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**RE: Docket Number NHTSA-2018-0092
National Highway Traffic Safety Administration | Advanced Notice of
Proposed Rulemaking |
NSTA Comment on Pilot Program for Collaborative Research on
Motor Vehicles with High and Full Driving Automation**

To Whom It May Concern:

The National School Transportation Association (NSTA) is pleased to offer comment and feedback to the U.S. Department of Transportation (DOT), National Highway Traffic Safety Administration (NHTSA), related to NHTSA's desire to collect comment on matters related to near-term and long-term challenges of Automated Driving Systems (ADS) testing, development and eventual deployment of vehicles with high and full driving automation due to NHTSA considering the establishment of a national pilot research program to include the development and implementation of non-traditional standards for ADS-equipped motor vehicles, as published on October 10, 2018, in the Federal Register.¹

NSTA is the voice for private school bus contractors for over 50 years. NSTA was formed in 1964 as a membership organization for school bus contract-operators engaged primarily in transporting students to and from school and school-related activities. Members range from small family businesses serving one school district, to large corporations operating tens of thousands of buses across multiple states—all committed to the safe, efficient and economical transport of our nation's children and future leaders.

¹This notice was published on October 10, 2018, in Volume 83, Number 196, of the Federal Register, pages 50872-50883.

The general areas of focus of the advance notice of proposed rulemaking (ANPRM) related to NHTSA's ADS safety research are as follows:

1. NHTSA seeks comments on potential factors that should be considered in designing a pilot program for the safe on-road testing and deployment of vehicles with high and full driving automation and associated equipment.
2. NHTSA seeks comments on the use of existing statutory provisions and regulations to allow for the implementation of such a pilot program.
3. NHTSA seeks comment on any additional elements of regulatory relief (e.g., exceptions, exemptions, or other potential measures) that might be needed to facilitate the efforts to participate in the pilot program and conduct on-road research and testing involving these vehicles, especially those that lack controls for human drivers and thus may not comply with all existing safety standards.
4. With respect to the granting of exemptions to enable companies to participate in such a program, NHSTA seeks comments on the nature of the safety and any other analyses that it should perform in assessing the merits of individual exemption petitions and on the types of terms and conditions it should consider attaching to exemptions to protect public safety and facilitate the Agency's monitoring and learning from the testing and deployment, while preserving the freedom to innovate.²

To establish a framework of this ANPRM, NHSTA noted that:

[a]s the Federal agency charged with improving motor vehicle safety through reducing crashes, and preventing deaths and injuries from crashes, NHTSA is encouraged by the new ADS vehicle technologies being developed and implemented by automobile manufacturers and other innovators. NHTSA anticipates that automation can serve a vital safety role on our Nation's roads, particularly since human error and choice are currently the critical factors behind the occurrence of a large number of crashes. ADS vehicle technologies possess the potential to save thousands of lives, as well as reduce congestion, enhance mobility, and improve productivity.

²U.S. Department of Transportation, National Highway Traffic Safety Administration, Advance notice of proposed rulemaking, *Pilot Program for Collaborative Research on Motor Vehicles With High or Full Driving Automation*, Federal Register, Vol. 83, No. 196, at p. 50873 (October 10, 2018).

To aid in determining how best to foster the safe development and implementation of ADS vehicle technologies on our Nation's roadways, NHTSA believes it is prudent to facilitate the conducting of research and gathering of data about these new and developing technologies in their various iterations and configurations. Thus, NHTSA is seeking comment on creating a national ADS vehicle pilot program for the testing of vehicles and associated equipment and to gather data from such testing, including data generated in real-world scenarios. NHTSA anticipates that this data will provide information needed to help realize the promises and meet the challenges of ADS vehicle development and deployment.

