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FOR DISCUSSION ONLY

HIGHLY AUTOMATED VEHICLES ACT

NATIONAL CONFERENCE OF COMMISSIONERS

ON UNIFORM STATE LAWS

MEETING IN ITS ONE-HUNDRED-AND-TWENTY-SEVENTH YEAR
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HIGHLY AUTOMATED VEHICLES ACT

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NATIONAL CONFERENCE OF COMMISSIONERS
ON UNIFORM STATE LAWS

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June 20, 2018

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REPORTER'S VERSION RELEASE NOTE

Introduction

As discussed in previous release notes, automated driving encompasses a wide range of technologies, applications of those technologies, business models for those applications, and participants in those business models.¹ For example, a vehicle capable of automated operation may or may not:

- (a) Be capable of automated operation for an entire trip.
- (b) Include traditional devices for a human to steer, brake, and accelerate.
- (c) Require a human who can resume driving when requested to do so.
- (d) Require that this human be physically present in the vehicle.
- (e) Rely on a human located far from the vehicle to provide instructions and information.
- (f) Use specific sensor technologies, including camera, radar, sonar, or lidar.
- (g) Use highly detailed maps created in advance.
- (h) Communicate directly with other vehicles.
- (i) Be designed for all roads.
- (j) Be sold to individual consumers.
- (k) Be originally manufactured as an automated vehicle.
- (l) Be retrofitted by an automated driving developer other than the vehicle manufacturer.
- (m) Be modified by third parties without the involvement of the automated driving developer.
- (n) Carry passengers, deliver goods, provide other services, or perform innovative functions.

In other words, because there will be so many different forms of automated driving, picturing and attempting to legislate for the singular “driverless car” may be both impractical and counterproductive. Instead, it may be more helpful to identify and explore assumptions in contemporary legal rules as well as in contemporary discussions of automated driving.

Scope

In clarifying and focusing the scope provided to it, the Committee has concluded that:

- (a) Vehicle deployment is in scope, while research-and-development testing is out of scope.
- (b) Automated driving from SAE levels 3 through 5 is in scope, while driver assistance below level 3 is out of scope. (Accordingly, platooning below level 3 is out of scope.)²

¹ See Bryant Walker Smith, *How Governments Can Promote Automated Driving*, available at newlypossible.org.

² See *Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles* (SAE J3016), available at sae.org.

- (c) Remote human input into automated driving is in scope, while remote human driving is out of scope.
- (d) Allocation of fault in the context of the vehicle code is in scope, while liability rules of general application are out of scope.
- (e) Clarification of automotive insurance requirements in the context of automated driving may be in scope, while regulation of insurance in general is out of scope.

Automated driving provider

The draft uniform law continues to answer the question “who drives an automated vehicle?” with “the automated driving provider.”

(The Committee has discussed alternative names for this concept, including “automated driving entity,” “automated driving developer,” and “automated driver,” but a consensus has yet to emerge on a preferred term.)

Similar to how drivers are licensed and subject to obligations under state vehicle codes, the automated driving provider would register and be subject to many of these same obligations. More fundamentally, the automated driving provider would be the legal entity that vouches for automated operation—and that thereby makes an explicit promise to the state and its public.

The diversity of automated driving requires flexibility within this concept. Automated driving systems may be installed on vehicles by the developer of the system, the manufacturer of the vehicle, or another entity altogether. These vehicles may be owned by sophisticated technology companies, by fleet operators with some familiarity with automation, or by individuals (or their lenders) with no technical knowledge whatsoever. But regardless of ownership, the continued safety of automated operation is likely to require the ongoing involvement of a technically competent entity that facilitates data transfers, software updates, and technical support.

