A bold voice for transportation workers

March 20, 2023

Robin Hutcheson
Administrator
Federal Motor Carrier Safety Administration
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Safe Integration of Automated Driving Systems (ADS)-Equipped Commercial Motor Vehicles (CMVs)
Docket No. FMCSA-2018-0037

Administrator Hutcheson,

On behalf of the Transportation Trades Department, AFL-CIO (TTD), I am pleased to respond to the Federal Motor Carrier Safety Administration's (FMCSA) supplemental advance notice of proposed rulemaking (SANPRM) regarding Safe Integration of Automated Driving Systems (ADS)-Equipped Commercial Motor Vehicles (CMVs). TTD is a coalition of 37 unions representing workers in all modes of transportation, including drivers and other ground transportation workers whose safety, security, and livelihoods have the potential to be seriously impacted by automated technologies and how the federal government regulates them.[1] Additionally, TTD endorses the comments filed by our affiliated unions, the Amalgamated Transportation Union (ATU) and the Transport Workers Union of America (TWU).

FMCSA's Role in the Deployment of ADS technologies on Commercial Vehicles Must be Predicated on a DOT-Wide AV Policy that Sets a Strong Policy Framework that Guarantees Safety, Workforce Considerations, and Other Critical Outcomes

Prior to providing some of the answers to the questions posed in this Supplemental Advanced Notice of Proposed Rulemaking (SANPRM), TTD would like to address a number of key points that we think are critically important for consideration by FMCSA and the DOT.

First, we were highly critical of the ill-advised DOT policy frameworks established under the Trump administration, which have not been overhauled under the administration of President

[1] Attached is a list of TTD's 37 affiliated unions

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Biden.[2] Without a policy framework for Automated Vehicles (AV) and ADS technology that gives serious consideration to safety, workforce impacts, and other fundamental concerns related to the deployment of automated driving technologies, TTD regards many of these questions, and indeed this proceeding as premature. With that in mind, TTD strongly encourages FMCSA to withdraw this SANPRM until the more foundational policy questions about how to ensure the safe testing and deployment of ADS-equipped vehicles are answered.

Specifically, the DOT should ensure the following as department-wide policies before questions like the ones asked in this SANPRM are given serious consideration.

Provide true safety oversight and standards

Under the AV policy frameworks established under the Trump Administration, the DOT completely abdicated its responsibility to protect workers and the public from the myriad documented safety problems associated with automated vehicles. The DOT failed to take serious steps to examine and mitigate the significant impacts that automated vehicles pose to the American workforce through deskilling and displacement. To make matters worse, the Trump DOT was extremely generous and compliant with the AV industry through the irresponsible approval of waivers and exemptions.

Any framework for ADS-equipped vehicles must lay the groundwork for true regulatory oversight by the DOT and its subagencies, a standard that to this day has been entirely unmet. The documented history of AV safety concerns and their potential to disrupt millions of good American jobs demands a measured, comprehensive policy framework. We need a rejection of the Trump Administration's voluntary self-regulation approach, which held no regard for the safety and job-disrupting impacts of this technology.

Consider the following, which represent a mere snapshot of incidents involving ADS-equipped vehicles:

- In a well-publicized 2018 incident, an Uber automated vehicle pilot test resulted in the death of a pedestrian. It was reported that test vehicles were involved in 37 crashes over the prior 18 months leading up to the fatal crash.
- In 2019, a self-driving shuttle in Las Vegas crashed into a truck. While there was an operator on board, they did not have direct access to the manual override controls.
- In 2020, a self-driving shuttle in Ohio came to an abrupt stop, requiring a passenger who was thrown from their seat to receive medical attention for their injuries. This pilot project was a component of the 2015 Smart Cities challenge.