The purpose of this ANPRM is to obtain public views and suggestions for steps that NHTSA can take to facilitate, monitor and learn from on-road research through the safe testing and eventual deployment of high and full automated vehicles, i.e., Level 4³ and 5⁴ ADS vehicles, primarily through a pilot program.⁵

NHTSA further noted that this ANPRM focuses on how it “can best encourage and facilitate the necessary research to allow for the development and establishment, as needed, of standards for ADS vehicles, including vehicles that have unconventional designs, can operate in “dual modes” (one of which may involve unconventional designs), and can comply with the existing FMVSS.”⁶ To best facilitate this research, including providing the ability for testing beyond the simulated, controlled or laboratory environments, NHTSA is considering providing real world experiences through a national pilot research program, which would require testing on our nation’s roadways under a “vast array of complex and changing road, traffic and weather conditions.”⁷

To consider this type of national pilot research program to establish ADS standards while not compromising safety yet supporting innovation, NHTSA recognizes that it must not only conduct its own research, but leverage research

³ *Id.* at 50874. **Level 4, High Driving Automation:** The vehicle can perform most aspects of the driving task under certain conditions without the involvement of or oversight by a human driver. Outside of those conditions, the vehicle will enter a safe fallback mode if a human occupant does not resume control. The vehicle may or may not be designed to allow a human occupant to assume control.

⁴ *Id.* at 50874. **Level 5, Full Driving Automation:** The vehicle can perform all aspects of the driving task at all times and under all conditions. While the human occupants need to set the trip destination and start the ADS, they need never be involved in any aspects of the driving task. The vehicle may or may not be designed to allow a human occupant to assume control.

⁵ *Id.* at pp. 50873-50874.

⁶ *Id.* at 50874.

⁷ *Id.* at 50875.

from outside stakeholders, such as research conducted by industry and universities.⁸ NHTSA indicated that Congress has granted the Secretary of DOT and NHTSA broad authority in conducting research, including the ability to “[c]ollect and analyze all types of motor vehicle and highway safety data’ relating to motor vehicle performance and crashes.”⁹ Such authority includes the Secretary having the ability to “enter into cooperative agreements, collaborative research, or contracts with Federal agencies, interstate authorities, State and local governments, other public entities, private organizations and persons,’ and other appropriate institutions.”¹⁰

To that end, the following questions have been provided by NHTSA to seek answers and guidance to assess the viability of a national pilot research program of ADS-equipped vehicles at the Level 4 and Level 5 automation levels, for which NHTSA offers the following responses:

Question 1. What potential factors should be considered in designing the structure of a pilot program that would enable the Agency to facilitate, monitor and learn from on-road research through the safe testing and eventual deployment of vehicles with high and full driving automation and associated equipment?

A complete review of the types of vehicles on the highway should be identified, including variations in types of vehicles, which could change the rules of the road and how to interpret or assess a specific situation. School buses and other school transportation vehicles should specifically be considered in designing a pilot program as they are unique in design with stop arm mechanisms and flashing lights with multiple stops needed to pick up and drop off children to and from school and school-related activities, including children required to cross roadways to access or depart from a school bus. Test pilot runs should include school buses with mock individuals being picked up or dropped off, including crossing roadways, during the times of the day that a school bus would normally be on the road.

Question 2. If NHTSA were to create a pilot program, how long would there be a need for such a program? What number of vehicles should be involved? Should NHTSA encourage the conducting of research projects in multiple locations with different weather conditions, topographical features, traffic densities, etc.?

⁸ *Id.* at p. 50876.

⁹ *Id.*, citing 49 U.S.C. § 30182(a).

¹⁰*Id.*, citing 49 U.S.C. § 30182(b)(5).

NHTSA should not be locked into a fixed time frame for a pilot program given the complexity of ADS-equipped vehicles and the multiple types of scenarios that need to be examined, including various geographic regions, weather conditions, road construction, traffic conditions and density on a given day or as a result of an emergency or special event.¹¹

Question 3. What specific difficulties should be addressed in designing a national vehicle pilot program for vehicles with high and full driving automation either through the exemption request process relevant for FMVSS or more broadly related to other areas of NHTSA and/or other authorities.