Accordingly, the draft uniform law defines the automated driving provider not by a specific role in the stream of commerce but, rather, by a willingness and ability to meet specific technical and legal requirements. Many of these potential requirements have been added or modified per the discussion at the February 2018 meeting, in part to mitigate administrative difficulties identified by participants from state regulatory agencies. At the suggestion of several commissioners, this draft also moves these provisions from the Vehicle Registration section to a new Automated Driving Provider Registration section in order to clearly bifurcate registration of the provider and registration of the vehicle.

At the February 2018 meeting, a majority of the Committee voted to retain automated driving provider registration. A majority of industry stakeholders present preferred to abolish any registration and thereby eliminate the entire concept of the automated driving provider. A majority of stakeholders present from organizations other than industry preferred to retain

registration or to expand it by imposing more substantive requirements.

1 **HIGHLY AUTOMATED VEHICLES ACT**

2 **SECTION 1. SHORT TITLE.** This [act] may be cited as the Highly Automated
3 Vehicles Act.

4 **SECTION 2. DEFINITION.** In this [act]:

5 (1) “Associated automated vehicle” means an automated vehicle an automated driving
6 provider identifies pursuant to Section 5(a)(5).

7 (2) “Automated driving provider” means a person that registers with the [relevant state
8 agency] pursuant to Section 5.

9 (3) “Automated driving system” means the combination of hardware and software
10 collectively capable of performing the entire dynamic driving task on a sustained basis.

11 (4) “Automated operation” means the performance of the entire dynamic driving task by
12 an automated driving system. Automated operation begins upon the performance of the entire
13 dynamic driving task by an automated driving system and continues until a human driver or
14 operator terminates the performance, but if a human driver or operator terminates the
15 performance to mitigate a crash hazard caused by the automated driving system, automated
16 operation continues until the crash hazard is no longer present.

17 (5) “Automated vehicle” means a motor vehicle with an automated driving system,
18 regardless of whether the vehicle is under automated operation.

19 (6) “Completely automated trip” means travel in an automated vehicle that, from the
20 point of departure until the point of arrival, is under automated operation by means of an
21 automated driving system designed to achieve a minimal risk condition.

22 (7) “Dedicated automated vehicle” means an automated vehicle designed for exclusively
23 automated operation when used for transportation on a [road open to the public].

1 (8) “Drive” means as provided in [this state’s vehicle code], except that an automated
2 driving provider exclusively drives an associated automated vehicle under automated operation.

3 (9) “Driver” means as provided in the vehicle code, except that an automated driving
4 provider is the exclusive driver of an associated automated vehicle under automated operation.

5 (10) “Dynamic driving task” means the real-time operational and tactical functions
6 collectively required to operate a vehicle in on-road traffic, including controlling lateral and
7 longitudinal vehicle motion, monitoring the driving environment, executing responses to objects
8 and events, planning vehicle maneuvers, and enhancing vehicle conspicuity. The term does not
9 mean the strategic functions of driving, including scheduling trips, selecting destinations, and
10 specifying routes.

11 (11) “Minimal risk condition” means a condition to which a vehicle user or an automated
12 driving system may bring a vehicle to reduce the risk of a crash when a trip cannot or should not
13 be completed.

14 (12) “Operate” has the meaning in [this state’s vehicle code], except that an automated
15 driving provider exclusively operates an associated automated vehicle under automated
16 operation.

17 (13) “Operational design domain” means the environmental, geographic, time-of-day,
18 traffic, infrastructure, and other conditions under an automated driving system is specifically
19 designed to function.

20 (14) “Operator” has the meaning in [this state’s vehicle code], except that an automated
21 driving provider is the exclusive operator of an associated automated vehicle under automated
22 operation.

23 (15) “Person” has the meaning in [this state’s vehicle code.] [means an individual, estate,

1 business or nonprofit entity, public corporation, government or governmental subdivision,
2 agency, or instrumentality, or other legal entity].

3 **SECTION 3. APPLICATION; GOVERNING LAW.**

4 (a) This [act] applies to ownership, registration, insurance, and operation of an automated
5 vehicle, even if the ownership, registration, insurance, and operation of the vehicle complied
6 with laws other than this [act] before [the effective date of this [act]].

