ADVOCATES
FOR HIGHWAY
& AUTO SAFETY

November 6, 2023

The Honorable Mark Kelly, Chair
The Honorable Kevin Cramer, Ranking Member
Committee on Environment and Public Works
Subcommittee on Transportation and Infrastructure
United States Senate
Washington, D.C. 20510

Dear Chair Kelly and Ranking Member Cramer:

Thank you for holding tomorrow's hearing, "Understanding Roadway Safety: Examining the Causes of Roadway Safety Challenges and Possible Interventions." With deaths and injuries on our Nation's roads at historically high levels, we urge this Subcommittee to advance proven solutions to reduce these grim and grave statistics. Advocates for Highway and Auto Safety (Advocates) respectfully requests this letter be included in the hearing record.

Motor Vehicle Crashes are a Public Health Crisis Which Demand Immediate Action
On average, 118 people were killed every day on roads in the U.S. in 2021,[1] totaling nearly 43,000 fatalities for the year. An additional 2.5 million people were injured.[2] This amounts to a 27 percent increase in deaths on our roads in just a decade.[3] Early projections for 2022 and the first six months of 2023 show traffic fatalities remain high.[4] Fatalities involving vulnerable road users (VRUs) continue to increase at alarming rates. Pedestrian fatalities increased 18 percent, and bicyclist deaths were up 12 percent from 2019 (pre-pandemic) to 2021.[5]

Truck crashes continue to cause remarkable harm. In 2021, 5,788 people were killed and nearly 155,000 people were injured in crashes involving large trucks.[6] Since 2009, the number of fatalities in large truck crashes has increased by 71 percent.[7] In that same timespan, the number

1 Overview of Motor Vehicle Traffic Crashes in 2021, NHTSA, Apr. 2023, DOT HS 813 435. (Overview 2021).
2 Overview 2021.
3 Traffic Safety Facts 2020: A Compilation of Motor Vehicle Crash Data, NHTSA, Oct. 2022, DOT HS 813 375, (Annual Report 2020); and Overview 2021; [comparing 2012 to 2021].
4 Traffic Safety Facts: Crash Stats, Early Estimate of Motor Vehicle Traffic Fatalities in 2022, NHTSA, Apr. 2023, DOT HS 813 428. (Early Estimates 2022).
5 Overview 2021, Annual Report 2020.
6 Overview of Motor Vehicle Traffic Crashes in 2021, NHTSA, Apr. 2023, DOT HS 813 435.
7 *Id.* and Traffic Safety Facts 2020: A Compilations of Motor Vehicle Crash Data, NHTSA, Oct. 2022, DOT HS 813 375. Note, the 71 percent figure represents the overall change in the number of fatalities in large truck involved crashes from 2009 to 2021. However, between 2015 and 2016 there was a change in data collection at U.S. DOT that could affect this calculation. From 2009 to 2015 the number of fatalities in truck-involved crashes increased by 21 percent, and between 2016 to 2019, it increased by 7.6 percent, and between 2020 and 2021, it increased by 17 percent.

of people injured in crashes involving large trucks increased by 109 percent.[8] Early estimates indicate that in 2022, traffic fatalities in crashes involving at least one large truck were up another two percent; 5,887 people were killed.[9] In fatal two-vehicle crashes between a large truck and a passenger motor vehicle, 97 percent of the fatalities were occupants of the passenger vehicle.[10]

The financial impact of motor vehicle crashes on our economy and on our families is staggering. Conservatively, the annual economic cost of motor vehicle crashes is approximately $340 billion (2019 dollars).[11] This means that every person living in the U.S. essentially pays an annual "crash tax" of over $1,000. These crashes negatively impact businesses as well. According to the Network of Employers for Traffic Safety, the total cost of crashes to employers is more than $72 billion (2019 dollars).[12] Moreover, the total value of societal harm from motor vehicle crashes in 2019 was nearly $1.4 trillion.[13]