NSTA believes that no waiver or exemption should be permitted for school buses or other school transportation vehicles. Moreover, as it relates to the SAE international (SAE) 3016 standard's definitions for levels of automation (SAE Level 1-5), NSTA believes that a school bus or other school transportation vehicle is at the SAE Level 0, i.e., the driver performs all driving tasks. In the event that school buses and other vehicles that transport children to school are equipped in the future with driving automation system engagement capabilities that could change the SAE Level of the school bus or other vehicle at any given time, the NSTA will comment on such change at that time. Additionally, parents do not believe their children should be in driverless school buses.¹²

Hence, just as “[s]afety remains the number one priority for the U.S. Department of Transportation and is the specific focus of the National Highway Traffic Safety Administration (NHTSA),”¹³ school bus safety is the top priority for NSTA and the school transportation industry. The “human driver” is an integral part of school bus safety, with the driver knowing the children, the neighborhoods, the dangers of picking up and dropping off children, the families of the children, and the school district.

NHTSA should also collaborate with the Federal Motor Carrier Safety Administration (FMCSA) and other agencies as needed at the federal, state and

¹¹ See also, Todd Litman, [Autonomous Vehicle Implementation Predictions Implications for Transport Planning](#), Victoria Transport Policy Institute (November 15, 2018).

¹² Emily C. Anania & Stephen Rice & Scott R. Winter & Mattie N. Milner & Nathan W. Walters & Matthew Pierce, 2018. [Why People Are Not Willing to Let Their Children Ride in Driverless School Buses: A Gender and Nationality Comparison](#), Social Sciences, MDPI, Open Access Journal, Vol. 7(3), pages 1-17, February; see also Bus Industry Confederation, [Driverless vehicles and social implications on the transportation industry](#) (February 2017)(Personal security and safety issues must also be considered with any exemption request, including the hacking and taking over of a vehicle.)

¹³ *Automated Driving Systems, A Vision for Safety, 2.0*, issued by the U.S. Department of Transportation and the National Highway Traffic Safety Administration, at p. ii.

local level before the granting of any exception or exemption request to the current safety regulations.

Question 4. How can existing statutory provisions and regulations be more effectively used in implementing such a pilot program?

NSTA offers no comment to a specific existing statutory provision or regulations except to state that the current safety standards should not be reduced to support innovation technology which compromises safety for everyone involved, including roadway users, pedestrians and children.

Question 5. Are there any additional elements of regulatory relief (e.g., exceptions, exemptions, or other potential measures) that might be needed to facilitate the efforts to participate in the pilot program and conduct on-road research and testing involving these vehicles, especially those that lack controls for human drivers and thus may not comply with all existing FMVSS?

NSTA incorporates its response to question 3, as if set forth in full. Additionally, any exceptions or exemptions granted to other roadway users need to take into account the implications and potential unintended consequences to others, including school buses and other school transportation vehicles on the road, as noted more fully in response to question 1, which is incorporated by reference as if set forth in full.

Question 6. What vehicle design elements might replace existing required safety equipment and/or otherwise enhance vehicle safety under reasonably anticipated operating conditions?

NSTA urges caution when evaluating what vehicle design elements might replace exiting safety equipment and/or otherwise enhance vehicle safety under reasonably anticipated operating conditions. While technology is moving at a rapid pace for ADS-equipped vehicles and regulatory rulemaking is much slower with NHTSA trying to find a balance with these two forces, safety must always remain the primary focus for the protection of vehicle occupants, pedestrians, and other vulnerable populations, including children who are being transported daily to and from school and school-related activities on a school bus. Furthermore, while the higher level driving automation systems (high and full driving automation) will attempt to accomplish “the vehicle to perform all driving functions in at least certain circumstances...to replace and improve upon the ability of human drivers to detect, interpret, communicate and react to vehicle

operational needs and conditions”¹⁴ such goals for the high level ADS- equipped vehicles need to always be weighed against current safety standards and safety remaining the number one priority for everyone. Finally, NSTA is not supportive of a voluntary safety self-disclosure approach for innovators due to the potential inclination of not reporting critical data to NHTSA and other authorities that may be paramount for such agencies to make informed decisions that impact safety standards and safety to all who are on or near roadways related to vehicle design and risk mitigation.

Question 7. What types of performance measures should be considered to ensure safety while allowing for innovation of emerging technology in vehicles with high and full driving automation participating in a pilot program?