7 (b) The [relevant state agency or agencies] may make rules, issue interpretations, and
8 take other lawful actions to administer and enforce this [act].

9 **SECTION 4. DRIVING LICENSING.**

10 (a) An individual is not required to hold a driving license to undertake a completely
11 automated trip.

12 (b) An automated driving provider is not required to hold a driving license to drive an
13 automated vehicle under automated operation.

14 **SECTION 5. AUTOMATED DRIVING PROVIDER REGISTRATION.**

15 (a) To register as an automated driving provider, a person must:

16 (1) participate in a substantial manner in the development of an automated driving
17 system;

18 [(2) submit to the United States National Highway Traffic Safety Administration
19 a safety self-assessment or equivalent report for the automated driving system;]

20 [(3) register as a manufacturer of motor vehicles or motor vehicle equipment
21 pursuant to the requirements of the United States National Highway Traffic Safety
22 Administration;]

23 [(4) register as a motor vehicle manufacturer pursuant to the motor vehicle

1 manufacturer registration laws of this state;]

2 (5) identify, by vehicle identification number, each automated vehicle the person
3 intends to be an associated automated vehicle;

4 (6) represent to the [relevant state agency] that sufficient evidence demonstrates
5 that

6 OPTION 1: the automated operation of each associated automated vehicle
7 will comply with [this state's rules of the road];

8 OPTION 2: the automated driving system of each associated automated
9 vehicle can comply with [this state's rules of the road];

10 OPTION 3: the automated driving system of each associated automated
11 vehicle is designed to detect and respond to vehicle and roadway situations in compliance with
12 [this state's vehicle code] and with local law applicable to the performance of the dynamic
13 driving task in the operational design domain of the system, except when necessary to enhance
14 the safety of the occupants of the vehicle, other road users, or other persons;

15 (7) warrant to the public that [REPEAT THE OPTION SELECTED ABOVE];

16 (8) irrevocably appoint the [relevant state agency] as a lawful agent upon which
17 process may be served in an action arising from the automated operation of an associated
18 automated vehicle; [and]

19 [(9) pay a fee specified by the [relevant state agency] for processing the
20 automated driving provider registration; and]

21 (10) submit to the [relevant state agency], in a form acceptable to the [agency], a
22 statement representing and documenting that the person complies with this section.

23 (b) If a person is registered as an automated driving provider in another state, the

1 [relevant state agency] may deem the person to be registered in this state or may exempt the
2 person from a requirement of this section.

3 (c) An automated driving provider must make available to the purchaser or owner of an
4 associated automated vehicle a summary of the submission by the provider to the [relevant state
5 agency] in a form acceptable to the [relevant state agency].

6 **SECTION 6. VEHICLE REGISTRATION.**

7 (a) Registration of an automated vehicle may be granted, maintained, or renewed only if
8 the vehicle is an associated automated vehicle.

9 (b) The [relevant state agency] may decline, suspend, revoke, or decline to renew the
10 registration of an automated vehicle that is not an associated automated vehicle, not properly
11 maintained, not insured in accordance with applicable law, not compliant with a registration
12 requirement, or otherwise not fit to be operated.

13 (c) If the [relevant state agency] declines, suspends, revokes, or declines to renew the
14 registration of an automated vehicle, it may grant a temporary registration that applies to the
15 vehicle only when it is not under automated operation.

16 (d) Registration of a motor vehicle that is no longer an automated vehicle may be granted,
17 maintained, or renewed only if the registrant represents to the [Department of Motor Vehicles]
18 that the vehicle cannot and will not be used under automated operation on a [road open to the
19 public].

20 (e) Registration of an automated vehicle does not create a presumption as to the safety of
21 the vehicle or its equipment.

