

Washington State Autonomous Vehicle Work Group Subcommittee Discussion

Subcommittee	AV Safety Subcommittee
Date of Meetings	June 4 and July 23, 2020

1) NOTEWORTHY TOPICS OF DISCUSSION, SUMMARY OF DISCUSSION, AND OUTCOME OF DISCUSSION

The AV Work group Executive Committee asked all of the subcommittees to provide feedback on the language proposed in HB 2470. The feedback is organized by HB2470 sections and represents the various viewpoints of representatives on the AV Safety Subcommittee. It is a collection of feedback only and is not intended to be a recommendation of any specific action. Because the AV Safety Subcommittee has diverse membership and perspectives, some points of feedback may seem to conflict with others. The feedback is documented below.

2) NEXT STEPS AND PLANS FOR SUBCOMMITTEE

The AV safety subcommittee would be open to developing sections of this feedback further upon the request of the AV Workgroup Executive Committee.

General

- The more than 530 people killed on Washington’s roads last year is not acceptable, and automated vehicle technology holds the potential to save lives, but we need to be able to test and deploy this technology in a safe manner that doesn’t expose drivers, passengers, and other road users to additional harm.
- This bill addresses only the deployment of vehicles that can provide automated operations. This would include Levels 3-5 of the [SAE standard](#). It does not address the testing of level 3-4 vehicles, which is actually the state of development where we are right now. Level 3 and 4 automated vehicles are being tested on public roads today in multiple states, and it is legal to test them on Washington’s public roads as well, with the self-certification outlined in [Executive Order 17-02](#) and recently passed [HB2676](#).
- The focus on traffic safety is appreciated. In section 11 of the bill, it states “This title must be interpreted to accommodate the development and deployment of automated vehicles in a way that maintains or improves traffic safety.”

- It provides a general framework that is good, but it is lacking many of the details that are very important to ensure safety. The need to regulate deployment of AV's in Washington is not urgent, and for that reason, we should spend more time addressing the issues outlined below.
- Portions of this bill act could apply to certain consumer-owned vehicles as early as 2021 if the manufacturers of those vehicles declare themselves to be an automated driving provider and define when the vehicle is in automated operation. But even in that case, not having a law of this type would not adversely affect traffic safety. The broader application of this would be to level 4 automated vehicles, and that would have larger impacts to traffic safety. We want people without licenses or are unable to drive, such as intoxicated persons, to use these level 4 vehicles for transportation, rather than driving themselves. But level 4 vehicles will likely not be deployed in any widespread use in Washington for at least another 3-5 years, so we have time to invest in more discussion and work out important details before passing legislation.

Definitions (Sections 2-10, 12)

- Defining “automated vehicle” as a motor vehicle with an automated system may be insufficient. This definition should contain a discussion of the autonomous vehicle levels.
- “Dedicated Automated Vehicle” is defined. Is this a new term we are going to introduce? Would it be better to stick with Highly Autonomous Vehicles, Level 1 -5 Autonomous Vehicles, or other terms widely accepted in this discussion.
- We need to have consistent definitions that align with other state and federal laws and regulations.

Vehicle Registration (Section 13)

- The National Highway Traffic Safety Administration (NHTSA) is responsible for setting standards for safe vehicle equipment standards, however they have not yet established what those standards are for automated vehicles being operated in automated operations (not under the control of a human driver). This bill gives the authority to Department of Licensing (DOL) to register vehicles as “automated vehicles” but it doesn't provide any criteria on how to ensure that vehicle can safely operate in automated operation, beyond the assurances of the company claiming the vehicle. There are [multiple industry organizations working on various standards](#) of how to judge automated vehicle operational safety, but they are not even close to having a commonly accepted standard. This would make it very difficult for DOL to reasonably ensure that the automated vehicles they would be asked to license are safe to operate on public roads and impact all Washingtonians.
- Something not addressed in this bill is how to do safety assessments or set performance standards. As a matter of equipment, the safety assessments should be done by the federal agency that governs vehicle equipment, NHTSA. These assessment and performance standards need to prioritize safety for all road users, not just a goal of improvements in traffic safety.

Infractions/Citations (Section 16)

(1) states “An automated driving provider shall take reasonable steps to comply with chapter 46.61 RCW during automated operation of an associated automated vehicle.”