[2] https://ttd.org/policy/ttd-urges-usdot-to-put-working-families-safety-first-in-automated-vehicle-policy/; https://ttd.org/policy/federal-comments/dots-a-v-4-0-is-more-of-the-same/; https://ttd.org/policy/federal-comments/previous-administrations-av-comprehensive-plan-should-be-left-in-the-past/

- In 2020, a self-driving shuttle in Utah sent a 76-year-old man to the hospital after it came to an abrupt stop.
- NHTSA has opened investigations into 27 crashes involving Tesla vehicles. There have been at least 11 deaths in Tesla vehicles that involved their autopilot feature in the US alone.
- A 2020 report showed that Waymo's driverless cars were involved in 18 accidents and 29 near-miss collisions over a 20-month period.

In addition to common sense minimum safety standards for ADS-equipped vehicles (such as standards for the human-machine interface and the transition to a fallback-ready driver, cybersecurity, vision and other qualifying tests), TTD has articulated other policies we believe are fundamental to ensure a safety-first regulatory environment. We strongly encourage FMCSA and the DOT to review and take those seriously in the development of a DOT-wide AV framework.[3]

Ensure workers have a voice in the adoption of new technology

For more than a century, employees affected by technological changes in the transportation sector have benefited from comprehensive employee protections providing job guarantees, training and retraining programs to learn and apply the new skills, and the continuation of their collective bargaining rights and terms and conditions of employment.

These protections have historically enabled the industries under FMCSA's jurisdiction and their employees to successfully adopt and adapt to new technologies, including those requiring advanced computer and engineering skills. However, due to decades of attacks on workers' rights to form and join a union across this country, workers find themselves under increasing threat by rapid technological change. The industries which seek to utilize ADS-equipped vehicles have a specific interest in reducing labor costs as a goal in and of itself, which threatens to further undermine not only the value that traditionally strong union density in this sector has provided for working families – but also the safety of all road users.

While TTD has applauded the Departmental Principles on Innovation put forward by this DOT, we have yet to see those principles be applied in a meaningful way in general and particularly with regard to ADS technology. TTD and ITS America recently sent a number of policy recommendations to the DOT and Department of Labor providing a road map for labor and industry-supported actions this administration could take to put its innovation principles into action.[4] These and other considerations, developed jointly with working people, must be given

[3] https://ttd.org/policy/letters-to-congress/labor-principles-for-autonomous-vehicle-legislation/; https://ttd.org/policy/federal-comments/trump-administration-ads-framework-is-a-nonstarter/; https://ttd.org/policy/hearing-testimony/ttd-president-greg-regan-testifies-at-house-hearing-congress-must-meet-the-workforce-and-safety-threats-of-automated-vehicles-in-legislation/

[4] https://ttd.org/policy/ttd-its-america-call-on-dot-dol-to-adopt-tech-framework/

serious consideration prior to the widespread deployment of ADS technology.

Define the scope of ADS-equipped vehicle oversight appropriately

Commercial motor vehicles offer a laundry list of unique operational challenges which will greatly complicate the introduction of AVs into that space. Frontline commercial vehicle operators do not just drive—they have unique training to react to adverse situations and an array of challenges that an AV is ill-equipped to handle without a human on board. Professional drivers are trained to account for heavy and shifting loads, the higher center of gravity a fully loaded trailer may have, and the need to identify and engage in defensive driving when surrounded by distracted drivers in the lanes next to them. Small vehicles bear little resemblance to the design or operational realities of buses, trucks, or heavy-duty construction vehicles and should not be considered under the same regulatory framework as personal cars or fleets of small vehicles delivering individual packages.

Recent research by the Carnegie Mellon Transportation Research Institute has substantiated these concerns, which have been long-held by labor.[5] In particular, their research recognizes that certain classes of vehicles operating in highly complex, ever-changing urban environments are "highly likely" to always require the presence of a human driver, no matter the level of automation. Circumstances including other drivers and cyclists using hand signals to communicate; police using hand signals to direct traffic; and eye contact between drivers to determine intent have "no parallel mechanism to communicate between autonomous vehicles and the rest of the world," the study finds.