NSTA agrees with NHTSA that “any pilot program for the testing of vehicles with high and full driving automation should include defined Operational Design Domains as a component of safe automated vehicle operation...[and] that the critical relationship between the safety of a vehicle's design and the vehicle's decision-making system similarly makes it necessary to evaluate the safety of automated vehicle performance in light of appropriate and well-defined Operational Design Domains.”¹⁵ Additionally, NHTSA should be mindful of the role that States and local authorities play in this process, as they will be the enforcers if rules are violated.

Question 8. How should the Operational Design Domains of individual vehicle models be defined and reinforced and how should Federal, State and local authorities work together to ensure that they are observed?

Due to the purpose of the upcoming national pilot program to be conducted in various phases, geographic locations, and among many other factors, it is recommended that State and local authorities are always contacted and active participants in those programs when such pilot programs come to that state and local site. Such collaboration should also include State and local authorities providing to the pilot study participants the state and local laws and ordinances that may impact a test pilot study. Additionally, with each pilot study, NSTA strongly recommends that a school bus be used as a potential vehicle on the road at some point during each study with a school bus test conducted during the normal operations of a school bus, to ensure that the unique characteristics of the school bus, such as its unique pattern of stops to pick up and drop off children as

¹⁴ U.S. Department of Transportation, National Highway Traffic Safety Administration, Advance notice of proposed rulemaking, *Pilot Program for Collaborative Research on Motor Vehicles With High or Full Driving Automation*, Federal Register, Vol. 83, No. 196, at p. 50878.

¹⁵ Id at 50879.

well as compliance with stop arm mechanism and light system requirements, are not forgotten.

Question 9. What type and amount of data should participants be expected to share with NHTSA and/or with the public for the safe testing of vehicles with high and full driving automation and how frequently should the sharing occur?

Data from research and pilot studies provided to NHTSA and other authorities should be mandatory and not voluntary to ensure that the appropriate data is received by NHTSA and others to make critical decisions for the use of ADS-equipped vehicles on the road while always making safety a paramount consideration. The sharing of data should have parameters such as weekly with more frequent reporting with an adverse testing problem or incident with reporting occurring within a 24- or 48-hour period of time. A website should also be developed for the public to access with information on test site locations, dates of testing, and other pertinent data that is helpful to educate the public and for the ability for the public to comment if they experienced issues as a result of the pilot study and the ADS-equipped vehicles on the road.

Question 10. In the design of a pilot program, how should NHTSA address the following issues—

a. confidential business information?

Within certain parameters to protect work design/product innovation, sufficient information should be provided to authorities and as appropriate, to the general public.

b. privacy?

Any privacy considerations need to be balanced with public policy consideration and overall safety to the public with the deployment of ADS-equipped vehicles on our nation's roadways.

c. data storage and transmission?

Dedicated servers should be used and the transmission of information should be in line with other types of sensitive data, i.e., similar to the transmission of patient medical records.

d. data retention and reporting?

Initially, data retention should be long-term. Only after there is a sufficient amount of time that has passed and successful positive data results obtained with the deployment of ADS-equipped vehicles on the roadways should data retention be reduced to a lesser period of time such as a 10-year period or a 7-year period. There should be standard mandatory reporting requirements and adverse, accident or emergency data reporting requirements implemented so adverse, accident or emergency incidents are reported immediately with other standard reporting occurring at fixed intervals.

e. other elements necessary for testing and deployment?

As NHTSA noted in the ANPRM, flexibility in approach is necessary to adapt to rapidly changing innovations with the testing and deployment of ADS-equipped vehicles. However, flexibility in approach should not compromise safety considerations below the current standards.

Question 11. In the design of a pilot program, what role should be played by—

a. The 12 safety elements listed in *A Vision for Safety*?