- This is concerning to some, because you either do comply with the law or you don't. Suggest replacing "...shall take reasonable steps to comply..." with "...shall comply..."
- However, there are situations where vehicles should violate law for good reasons, such as temporarily crossing a yellow line to move around a disabled vehicle or a flagger directs the vehicle, so "reasonable steps" language is intended to address these kinds of situations.
- Current proposed language is consistent with what other states have implemented. California has an exception for compliance if the AV is taking actions to improve road safety which may violate traffic laws, such as crossing a double yellow line to move around a stalled vehicle, an accident, construction, or if a police officer is manually directing traffic.
- We could provide examples, but generally you don't see those in laws. It opens up a rabbit hole of "the statute did not include example X, so does that mean it does not apply?"
- Is there a better way to capture the legislative intent in this language, defining "reasonable steps" more clearly?
- How is this addressed with human drivers? The LE officer doing enforcement is the one determining if the violation was reasonable to not.
- Ultimately, the standard for the AV should be the same as a human driver.

(2) states *"An automated driving provider is responsible for a violation of chapter 46.61 RCW during automated operation of an associated automated vehicle."*

- This is consistent with other states, such as CA and AZ.
- Concern over how we hold the automated driving provider (ADP) responsible.
- If a violation is observed by a police officer, how do they stop the vehicle if it is in automated mode? Both CA and AZ require LE Interaction plans for any driverless testing on their roads. [Waymo has provided a sample LE interaction plan](#), that includes:
 - How to pull an AV over
 - Sounds, sirens, visual profiles of police and emergency vehicles built into the AVs
 - Contact information for police/emergency
 - Citations are always issued to the AV company
- Should a law enforcement interaction plan be required for all ADP's in WA too? This could be done in a law or in rulemaking.
- In a dual use vehicle (level 3 or level 4), the human could be driving, or the vehicle could be in control. If there was someone in the driver's seat, it is unclear how law enforcement would conclusively know if the person was driving that vehicle or the vehicle was in automated operation.
- For fleet owned vehicle, the violation would always go to the ADP, but for personal AV ownership, this raises many questions. Is a violation issued to the ADP or the person in the driver's seat?
- There can be dual-use vehicles – geofenced area scoped for level 4 automated operation, then when it reaches the end of the geofence, it notifies the driver they need to take over and manually drive from there. Is it the expectation that the responsibility in geofenced area is on the ADP, the responsibility in non-geofenced area is on manual driver?
- It's important that we create a situation where passengers do not have to always be able to take over driving. But even some level 4 vehicles may be controlled by the person in the driver's seat or the automated system.
- Idea: When an officer approaches a vehicle having an infraction or violation, an external indication of the mode of operation - fully automated, or manual - will guide the actions to be taken.
- If the ticket was actually issued to the ADP, the courts would have to modify their system to process that violation.

- Need to include rulemaking authority into the language – There are to be some Washington Administration Codes that go along with this
 - Would the ability to contact the ADP be contained in rule or does it need to be written into statute?
 - Would contact information be posted on the vehicle? Provided electronically?
 - Language is consistent between states, but the mechanism varies
 - California as written in regulations, based on statute
 - Arizona Department of Public Safety issued regulations following administrative action at the Governor’s level
 - Other states require it by law

(3) states *“A violation of this subsection is a violation under this title. A person may not operate an automated vehicle on a public roadway if the vehicle is not: (a) Properly maintained; (b) Lawfully insured; (c) Compliant with registration requirements; or (d) Fit to be operated.”*

- There is some concern about “properly maintained” and “fit to be operated” language. Who gets to decide? It seems that the intent was for vehicles to be compliant with existing equipment requirements, not just for personally-owned vehicles, but also for ride-hailing, hazardous goods transport, etc.
- Who is responsible for equipment violations? The person the car is registered to or the ADP? If a vehicle has a tail-light out and is rear-ended by another vehicle, who gets the ticket? Who goes on the collision report?
- If the technology stops the vehicle for a police car, who do the police contact? Automated vehicles may need to be manually operated if in an accident and stopped in place, obstructing traffic.
 - Likely the ADP will deploy a team to resolve, but if law enforcement arrives first, there should be capabilities for either law enforcement to manually operate the vehicle out of the way or for remote control of the vehicle to move it
 - Only applicable when the self-driving system is completely disabled
 - Self-driving system should not stop mid-motion, as happens with driver assistance systems now
 - Law enforcement used to that scenario now, moving vehicles out of the way to clear for safety. This is a statutory requirement for non-injury collisions when the vehicles involved are driveable.
 - What about vehicles with no steering wheel, gas pedal, brakes, etc.?
 - Law enforcement should be able to obtain information on how to move the vehicle
 - Note that full speed vehicles are years away from federal standards that allow removal of in-vehicle controls – applicable only to low speed vehicles for now
- This sub-section (like sub-section 2) might benefit greatly from rule making authority. Currently the WSP has rule making authority over equipment standards.