Safety Advances in the Infrastructure Investment and Jobs Act (IIJA) Must be Implemented Comprehensively and with Expediency

We once again commend the Committee on Environment and Public Works for advancing commonsense safety solutions in the IIJA.[14] While vehicle safety technology does not fall into the Committee's jurisdiction, the Safe System Approach is incorporated in the IIJA and undertakes a holistic method to improve safety in the roadway environment including advancing safe vehicles as a core element. Vehicle safety technology and roadway infrastructure improvements proven to upgrade safety have great potential to complement each other and collaboratively save lives. For example, the IIJA authorizes safety upgrades to the Highway Safety Improvement Program (HSIP) that will help to protect VRUs, such as infrastructure features that calm traffic, separate road users and reduce vehicle speeds as well as includes provisions requiring automatic emergency braking (AEB) for passenger motor vehicles and large trucks.[15] Advocates supports enhancing HSIP to allow for funding of projects that can strengthen protections for VRUs and ensuring that all communities across the Nation are able to take advantage of federal dollars to implement these innovative approaches to improving public safety on their roadways.

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8 Traffic Safety Facts 2021 Data: large Trucks, NHTSA, Jun 2023 (Revised), DOT HS 813 452; Traffic Safety Facts 2020, NHTSA, Oct. 2022, DOT HS 813 375. Note, the 109 percent figure represents the overall change in the number of people injured in large truck involved crashes from 2009 to 2021. However, between 2015 and 2016 there was a change in data collection at U.S. DOT that could affect this calculation. From 2009 to 2015 the number of people injured in truck-involved crashes increased by 59 percent, and between 2016 to 2019, it increased by 18 percent, and between 2020 and 2021, it increased by 5 percent.

9 Traffic Safety Facts: Crash Stats; Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories in 2022, NHTSA, Apr. 2023, DOT HS 813 448.

10 Insurance Institute for Highway Safety (IIHS), Large Trucks. See: https://www.iihs.org/topics/fatality-statistics/detail/large-trucks.

11 The Economic and Societal Impact of Motor Vehicle Crashes, 2019, NHTSA, Dec. 2022, DOT HS 813 403. (Economic and Societal Impact 2019).

12 Network of Employers for Traffic Safety (NETS), The Cost of Motor Vehicle Crashes to Employers−2019, March 2021, prepared by Ted R. Miller and A. Scott McKnight, Pacific Institute for Research and Evaluation.

13 Economic and Societal Impact 2019.

14 Pub. L. 117-58 (2021).

15 Pub. L. 117-58, § 24208 (2021).

According to the Insurance Institute for Highway Safety (IIHS), AEB has the capability to reduce car front-to-rear crashes with injuries by 56 percent and large truck front-to-rear crashes by 41 percent.[16] The ripple effect of these crash reductions is wide-ranging and in addition to saving lives and preventing injuries includes less damage to infrastructure, less congestion caused by crashes, and less expenditure of first responder resources, among others. While Advocates applauds the National Highway Traffic Safety Administration (NHTSA) for issuing Notices of Proposed Rulemaking (NPRM) to require AEB on passenger vehicles and trucks, the agency must promptly issue comprehensive final rules to save lives of all road users and meet the deadlines set by Congress.[17] Advocates looks forward to working with the Subcommittee and the U.S. DOT to optimize safety outcomes in a robust and equitable manner.

Automated Enforcement Improves Roadway Safety

Automated enforcement (AE), such as speed and red-light running safety cameras, is a verified deterrent against frequent crash contributors and has been identified by NHTSA, the Federal Highway Administration (FHWA), the National Transportation Safety Board (NTSB), Centers for Disease Control and Prevention (CDC), IIHS and others as an effective means to curb dangerous driving behavior.[18] Moreover, the Congressional Research Service (CRS) has found that speed camera programs are effective in reducing speeding and/or crashes near cameras.[19] Additionally, for VRUs, such as pedestrians and bicyclists, small changes in speed can have a large impact on survivability. New crash tests performed by IIHS, the AAA Foundation for Traffic Safety, and Humanetics show that modest five to ten miles per hour (mph) increases in speed can have a severe impact on a driver's risk of injury or even death.[20] Provisions in the IIJA correctly permit use of certain federal funds for AE programs in school and work zones. This allowance should be expanded to curb deadly driving on other roadways.

