July 31, 2018

Oregon Department of Transportation
355 Capitol Street NE, MS 11
Salem, OR 97301-3871

RE: Task Force Long-Term Policy Workshop

Dear Members of the Oregon Department of Transportation Task Force on Autonomous Vehicles:

As the Oregon Department of Transportation’s Task Force on Autonomous Vehicles (AV Task Force) continues looking into autonomous vehicles policies and issues including licensing and registration, insurance and liability, law enforcement and accident reporting, and cybersecurity, the Owner-Operator Independent Drivers Association (OOIDA) submits the following comments.

OOIDA is a not-for-profit trade association incorporated in 1973 and is the largest organization representing the interests of independent owner-operators, small business motor carriers, and professional commercial motor vehicle (CMV) drivers. OOIDA is comprised of 161,000 members located in all fifty states and Canada who collectively own and operate more than 240,000 individual heavy-duty trucks, including 1,230 members in Oregon. As such, OOIDA’s members have a keen interest in the development and deployment of AVs as these technologies have the potential to drastically change the trucking industry, in particular its workforce. Federal and state governments must take careful and proper steps to ensure that AVs optimally serve both the general public and the industry. Professional drivers will likely be the first to experience the technology’s shortcomings or deficiencies outside controlled testing scenarios, creating serious safety concerns for our members and the driving public. OOIDA members and millions more working in other segments of trucking face a particularly uncertain future, as technology might first diminish the quality of their jobs, and then threaten to displace them completely.

U.S. Department of Transportation (DOT) Secretary Elaine Chao has recognized that the introduction of AVs presents a challenge to the 3.9 million drivers currently holding a commercial driver’s license (CDL). The Trump administration has emphasized the importance of not only keeping American jobs, but adding more jobs to boost the economy and spur economic growth. Both federal and state governments must take their time evaluating the benefits that AVs offer within the context that commercial drivers deliver 70 percent of all freight worth
$11.7 trillion\(^1\) while collecting $726.4 billion in gross revenue.\(^2\) A hurried and misguided introduction of AVs would not only have a negative impact on safety, but would disrupt the trucking workforce by displacing drivers and adversely impacting the economy. OOIDA encourages the AV Task Force to properly analyze these workforce disruptions.

Regardless of their potential, it is important to understand the safety implications automated vehicles will have on public roadways. Despite the various claims that AVs will lead to zero deaths, news articles and case-studies have presented real-world situations, in which automation has devastatingly failed. While AVs might improve safety under certain conditions, they create new risks with possibly fatal outcomes. There is no technology that performs perfectly 100 percent of the time; however an error in an automated commercial vehicle presents a grave concern both for the truck driver and the motoring public. And when failed automation does lead to a crash, who will be held liable? The motor carrier, the driver, or the systems manufacturer? This is just one of many unanswered questions that the introduction of AVs has raised.

OOIDA believes that any process to advance automated truck technology should be completed with total data transparency from all manufacturers. Consumers, industry, and regulators must be fully informed of the actual reliability of autonomous technology. Safety reports from technology developers should be mandatory before large truck and passenger-car drivers are asked to share the road with AVs.

Manufacturers must also provide cybersecurity protection. As more technology is integrated into CMVs and their autonomy increases, the opportunity for cyber-attacks will escalate. AVs are operated by computer software and in some instances outside networks that are connected via the internet. Until recently, hackers have seemed more occupied penetrating computer systems at banks, retailers, and government agencies where they can access more money and data and create substantial disruption. Such attacks on the trucking industry could have disastrous consequences. In 2017, the Transportation Security Administration (TSA) released a report entitled “Vehicle Ramming Attacks: Threat landscape, Indicators, and Countermeasures.” The report detailed that terrorist networks have utilized CMVs to carry out attacks in recent years, including four attacks within the last two years. As AVs enter the marketplace, oversight must be established that require manufacturers to prioritize cybersecurity concerns.

Moving forward, regulators must also consider infrastructure modernization. In their 2017 Infrastructure Report Card, the American Society of Civil Engineers graded the nation’s overall infrastructure as a D+. The rating details that, “…the infrastructure is in poor to fair condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration. Condition and capacity are of serious concern with strong risk of failure.” While the state of our nation’s infrastructure is problematic for the current fleet of highway vehicles, it is especially problematic for autonomous technology. AVs depend on cameras and radar systems to detect lane markings, signage, and pavement conditions. Low-quality highway infrastructure will inhibit the productivity of AVs and could

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\(^1\) Bureau of Transportation Statistics, *Transportation Statistics Annual Report 2016*, Department of Transportation (2016) pg. 58

create a significant safety risk, especially in construction zones where markings might be limited or no longer exist. Infrastructure needs must be addressed before the full or partial deployment of AVs.

Additionally, there are a number of other issues which lawmakers and regulators must consider as they develop AV policy, including:

- **Automation bias**: Automated decision aids are designed to reduce human error, but actually can cause errors in the operation of a system as human drivers become overly reliant upon automation and thus exhibit errors of omission and or commission.

- **Ethics**: In circumstances where a crash is inevitable, what action will an AV undertake? How will such a system make its choice between striking a school bus or putting itself into a ditch? Critical situations will occur on the roadways every day, thus ethical considerations will be inevitable as accidents involving AVs become a reality. How will scientific models address these situations, especially considering that there is no comprehensive model today that can mirror the underlying cognitive processes of moral judgment and human behavior? Whatever algorithms are utilized will likely affect millions of vehicles at a time, which will increase the impact of any inherent biases or failures, thereby increasing the importance of getting it right.

- **Performance and interaction with non-autonomous vehicles**: Fully autonomous vehicles are decades away. How will Levels 3 and 4 interact with the other trucks, cars, and buses on the roadways? We have already seen multiple crashes in these scenarios.

- **Situational awareness**: In the event of a steer-tire blowout or severe weather, how will an AV perform in order to ensure the safety of the driver, if not fully autonomous, and the motoring public? An experienced driver understands when it is best to pullover and wait for a storm to pass. How will AVs handle poor brake performance, construction zones, variable speed limits, detours and routing changes, load securement, etc.?

- **Congestion and increased pavement damage**: New research demonstrates that AVs will likely increase traffic and VMT, thereby increasing the pavement damage to the nation’s already crumbling infrastructure. Additionally, the more vehicles that are on the road, the greater the number of interactions with other vehicles and thus the greater likelihood of being involved in a crash.

We would also note the lack of representation from the small business community on the AV Task Force. OOIDA represents small business truckers, who comprise 90% of the trucking industry, with single truck enterprises accounting for approximately 50% of total carriers in the United States. The omission of small business trucking representative is surprising considering the sheer number of truckers required to meet the needs of our nation and the extremely critical nature of what they do. We appreciate the opportunity to provide comments and would be happy to provide additional information as needed.
Sincerely,

Todd Spencer  
President & CEO  
Owner-Operator Independent Drivers Association