Moreover, CMU's research raises questions we believe are far more foundational and must be given serious consideration by FMCSA before other questions about the safe operation of ADS-equipped vehicles are asked. Specifically, the researchers bring focus to the serious challenges involved in ADS-human interaction. When an automated driving system faces a situation it can't resolve, it turns control over to the operator, which they recognize as a "very stressful, complex situation." Nikolas Martelaro, CMU assistant professor and an author of the report notes that "when you're just watching something, it can become quite tiring." If a driver isn't fully alert to the situation around the vehicle they are operating, but suddenly needs to take over at a critical moment, they may not be ready.

We strongly encourage FMCSA to seek answers to these more foundational questions, which can help inform a "whole of DOT" approach to regulating ADS-equipped vehicles, including those related to the stresses and demands placed on CMV drivers from automation; the safe transition from ADS to human operations; and the types of mandatory data collection, data sharing among agencies and oversight of automated CMV operations FMCSA should ensure before their deployment.

With regard to the specific questions put forward by this SANPRM, TTD offers the following.

[5] https://www.cmu.edu/traffic21/research-and-policy-papers/traffic21-policy-brief-22.1---apr-14-002.pdf

1.1. Should FMCSA require motor carriers operating Level 4 or 5 ADS-equipped CMVs to notify FMCSA before operating those vehicles in interstate commerce without a human driver behind the wheel? If so, what potential methods or procedures should be established to notify FMCSA of those operations?

This question speaks strongly to our above-articulated belief that these foundational questions about ADS technology have gone unanswered by the DOT. There is no framework for the safe deployment of highly automated vehicles that leaves it up to the OEM to decide if their vehicles meet the standards of Level 4 or 5. That determination must come with strict safety standards established by NHTSA, FMCSA, and other relevant subagencies of the Department of Transportation, which at a minimum ensure standards for safety, ADS vision tests, cybersecurity, and other key considerations. Particularly with regard to CMVs, as made evident by CMU's above-cited research, TTD strictly objects to the notion that a Level 4 or 5 vehicle should be allowed to operate on public roads at all. These vehicles by definition do not include the tools a fallback-ready driver needs to safely assume control of the vehicle when the technology fails or malfunctions. If it is true that there are vehicles operating on public roads today that are deemed to be level 4 or 5 by this DOT or their OEMs, it represents a complete and utter policy failure of this DOT in its mission to protect the traveling public.

1.2. Before operating in interstate commerce, should motor carriers be required to submit information, data, documentation, or other evidence that demonstrates to FMCSA that motor carriers seeking to operate Level 4 or 5 ADS-equipped CMVs have appropriate safety management controls in place to operate the vehicle in accordance with the manufacturer's specifications and with Federal requirements? If so, please describe any recommended approaches including the information to be provided and appropriate techniques for reviewing that information. If available, provide cost estimates for proposed approaches.

TTD is deeply concerned by this question. FMCSA, NHTSA, and other subagencies of the DOT must set clear rules and regulations for vehicles purporting to be level 4 or 5 automated vehicles, including the mandatory submission of safety data to federal oversight agencies. We strongly encourage NHTSA to ask more foundational questions about what types of data must be collected from Level 4 and 5 ADS-equipped vehicles, and how to ensure that companies in this space (which have a long history of making erroneous claims about that data being proprietary) are held accountable.

As the regulatory body responsible for motor vehicles operating in interstate commerce, FMCSA has a duty to ensure that ADS-equipped CMVs are safe and reliable. The standard of safety achieved using ADS technology should be the same or higher than that achieved by traditional human operations. The FMCSA has extensive regulations that provide standards and reporting mechanisms to ensure and enforce a satisfactory level of safety for human-operated CMVs. It only makes sense that similar reporting structures would be needed here, in addition to ADS-specific reporting and technology assessments. For instance, motor carriers must register and complete an

18-month New Entrant Safety Assurance Program.[6] This safety assurance program is on top of existing regulations governing the vehicle and operating mechanisms[7] and the qualifications of the operators.[8] Motor carriers that operate passenger services or transport hazardous or other sensitive goods must provide further documentation to FMCSA.[9] Requiring such documentation is a basic function of FMCSA's responsibility as a regulator to ensure safety through every potential failure in the operation. Further, simply because such documentation is submitted, FMCSA should not automatically grant permission to operate. This information should be provided to allow FMCSA to fulfill its obligations to review and exercise oversight.