Advocates Supports Efforts to Alleviate the Truck Parking Shortage

Advocates recognizes that the lack of safe and convenient truck parking is an issue that merits federal action. However, simply dedicating more federal funding to building parking facilitates will likely not solve the issue alone. Studies have demonstrated that the parking shortage is often most acute in areas of the country such as along the Interstate 95 corridor in the Northeast where building facilities for parking may not be realistic due to costs and scarcity of open land.[21] As such, along with providing funding to address this issue, Advocates urges policymakers to examine additional remedies to address this problem such as use of existing dormant facilities.

Dangerous Overweight Trucks Damage our Nation's Crumbling Infrastructure

Federal limits on the weight and size of commercial motor vehicles (CMVs) are intended to protect truck drivers, the traveling public, and America's roads, bridges and other infrastructure components. Yet, provisions allowing larger and heavier trucks that violate or circumvent these federal laws to operate in certain states or for specific industries have often been tucked into

[16] IIHS, Real World Benefits of Crash Avoidance Technologies (Dec. 2020).
[17] 88 FR 38632 (Jun. 13, 2023); 88 FR 43174 (Jul. 6, 2023).
[18] IIHS, Topics, Red Light Running, available at: https://www.iihs.org/topics/red-light-running#effectiveness-of-cameras
[19] CRS, Safety Impact of Speed and Red Light Cameras, R46552 (Sep. 28, 2020).
[20] IIHS, New crash tests show modest speed increases can have deadly consequences (Jan. 28, 2021).
[21] Federal Highway Administration, Commercial Motor Vehicle Parking Shortage (May 2012).

must-pass bills to avoid public scrutiny including in legislation recently passed by the Senate to provide funding to the U.S. DOT.[22]

According to the 2021 Infrastructure Report Card from the American Society of Civil Engineers, America's roads receive a grade of "D" and our bridges were given a "C."[23] Nearly 40 percent of our 615,000 bridges in the National Bridge Inventory are 50 years or older, and one out of 11 is structurally deficient.[24] The U.S. DOT Comprehensive Truck Size and Weight Study found that introducing double 33-foot trailer trucks, known as "Double 33s," would be projected to result in 2,478 bridges requiring strengthening or replacement at an estimated one-time cost of $1.1 billion.[25] This figure does not even account for the additional, subsequent maintenance costs which will result from longer, heavier trucks. In fact, increasing the weight of a heavy truck by only 10 percent increases bridge damage by 33 percent.[26] The FHWA estimates that the investment backlog for bridges, to address all cost-beneficial bridge needs, is $123.1 billion.[27]

Raising truck weight or size limits could result in an increased prevalence and severity of crashes. Longer trucks come with operational difficulties such as requiring more time to pass, having larger blind zones, crossing into adjacent lanes, swinging into opposing lanes on curves and turns, and taking a longer distance to adequately brake. In fact, double trailer trucks have an 11 percent higher fatal crash rate than single trailer trucks.[28] Overweight trucks also pose serious safety risk. Brake violations are a major reason for out-of-service violations.[29] According to a North Carolina study by IIHS, trucks with out-of-service violations are 362 percent more likely to be involved in a crash.[30] This is also troubling considering that tractor-trailers moving at 60 miles per hour are required to stop in 310 feet – the length of a football field – once the brakes are applied.[31] Actual stopping distances are often much longer due to driver response time before braking and the common problem that truck brakes are often not in adequate working condition.