Secretary Elaine L. Chao of the U.S. Department of Transportation along with the NHTSA released *A Vision for Safety 2.0* (with other version forthcoming) to promote improvements in safety, mobility, and efficiency through ADSs. As such, all 12 safety elements should be considered in the design of a pilot program, which should be modified or revised as newer versions of *A Vision for Safety* are released.

b. The elements listed below:

- i. Failure risk analysis and reduction during design process (functional safety)?**
- ii. Objective performance criteria, testable scenarios and test procedures for evaluating crash avoidance performance of vehicles with high and full driving automation?**
- iii. Third party evaluation?**
 - A. Failure risk reduction?**
 - B. Crash avoidance performance of vehicles with high and full driving automation?**
- iv. Occupant/non-occupant protection from injury in the event of a crash (crashworthiness)?**
- v. Assuring safety of software updates?**
- vi. Consumer education?**
- vii. Post deployment Agency monitoring?**
- viii. Post-deployment ADS updating, maintenance and recalibration?**

All of the above listed items should be routinely re-evaluated with the changing innovations in technology while also working in collaboration with the Federal Motor Carrier Safety Administration (FMCSA), the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), NSTA, the National Association of Pupil Transportation (NAPT), the National Association of State Directors of Pupil Transportation Services (NASDPTS), as well as with other national, state and local authorities and organizations, as appropriate.

c. Are there any other elements that should be considered?

As noted above in other responses to questions, which are incorporated by reference as if set forth in full, the primary concern of NSTA is safety in the transport of children to and from school and to school-related activities on school transportation vehicles and school buses. NSTA is willing to assist and offer any necessary support to NHTSA and other agencies during the pilot testing phases and programs to ensure that the school bus and school transportation vehicles, with their unique characteristics, are not forgotten in the testing and troubleshooting phases of the deployment of ADS-equipped vehicles on our nation's roadways.

Question 12. Are there any additional critical areas to consider in the design of a safe pilot program for the testing and deployment of vehicles with high and full driving automation?

Responses to questions 1-11 are incorporated by reference as if set forth in full to answer question 12. Additionally, NSTA is requesting that there is a reporting mechanism for school bus drivers, school bus companies and school districts to provide them with the ability to report issues with ADS-equipped vehicles on the road via through a website or other reporting mechanism that is easily accessible and easy to report incidents, accidents, or other adverse situations that have occurred as a result of a pilot test study or program or otherwise related to ADS-equipped vehicles on the roadways.

Question 13. Which of the following matters should NHTSA consider requiring parties that wish to participate in the pilot program to address in their applications?

- a. **"Safety case" for vehicles to be used in the pilot program (e.g., system safety analysis (including functional safety analysis), demonstration of safety capability based on objective performance criteria, testable**

scenarios and test procedures, adherence to NHTSA's existing voluntary guidance, including the submission of a voluntary safety self-assessment, and third party review of those materials).

- i. What methodology should the Agency use in assessing whether an exempted ADS vehicle would offer a level of safety equivalent to that of a nonexempted vehicle? For example, what methodology should the Agency use in assessing whether an ADS vehicle steers and brakes at least as effectively, appropriately and timely as an average human driver?
- b. Description of research goals, methods, objectives, and expected results.
- c. Test design (e.g., route complexity, weather and related road surface conditions, illumination and institutional review board assessment).
- d. Considerations for other road users (e.g., impacts on vulnerable road users and proximity of such persons to the vehicle).
- e. Reporting of data, e.g., reporting of crashes/incidents to NHTSA within 24 hours of their occurrence.
- f. Recognition that participation does not negate the Agency's investigative or enforcement authority, e.g., independent of any exemptions that the Agency might issue to program participants and independent of any terms that the Agency might establish on those exemptions, the Agency could conduct defect investigations and order recalls of any defective vehicles involved in the pilot program. Further, the Agency could investigate the causes of crashes of vehicles involved in the program.
- g. Adherence to recognized practices for standardizing the gathering and reporting of certain types of data in order to make possible the combining of data from different sources and the making of statistically stronger findings.
- h. For which types of data would standardization be necessary in order to make such findings and why?
- i. To what extent would standardization be necessary for those types?
- j. Occupant/non-occupant protection from injury in the event of a crash (crashworthiness).
- k. Assuring safety of software updates.
- l. Consumer education.
- m. Post-deployment monitoring.
- n. Post-deployment maintenance and calibration considerations.

