This rulemaking will help address legitimate public concerns about safety, security and privacy without hampering innovation in the development of automated driving systems,” said U.S. Secretary of Transportation Elaine Chao.[10]

While NHTSA takes the view that the establishment of FMVSS for ADS would be premature at this stage, it seeks feedback on a proposed governmental safety framework specifically tailored to ADS and the role NHTSA would play with respect to guidance and potential regulation. The proposed framework spans a broad range of potential regulatory approaches—from a “hands-off” approach that would include the issuance of guidance documents addressing best industry practices, providing information to consumers, and describing different approaches to research and summarizing the results of research, to more formal regulation such as rules requiring reporting and disclosure of information or the adoption of ADS-specific FMVSS.[11]

The primary ADS components that would be the focus of NHTSA’s attention are (1) sensors (how the ADS receives information about its environment); (2) “perception” functions (how the ADS detects and categorizes other road users (vehicles, motorcyclists, pedestrians, etc.), infrastructure (traffic signs, signals, etc.), and conditions (weather events, road construction, etc.)); (3) “planning” components (how the ADS analyzes the situation, plans the route it will take on the way to its intended destination, and makes decisions on how to respond appropriately to the road users, infrastructure, and conditions detected and categorized); and (4) “control” functions (how the ADS executes the driving functions necessary to carry out that plan (“control”) through interaction with other parts of the vehicle).[12] NHTSA also seeks feedback on what kind of engineering measures should be included in the framework, and whether ADS-specific regulations should be issued prior to testing and validation or commercial deployment of the technology.[13]

Written comments from stakeholders will be due within 60 days from the date of publication of the ADS NPRM in the Federal Register, likely to be November 24 or 25. After considering such comments, we anticipate that regulatory changes to testing

procedures (including pre-programmed execution, simulation, use of external controls, use of a surrogate vehicle with human controls, and technical documentation) and modifications to current FMVSSs (such as crashworthiness, crash avoidance, and indicator standards) will be finalized by NHTSA in 2021. We encourage our clients to contact us if they would like further information or assistance in developing and submitting comments.

Given the fast pace of developments and tangle of applicable rules, it is essential that companies operating in this space stay abreast of legal developments in states as well as cities in which they are developing or testing AVs, while understanding that any new federal regulations may ultimately preempt states' authorities to determine, for example, safety policies or how they handle their passengers' data. For more information on legal and policy developments related to CAVs, please contact the authors or see Gibson Dunn's previous legal updates on legislative developments and NHTSA's broader policy efforts, including the re-introduction of the SELF-DRIVE Act (here) and NHTSA's Autonomous Vehicle ("AV") 4.0 Guidelines (here).

---

[1] NHTSA, Press Release, *U.S. Department of Transportation Seeks Public Comment on Automated Driving System Safety Principles* (Nov. 19, 2020), available at https://www.nhtsa.gov/press-releases/public-comment-automated-driving-system-safety-principles.

[2] *Framework for Automated Driving System Safety*, 49 Fed. Reg. 571 (Nov. 19, 2020), available here.

[3] *Removing Regulatory Barriers for Vehicles With Automated Driving Systems*, 84 Fed. Reg. 24,433 (May 28, 2019) (to be codified at 49 Fed. Reg. 571); *see also* Removing Regulatory Barriers for Vehicles with Automated Driving Systems, 83 Fed. Reg. 2607, 2607 (proposed March 5, 2018) (to be codified at 49 Fed. Reg. 571).

[4] FMVSS provide the minimum safety performance requirements for motor vehicles or items of motor vehicle equipment, but were drafted with traditionally operated vehicles in mind. ADS, as defined by NHTSA, is the "hardware and software that are, collectively, capable of performing the entire dynamic task of driving on a sustained basis." (Within the SAE automation taxonomy, ADS describes automation Levels 3, 4, and 5).

[5] *Supra*, n.3 at 6.

[6] *See, e.g.,* the petition filed by General Motors requesting temporary exemption from FMVSSs which require manual controls or have requirements that are specific to a human driver. General Motors, LLC - *Receipt of Petition for Temporary Exemption from Various Requirements of the Safety Standards for an All Electric Vehicle with an Automated Driving System*, 84 Fed. Reg. 10182.

[7] Congressional Research Service, *Issues in Autonomous Vehicle Testing and Deployment* (Feb. 11, 2020), available at https://fas.org/sgp/crs/misc/R45985.pdf; U.S. Dep's of Transp., NHTSA Grants Nuro Exemption Petition for Low-Speed Driverless Vehicle, available at https://www.nhtsa.gov/press-releases/nuro-exemption-low-speed-driverless-vehicle.

[8] For more information, see our *Artificial Intelligence and Automated Systems Legal Update (1Q20)*, available at https://www.gibsondunn.com/artificial-intelligence-and-automated-systems-legal-update-1q20/.

[9] U.S. Dep't of Transp., *NHTSA Issues First-Ever Proposal to Modernize Occupant Protection Safety Standards for Vehicles Without Manual Controls*, available at https://www.nhtsa.gov/press-releases/adapt-safety-requirements-ads-vehicles-without-

manual-controls; *see further* Gibson Dunn's Artificial Intelligence and Automated Systems Legal Update (1Q20), available at https://www.gibsondunn.com/artificial-intelligence-and-automated-systems-legal-update-1q20/.

[10] NHTSA, Press Release (Nov. 19, 2020), *supra*, n.1.

[11] NHTSA, Framework for Automated Driving System Safety, *supra*, n.4 at 8.

[12] *Id*.

[13] *Id*. at 11.

Gibson Dunn's lawyers are available to assist in addressing any questions you may have regarding these developments. Please contact the Gibson Dunn lawyer with whom you usually work, any member of the firm's Artificial Intelligence and Automated Systems Group, or the following authors:

H. Mark Lyon – Palo Alto (+1 650-849-5307, mlyon@gibsondunn.com)
Frances A. Waldmann – Los Angeles (+1 213-229-7914, fwaldmann@gibsondunn.com)

Please also feel free to contact any of the following practice group members:

Artificial Intelligence and Automated Systems Group:
H. Mark Lyon – Chair, Palo Alto (+1 650-849-5307, mlyon@gibsondunn.com)
J. Alan Bannister – New York (+1 212-351-2310, abannister@gibsondunn.com)
Patrick Doris – London (+44 (0)20 7071 4276, pdoris@gibsondunn.com)
Kai Gesing – Munich (+49 89 189 33 180, kgesing@gibsondunn.com)
Ari Lanin – Los Angeles (+1 310-552-8581, alanin@gibsondunn.com)
Robson Lee – Singapore (+65 6507 3684, rlee@gibsondunn.com)
Carrie M. LeRoy – Palo Alto (+1 650-849-5337, cleroy@gibsondunn.com)
Alexander H. Southwell – New York (+1 212-351-3981, asouthwell@gibsondunn.com)
Christopher T. Timura – Washington, D.C. (+1 202-887-3690, ctimura@gibsondunn.com)
Eric D. Vandevelde – Los Angeles (+1 213-229-7186, evandevelde@gibsondunn.com)
Michael Walther – Munich (+49 89 189 33 180, mwalther@gibsondunn.com)

Related Capabilities

Artificial Intelligence