following paragraphs as additions to paragraph (b) of the basic clause:

(6)(i) The Contractor shall show on the critical path method (CPM) the total cost of the guarantee period services in accordance with the guarantee period service section(s) of the specifications. This cost shall be priced out when submitting the CPM cost loaded network. The cost submitted shall be subject to the approval of the Contracting Officer. The activity on the CPM shall have money only and not activity time.

(ii) The Contractor shall submit with the CPM a guarantee period performance program which shall include an itemized accounting of the number of work-hours required to perform the guarantee period service on each piece of equipment. The Contractor shall also submit the established salary costs, including employee fringe benefits, and what the contractor reasonably expects to pay over the guarantee period, all of which will be subject to the Contracting Officer’s approval.

(iii) The cost of the guarantee period service shall be prorated on an annual basis and paid in equal monthly payments by VA during the period of guarantee. In the event the installer does not perform satisfactorily during this period, all payments may be withheld and the Contracting Officer shall inform the contractor of the unsatisfactory performance, allowing the Contractor 10 days to correct and comply with the contract. The guarantee period service is subject to those provisions as set forth in the Payments and Guarantee Period Service in accordance with the guarantee period service in accordance with the clause.

§ 852.232–72 Electronic submission of payment requests.

As prescribed in 832.7001–2, insert the following clause:

Electronic Submission of Payment Requests (Date)

(a) Definitions. As used in this clause—

(1) Contract financing payment has the meaning given in FAR 32.001.

(2) Designated agency office means the office designated by the purchase order, agreement, or contract to first receive and review invoices. This office can be contractually designated as the receiving entity. This office may be different from the office issuing the payment.

(3) Electronic form means an automated system transmitting information electronically according to the accepted electronic data interchange (EDI) formats established by the Accredited Standards Committee (ASC) and chartered by the American National Standards Institute (ANSI).

(b) Electronic payment requests. Except as provided in paragraph (e) of this clause, the contractor shall submit payment requests in electronic form. Purchases paid with a Government-wide commercial purchase card are considered to be an electronic transaction for purposes of this rule, and therefore no additional electronic invoice submission is required.

(c) Data transmission. A contractor must ensure that the data transmission method and format are through one of the following:

(1) VA’s Electronic Invoice Presentment and Payment System at the current website address provided in the contract.

(2) Any system that conforms to the X12 electronic data interchange (EDI) formats established by the Accredited Standards Committee (ASC) and chartered by the American National Standards Institute (ANSI).

(d) Invoice requirements. Invoices shall comply with FAR 32.905.

(e) Exceptions. If, based on one of the circumstances below, the Contracting Officer directs that payment requests be made by mail, the contractor shall submit payment requests by mail through the United States Postal Service to the designated agency office. Submission of payment requests by mail may be required for—

(1) Awards made to foreign vendors for work performed outside the United States;

(2) Classified contracts or purchases when electronic submission and processing of payment requests could compromise the safeguarding of classified or privacy information;

(3) Contracts awarded by Contracting Officers in the conduct of emergency operations, such as responses to national emergencies;

(4) Solicitations or contracts in which the designated agency office is a VA entity other than the VA Financial Services Center in Austin, Texas; or

(5) Solicitations or contracts in which the VA designated agency office does not have electronic invoicing capability as described above.

(End of clause)
measures they believe are required to ensure the protection of any proprietary or confidential business information they intend to share with the Agency.

DATES: Public Comments: Comments on this notice must be received on or before May 10, 2018.

ADDRESSES: You may submit comments identified by Docket Number FMCSA–2018–0037 using any of the following methods:

- **Federal eRulemaking Portal:** [http://www.regulations.gov](http://www.regulations.gov). Follow the online instructions for submitting comments.
- **Mail:** Docket Management Facility, U.S. Department of Transportation, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC 20590–0001.
- **Hand Delivery or Courier:** West Building, Ground Floor, Room W12–140, 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m. E.T., Monday through Friday, except Federal holidays.
- **Fax:** 1–202–493–2251.