All of the above identified categories should be considered of participants of any pilot program, including additional requirements added, which are deemed necessary, as the pilot program moves through various testing phases and deployments and additional issues or concerns are evaluated and addressed.

Question 14. What types of terms and conditions should NHTSA consider attaching to exemptions to enhance public safety and facilitate the Agency's monitoring and learning from the testing and deployment, while preserving the freedom to innovate, including terms and conditions for each of the subjects listed in question 13? What other subjects should be considered, and why?

NSTA is not supportive of exemptions or exceptions in the deployment of ADS-equipped vehicles. NSTA is also specifically opposed to any exemptions or exceptions provided for school buses and school transportation vehicles as noted above in the above responses 1-13, which are incorporated by reference as if set forth in full. Should NSTA grant exemptions or exceptions in certain limited situations, there should be strict terms and conditions that must be abided by, including additional reporting within a 12- to 24-hour period of time related to an adverse condition, accident, or emergency.

Question 15. What value would there be in NHTSA's obtaining one or more of the following potential categories of data from the participants in the pilot program? Are there other categories of data that should be considered? How should these categories of data be defined?

- a. **Statistics on use (e.g., for each functional class of roads, the number of miles, speed, hours of operation, climate/weather and related road surface conditions).**
- b. **Statistics and other information on outcome (e.g., type, number and cause of crashes or near misses, injuries, fatalities, disengagements, and transitions to fallback mechanisms, if appropriate).**
- c. **Vehicle/scene/injury/roadway/traffic data and description for each crash or near miss (e.g., system status, pre-crash information, injury outcomes).**
- d. **Sensor data from each crash or near miss (e.g., raw sensor data, perception system output, and control action).**
- e. **Mobility performance impacts of vehicles with high and full driving automation, including string stability of multiple consecutive ADS vehicles and the effects of ADS on vehicle spacing, which could ultimately impact flow safety, and public acceptance.**
- f. **Difficult scenarios (e.g., scenarios in which the system gave control back to an operator or transitioned to its safe state by, for example, disabling itself to a slow speed or stopped position).**
- g. **Software updates (e.g., reasons for updates, extent to which updates are made to each vehicle for which the updates are intended, effects of updates).**
- h. **Metrics that the manufacturer is tracking to identify and respond to progress (e.g., miles without a crash and software updates that increase the operating domain).**
- i. **Information related to community, driver and pedestrian awareness, behavior, concerns and acceptance related to vehicles with high and full driving automation operation. For example, if vehicles with high and full driving automation operated only in limited defined geographic areas, might that affect the routing choices of vehicles without high and full driving automation? For another example, if vehicles with high and full driving automation are programmed to cede right of way to avoid collision with other vehicles and with pedestrians and cyclists, might some drivers of vehicles without such automation, pedestrians and**

cyclists take advantage of this fact and force vehicles with high and full driving automation to yield to them?

- j. Metrics or information concerning the durability of the ADS equipment and calibration, and need for maintenance of the ADS.
- k. Data from "control groups" that could serve as a useful baseline against which to compare the outcomes of the vehicle participating in the pilot program.
- l. If there are other categories of data that should be considered, please identify them and the purposes for which they would be useful to the Agency in carrying out its responsibilities under the Act.
- m. Given estimates that vehicles with high and full driving automation would generate terabytes of data per vehicle per day, how should the need for data be appropriately balanced with the burden on manufacturers of providing it and the ability of the Agency to absorb and use it effectively?
- n. How would submission of a safety assurance letter help to promote public safety and build public confidence and acceptance?
- o. For all of the above categories of information, how should the Agency handle any concerns about confidential business information and privacy?

NSTA believes that all of the above identified categories of data are important to obtain from the participants in the pilot program. Additionally, responses to questions 1-14 are incorporated by reference as if set forth in full related to the consideration of school buses and school transportation vehicles on the road, the transporting of children safely to and from school and school related activities, as well as the unique characteristics of a school bus—all of which must be considered with any pilot programs and testing of ADS-equipped vehicles on our nation's roadways. Additionally, see specifically response to question 10 related to confidential business information and privacy considerations.

