



DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA-2026-2047]

Federal Motor Vehicle Safety Standards; Denial of a Petition for Rulemaking

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Denial of petition for rulemaking.

SUMMARY This document denies the September 11, 2025, petition for rulemaking submitted by Eric Dauster (“petitioner”). The petitioner requested that the agency initiate rulemaking to establish new standards for a centralized National Map Database (NMD) containing static roadway information and requiring global mapping providers to conform to these standards. The petitioner stated that the NMD standards should apply to entities responsible for the installation and maintenance of road infrastructure, including local municipalities, state transportation agencies, and private contractors. NHTSA is denying the petition based on a lack of information necessary for the agency to take action under the National Traffic and Motor Vehicle Safety Act, as well as the agency’s view concerning the efficient allocation of agency resources.

DATES: [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: For technical issues, please contact Mr.

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I. Background

The National Traffic and Motor Vehicle Safety Act ("Safety Act") (49 U.S.C. 3010 et seq.) authorizes NHTSA to issue safety standards for new motor vehicles and new items of motor vehicle equipment. Each safety standard must be practicable, meet the need for motor vehicle safety, and be stated in objective terms. NHTSA does not endorse or approve any vehicles or items of equipment. Further, NHTSA does not approve or certify vehicles or equipment. Instead, the Safety Act establishes a self-certification process under which each manufacturer is responsible for certifying that its products meet all applicable safety standards.

Petitions for rulemaking are governed by 49 CFR part 552. Pursuant to section 552.6, the agency conducts a technical review of the petition, which may consist of an analysis of the material submitted, together with information already in possession of the agency. In deciding whether to grant or deny a petition, the agency considers this technical review as well as appropriate factors, which include, among others, allocation of agency resources and agency priorities.¹

II. Petition for Rulemaking

The petitioner submitted a letter, dated September 11, 2025, that includes a rulemaking petition pursuant to 49 CFR part 552.² The rulemaking petition requests that NHTSA establish

¹ 49 CFR 552.8

² See the petition in the docket for this notice.

standards for a NMD that would serve as a centralized repository of static roadway information. The petition further requests all entities responsible for the installation and maintenance of road infrastructure maintain the NMD and all global map providers conform existing map databases to the new NMD standards. The petitioner states that the NMD standards should be established due to the increasing deployment of Automated Driving Systems (ADS) and the reliance of ADS on accurate and consistent static map data to operate safely. As supporting information, the petition includes various references, such as short descriptions and links to articles and videos.

III. NHTSA's Analysis and Decision

After a thorough review of the petition and accompanying materials provided by the petitioner, NHTSA has decided to deny the NMD rulemaking petition based on a lack of sufficient data necessary to proceed under the Motor Vehicle Safety Act, 49 U.S.C. §30111 (a) and (b) the allocation of agency resources.

Insufficient Information to Suggest NMD Will Address Safety Need

Although conformance of map standards may have safety benefits for the deployment and operation of ADS-equipped vehicles, the petitioner has not provided sufficient information to establish the extent to which the proposed NMD standards will address ADS relevant safety needs.

NHTSA reviewed all sources provided by the petitioner to determine whether and to what extent a safety need exists that could be resolved by introducing NMD standards. Without more detailed evidence, it is inconclusive whether map data inaccuracies are the root cause for the ADS performance errors described by each of the provided sources. Some sources do not directly reference map inaccuracies but instead point to localization, perception, or other software errors. For example, the petitioner references UC Irvine research from 2025 and summarily states the research “demonstrated that multicolored stickers placed on traffic signs can cause self-driving systems to misinterpret commands, resulting in hazardous braking or

speeding.” In reviewing the research, UC Irvine points to possible limitations with regards to traffic sign recognition due to physical patches or posters applied to stop signs and speed limit signs, which NHTSA interprets as vision-based inaccuracies rather than map inaccuracy issues.

