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Docket Management Facility
U.S. Department of Transportation
1200 New Jersey Avenue, SE
West Building, Ground Floor, Room W12-140
Washington, DC 20590-0001

Re: Framework for Automated Driving System Safety (Docket No. NHTSA-2020-0106)

The National Association of Manufacturers is pleased to provide the Department of Transportation with these comments in response to the National Highway Traffic Safety Administration's advance notice of proposed rulemaking (ANPRM) on the development of a framework for Automated Driving System (ADS) safety. The NAM is the largest manufacturing association in the United States representing manufacturers in every industrial sector and in all 50 states. Manufacturing employs 12.2 million men and women, contributes more than $2 trillion to the U.S. economy annually, has the largest economic impact of any major sector, and accounts for nearly 62% of private-sector research and development.[1] The NAM is the powerful voice of the manufacturing community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States.

As automotive technologies continue to advance, manufacturers in the United States continue to take the lead in designing and making products that improve safety and enhance the driving experience. Manufacturers have been early innovators of the technologies and products found in Automated Driving Systems and are building on long-standing research, knowledge and success to advance the safe, timely and widespread deployment of autonomous vehicles. The NAM represents all parts of the passenger and commercial AV supply chain, including original equipment manufacturers, suppliers, and entities involved in the design, testing and manufacturing of ADS, as well as commercial vehicle and multimodal transportation manufacturers and suppliers. The NAM also represents manufacturers who rely on advanced transportation technology to improve their supply chains and better serve their customers and communities.

The NAM believes vehicles equipped with well-tested and proven ADS will present a new opportunity to make our roadways safer. According to NHTSA data, human error remains the critical cause of 94 percent of vehicle crashes.[2] At every stage of the process, safety continues to be a primary objective for manufacturers that are designing, building, testing, operating and deploying autonomous vehicles. Manufacturers appreciate that NHTSA recognizes the safety improvement potential presented by ADS technologies, and the need to prioritize the safe development and testing of AV technologies by factoring safety into the process toward broad deployment.

[1] https://www.nam.org/facts-about-manufacturing/
[2] https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812506

The NAM welcomes the opportunity to comment on this ANPRM considering development of a framework for ADS safety. The NAM participated in DOT's previous efforts to gather input on ADS guidance documents, submitting comments in 2016 to the *Federal Automated Vehicle Policy* and in 2017 to *Automated Driving Systems: A Vision for Safety*, as well as in 2018 to the Department's request for comment on *Preparing for the Future of Transportation: Automated Vehicles 3.0* (*AV 3.0*). Most recently, the NAM provided input on NHTSA's ANPRM on *Removing Regulatory Barriers for Vehicles With ADS*.

The NAM continues to urge collaboration between industry and government to establish a framework that fosters further innovation in autonomous vehicle technology by manufacturers in America and promotes the safe, timely deployment of this technology. The NAM's *Building to Win* infrastructure blueprint states this core objective:

> *This is an exciting time for automotive and truck manufacturers as well as suppliers, but to maintain a mantle of leadership, our nation's elected officials and leaders must get safety regulations and the adoption of new technologies right… Also, a federal regulatory approach that considers the industry a technology partner and allows for innovation will be instrumental to the further success of (ADS).*[3]

The NAM has consistently called for guidance that is voluntary and provides flexibility for manufacturers to continue to innovate in ADS and has supported the approach taken by DOT in previous ADS guidance development documents, such as *AV 3.0*. NHTSA is now building on this prior work to consider the appropriate safety framework and administrative mechanisms for the implementation and oversight of that framework, ranging from voluntary mechanisms to regulatory tools. As NHTSA considers this next step, the automation principles DOT adopted in *AV 3.0*, which include prioritizing safety, remaining technology neutral, modernizing regulations and promoting a consistent regulatory and operational environment, should continue to guide the development of an ADS safety framework.

The NAM appreciates NHTSA's consideration of the distinct roles of state and local governments and the federal government in ADS safety principles and supports NHTSA's recognition of the need for a strong, federal framework on the vehicle performance and design aspects of AV safety, as well as the guiding policy on roadway safety. This complements State governments' role in traffic safety and in facilitating numerous AV pilot programs and on-road testing. A strong federal framework on ADS safety is necessary to avoid the emergence of conflicting state requirements, which would unnecessarily stall the timely deployment of AV technologies across the United States. It is also needed to ensure harmonization between the U.S. framework for ADS safety and the emergence of international legal frameworks. In addition to the ongoing work at the Department, the NAM continues to call on Congress to enact legislation that would speed the development of NHTSA safety regulations appropriate for AVs, provide clear pathways for AV manufacturers to test the technology while regulations are updated and clarify the role of the federal and state governments to prevent a potentially conflicting and costly regulatory environment.[4]

Manufacturers support NHTSA's inclination in the ANPRM towards a performance-oriented approach to ADS safety that permits ongoing design flexibility, safety innovation and

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[3] https://www.nam.org/wp-content/uploads/2019/05/IIHR.BTW_.2019.v08.pdf

[4] http://documents.nam.org/IIHRP/2021-02-03%20CFM%20AV%20Legislation%20Introduction%20Letter_FINAL.pdf?_zs=BxMWd1&_zl=6VbO7

novel designs in emerging AV technologies. As NHTSA looks to further delineate engineering and process measures of an ADS safety framework, the NAM agrees with the agency's focus on the core ADS functions of sensing, perception, planning and control. NHTSA should continue to gather data that informs the timely development of performance metrics for these core functions. The ongoing, active testing of ADS is producing increasing amounts of data, and AV pilot programs can provide reliable, transparent avenues for additional data. The AV TEST Initiative permits state governments and organizations to submit detailed information regarding ADS testing to NHTSA, and NHTSA should utilize this data to advance performance metrics in the core areas identified. The federal framework should remain committed to an approach that provides clear guidelines for the testing and deployment of AVs and flexibility for industry-led technical development and design of AV technologies and standards.

Manufacturers support the critical factors NHTSA identified in the ANPRM to guide the agency's consideration of administrative mechanisms for implementation and oversight of ADS:

- Consistent and Reliable Assurance of Safety;
- Technology Neutrality/ Performance-Based;
- Predictability;
- Transparency;
- Efficiency;
- Equity;
- Consistent with market-based innovation; and
- Resource requirements.

Each of these are appropriate factors for NHTSA's consideration while advancing the detailed approaches and metrics of a federal framework for ADS safety, and they are critical factors for ensuring solutions will work for stakeholders creating, manufacturing and investing in AV technologies.

Manufacturers appreciate DOT's ongoing commitment to partner with AV technology innovators and manufacturers to establish a framework and mechanisms that foster safe and timely adoption of ADS technologies. AV technologies are advancing around the world. The global competitiveness of U.S. manufacturers and the technological leadership of the United States require an AV policy and regulatory framework that supports the speed of innovation while ensuring safety and public trust in transformational automotive technologies. Manufacturers look forward to working with DOT and NHTSA, as well as policymakers and stakeholders in the public and private sectors to advance this goal.

Comments submitted electronically by:

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