22 **SECTION 7. EQUIPMENT.**

23 (a) [This state's vehicle code] shall be interpreted to facilitate the development and

1 deployment of automated vehicles in a way that improves traffic safety.

2 (b) An automated vehicle must be properly maintained.

3 (c) A provision of [this state's vehicle code] requiring equipment that is necessary only
4 for the performance of the dynamic driving task by a human driver does not apply with respect to
5 a dedicated automated vehicle.

6 (d) A provision of [this state's vehicle code] prohibiting an electronic device in a vehicle,
7 other than a device used to evade law enforcement, does not apply with respect to a dedicated
8 automated vehicle.

9 (e) A provision under [this state's vehicle code] prohibiting an electronic device in a
10 vehicle, other than a device used to evade law enforcement, may not be enforced with respect to
11 an automated vehicle under automated operation.

12 **SECTION 8. RULES OF THE ROAD.**

13 (a) [This state's rules of the road] shall be interpreted to facilitate the development and
14 deployment of automated vehicles in a way that improves traffic safety.

15 (b) Automated operation of an automated vehicle in accordance with applicable federal,
16 state, and local law and in a reasonably safe manner is lawful.

17 (c) An automated driving provider must take reasonable steps to comply with [this state's
18 rules of the road] during automated operation of an associated automated vehicle.

19 (d) An automated driving provider is liable for a failure to comply with [this state's rules
20 of the road] during the automated operation of an associated automated vehicle as a human
21 driver or operator would be if the vehicle were not under automated operation.

22 (e) An automated vehicle may not be operated on a [road open to the public] if the
23 vehicle is not properly maintained, not insured in accordance with applicable law, not compliant

1 with a registration requirement, or otherwise not fit to be operated.

2 (f) An automated vehicle under automated operation shall not be considered
3 or abandoned solely because an individual is not in or near the vehicle, unless the vehicle is not
4 lawfully registered, poses a risk to public safety, or unreasonably obstructs other road users.

5 (g) A child, incapacitated person, or pet in an automated vehicle shall not be considered
6 attended solely because the vehicle is under automated operation.

7 (h) A restriction under [this state's vehicle code] on the use of an in-vehicle electronic
8 device, other than a device used to evade law enforcement, does not apply during the automated
9 operation of an automated vehicle.

10 (i) A requirement under [this state's vehicle code] that imposes a minimum following
11 distance other than a reasonable and prudent distance does not apply to the automated operation
12 of an automated vehicle.

13 **[SECTION 9. INSURANCE.**

14 (a) An automated driving provider shall be considered a [permissive driver] under an
15 insurance policy applicable to an associated automated vehicle.

16 (b) The coverage limits applicable to the automated driving provider as a permissive
17 driver shall be the bodily injury and property damage liability limits under the policy unless the
18 policy or an endorsement to the policy specifies different limits applicable to the automated
19 driving provider as a permissive driver, but the bodily injury and property damage liability limits
20 shall not be less than the amounts set forth in [the financial responsibility law].

21 (c) This section does not modify or limit the liability of an automated driving provider
22 under statutory or common law.

23 (d) This [act] does not displace other insurance requirements, and the insurance required

1 under this [act] does not satisfy other insurance requirements.]

2 **SECTION 10. VIOLATIONS.** A violation of this act is a violation of this Title and
3 does not preclude liability under other laws.

4 **SECTION 11. UNIFORMITY OF APPLICATION AND CONSTRUCTION.** In
5 applying and construing this uniform act, consideration shall be given to the need to promote
6 uniformity of the law with respect to its subject matter among states that enact it.

7 **[SECTION 12. SEVERABILITY.** If a provision of this [act] or its application to a
8 person or circumstance is held invalid, the invalidity does not affect other provisions or
9 applications of this [act] which can be given effect without the invalid provision or application,
10 and to this end the provisions of this [act] are severable.]

11 **SECTION 13. EFFECTIVE DATE.** This [act] takes effect [[30] days after its
12 enactment].