

ARKANSAS DEPARTMENT OF TRANSPORTATION
AUTONOMOUS VEHICLE PILOT 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 pilot 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.

III. Application

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

(1) A statement of the commercial purpose of the autonomous vehicle pilot program;

(2) The identification of any additional requirements for proof of insurance under the Motor Vehicle Safety Responsibility Act, A.C.A. §§ 27-19-101 et seq., and 27-22-101 et seq.;

(3) 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 unless an exemption for the operation of autonomous vehicles or fully autonomous vehicles at railroad crossings has been obtained from the owner of the railroad by the person submitting the application;

(B) The fully autonomous vehicle is capable of achieving a reasonably safe state or “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; and

(C) 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.

(4) 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).

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) An autonomous vehicle pilot program is automatically approved sixty days after the date of submission of the application to Commission unless the Director approves or denies the application prior to the end of the sixty days.
- (c) 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.
- (d) The Director can withdraw approval of an autonomous vehicle pilot program at any time for any reason. If approval of an autonomous vehicle pilot program is withdrawn, the Director will notify the applicant of the decision in writing.
- (e) 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 or withdraw an application.

V. Operational Allowances and Limitations

- (a) Upon approval of an autonomous vehicle pilot program, a person may operate a maximum of three autonomous vehicles or fully autonomous vehicles simultaneously on the streets and highways of this State;
- (b) During the first six months of an approved autonomous vehicle pilot 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 pilot 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 pilot 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 pilot program or a statement that no accidents have occurred that involved an autonomous vehicle operating under the autonomous vehicle pilot program; and
- (d) 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.

(e) Upon approval of an autonomous vehicle pilot 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;
- (2) A steering wheel; and
- (3) A rearview mirror.

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

- (1) The person responsible for the autonomous vehicle pilot program will notify the Director immediately;
- (2) All vehicles operating under the autonomous vehicle pilot program will cease operations until a review of the accident can be completed;
- (3) The person responsible for the autonomous vehicle pilot 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 pilot program, if the person responsible for the autonomous vehicle pilot program desires to do so;
- (4) The review, approval, or denial of the application to restart the autonomous vehicle pilot 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 pilot 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 pilot program or a statement that no accidents have occurred that involved an autonomous vehicle operating under the autonomous vehicle pilot program.

1 State of Arkansas
2 92nd General Assembly
3 Regular Session, 2019
4

A Bill

HOUSE BILL 1561

5 By: Representative McCollum
6 By: Senator M. Pitsch
7

For An Act To Be Entitled

9 AN ACT TO AUTHORIZE THE OPERATION OF AUTONOMOUS
10 VEHICLES OR FULLY AUTONOMOUS VEHICLES ON THE STREETS
11 AND HIGHWAYS OF THIS STATE UNDER AN AUTONOMOUS
12 VEHICLE PILOT PROGRAM; TO DECLARE AN EMERGENCY; AND
13 FOR OTHER PURPOSES.
14

Subtitle

15
16
17 TO AUTHORIZE THE OPERATION OF AUTONOMOUS
18 VEHICLES OR FULLY AUTONOMOUS VEHICLES ON
19 THE STREETS AND HIGHWAYS OF THIS STATE
20 UNDER AN AUTONOMOUS VEHICLE PILOT
21 PROGRAM; AND TO DECLARE AN EMERGENCY.
22
23

24 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:
25

26 SECTION 1. Arkansas Code Title 27, Chapter 51, Subchapter 14, is
27 amended to add an additional section to read as follows:

28 27-51-1410. Autonomous vehicle pilot program.

29 (a) As used in this section:

30 (1) "Automated driving system" means the hardware and software
31 that are collectively capable of performing the entire dynamic driving task
32 on a sustained basis, regardless of whether the automated driving system is
33 limited to a specific operational design domain;

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



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

4 (i) Lateral vehicle motion control via steering;

5 (ii) Longitudinal motion control via acceleration
6 and deceleration;

7 (iii) Monitoring of the driving environment using
8 object and event detection, recognition, classification, and response
9 preparation;

10 (iv) Object and event response execution;

11 (v) Maneuver planning; and

12 (vi) Lighting and signaling operation designed to
13 enhance conspicuity of the vehicle.

14 (B) "Dynamic driving task" does not include the strategic
15 functions of:

16 (i) Trip scheduling; or

17 (ii) Selection of destinations and waypoints;

18 (4) "Fully autonomous vehicle" means a vehicle equipped with an
19 automated driving system designed to function as a level four-"high
20 automation" or level five-"full automation" system under Society of
21 Automobile Engineers "Taxonomy and Definitions for Terms Related to Driving
22 Automation Systems for On-Road Motor Vehicles" and may be designed to
23 function solely by use of the automated driving system, or when the automated
24 driving system is not engaged, to permit operation by a human operator;

25 (5) "Minimal risk condition" means a low-risk operating mode in
26 which a fully autonomous vehicle operating without a human operator is
27 brought to a complete stop upon experiencing a failure of the vehicle's
28 automated driving system that renders the vehicle unable to perform the
29 entire dynamic driving task;

30 (6) "Operational design domain" means a description of the
31 specific operating domain in which an automated driving system is designed to
32 properly operate, including without limitation:

33 (A) Roadway types;

34 (B) Speed range;

35 (C) Environmental conditions; and

36 (D) Other domain constraints; and

1 (7) "Person" means every natural person, firm, copartnership,
2 association, corporation, or any political subdivision of the State of
3 Arkansas, individually or collectively, including all counties, municipal
4 corporations, public transit authorities, school districts, and special
5 improvement districts.

