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November 5, 2018

Finch Fulton
Deputy Assistant Secretary for Transportation Policy
Office of the Secretary
Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Notice of Request for Comments: Scope of the Study on the Impact of Automated Vehicle Technologies on the Workforce
Notice of Request for Comments
Office of the Secretary
Department of Transportation
Docket No. DOT-OST-2018-0150

Dear Mr. Fulton:

The Transport Workers Union of America, AFL-CIO (TWU), submits the following comments in response to the Department of Transportation (DOT) Office of the Secretary’s (OST) Request for Comments, which solicits feedback on the scope of the proposed analysis of the impact that automated vehicle technologies will have on the workforce. The TWU represents 150,000 workers employed across every transportation sector in America, including those who earn a living by operating and maintaining public transit buses, school and shuttle buses, and other commercial motor vehicles (CMVs). We therefore have a vested interest in this proceeding.

The OST is undertaking this study at the direction of Congress, as the Fiscal Year 2018 omnibus appropriations bill directed \$1.5 million to the Secretary of Transportation for a comprehensive analysis of how advanced driver assist systems (ADAS) and highly automated vehicles (HAVs) will impact operators of commercial motor vehicles (CMVs), including worker displacement. DOT is required to consult with the Secretary of Labor and include stakeholder input in conducting the study.

Adapting to new technologies is nothing new for TWU bus members. As the industry has evolved over time, our members have upgraded and updated their skills in order to grow with changes made to operating systems. And some technological updates have made driving safer. For example, collision avoidance systems warn

drivers of pedestrians coming too close to the bus, helping drivers avoid dangerous situations.

However, the TWU believes that autonomous vehicles are not safe for use, as evidenced by safety incidents, some fatal, including failures to detect hazards on highways, inability to operate in certain weather conditions, and reported incidents which required human intervention to regain control of vehicles. Of course, these hazards would be multiplied if transit, school, shuttle, or other buses equipped with this technology fail, as the dozens of passengers they carry would be harmed. Additionally, we have grave concerns regarding the economic impact of autonomous technology, including the strong potential of devastating job losses.

The potential safety and worker impacts of this technology necessitate a clear response from the federal government, especially as the companies who stand to make billions in profits press forward with testing autonomous systems. The federal government also has taken deliberate actions to create a regulatory framework to facilitate the deployment of this technology and has provided funds to support its development. In doing so, the federal government must recognize that it has the responsibility to respond proactively and aggressively to threats this technology poses to workers and public safety. That is why the TWU joined other labor unions in fighting to secure funding for this study in legislation that otherwise spends millions of dollars in supporting the development of autonomous and advanced technologies.

Thus, we appreciate that policymakers recognize the need to consider how advanced technologies could impact the driving workforce and urge the OST to take the following recommendations into consideration.

Labor Force Transformation/Displacement

We appreciate the research questions posed under this first category of inquiry, as the bus and truck driving workforce is anticipated to be severely harmed by autonomous technology. According to the Department of Labor's Bureau of Labor Statistics, nearly 170,000 Americans drive transit or intercity buses for a living and millions of Americans work in driving-dependent jobs. The Council of Economic Advisors estimates that between 2.2 and 3.1 million existing full- and part-time jobs may be substantially altered or eliminated due to autonomous vehicle technology. Other estimates show that more than 4 million driving jobs will be impacted.

To ensure the findings from this research category are best able to inform the discussion of workforce impacts, the OST must consider the long-term effects of this technology, including impacts to worker wages. For instance, startup companies are testing autonomous passenger shuttles around the country, and some plan to have human operators onboard to monitor the systems and intervene when necessary. But according to the pricing proposal one such company submitted to a State DOT, the company plans to pay its operators sixty percent of the rate earned by senior bus operators employed at a neighboring transit authority. And the autonomous bus operator jobs will be temporary.

Research shows that frontline workers are especially harmed by market disruptions, such as those caused by automation and trade. When these workers lose their jobs, they face severe

and long-lasting hardships in the labor market. This often includes higher levels of unemployment and lower labor force participation. Notably, workers who find subsequent employment, on average, never recover the full wages and benefits they once earned.

Additionally, data indicates that bus operators are more likely to be union members, and therefore earn strong wages and benefits. Thus, the jobs that may be destroyed are those that provide a pathway to the middleclass. In an economy of severe wage inequality and stagnant wages, the OST must be careful not to equate jobs that offer sixty percent of today's wages as a simple substitute for today's work.

Moreover, the same company discussed above also has indicated that it plans to hire engineering students or retired engineers to work as operators on the autonomous buses – not retired bus operators or other local residents who typically comprise the bus operator demographic. In considering the potential workforce impact, the OST must take an honest review of who stands to benefit from new jobs that could be created by this technology. If future bus operating jobs will be held by those with engineering degrees, it is disingenuous and irresponsible for workforce impact models to not take that into consideration. The simple creation of jobs does not alleviate job displacement concerns if those who are displaced cannot obtain the new work.

As such, the OST must consider not just the potential for workers to lose their jobs to technology, but also how worker's wages and benefits will be impacted for the remainder of their working lives and who stands to benefit from any new jobs that may be created.

Labor Force Training Needs

We also appreciate the questions regarding workforce training needs. Given that autonomous technology could alter the industry in drastic new ways, the OST must consider additional items not indicated in the notice.

In its review, the OST must consider when training programs would be available to workers. Making training available to workers after they have been displaced by technology would not help lessen the blunt of job loss. Rather, providing workers early access to programs that help adapt their skills to new technologies would empower the workforce and help ensure the safe operation of commercial vehicles equipped with the technology.

The OST must also consider who is providing the training programs, where they are located, and the cost of pursuing a program. Today, many transit, shuttle, and school bus employers provide training to their employees to make sure their skills match their responsibilities. If these programs adapt with the technology, they could provide a simple way of keeping the workforce's skills current. But if training programs intended to upgrade drivers' skills are unattainable to current operators, whether due to costs, location, or other reason, workers and public safety will not benefit.

Additionally, some research shows that those who drive for a living have skillsets specific to operating large vehicles and tend to be older in age. The OST must consider the types of skills

that could be needed for the future work and whether there could be inherent limitations in teaching these skills to the existing workforce.

Stakeholder Input

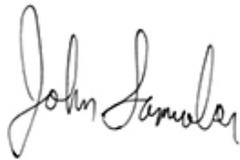
We appreciate the OST's intention to work with stakeholders as it conducts this study. Given the scope of this study sits squarely on workforce impacts, labor unions such as TWU could provide valuable input on this work.

TWU members who operate buses could be impacted severely by advanced and autonomous technology. Our union has a rich history of representing bus drivers who, over the decades, have adjusted their skills and occupation to meet technological changes in the industry. As such, the TWU stands ready to assist the OST and Department of Commerce in preparing this study.

Finally, we note that the authorizing language specifically directs the OST to consult with the Department of Labor. Given that Department's familiarity with workplace issues, it would seem that OST would benefit from their consultation as well.

We thank the OST for beginning its work to fulfill this important mandate from Congress and appreciate the opportunity to comment on this Statement of Work.

Sincerely,

A handwritten signature in cursive script that reads "John Samuelson".

John Samuelson
International President