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Docket Operations
U.S. Department of Transportation
1200 New Jersey Avenue SE
Room W58-213, West Building
Washington, DC 20590-0001

Re: Comments of the National Association of Manufacturers; Parts and Accessories Necessary for Safe Operation; Application for Exemption From Aurora Operations, Inc. (Docket No. FMCSA-2026-0958)

To whom it may concern:

The National Association of Manufacturers (“NAM”) respectfully submits these comments in support of Aurora Operations, Inc.’s application for a five-year exemption from certain warning device requirements under 49 CFR § 392.22(b), 393.25(e), and 393.95(f). The proposed exemption would allow Level 4 automated commercial motor vehicles (“CMVs”) to utilize cab-mounted warning beacons in lieu of requiring physical placement of roadside warning triangles or fuses.

The Importance of Freight Mobility to Manufacturers

The NAM is the largest manufacturing association in the United States, representing manufacturers in every industrial sector and in all 50 states. Manufacturing contributes \$2.96 trillion to the U.S. economy annually. The NAM works on behalf of the more than 13 million people who make things in America by advocating for policies that strengthen manufacturing competitiveness, innovation, and economic growth.¹

Manufacturers depend on a safe, reliable, and efficient freight transportation network to move raw materials, inputs, equipment, and finished goods across the country. As the transportation sector continues to evolve, it is important that federal regulations keep pace with emerging technologies that have the potential to strengthen safety outcomes, improve supply chain reliability, and support continued innovation.

Improving Safety for Drivers and Road Users

The exemption request presents a practical opportunity to improve safety while accommodating the operational realities of autonomous commercial vehicles. Requiring a person to exit a stopped CMV and place warning triangles along an active roadway exposes that person to significant safety risks, particularly on high-speed roadways, during nighttime operations, or in poor weather conditions.

The proposed warning beacons are mounted high on the vehicle cab and designed to provide early visibility to approaching motorists. As such, they offer a reasonable alternative that provides approaching motorists with clear and immediate visibility of a stopped vehicle while reducing the need for unnecessary roadside exposure. This not only maintains roadway warning functions but

¹ See Facts About Manufacturing, available at <https://nam.org/manufacturing-in-the-united-states/facts-about-manufacturing-expanded/>

also reduces the need for individuals to enter travel lanes or roadway shoulders to manually place warning triangles.

Research and Operational Data Supporting the Request

When considering how proposed flashing beacons compare to the traditional warning triangles or fusees, studies from Aurora, as well as an independent study from Virginia Tech Transportation Institute (VTTI), have shown that flashing beacons perform similarly to the triangles or fusees.

In its application, Aurora cites data from a naturalistic study involving more than 7,000 passing vehicles. Using cab-mounted sensors, the study measured how motorists responded to both traditional warning triangles and cab-mounted warning beacons across a variety of roadway geometries and lighting conditions. According to Aurora, the results showed the beacons performed equivalently to warning triangles, with drivers responding at similar rates and distances and demonstrating comparable lane positioning and speed adjustments around the stopped vehicle.²

Additionally, an independent study conducted by VTTI evaluated how drivers detected, recognized, and responded to a stopped truck equipped with mounted flashing beacons or warning triangles in day and nighttime conditions. They studied whether drivers could detect the truck, recognize the truck as a stopped vehicle, and whether they had safe driving responses. The VTTI study determined that cab-mounted flashing beacons performed better during nighttime conditions and were at least equivalent to triangles during daytime conditions.³

Aurora's real-world operational data also provides important insight into the performance of the system. According to the application, Aurora has operated more than 500,000 miles under FMCSA's waiver authority using cab-mounted warning beacons without roadway collisions involving stopped vehicles utilizing the system. The company also noted that the warning beacons activated reliably during operations and provided continuous visibility throughout stopped events.⁴

Establishing a Scalable Framework for the Industry

The NAM appreciates that Aurora's application is designed to make this approach available to similarly situated autonomous trucking operators under consistent operating conditions and appropriate FMCSA oversight. Establishing a scalable framework that can be applied across the emerging autonomous trucking sector, rather than providing a patchwork of waivers on a company-by-company basis, will help provide regulatory clarity while supporting consistent safety expectations across the industry.

As autonomous trucking technologies continue to develop, it is important that manufacturers, motor carriers, and those advancing new technologies have a clear pathway to deploy safety solutions across freight operations. Manufacturers rely on the trucking industry to maintain supply chain continuity and move goods safely and predictably throughout the economy. Supporting the responsible deployment of emerging transportation technologies can help strengthen freight reliability, support long-term economic competitiveness, and encourage continued investment in advanced manufacturing and transportation systems in the United States.

Finally, manufacturers have consistently recommended that federal regulators "review the statutory and regulatory frameworks they maintain and enforce. These reviews would (. . .) allow regulators to identify regulations (. . .) that were enacted before the advent of AI and that might prevent

² Aurora Operations, Inc., Application for Exemption, Docket No. FMCSA-2026-0958 (Mar. 31, 2026).

³ Ibid.

⁴ Ibid.

manufacturers from developing and offering AI-enabled products.”⁵ President Trump’s AI Action Plan⁶ directed federal regulators to work with the Office of Management and Budget to “identify, revise, or repeal regulations, rules, memoranda, administrative orders, guidance documents, policy statements, and interagency agreements that unnecessarily hinder AI development or deployment.” This exemption application represents an opportunity for the FMCSA to ensure that its corpus of regulations supports the adoption of AI in the industry it oversees.

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The NAM appreciates FMCSA’s continued leadership in evaluating innovative approaches that can enhance transportation safety while supporting the future of American freight movement and manufacturing competitiveness. We encourage FMCSA to continue advancing policies that enable the safe deployment of innovative freight technologies across the broader transportation industry while maintaining strong safety oversight and performance standards.

Sincerely,



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Director, Transportation and Infrastructure Policy



Franck Journoud
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⁵ Comments of the National Association of Manufacturers to the White House in response to the Request for Information on the Development of an Artificial Intelligence Action Plan, p. 3, available at <https://documents.nam.org/tech/NAM%20submission%20-%20WH%20AI%20action%20plan%20RFI%20-%20FINAL.pdf>

⁶ Available at <https://www.whitehouse.gov/wp-content/uploads/2025/07/Americas-AI-Action-Plan.pdf>