Because ADS technology is much newer and has much less testing than the safety systems that FMCSA currently regulates, such as seat belts – an initial, high level of scrutiny is necessary simply because ADS systems represent a new and unproven technology with many potential points of failure. FMCSA must use just as much scrutiny in just as much detail as it did when creating regulations for seat belt material and installation requirements – and seat belts are a much simpler system.[10]

1.3. What data should FMCSA collect and maintain regarding Level 4 or 5 ADS-equipped CMVs engaged in interstate transportation? How would such information be used and how would it improve FMCSA's ability to oversee the safe operation of Level 4 or 5 ADS-equipped CMVs?

At a minimum, OEMs and operators of highly automated CMVs should be required to turn over data related to crash events, near-crash events, post-crash behavior, instances where the driver resumed control of the vehicle, failures of the human-machine interface to ensure driver alertness or ensure a safe handoff to the fallback-ready driver in the event of a technology failure, cybersecurity breaches, and other key data that will help ensure that the deployment of highly automated vehicles is done under strict safety oversight given their size and unique operational challenges.

1.4. What is the current size of the Level 4 or 5 ADS-equipped CMV population? What is the anticipated size of the population within 5 years? What might the size of the population be in 10 years?

TTD is deeply and fundamentally concerned that FMCSA and the DOT do not know the answer to this question. As previously stated, if highly automated CMVs that purport to be Level 4 or 5 are being operated on public streets today it represents an absolute policy failure of this DOT's

[6] https://csa.fmcsa.dot.gov/safetyplanner/MyFiles/Sections.aspx?ch=19&sec=51

[7] https://csa.fmcsa.dot.gov/safetyplanner/MyFiles/Chapters.aspx?ch=22

[8] https://csa.fmcsa.dot.gov/safetyplanner/MyFiles/Chapters.aspx?ch=23

[9] https://csa.fmcsa.dot.gov/safetyplanner/MyFiles/Chapters.aspx?ch=24
https://csa.fmcsa.dot.gov/safetyplanner/MyFiles/Chapters.aspx?ch=25

[10] https://www.ecfr.gov/current/title-49/subtitle-B/chapter-V/part-571/subpart-B/section-571.207

safety oversight responsibility not to know how and where those vehicles are being operated in lieu of an FMVSS that sets minimum safety standards for their deployment. The DOT should know how many Level 4 and 5 vehicles are in service and shouldn't be relying on answers to this question to quantify how many of these vehicles are traversing our roads and highways. We suspect the public would be horrified to know that our government has no idea how many ADS-equipped vehicles share the road with them.

Remote Assistants

We believe questions 2.1-2.5 require more explanation from FMCSA to fully understand and answer. If the assumption is that FMCSA believes there will be dispatch centers that control AVs without first establishing rigorous federal regulations around the remote operation of AVs, these questions are not only too premature to be asking, but it is also entirely inappropriate from the perspective of the on-board transportation workers who ensure the safe operation of these vehicles.

As written, TTD takes these questions to mean that FMCSA is entertaining a future in which remote workers – such that those jobs may eventually be properly regulated and proven to safely serve a safety function for the operation of ADS-equipped vehicles – may be held to less strict safety requirements than those that apply to on-board drivers. We firmly believe it will not only lead to a degradation of safety but will give rise to low-road employment models. The assumption from FMCSA must be that durable operational and workforce safety requirements will be applied to any operational role, and the solicitation of information from stakeholders must follow from that position (i.e., how might the cognitive load of a remote operator differ from that of an on-board driver, what technological limitations limit the safe performance of remote assistants, what minimum cybersecurity standards must be in place for the consideration of remote operations?). Currently, these questions have been completely sidelined by FMCSA in favor of ones that, again, are simply inappropriate given the current state of federal regulations and of the technology itself.