SUPPLEMENTARY INFORMATION:

**Submitting Comments**

If you submit a comment, please include the docket number for this notice (FMCSA–2018–0037), indicate the specific section of this document and the Volpe report to which each comment applies, provide a reason for each suggestion or recommendation, and identify the source of any data informing your comment. You may submit your comments and any other materials online, or by fax, mail, or hand delivery, but please use only one of these means. FMCSA recommends that you include your name and mailing address, an email address, or a phone number in the body of your document so that FMCSA can contact you if there are questions regarding your submission.

To submit your comment online, go to [http://www.regulations.gov](http://www.regulations.gov). Click the docket number, FMCSA–2018–0037, in the keyword box, and click “Search.” When the new screen appears, click on the “Comment Now!” button and type your comment into the text box on the following screen. Choose whether you are submitting your comment as an individual or on behalf of a third party and then submit.

If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8 1/2 by 11 inches, for copying and electronic filing. If you submit comments by mail and would like to know that they reached the facility, please enclose a stamped, self-addressed postcard or envelope.

**Viewing Comments and Documents**

To view comments, as well as any documents mentioned in this preamble, to be available in the docket, go to [http://www.regulations.gov](http://www.regulations.gov). Insert the docket number, FMCSA–2018–0037, in the keyword box, and click “Search.” Next, click the “Open Docket Folder” button and choose the document to review. If you do not have access to the internet, you may view the docket by visiting the Docket Management Facility in Room W12–140 on the ground floor of the West Building, 1200 New Jersey Avenue SE, Washington, DC 20590, between 9 a.m. and 5 p.m., E.T., Monday through Friday, except Federal holidays.

**Privacy Act**

The Department of Transportation (DOT) solicits comments from the public to better inform its decision-making processes. DOT posts these comments, without edit, including any personal information the commenter provides, to [www.regulations.gov](http://www.regulations.gov), as described in the system of records notice (DOT/ALL–14 FDMS), which can be reviewed at [www.dot.gov/privacy](http://www.dot.gov/privacy).

I. Background

On September 12, 2017, the Department published the Automated Driving Systems (ADS): A Vision for Safety 2.0. (Publication No. DOT HS 812 442) (the Voluntary Guidance). The Voluntary Guidance offers a path forward for the safe integration of automated vehicles by:

- Encouraging new entrants and ideas that deliver safer vehicles;
- Making the Departmental regulatory process more nimble to help match the pace of private sector innovation; and,
- Supporting industry innovation and encouraging open communication with the public and with stakeholders.

The Voluntary Guidance is rooted in the Department’s view that ADS-equipped vehicles hold enormous potential benefits for safety, mobility, and the efficiency of our transportation system. The primary focus of the Voluntary Guidance is on levels of ADS that can take full control of the driving tasks in at least some circumstances. Portions of the Voluntary Guidance also apply to lower levels of automation, including some of the driver assistance systems already being deployed by automakers today. The full document can be found at: [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf](https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf).

The Voluntary Guidance adopts the SAE International (SAE) J3016 standard’s definitions for levels of automation. The SAE definitions divide vehicles into levels based on “who does what, when.” Generally:

- **SAE Level 0, No Driving Automation:** the driver performs all driving tasks.
- **SAE Level 1, Driver Assistance:** the vehicle is controlled by the driver, but some driving assist features may be included in the vehicle design.
- **SAE Level 2, Partial Driving Automation:** the vehicle has combined automated functions, like acceleration and steering, but the driver must remain engaged with the driving task and monitor the environment at all times.
- **SAE Level 3, Conditional Driving Automation:** the driver is a necessity, but is not required to monitor the environment. The driver must be ready to take control of the vehicle at all times with notice.
- **SAE Level 4, High Driving Automation:** the vehicle is capable of performing all driving functions under certain conditions. The driver may have the option to control the vehicle.
- **SAE Level 5, Full Driving Automation:** the vehicle is capable of performing all driving functions under all conditions.

