

ARKANSAS DEPARTMENT OF TRANSPORTATION
AUTONOMOUS VEHICLE PROGRAM RULES

I. Introduction

Pursuant to Arkansas Code Annotated (A.C.A.) § 27-51-2002, the Arkansas State Highway Commission (Commission) may approve a proposed autonomous vehicle program submitted by a person. These rules are issued in accord with the statutory authority set out in subsection (d).

II. Definitions

(a) As used in these rules:

(1) "Automated driving system" means the hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether the automated driving system is limited to a specific Operational Design Domain.

(A) An Operational Design Domain (ODD) is the description of the specific operating domain(s) in which an automated function or system is designed to properly operate, including but not limited to roadway types, speed range, environmental conditions (weather, daytime/nighttime, etc.), and other domain constraints.

(2) "Autonomous vehicle" means a vehicle equipped with an automated driving system that can drive the vehicle for any duration of time without the active physical control or monitoring of a human operator.

(3) "Dynamic driving task" means the real-time operational and tactical functions required to operate a vehicle in on-road traffic, including without limitation the operational functions of:

(A) Lateral vehicle motion control via steering;

(B) Longitudinal motion control via acceleration and deceleration;

(C) Monitoring of the driving environment using object and event detection, recognition, classification, and response preparation;

(D) Object and event response execution;

(E) Maneuver planning; and

(F) Lighting and signaling operation designed to enhance conspicuity of the vehicle.

(4) "Dynamic driving task" does not include the strategic functions of:

(A) Trip scheduling; or

(B) Selection of destinations and waypoints.

(5) "Fully autonomous vehicle" means a vehicle equipped with an automated driving system designed to function as a level four-"high automation" or level five-"full automation" system under Society of Automobile Engineers "Taxonomy and Definitions

for Terms Related to Driving Automation Systems for On-Road Motor Vehicles” and may be designed to function solely by use of the automated driving system, or when the automated driving system is not engaged, to permit operation by a human operator.

(6) “Person” means every natural person, firm, co-partnership, association, corporation, or any political subdivision of the State of Arkansas, individually or collectively, including all counties, municipal corporations, public transit authorities, school districts, and special improvement districts.

(7) “Minimal risk condition” means a low-risk operating mode in which a fully autonomous vehicle operating without a human operator is brought to a complete stop upon experiencing a failure of the vehicle’s automated driving system that renders the vehicle unable to perform the entire dynamic driving task.

(8) “Disengagement of the autonomous mode” means a deactivation of the autonomous mode when a failure of the autonomous technology is detected or when the safe operation of the vehicle requires that a human operator that is physically in the vehicle or that is remotely located takes control of the vehicle.

(9) "Human operator" means an individual who operates a vehicle by manually controlling the:

- (A) Brake;
- (B) Accelerator pedal;
- (C) Steering wheel; or
- (D) Transmission gear selection;

(10) "On-demand driverless capable vehicle network" means a transportation service network that uses a software application or other digital means to dispatch autonomous vehicles or fully autonomous vehicles for purposes of transporting persons or goods, including without limitation vehicles used for:

- (A) For-hire transportation;
- (B) The transportation of multiple passengers who agree to share the ride in whole or in part; or
- (C) Public transportation; and

(11) "Remote operator" means an individual who is:

- (A) Able to provide remote assistance to a fully autonomous vehicle in driverless operation; or
- (B) Not seated in a position to manually control a vehicle's:
 - (i) Brake;
 - (ii) Accelerator pedal;
 - (iii) Steering wheel; or
 - (iv) Transmission gear selection.

III. Application

(a) Any person seeking approval for an autonomous vehicle program shall submit to the Commission an application providing the following information:

- (1) A filled application form (downloadable from <https://www.ardot.gov/autonomous>)
- (2) A statement of the commercial purpose of the autonomous vehicle program;
- (3) Proof that the autonomous vehicle program complies with the minimum liability insurance coverage requirements for a motor carrier of property under 49 C.F.R. § 387.9 as it existed on January 1, 2021;
- (4) A statement acknowledging that:

(A) The autonomous vehicle or fully autonomous vehicle is capable of complying with all applicable traffic and motor vehicle safety laws of this state and rules adopted by the Office of Motor Vehicle, including without limitation the laws and rules concerning the capability to safely negotiate railroad crossings, if applicable;

(B) The fully autonomous vehicle is capable of achieving “a minimal risk condition” if a failure of the automated driving system occurs that renders the automated driving system unable to perform the entire dynamic driving task;

(C) The autonomous vehicle or fully autonomous vehicle meets Federal Motor Vehicle Safety Standards and Regulations, 49. C.F.R. Part 571 as it existed on January 1, 2021, for the vehicle's model year, except to the extent an exemption has been granted under applicable federal law, and all other applicable safety standards and performance requirements stated in state and federal law and rules adopted by the commission; and

(D) The remote operator of a fully autonomous vehicle involved in a motor vehicle accident is capable of meeting the requirements of A.C.A. §§ 27-53-101, 27-53-102, and 27-53-105.