There is overwhelming opposition to any increases to truck size and weight limits. The public, local government officials, safety, consumer and public health groups, law enforcement, first responders, truck drivers and labor representatives, families of truck crash victims and survivors,

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[22] Making appropriations for the Departments of Transportation, and Housing and Urban Development, and related agencies for the fiscal year ending September 30, 2024, and for other purposes, S. 2437, 118 Cong, § 1 (2023).
[23] 2021 Infrastructure Report Card – Bridges, American Society of Civil Engineers (ASCE); 2021 Infrastructure Report Card – Roads, ASCE.
[24] 2021 Infrastructure Report Card – Bridges (ASCE).
[25] Comprehensive Truck Size and Weight Limits Study: Bridge Structure Comparative Analysis Technical Report, FHWA, June 2015.
[26] Effect of Truck Weight on Bridge network Costs, NCHRP Report 495, National Cooperative Highway Research Program, 2003.
[27] 2015 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance, Chapter 7, p. 7-34, FHWA, 2016.
[28] An Analysis of Truck Size and Weight: Phase I – Safety, Multimodal Transportation & Infrastructure Consortium, November 2013; Memorandum from J. Matthews, Rahall Appalachian Transportation Institute, Sep. 29, 2014.
[29] Roadside Inspections, Vehicle Violations: All Trucks Roadside Inspections, Vehicle Violations (2019 – Calendar), FMCSA.
[30] Teoh E, Carter D, Smith S and McCartt A, Crash risk factors for interstate large trucks in North Carolina, Journal of Safety Research (2017).
[31] Code of Federal Regulations (CFR) Title 49 Part 571 Section 121: Standard No. 121 Air brake systems (FMVSS 121).

and even Congress on a bipartisan level have all rejected attempts to increase truck size and weight. Also, the technical reports released in June 2015 from the U.S. DOT Comprehensive Truck Size and Weight Study concluded there is a "profound" lack of data from which to quantify the safety impact of larger or heavier trucks and consequently recommended that no changes in the relevant truck size and weight laws and regulations be considered until data limitations are overcome.[32]

The IIJA is investing billions of dollars to improve and elevate the safety of our Nation's roads and bridges. Any increase to federal truck size and weight limits will undermine this objective, worsen safety problems, and divert rail traffic from privately owned freight railroads onto our already overburdened public highways. Despite claims to the contrary, bigger trucks will not result in fewer trucks. Following every past increase to federal truck size and weight limits, the number of trucks on our roads has gone up. Since 1982, when Congress last increased the gross vehicle weight limit, truck registrations have more than doubled.[33] The U.S. DOT study also addressed this meritless assertion and found that any potential mileage efficiencies from the use of heavier trucks would be offset in just one year.[34] We urge this Subcommittee to oppose any increases to federal truck size and weight limits, including mandating double 33-foot trailers, pilot programs and state or industry specific exemptions.

Experimental Autonomous Driving Technology Remains Unproven

Several serious crashes involving cars equipped with autonomous driving technology, which is unregulated, have already occurred. Many have been subject to investigation by the National Transportation Safety Board (NTSB) and NHTSA which have and will continue to identify safety deficiencies, determine contributing causes, and recommend government and industry actions to prevent future deadly incidents.

The *Washington Post* reported in June that according to NHTSA data, there have been 17 fatal incidents, five serious injuries and 736 crashes involving Tesla vehicles operating in Autopilot mode since 2019.[35] As of June 2022, NHTSA's Office of Defects Investigation (ODI) indicated that it had identified at least fourteen crashes in which a Tesla vehicle operating under its "Autopilot System" or Traffic Aware Cruise Control collided with vehicles at crash scenes where first responder vehicles lights and other control measures such as flares and cones were in place.

The testing and deployment of AVs in San Francisco was so concerning that the California Department of Motor Vehicles (CA DMV) recently halted all activities for Cruise LLC that do not involve a human safety driver in the vehicle.[36] Several San Francisco transportation agencies

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[32] Comprehensive Truck Size and Weight Limits Study, Federal Highway Administration (June 2015).

[33] 2017 Annual Report.