Using the SAE levels described above, the Department draws a distinction between Levels 0–2 and 3–5 based on whether the human driver or the automated system is primarily responsible for monitoring the driving environment. For the purposes of this [Federal Register](https://www.federalregister.gov) notice, the Agency’s primary focus is SAE Levels 3–5 ADS.

FMCSA encourages the development of these advanced safety technologies for use on CMVs, and at the same time, recognizes the need to work with the States to ensure that, from an operations standpoint, all testing and use of these advanced safety systems is conducted in a manner that ensures the safe operation of ADS-equipped commercial vehicles.

FMCSA is responsible for the safety oversight of motor carriers operating CMVs in interstate commerce, the drivers of CMVs, and the vehicles. The Agency works with its State partners to deliver programs intended to prevent CMV crashes, and the associated injuries and fatalities.

The FMCSRs provide rules to ensure the safe operation of CMVs, as defined...
in 49 CFR 390.5, which includes vehicles with a gross vehicle weight/ gross combination weight or gross vehicle weight rating/gross combination weight rating, whichever is greater, of 10,001 pounds or more; passenger-carrying vehicles designed or used to transport 9 to 15 passengers for direct compensation; passenger-carrying vehicles designed or used to transport 16 or more passengers; and any size vehicle transporting hazardous materials in a quantity requiring placards.

On April 24, 2017, FMCSA held a public listening session to solicit information on issues relating to the design, development, testing, and integration of ADS-equipped commercial motor vehicles (82 FR 18096, April 17, 2017). The listening session provided interested parties an opportunity to share their views and any data or analysis on this topic with Agency representatives. The Agency also invited interested parties to submit written comments by July 17, 2017. A full transcript of the listening session and all written comments is available in public docket, FMCSA–2017–0114, at www.regulations.gov.

II. Request for Public Comments: The Applications of the FMCSRs to ADS-Equipped CMVs

In addition to the public listening session discussed above, FMCSA commissioned Volpe to conduct a preliminary review of the FMCSRs to identify regulations that relate to the development and safe introduction of automated driving systems. FMCSA subsequently received from Volpe its final report, “Review of the Federal Motor Carrier Safety Regulations for Automated Commercial Vehicles: Preliminary Assessment of Interpretation and Enforcement Challenges, Questions, and Gaps,” report number MCSA–RRT–17–013, August 17, 2017. A copy of the report is included in the docket referenced at the beginning of this notice.

Volpe found several provisions in the FMCSRs that might present challenges for automated CMVs that continue to require a human driver. Additionally, Volpe indicated that automated CMVs either requiring an onboard (non-driving) human technician or not requiring an onboard human at all may face compliance challenges. Volpe noted, however, that the nature and extent of these challenges will depend on how key terms and applicability statements are interpreted.

Noting the findings of the Volpe analysis, the Policy released on September 12, 2017, indicated (see page 2 of the publication) that FMCSA believes its regulations require that “a trained commercial driver must be behind the wheel at all times, regardless of any automated driving technologies available on the CMV, unless a petition for a waiver or exemption has been granted.” In light of the comments the Agency received in response to its April 17, 2017, request for public comments and the remarks of those in attendance at the April 24, 2017, public listening session, the Agency is reconsidering its views on this matter. The absence of specific regulatory text requiring a driver be behind the wheel may afford the Agency the flexibility to allow, under existing regulations, ADS to perform the driver’s functions in the operational design domain in which the system would be relied upon, without the presence of a trained commercial driver in the driver’s seat.

FMCSA notes that in the event regulatory relief is necessary to allow the operation of a commercial motor vehicle without a person in the driver’s seat, the Agency has authority to grant waivers for up to three months, grant exemptions for up to five years (with the possibility of renewals of the exemptions), or allow pilot programs for up to three years, provided certain conditions are satisfied [see 49 CFR part 381].