Other sources cited in the petition and incidents reviewed by the petitioner and included in the petition make claims that map data inaccuracies are the root cause of incidents with ADS-equipped vehicles. However, upon NHTSA’s review, depending on implementation specifics, such claims are inconclusive and could equally be attributed to localization, perception, or other software errors. Where map updates are included as a remedy, they conform to the specification of the particular ADS entity. For example, the petitioner provided links to articles referring to two recalls conducted by Waymo. One recall involved a software update to avoid incidents involving stationary and semi-stationary roadway barriers, such as chains and gates, by improving detection and avoidance of such roadway barriers.³ The second recall relates to a collision with a pole in Phoenix, Arizona.⁴ The remedy included (among other software updates) a map update to include a hard road edge between the driveable surface area and pole-like permanent objects which reside within the boundaries of the road rather than the accuracy of the placement of the object itself. The map update remedy is pertinent to Waymo’s specifications for mapping near particular objects; however, the specific approach or application of such boundaries may not be pertinent or directly transferable to all ADS developers or operators. While the sources provided support the importance of maps in maintaining ADS safety, the petitioner has not demonstrated sufficient information to establish the extent to which the proposed NMD standards will address ADS safety needs across the industry.

Insufficient Information to Support Statutory Authority

³ <https://www.nhtsa.gov/?nhtsaId=25E034000>

⁴ <https://www.nhtsa.gov/?nhtsaId=24E049000>

The petitioner has not provided information on the practical means or solutions by which NHTSA may establish a standard.

Consistent with the Motor Vehicle Safety Act, the Federal Motor Vehicle Safety Standards apply to manufacturers of motor vehicles and motor vehicle equipment. The proposed rulemaking calls for a national map database of static road features which is to be maintained by entities responsible for installing and maintaining road infrastructure. Since these entities are not manufacturers of motor vehicle equipment, NHTSA would likely not have authority to regulate these entities under the Motor Vehicle Safety Act.

Furthermore, the petition provides enumerated rule requirements, including accuracy standards, update frequency and validation, data integrity and cybersecurity, and reconciliation and standardization for external mapping companies, which may present significant challenges to practicability. High-definition maps are not specifically called out in the petition but are implied as the solution based on the proposed standards for positional accuracy, resolution, and acceptable error margins. To generate this level of accuracy at the frequency (the petition states daily at minimum) and resolving map errors (petition states within 72 hours) is likely to be a significant burden to the responsible entities. In addition, the entities responsible for installing and maintaining road infrastructure may not have the existing expertise or resources to collect and maintain such detailed level of information. The petition also calls for a public error-reporting portal to catch possible map errors. This could result in questionable error reporting which would need to be verified first before taking action to correct. No practicable solutions are provided for responsible entities to verify such error reporting nor means to determine resolution criticality based on safety impact considering the multitude of different ADS implementations and areas of operation, influencing their sensitivities to such errors. Finally, a phased rollout approach is proposed to prioritize high-traffic and high-risk areas along with error update time windows based on what is deemed critical or non-critical. Given the variety of ADS applications and operating areas, it is not clear by what means or methods error criticality is to be determined

nor prioritization of update rollout to avoid the potential for uneven advantages given to specific ADS manufacturers or operators.

The Department's Automated Vehicle (AV) Framework⁵ follows three guiding principles to: (1) prioritize the safety of ongoing ADS-equipped vehicle operations on public roads, (2) unleash innovation by removing unnecessary regulatory barriers, and (3) enable commercial deployment of ADS-equipped vehicles to enhance safety and mobility for the American public. NHTSA has already begun allocation of resources to meet the principles of this framework, including through initiating rulemakings related to ADS and reforming its exemption processes, as well as continuing to monitor ADS-equipped vehicles through the Standing General Order on Crash Reporting (SGO) and other enforcement activities. At this time, due in part to the concerns identified above, NHTSA does not believe its resources promoting ADS safety are best used in pursuing a rulemaking based on this petition.

Therefore, NHTSA is denying Eric Dauster's rulemaking petition.

Authority: 49 U.S.C. §30113; delegation of authority at 49 CFR §1.95.

Issued on in Washington, D.C., under authority delegated in 49 CFR 1.95 and 501.5.

Jonathan Morrison,
Administrator.

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⁵ See <https://www.transportation.gov/briefing-room/trumps-transportation-secretary-sean-p-duffy-unveils-new-automated-vehicle-framework>