(5) A description of how a fully autonomous vehicle is capable of meeting the requirement of the statement required in A.C.A. § 27-51-2002 (b)(3)(C).

(6) An autonomous vehicle or fully autonomous vehicle shall be registered and titled as required under the Motor Vehicle Administration, Certificate of Title, and Antitheft Act, § 27-14-101 et seq.

IV. Application Review, Approval, Denial, or Withdrawal of Approval

(a) Upon receipt of an application, the Commission will refer it for consideration to the Director of the Arkansas Department of Transportation.

(b) The Director will:

- (1) Review the application, and approve or deny the application based upon its compliance with these rules; and
- (2) Notify the applicant of the decision in writing.

(c) The Director can withdraw approval of an autonomous vehicle program at any time for any reason. If approval of an autonomous vehicle program is withdrawn, the Director will notify the applicant of the decision in writing.

(d) The applicable administrative adjudication provisions of the Arkansas Administrative Procedure Act found in A.C.A. §§ 25-15-208 to -210, and §§ 25-15-212 to -214, shall apply to a decision of the Director to deny an application or withdraw approval of an application.

V. Operational Allowances and Limitations

(a) Operation of on-demand driverless capable vehicle network.

(1) A person may operate an on-demand driverless capable vehicle network in the state.

(2) An on-demand driverless capable vehicle network may connect a passenger or goods to a fully autonomous vehicle either exclusively or as part of a digital network that also connects passengers or goods to human drivers who provide transportation services in vehicles that are not fully autonomous vehicles.

(b) During the first six months of an approved autonomous vehicle program, a human operator will be required to be physically present in the vehicle while it is operating on the streets and highways of this State;

(c) After completion of the first six months of the autonomous vehicle program, an application may be submitted to the Commission to remove the requirement of a human operator to be physically present in the vehicle while it is operating on the streets and highways of this State providing the following information:

(1) A copy of the approved application for the autonomous vehicle program;

(2) Total number of trips accomplished;

(3) Total number of miles traveled;

(4) Total number of times a disengagement of the autonomous mode occurred;

(5) A copy of all law enforcement accident reports that have involved an autonomous vehicle operating under the autonomous vehicle program or a statement that no accidents have occurred that involved an autonomous vehicle operating under the autonomous vehicle program; and

(a) The review, approval, denial, or withdrawal of approval of the application to remove the requirement of a human operator to be physically present in the vehicle will be handled as noted in Section IV of these rules.

(b) Upon approval of an autonomous vehicle program that does not require a human operator to be physically present in the vehicle, a person may operate autonomous vehicles or fully autonomous vehicles that are not equipped with the following:

(1) Seat belts, unless transporting persons as required by § 27-37-701 et seq.;

(2) A steering wheel; and

(3) A rearview mirror.

(c) If a vehicle operating under an autonomous vehicle program is involved in a serious injury or fatal accident, the following actions will be taken:

- (1) The person responsible for the autonomous vehicle program will notify the Director immediately;
- (2) All vehicles operating under the autonomous vehicle program will cease operations until a review of the accident can be completed;
- (3) The person responsible for the autonomous vehicle program will submit the following to the Director:
 - (A) A copy of the accident report;
 - (B) A report of actions taken by the human operator that was physically located within the vehicle or actions taken by the human operator that was remotely located or a statement that no actions were taken by a human operator;
 - (C) A description of actions taken to prevent subsequent accidents;
 - (D) A request to restart operations of the autonomous vehicle program, if the person responsible for the autonomous vehicle-program desires to do so;
- (4) The review, approval, or denial of the application to restart the autonomous vehicle program will be handled as noted in Section IV of these rules.

VI. Reporting

- (a) A report will be submitted to the Director by January 31st for the previous calendar year's operations providing the following information:
 - (1) A copy of the approved application for the autonomous vehicle program;
 - (2) Total number of trips accomplished;
 - (3) Total number of miles traveled;
 - (4) Total number of times a disengagement of the autonomous mode occurred; and
 - (5) A copy of all law enforcement accident reports that have involved an autonomous vehicle operating under the autonomous vehicle program or a statement that no accidents have occurred that involved an autonomous vehicle operating under the autonomous vehicle program.