To that end, the Agency seeks information concerning the extent to which the public, including industry, safety advocates, the motoring public, and those engaged in the design, development, testing, and integration of ADS for CMVs believe any of FMCSA’s current safety regulations may hinder the testing and safe deployment of ADS-equipped CMVs, including, but not limited to, the regulations preliminarily identified by Volpe. In particular, the agency is interested in comments concerning how different interpretations of the applicability of FMCSRs to ADS-equipped CMVs could represent a barrier, e.g., whether the FMCSRs, under certain conditions, could be read to require, or not require, the presence of a trained commercial driver in the driver’s seat. To the extent commenters do identify unnecessary barriers, how could FMCSA use its available regulatory relief mechanism to appropriately remove or reduce those barriers?

In addition to the issues in the Volpe Report, the agency also requests comment on how ADS-equipped CMVs could interact with certain specific regulations.
What changes, if any, should be made to the distracted driving regulations for human drivers of CMVs with ADS while in automated mode? For example, should a human driver in a CMV with ADS be allowed to use a hand-held wireless phone while the ADS is in complete control of the vehicle?

Should driver fatigue monitoring be required, and if so, what method(s) should be used to conduct such monitoring? For example, the Trucking Fatigue Meter [See https://pulsarinformatics.com/products/trucking] samples data throughout the day and alerts fleet managers once a human driver exceeds a company-determined fatigue threshold.

Additionally, should these systems be required to provide “alertness assistance” to human drivers? For example, should these systems be required to periodically request input from human drivers, or should they be required to request input from human drivers only when the driver appears to be losing focus or when the ADS in control of the vehicle is confronted with situations outside its parameters?

What level of human driver inattentiveness (or how long a period of inattentiveness) should be allowed in a vehicle controlled by an ADS before the vehicle is required to enter its minimal risk condition? How long after entering the minimal risk condition must a human driver wait to re-engage an ADS (e.g., a minimum 30-minute break may provide the driver an opportunity to rest)? What should the requirements be for re-engaging the CMV with ADS in an automated mode in this scenario?

**Medical Qualifications**

FMCSA’s regulations include physical qualification standards for humans driving CMVs to ensure that they are medically qualified to do so. As technology advances, humans may be required only to monitor the operation of CMVs with ADS on public roadways, or they may not be required at all. Thus, as technology develops, changes to the physical qualification rules will be required, and some medical conditions may become inapplicable.

What medical conditions currently precluding issuance of a medical card could become inapplicable as ADS technology develops?

What medical conditions currently precluding issuance of a medical card should NOT be considered disqualifying for a human driver who is simply monitoring a CMV with ADS?

**Hours of Service for Drivers**

FMCSA’s regulations include requirements intended to reduce the risk of driver fatigue and fatigue-related crashes. Generally, the rules for truck drivers allow up to 11 hours driving time in the work day, following 10 consecutive hours off-duty. And all driving must be completed within 14 hours of the beginning of the work day. The rules prohibit driving after a driver has accumulated a certain amount of on-duty time (which includes the time spent driving and time spent performing other work) during the work week. Current regulations require that all time spent at the operating controls of the CMV be recorded as on-duty, driving time. Given the SAE levels of automation discussed above, FMCSA seeks public comments on how drivers’ hours of service should be recorded if the ADS is relied upon to perform some or all of the driving tasks.

**Commercial Driver’s License (CDL) Endorsements**

FMCSA requires all drivers of CMVs to have the knowledge and skills necessary to operate a CMV safely. States are required to include specific items in the knowledge and skills tests administered to CDL applicants. CDL applicants wishing to obtain specific endorsements must satisfy additional knowledge and skill test requirements. Existing endorsements include: Double/triple trailers, passenger, tank vehicle, hazardous materials, and school bus.

Due to potential variations in ADS technology across various providers, FMCSA seeks to ensure that human drivers and operators of CMVs with ADS receive training for the specific technologies present in the vehicles they operate.

Should an endorsement be considered for human drivers and operators of CMVs with ADS to ensure they (1) understand the capabilities and limitations of the advanced technologies, and (2) know when it is appropriate to rely on automatic rather than manual operation? If so, what types of tests—knowledge, skills, or both—should be required to obtain such an endorsement; and should there be separate endorsements for different types of ADS?