[34] Comprehensive Truck Size and Weight Limits Study, Federal Highway Administration (June 2015).

[35] Faiz Siddiqui and Jeremy B. Merrill, *17 fatalities, 736 crashes: The shocking toll of Tesla's Autopilot*, Wash. Post (Jun. 10, 2023).

[36] CADMV, DMV STATEMENT ON CRUISE LLC SUSPENSION (Oct. 24, 2023), available at: https://www.dmv.ca.gov/portal/news-and-media/dmv-statement-on-cruise-llc-suspension/.

submitted comments to the California Public Utilities Commission (CPUC) in May detailing numerous dangerous incidents involving AVs operating in the city.[37] These events include:

- Interfering with emergency response operations including 18 incidents documented by the San Francisco Fire Department (SFFD) in which AVs put firefighters and the public at risk. As of August 2023, the SFFD logged at least 50 written reports of interference.[38]
- Making planned and unplanned stops in travel lanes that have interfered with transit service and blocked traffic.
- Intrusions into construction zones where City employees were working.
- Obstructions caused by AVs having to interpret and respond to human traffic control officers.
- Erratic driving.[39]

These treacherous incidents are also on the rise. The agencies indicate that during this year reported monthly incidents involving AVs have increased six-fold.[40] In fact, in June an AV blocked San Francisco police from responding to a mass shooting.[41] In October a Cruise AV ran over a pedestrian after she was struck by another vehicle.[42] The Cruise AV then dragged the victim 20 feet before stopping, causing serious injuries.[43] CA DMV has accused Cruise of selective editing of the footage of the incident. Moreover, it was recently reported that Cruise employees have had to intervene to remotely assist the AVs every 2.5 to five miles.[44] What San Francisco has been experiencing must not be replicated across the Nation by continuing to allow for the proliferation of AVs that do not comply with any federal safety regulations setting minimum performance standards for driverless systems.

In sharp contrast to what is happening in the U.S., other countries are taking a more calculated, careful and cautious approach to the development of AVs.[45] Often-repeated claims about the U.S. "falling behind" other countries in the "race" for AVs are simply not true. For example:

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37 San Francisco Comments to the Draft Resolution Approving Authorization for Waymo Autonomous Vehicle Passenger Service Phase I Driverless Deployment Program, R.12-12-011 (May 31, 2023). Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://sfstandard.com/wp-content/uploads/2023/06/SF-Comments-on-Waymo.pdf.

38 CPUC Status Conference: Safety Issues Regarding Driverless AV Interactions with First Responders (Aug. 7, 2023), available at: https://www.sfmta.com/sites/default/files/reports-and-documents/2023/08/2023.08.07_cpuc_status_conference_8.7.2023_final.pdf

39 *Id.* at pgs. 9-11.

40 *Id.* at p. 3.

41 Self-driving car blocks police responding to San Francisco shooting, KTVU (Jun. 11, 2023). Available at: https://www.ktvu.com/news/self-driving-car-blocks-police-responding-to-san-francisco-shooting.

42 Tripp Mickle, Cade Metz and Yiwen Lu, G.M.'s Cruise Moved Fast in the Driverless Race. It Got Ugly. N.Y. Times (Nov. 3, 2023).

43 *Id.*

44 *Id.*

45 Autonomous vehicles: cross jurisdictional regulatory perspectives update, Oct. 7, 2022.

- China continues to require permits or restricts operations of AVs on its roads to only those areas approved by the authorities.[46]
- Germany continues to require permits, approvals, and limits areas of operation for AVs.[47]
- In Japan, the introduction of Level 4 vehicles will be controlled and limited to specific, lightly populated areas.[48]
- Even the latest United Nations Economic Commission for Europe (UNECE) regulations will limit operations to restrict risks and oversee approval through testing and other requirements.[49]