Driver Licensing (Section 17)

Amends RCW 46.20.025 “The following persons may operate a motor vehicle on a Washington highway without a valid Washington driver's license: (3) A person taking a completely automated trip”;

- This may be unnecessary, because currently law does not have to say that a passenger can ride in a vehicle with a licensed driver.
- This may be acceptable for completely automated trip where occupants would be in the passenger or back seat, such as the rides that Waymo is providing with Level 4 automated vehicles in Arizona. In cases like that, there is very real benefit for disabled or older people who no longer have a driver's license to be able to obtain transportation. Need a way to determine at trip start whether the trip was intended to be a completely automated trip – maybe through the law enforcement engagement plan. Transparency is key.
- A driver's license would still need to be required in cases where a person is sitting in the driver's seat and is capable of taking the vehicle out of automated operation. This would also be the case for any level 3 automated vehicle, which is not capable of a completely automated trip, and where the driver must be able to take back control within a few seconds of the vehicle notifying them.
- Perhaps there should be a requirement for auto dealers to education the “human” on how to use the auto-drive features? Should there be a requirement to provide some type of training on self-driving vehicles?

TV Screen in vehicles (Section 20)

In response to Washington's Distracted Driving statutes, and separate from this bill, the AV Safety Subcommittee is recommending that RCW 46.37.480 Section (1) be repealed, so it would no longer apply: *“No person shall drive any motor vehicle equipped with any television viewer, screen, or other means of visually receiving a television broadcast when the moving images are visible to the driver while operating the motor vehicle on a public road, except for live video of the motor vehicle backing up. This subsection does not apply to law enforcement vehicles communicating with mobile computer networks;”*

Abandoned Vehicles (Section 21)

RCW 46.61.590 and 1979 ex.s. c 178 s 1 are each amended to read as follows: It is unlawful for the operator of a vehicle to leave the vehicle unattended within the limits of any highway unless the operator of the vehicle arranges for the prompt removal of the vehicle or the vehicle is an automated vehicle under automated operation lawfully permitted to operate in the state.

It states that, basically, an automated vehicle cannot be abandoned. If an automated vehicle breaks down, or gets a flat tire, on the side of the freeway, it is just as abandoned as any other unoccupied vehicle along the side of the road. We suggest review of this proposed language to clearly capture legislative intent.

Distracted Driving (Section 23)

RCW 46.61.672 and 2017 c 334 s 1 are each amended to read as follows: “A person who uses a personal electronic device while driving a motor vehicle on a public highway is guilty of a traffic infraction and

must pay a fine as provided in RCW 46.63.110(3). This does not apply to: The automated operation of an automated vehicle.

- It is unclear how would law enforcement be able to tell if someone sitting in the driver's seat was operating the car or if the car was under automated operation. This would create significant ambiguity and confusion.
- There needs to be more clarity around when the electronic device prohibitions may not be enforced. Unless the car is in completely automated mode and able to give the driver sufficient time to take over operations, that driver must be paying attention and capable of taking over operation, or there needs to be another “back-up” system or driver. (A good example of this is the pedestrian fatality in Arizona.)
- Maybe this is unnecessary, because if the person is not driving then this would not apply to them, as they are a passenger and not the driver. But if the person was sitting in the driver’s seat, how would the officer know if the vehicle is in automated operation?
- There should be more discussion around language about incapacitated or impaired persons. From a traffic safety perspective, we want to encourage intoxicated people to use an alternative to driving – and an automated vehicle ride might be a good option. But there would need to be some sort of back-up if the technology failed, because the impaired person could not take over the vehicle in any case.

Other resources to review:

- [AAMVA's Guidelines for Testing and Deployment of Highly Automated Vehicles](#)
- [GHSA's Autonomous Vehicles Meet Human Drivers: Traffic Safety Issues for States](#)
- [NHTSA's AV Test Initiative](#)

We should also look at what other states have done for consistency (CA, OR, AZ, etc.) at [NCSL's Autonomous Vehicles State Bill Tracking Database](#)

(Additional input provided on the following page)



December 11, 2019

Representative Zack Hudgins
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Sen. Jamie Pedersen
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Sent via email

Dear Representative Hudgins, Senator Pedersen, and the Washington State Transportation Commission:

On behalf of the Self-Driving Coalition for Safer Streets (“Coalition”), we are writing to provide comments on potential introduction of the “Uniform Automated Operation of Vehicles Act” (“ULC Bill”) in Washington. While the Act provides some useful elements of a potential legislative framework, we do have significant concerns with aspects of the Act. Below we outline some of those concerns and urge the Legislature not to move forward with such complex legislation in the short-session. Instead, we encourage using 2020 as an opportunity for all stakeholders to engage in thoughtful conversations and build consensus toward a workable solution for autonomous vehicle (“AV”) deployment in Washington.