Question 16. How should the Agency analyze safety in deciding whether to grant such exemptions under each of the separate bases for exemptions in section 30113? Can the exemption process be used to facilitate safe and effective ADS development in an appropriate manner?

NSTA incorporates by reference its response to questions 1-15 as if set forth in full.

Question 17. Could a single pilot program make use of multiple statutory sources of exemptions or would different pilot programs be needed, one program for each source of exemption?

Each pilot program should be evaluated separately based on location, State and local laws and regulations, as well as other factors specific to the particular pilot program, including the context and parameters of the pilot program.

Question 18. To what extent would NHTSA need to implement the program via new regulation or changes to existing regulation? Conversely, could NHTSA implement the program through a non-regulatory process? Would the answer to that question change based upon which statutory exemption provision the agency based the program on?

NSTA believes that regardless if NHTSA implements a national pilot program via new regulations or changes to existing regulations or through a different non-regulatory process, caution is urged that any pilot study, deployment or program not be permitted to advance to the detriment of overall safety. NSTA incorporates its responses to questions 1-17 as if set forth in full.

Question 19. How could the exemption process in section 30113 be used to facilitate a pilot program? For vehicles with high and full driving automation that lack means of manual control, how should NHTSA consider their participation, including their continued participation, in the pilot program in determining whether a vehicle would meet the statutory criteria for an exemption under section 30113?

Under 49 U.S.C. § 30113(b)(1),(3), the Secretary of Transportation has the authority to exempt so long as other findings are found, as stated in pertinent part:

§ 30113. General exemptions

(b) Authority to exempt and procedures.—

(1) The Secretary of Transportation may exempt, on a temporary basis, motor vehicles from a motor vehicle safety standard prescribed under this chapter or passenger motor vehicles from a bumper standard prescribed under chapter 325 of this title, on terms the Secretary considers appropriate. An exemption may be renewed. A renewal may be granted only on reapplication and must conform to the requirements of this subsection.

(3) The Secretary may act under this subsection on finding that--

(A) an exemption is *consistent with the public interest* and this chapter or chapter 325 of this title (as applicable); and

(B) (i) compliance with the standard would cause substantial economic hardship to a manufacturer that has tried to comply with the standard in good faith;

(ii) the exemption would make easier the development or field evaluation of a new motor vehicle safety feature providing a safety level at least equal to the safety level of the standard;

(iii) the exemption would make the development or field evaluation of a low-emission motor vehicle easier and would not unreasonably lower the safety level of that vehicle; or

(iv) *compliance with the standard would prevent the manufacturer from selling a motor vehicle with an overall safety level at least equal to the overall safety level of nonexempt vehicles.*

(emphasis added).

Based on the above statutory language, any exemptions, for which NSTA is opposed, must be consistent with the public interest as well as comply with at least the same overall safety level for those vehicles that are not exempt. It is paramount that such statutory language is strictly construed for the protection of the general public with the deployment of ADS-equipped vehicles on our nation's roadways.

Question 20. What role could exemptions under section 30114 play in the pilot program? Could participation in the pilot program assist a manufacturer in qualifying for an exemption under section 30114? Could participation be

considered part of the terms the Secretary determines are necessary to be granted an exemption under section 30114 for vehicles that are engaged in "research, investigations, demonstrations, training, competitive racing events, show, or display"?

Under 49 U.S.C. § 30114, the following is provided in pertinent part:

§ 30114. Special exemptions

(A) **Vehicles used for particular purposes.** The Secretary of Transportation may exempt a motor vehicle or item of motor vehicle equipment from section 30112(a) of this title on terms the Secretary decides are necessary for research, investigations, demonstrations, training, competitive racing events, show, or display.

49 U.S.C. § 30114(A).

While it is possible that section 30114(A) could play a role in a pilot program given the language in that section, and NHSTA is strategically claiming that the potential upcoming pilot program would be a national *research* pilot program, perhaps with the intent to use 30114 for that very purpose, NSTA again urges caution when using a special exemption that may be in direct conflict with public interest and the requirement that the pilot program comply with at least the same overall safety level for those vehicles that are not exempt.