In sum, no country is selling fully automated vehicles for unfettered use to the public and by many accounts, none will be for a significant amount of time.[50] According to the most recent KPMG analysis, the U.S. ranks fourth in the world for AV readiness, while China is at number twenty. While the U.S. is not behind other countries in allowing AVs to go to market, we are behind in establishing comprehensive regulations to ensure public safety will not be jeopardized or diminished. As Dr. Missy Cummings, Professor, George Mason University, College of Engineering and Computing, noted during a briefing convened by Advocates in March 2023:

> I was a military officer; I spent three years on the Defense Innovation Board advising the Secretary of Defense. China is a real threat, a real problem that we have to address from a national security perspective. What it [China] is not is a threat to our commercialization of autonomous vehicles. And any insistence that it actually takes away from the emphasis that we need to place on national security. So, what I would really like everyone to do is back off the China fear mongering. China is not beating us to the commercialization of autonomous vehicles…[51]

Advocates and numerous stakeholders representing broad interests developed the "AV Tenets," policy positions which are a people-and-safety-first approach to AV development and deployment and should be a foundational part of any AV policy. It has four main, commonsense categories including: 1) prioritizing safety of all road users; 2) guaranteeing accessibility and equity; 3) preserving consumer and worker rights; and, 4) ensuring local control and sustainable transportation. The AV Tenets are supported by a coalition of approximately 65 groups and are based on expert analysis, real-world experience and public opinion. Requiring that AVs meet minimum standards, including for cyber security, and that operations are subject to adequate oversight, including a comprehensive database accessible by vehicle identification number (VIN) with basic safety information, will save lives and boost consumer confidence in this burgeoning

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[46] China drafts rules on use of self-driving vehicles for public transport; Aug. 8, 2022, Reuters; and Baidue bags China's first fully driverless robotaxi licenses, Aug. 7, Reuters. Real driverless cars are now legal in Shenzhen, China's tech hub, Jul. 25, 2022, TechCrunch+.

[47] Germany completes legal framework for autonomous driving | Federal Cabinet approves new ordinance, Apr. 2022, Malterer, M.

[48] Japan to open roads to autonomous vehicles in 2023, Nov. 28, 2022, Wessling, B., The RobotReport.

[49] New rules to improve road safety and enable fully driverless vehicles in the EU, Jul. 6, 2022, UNECE.

[50] Lawrence Ulrich, Driverless Still a Long Way From Humanless, N.Y. Times (Jun. 20, 2019); Level 5 possible but "way in the future", says VW-Ford AV boss, Motoring (Jun. 29, 2019).

[51] Advocates for Highway and Auto Safety, Virtual Capitol Hill Briefing: Expert Panel on Autonomous Vehicle Safety (Mar. 7, 2023). See: https://saferoads.org/briefing-expert-panel-on-autonomous-vehicle-av-safety-3-7-23-public/.

technology. Further, the IIJA directed the FHWA to conduct a study on the impacts of AVs and to report to Congress. That report should have been presented to the Committee on Environment and Public Works and the House Transportation and Infrastructure Committee one year after the enactment of the IIJA and is now overdue.

A Caravan Public opinion survey commissioned by Advocates in February 2023 showed Americans across the country and across generations are concerned with driverless cars and trucks on our roadways. In fact, four out of five respondents reported being concerned about sharing the roads with driverless cars. While there is widespread concern about the use and deployment of driverless vehicles, 64 percent of those polled feel that their concerns could be adequately addressed by minimum government safety requirements.[52]

Thank you again for convening this hearing and for your consideration of these issues. We look forward to working with you to improve safety for all road users on our Nation's roadways.

Sincerely,

Catherine Chase, President

cc: The Honorable Thomas Carper, Chair, U.S. Senate Committee on Environment and Public Works
The Honorable Shelly Moore Capito, Ranking Member, U.S. Senate Committee on Environment and Public Works
Members of the U.S. Senate Committee on Environment and Public Works

[52] Online CARAVAN Survey (Feb. 2023). See: https://saferoads.org/wp-content/uploads/2023/03/Advocates-Caravan-AV-Poll-Report-.pdf