- ***The ULC Bill introduces confusing, untested concepts that do not align with existing statutory or industry frameworks.***

The introduction in the Bill of concepts such as “automated driving provider,” “associated automated vehicles,” and other novel categories that would have distinct legal status would confuse industry stakeholders and consumers alike. Creation of a new legal status is unnecessary, as evidenced by the fact that none of the many states that have enacted legislation authorizing testing and commercial operation of autonomous vehicles has incorporated these novel concepts or anything similar. Moreover, these terms may confuse consumers, limit how manufacturers and developers structure business relationships, and create administrative burdens for the state. Another example is the concept of a “completely automated trip,” which is not included in any automated vehicle legislation enacted across the country. In addition to being unnecessary, the definition is imprecise. For example, it is unclear what would constitute “departure” and “arrival.” This imprecision is concerning because the definition is used in a critical section for enabling driverless operation (Section 4 - Driver Licensing). The Coalition recommends replacing these concepts with those that align with existing statutory or industry frameworks to avoid confusion.

- ***Lack of clarity on what existing rules apply to AVs, creating confusion about the terms under which applications of AV technology may operate.***

Passenger services and goods delivery are two of the earliest and most promising use cases for AVs. Given that existing law did not contemplate vehicles without drivers providing these services, state AV legislation should clarify the applicable regulatory frameworks. The ULC Bill does not appear to address either of these issues.

In addition, the ULC Bill grants broad authority to state agencies that, as the ULC Bill legislative comments recognize, may not align with existing state law and practice (see, e.g., Sections 5(e), 5(h), 6(e)). The scope of authority should align with existing law governing conventional vehicles. There is no demonstrated need or justification for special treatment of AVs, such as creating AV-specific maintenance requirements (Sec. 8(b)). Existing state provisions regarding vehicle maintenance should apply to AVs. With this principle in mind, states that have enacted AV legislation (as well as NHTSA at the federal level) have generally refrained from establishing new or special agency authorities for AVs.

The current language of the ULC Bill gives broad rulemaking authority to “relevant state agency or agencies” to “[make rules, issue interpretations, and take other actions to] administer and enforce this [act].” An example of the breadth of this authority pertains to vehicle registration. Pursuant to the current bill language, the state agency would have the authority to decline, suspend, revoke, or decline to renew registration of an automated vehicle that is “otherwise not fit to be operated” in Sec. 5(e). The Coalition recommends limiting the authority of the state agency to declining registration for either failure to satisfy the associated autonomous vehicle requirements or other generally applicable registration requirements. The current language as drafted provides state agencies with absolute discretion to decline to register an autonomous vehicle without providing clear basis for doing so.

Lastly, facilitation of AV deployment will only be successful if the state’s vehicle codes are interpreted to apply accordingly to AV technology. Thus, the Coalition recommends clarifying that any provision of the vehicle code that reasonably applies only to a human driver would not apply to the operation of an automated vehicle with the automated driving system engaged in Sec. 3(c). In addition to state vehicle code, AVs should also be required to adhere to the state’s motor vehicle insurance code in Sec. 3(b).

- ***Include definition of “On-Demand Autonomous Vehicle Network”***

The Coalition recommends adding “On-Demand Autonomous Vehicle Network” to the definitions. An “On-Demand Autonomous Vehicle Network” is defined as a transportation service network that uses a software application or other digital means to dispatch or otherwise enable the pre-arrangement of transportation with associated automated vehicles for purposes of transporting persons or goods, including for-hire transportation and transportation for compensation. Addition of this definition would ensure inclusion of transportation service networks for on-demand autonomous vehicles.

Autonomous vehicle technology has the potential to usher in a new era of mobility, with incredible potential to make Washington’s transportation system safer, more efficient, and accessible. But, despite the Uniform Automated Operation of Vehicles Act’s genuine goal to provide a consistent model for state AV statutes, the

issues raised above could impede Washington's progress towards safe, thoughtful testing and deployment of AVs.

Our comments highlight the Coalition's primary concerns regarding the ULC Bill, but we would be happy to discuss our concerns with specific provisions of the ULC Bill at a later time. The Coalition appreciates the opportunity to provide feedback and looks forward to discussing our suggested edits and revisions further with you. Thank you for including us in your process.

Sincerely,

/Ariel S. Wolf/

Ariel S. Wolf

Counsel, Self-Driving Coalition for Safer Streets