6 (b)(1) An autonomous vehicle or a fully autonomous vehicle may be
7 operated in this state under an autonomous vehicle pilot program approved by
8 the State Highway Commission.

9 (2) The autonomous vehicle pilot program is automatically
10 approved sixty (60) days after the date the autonomous vehicle pilot program
11 is submitted to the commission for approval.

12 (c) An autonomous vehicle pilot program shall include without
13 limitation the following:

14 (1) A statement of the commercial purpose of the autonomous
15 vehicle pilot program;

16 (2) The identification of any additional requirements for proof
17 of insurance under the Motor Vehicle Safety Responsibility Act, § 27-19-101
18 et seq., and § 27-22-101 et seq.; and

19 (3) A statement acknowledging that:

20 (A) The autonomous vehicle or fully autonomous vehicle is
21 capable of complying with all applicable traffic and motor vehicle safety
22 laws of this state and rules adopted by the Office of Motor Vehicle;

23 (B) The fully autonomous vehicle is capable of achieving a
24 reasonably safe state if a failure of the automated driving system occurs
25 that renders the automated driving system unable to perform the entire
26 dynamic driving task; and

27 (C) A fully autonomous vehicle involved in a motor vehicle
28 accident is capable of meeting the requirements of §§ 27-53-101, 27-53-102,
29 and 27-53-105; and

30 (4) A description of how a fully autonomous vehicle is capable
31 of meeting the requirement of subdivision (c)(3)(C) of this section.

32 (d) For the purposes of this section, a person may operate:

33 (1) A fully autonomous vehicle that is not equipped with:

34 (A) Seat belts;

35 (B) A steering wheel; or

36 (C) A rearview mirror; and

1 State of Arkansas As Engrossed: H3/27/19 S4/4/19

2 92nd General Assembly

A Bill

3 Regular Session, 2019

HOUSE BILL 1822

4

5 By: Representatives Christiansen, Breaux, Cavanaugh, Dalby, A. Davis, D. Douglas, Eaves, K. Ferguson,
6 Fielding, M. Gray, Hillman, M. Hodges, Rye, Scott, Sorvillo

7 By: Senators J. Dismang, K. Hammer, B. Sample

8

9

For An Act To Be Entitled

10 AN ACT CONCERNING THE OPERATION OF AUTONOMOUS
11 VEHICLES AT RAILROAD CROSSINGS; TO DECLARE AN
12 EMERGENCY; AND FOR OTHER PURPOSES.

13

14

15

Subtitle

16

CONCERNING THE OPERATION OF AUTONOMOUS
17 VEHICLES AT RAILROAD CROSSINGS; AND TO
18 DECLARE AN EMERGENCY.

19

20

21 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS:

22

23 SECTION 1. Arkansas Code § 27-51-1410(c)(3), as amended by Acts 2019
24 No. 468, and concerning an autonomous vehicle pilot program, is amended to
25 read as follows:

26

(3) A statement acknowledging that:

27

(A)(i) The autonomous vehicle or fully autonomous vehicle
28 is capable of complying with all applicable traffic and motor vehicle safety
29 laws of this state and rules adopted by the Office of Motor Vehicle,

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including without limitation the laws and rules concerning the capability to
31 safely negotiate railroad crossings unless an exemption for the operation of
32 autonomous vehicles or fully autonomous vehicles at railroad crossings is
33 granted by the Arkansas Department of Transportation.

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(ii) The department shall consult with railroad
35 companies operating in the state when considering an exemption that affects
36 the operation of autonomous vehicles or fully autonomous vehicles at railroad



1 crossings;

2 (B) The fully autonomous vehicle is capable of achieving a
3 reasonably safe state if a failure of the automated driving system occurs
4 that renders the automated driving system unable to perform the entire
5 dynamic driving task; and

6 (C) A fully autonomous vehicle involved in a motor vehicle
7 accident is capable of meeting the requirements of §§ 27-53-101, 27-53-102,
8 and 27-53-105; and

9
10 SECTION 2. EMERGENCY CLAUSE. It is found and determined by the
11 General Assembly of the State of Arkansas that autonomous vehicles may begin
12 operating on public streets, roads, and highways as soon as March 14, 2019;
13 that there may be an issue with negotiating railroad crossings if an
14 exemption is not granted for autonomous vehicles by the Arkansas Department
15 of Transportation; and that railroad companies and the department need to be
16 aware of this issue and work together to resolve this potential issue for the
17 safety of railroad and motor vehicle traffic. Therefore, an emergency is
18 declared to exist, and this act being immediately necessary for the
19 preservation of the public peace, health, and safety shall become effective
20 on:

21 (1) The date of its approval by the Governor;

22 (2) If the bill is neither approved nor vetoed by the Governor,
23 the expiration of the period of time during which the Governor may veto the
24 bill; or

25 (3) If the bill is vetoed by the Governor and the veto is
26 overridden, the date the last house overrides the veto.

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28
29 /s/Christiansen

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32 APPROVED: 4/16/19