If FMCSA plans to promulgate safety rulemakings with regard to remote assistant jobs, we expect those positions to be held to the same high standard that CDL-equipped drivers are. By way of example, hours of service requirements should apply to all employees, and specific assessments should be made as to the effects of fatigue on workers who are not continually and actively operating CMVs because passive attention can create unexpected fatigue.

More importantly, prior to establishing any framework for remote assistants to monitor and safely operate ADS-equipped vehicles, it would be an utter abdication of FMCSA's responsibility to keep the traveling public safe to not first establish a strict safety framework that guarantees this technology is functional and safe. Until FMCSA asks questions that help establish this framework (e.g., how will OEMs ensure cellular systems are free from cyber threats or latency issues), these questions must be tabled.

Vehicle Inspection and Maintenance

Likewise, TTD has serious concerns with questions 3.1-3.9 related to vehicle inspection and maintenance.

Similarly to questions 2.1-2.5, federal transportation safety regulators have a clear responsibility to establish strict safety protocols for level 4 or 5 ADS systems to prove they can operate safely without a human driver prior to attempting to issue regulations with regard to how they will be inspected and maintained. However, if Level 4 or 5 ADS systems are eventually proven safe under an appropriate safety framework within the DOT, TTD takes serious issue with the notion that ADS-operated vehicles are somehow excused from pre-trip and roadside inspection systems that are necessarily performed by highly skilled humans. Just through Google searches, we know that ADS-equipped vehicles are failing to complete the dynamic driving task on a daily basis. We also know that an AV without a driver can be just as unsafe as any other vehicle due to dangerous corner-cutting and shoddy maintenance.

Existing regulations at 49 CFR 396.11 require inspections that ensure the safety of continued operations of CMVs.[11] These criteria cover the basic safe operation of CMVs and would be largely the same for AVs, though AVs are likely to need more technical inspections to ensure that internal and remote operations are functioning. Many of the existing required inspections are simply impossible without a human operator to conduct the inspection and additional AV-specific inspection criteria would also need to be conducted with at least one human physically present with the AV to ensure that the automated and remote systems were correctly interpreting real-world surroundings and communicating with remote personnel effectively. Existing technology is not capable of executing these inspections to the standard required and in the many environments that CMVs currently operate in.

Conclusion

Again, we believe that FMCSA would be abdicating its responsibility to public safety if it moved forward with this rulemaking process without first building its own capacity and expertise as a regulator to apply serious and detailed scrutiny to respondents' answers to this SANPRM. As stated above, the phrasing of the questions alone betrays an alarming lack of built-in expertise and a deeply concerning lack of leadership in its approach to the deployment of AV and ADS technologies on our public roads. The agency should suspend and then significantly revise this proceeding after the DOT has promulgated a strong safety policy framework with regulations that can inform the rules that are developed inside modal agencies.

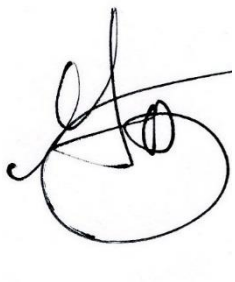
The FMCSA would be making a serious misstep if the lax oversight implied in this SANPRM move forward through the rulemaking process. ADS technology necessarily requires a more foundational federal safety apparatus before the kinds of questions being asked by FMCSA are given any consideration. TTD strongly encourages FMCSA to withdraw this SANPRM, and instead, better engage with working people – particularly frontline workers who operate CMVs,

[11] https://csa.fmcsa.dot.gov/safetyplanner/MyFiles/SubSections.aspx?ch=22&sec=65&sub=148

and safety advocates in the spirit of the DOT Innovation Principles to consider the most basic safety challenges posed by ADS. These questions have thus far gone unaddressed by federal safety officials within the DOT even as it turns the page from a previous administration that abdicated its responsibility to protect against the unsafe deployment of highly automated vehicles.

Thank you for your consideration.

Sincerely,



Greg Regan,
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