Question 21. What role could a pilot program play in determining when to grant an exemption from the "make inoperative" prohibition under section 30122 for certain "dual mode" vehicles? Relatedly, what tools does NHTSA have to incentivize vehicles with high and full driving automation that have means of manual control and thus do not need an exemption to participate in the pilot program?

Under 49 U.S.C. § 30122, the following is provided:

§ 30122. Making safety devices and elements inoperative

(a) Definition.--In this section, “motor vehicle repair business” means a person holding itself out to the public to repair for compensation a motor vehicle or motor vehicle equipment.

(b) Prohibition.--A manufacturer, distributor, dealer, rental company, or motor vehicle repair business may not knowingly make inoperative any part of a device or element of design installed on or in a motor vehicle or motor vehicle equipment in compliance with an applicable motor vehicle safety standard prescribed under this chapter unless the manufacturer, distributor, dealer, rental company, or repair business reasonably believes the vehicle or equipment will not be used (except for testing or a similar purpose during maintenance or repair) when the device or element is inoperative.

(c) Regulations.--The Secretary of Transportation may prescribe regulations--

(1) to exempt a person from this section if the Secretary decides the exemption is consistent with motor vehicle safety and section 30101 of this title; and

(2) to define “make inoperative”.

Based on the above language, it is the position of NSTA that for purposes of a pilot program, the only way to grant an exemption from the language “make inoperative” prohibition for certain “dual mode” vehicles, it would be necessary for the Secretary to either grant the exemption in conjunction with either section 30113 or 30114. That said, NSTA is not supportive of the granting of exemptions, especially during school bus transit hours, and if such exemption is not in the public interest and/or does not comply with at least the same overall safety level for those vehicles that are not exempt.

Question 22. If there are any obstacles other than the FMVSS to the testing and development of vehicles with high and full driving automation, please explain what those are and what could be done to relieve or lessen their burdens. To the extent any tension exists between a Federal pilot program and State or local law, how can NHTSA better partner with State and local authorities to advance our common interests in the safe and effective testing and deployment of ADS technology?

NSTA recommends that there is a website with a designated portal which allows various federal, state and local agencies to communicate with each other related to each pilot program test site as well as other needed data for the purposes of collaboration and ensuring that safety remains the top priority with all pilot programs and ADS-equipped vehicle deployments.

NSTA has previously commented on ADS-equipped vehicle notices as published in the Federal Register, which can be found as follows: NSTA Comment to FMCSA on July 13, 2017, at [Docket No. FMCSA-2017-0114](#); NSTA Comment to FMCSA on May 10, 2018, at [Docket No. FMCSA-2018-0037](#); and, NSTA Comment to U.S. Departments of Transportation and Labor on November 5, 2018 at [Docket No. DOT-OST-2018-0150](#).

Conclusion

NSTA acknowledges that vehicle automation, including at SAE Levels 4 and 5, is ever-present and moving at a fast pace. However, NSTA has identified several areas of concern, including related to school transportation vehicles. NSTA is willing to work in collaboration with NHTSA to ensure that the daily transport of 26 million children to and from school on nearly 500,000 yellow school buses is not forgotten and that any ADS-equipped vehicles deployed on our nation's highways are able to interact appropriately with such school transportation vehicles.

Because of NSTA's commitment to the safe transport of children to and from school and school-related activities, we encouraged NHTSA to ensure that all relevant governmental agencies, including FMCSA, FHWA, the Department of Homeland Security, among others, are included in this discussion.

We appreciate the opportunity to offer comment on this NHTSA ANPRM at Docket No. NHTSA-2018-0092, and look forward to continuing to work with NHTSA on this important subject. If further clarification is required, please do

not hesitate to contact me at 703-684-3200, ext. 702 or by e-mail at mbattista@yellowbuses.org.

Very respectfully,

A handwritten signature in black ink, appearing to read "Maria Battista", with a large, stylized flourish at the end.

Maria Battista, J.D., Ed.D.
National School Transportation Association