If an ADS-equipped CMV is to be deployed without a human driver onboard, should the computer system be required to demonstrate autonomous capabilities for the same maneuvers included on the CDL skills test?

**III. Request for Information: Current Testing and Operation of CMVs With ADS**

**Data Sharing**

FMCSA would like to ensure that the Agency is able to receive and review data and information from the private sector to understand a driver’s experience with ADS technologies in real-world settings.

If you are a developer or tester of ADS technologies, what types of data and/or safety measures are you currently collecting—or do you plan to collect—during testing? How often is this data collected?

How can FMCSA ensure that data and/or safety measures collected are presented in a comparable format?

How can FMCSA assess whether a CMV equipped with an ADS is being operated as safely as a traditional CMV operating on a public roadway?

What pieces of information are entities using to evaluate how a driver is using an ADS-equipped commercial vehicle?

**Testing and Interstate Operations of CMVs With ADS on Public Roadways**

What type of ADS-equipped CMVs are currently being tested? Are they Level 4 ADS-equipped vehicles that can only operate on certain roadways, Level 4 vehicles with more extensive ODDs, or full Level 5 vehicles?

Do vehicles currently being tested have operational limitations to ensure safe operations? Examples of operational limitations might include time of day, weather conditions, types of roads, specific routes within an ODD, maximum allowable operational speed, markings showing that the vehicle is capable of highly automated operations, etc.

In moving forward what actions, if any, should FMCSA consider to ensure the safe operation of ADS-equipped CMV’s in various ODDs?

How can FMCSA assess whether a CMV with ADS operating within its ODD can perform on certain maneuvers, such as emergency brake performance, crash avoidance maneuvers, etc.?

Should FMCSA consider approaches that carry persons or hazardous materials differently than other CMVs?

For State representatives, would you consider changing certain requirements (for example, higher versus lower levels of insurance) for an ADS-equipped CMV? If yes, based on what factors; and how would you implement such requirements?

**Beyond Compliance Program**

On April 23, 2015, FMCSA issued an initial Federal Register notice seeking...
comment on the impacts of a possible “Beyond Compliance Program” to consider a company’s voluntary implementation of state-of-the-art best practices and technologies when evaluating a carrier’s safety (80 FR 22770).


To what extent, if any, should the various levels of automation be considered as part of the Beyond Compliance Program?

Regulation of Manufacturing Versus Operation

The regulation of CMVs is a function shared by the National Highway Traffic Safety Administration (NHTSA) and FMCSA, with manufacturing regulated by NHTSA and operation regulated by FMCSA (and its State partners). Does this separation of functions create unique problems, or perhaps offer unique solutions, for operators of ADS-equipped CMVs?

Confidentiality of Shared Information

FMCSA acknowledges that companies may be reluctant to share certain proprietary data or information with the Agency, either as part of the waiver, exemption, or pilot program application process, or during the pendency of a regulatory relief period. The Agency notes that 49 CFR 389.3 provides protection for “confidential business information” which includes trade secrets or commercial or financial information that is privileged or confidential, as described in 5 U.S.C. 552(b)(4). Commercial or financial information is considered confidential if it is voluntarily submitted to the Agency and constitutes the type of information not customarily released to the general public. FMCSA has established standards and procedures by which the Agency will solicit, receive, and protect confidential information from public disclosure. The Agency is seeking information from interested parties on how it might further protect non-public information necessary to assess whether ADS-equipped CMVs meet performance standards and accurately document safety-related events during a waiver, temporary exemption, or pilot program.

What measures would original equipment manufacturers and developers expect of FMCSA before sharing confidential business information?

How might the Agency obtain information sufficient to assess the safety performance of CMVs with ADS without collecting confidential business information?

Do you have any additional comments regarding the confidentiality of shared information?

Issued under authority delegated in 49 CFR 1.87 on: March 16, 2018.

Raymond P. Martinez, Administrator.