

**2019 HOUSE TRANSPORTATION**

**HB 1418**

# 2019 HOUSE STANDING COMMITTEE MINUTES

Transportation Committee  
Fort Totten Room, State Capitol

HB 1418  
1/31/2019  
#31912

- Subcommittee
- Conference Committee

Committee Clerk Signature Jeanette Cook

## Explanation or reason for introduction of bill/resolution:

A BILL relating to automated vehicle network companies and autonomous vehicle operations; relating to nonmoving violations; and relating to unattended motor vehicles.

## Minutes:

Attachments 1-2

**Vice Chairman Rick C. Becker**, District 38, opened the hearing on HB 1418.

**Chairman Ruby** introduced HB 1418.

Last session the Department of Transportation asked me to put in a bill that gives them some rule making authority for the potential to foster or allow the use or testing of autonomous technology in the state. There were some issues with that. The industries weren't 100% comfortable with it because of concerns that if the legislation was used in other states with the same language, there might be some agencies in those states that would be less receptive and encouraging of the technology, and the companies that would like to work and develop the use of autonomous technology. That bill was converted to a study for the Department of Transportation, and we passed it. We also passed a bill dealing with the data collection and ownership of personal data from the use of autonomous technology. The Senate killed the bill, and integrated in the study some of the areas that would be require to look at in the study. In the interim the Department of Transportation looked at different stake holders in the autonomous technology. They worked on all the areas they would need to allow and define the areas of technology that are consistent with the industry. In the end the Department of Transportation said they would report to Legislative Management. I haven't spoken to them to find out why the bill wasn't introduced. Maybe they thought they didn't have the authority, and if it did come to this body, it would come through a legislator. The industry that worked with the Department of Transportation felt that they had a good product. It needed to get introduced. I like the bill. There is one thing that we could make a change on. In Section 4 the repealer has issues with the autonomous vehicles that are already running with no one in them. We did pass a bill that left this Section in, but we changed the area about the idling, so people can use car starters. We left in the parking brake part. We may want to remove the repealer from the bill. We did have some discussion in this committee about removing that whole section.

**Levi Andrist**, representing Alliance of Auto Manufacturers, spoke to support HB 1418. His client Leighton Yates, from the Auto Alliance, is stuck in Omaha and cannot be here today. Levi gave an overview of Mr. Yates testimony to the committee. See attachment #1. He also reviewed the bill for the committee. This bill will be what governs the autonomous vehicles. The one thing I would like the committee to look at is b. on line 16. This is the one provision that wasn't included in our stakeholder bill. I would encourage the committee to ask Legislative Council why they included that. The definitions in the bill are critical because they help define other terms.

**Chairman Ruby:** There are five levels of autonomous technology. Does the bill define all of them?

**Levi Andrist:** It does include all of them. We had a robust debate about whether we should carve out different levels and regulate them in a specific manner. There were some issues with that. One issue was that those levels are not set by the federal government; they are industry standards set by SAE (Society of Automotive Engineers). Using private standards that don't have the force of law is often frowned upon by the Legislature.

**Chairman Ruby:** Will the section that is left in be problematic to autonomous vehicles?

**Levi Andrist:** I don't have a clear answer for you there. I believe there is a second bill that also mentions unattended vehicles. I will get you an answer if it is problematic or not; I don't think it will be. The bill that you pass may not even apply because of the governance section.

**Representative Nelson:** If you are driving down the highway, and the Highway Patrol wants an autonomous vehicle to stop, does it stop?

**Levi Andrist:** I would defer to law enforcement on that as well as the manufacturer.

**Representative Nelson:** I was wondering if an autonomous vehicle will recognize that law enforcement has their lights on. Does it recognize a DUI checkpoint? We also have vehicles that are capable of being completely autonomous and being self-driven. A driver comes out of the bar, gets in the car, and starts the car. The driver is in actual physical control of the car. If it is capable of fully dynamic driving, how do we determine if it is dynamically driving or if the driver is in physical control?

**Levi Andrist:** I'm not an expert, but I can provide you with the response, p. 3 line 24-29.

**Representative Nelson:** At what point does the dynamic driving task start? Do I have to program it to take me home before I get into the car? Or can I program it to take me home after I get into the car? Simply being in the car is in physical control. Are autonomous vehicles somehow going to be different?

**Levi Andrist:** I don't have the ability to answer that.

**Representative Weisz:** Who gets the speeding ticket if the vehicle is breaking the law?

**Levi Andrist:** It would be the human driver.

**Chairman Ruby:** Initially these vehicles are not going to be owned by individuals.

**Representative Kading:** Are we incorporating by reference a whole new set of laws, and are we giving up any state authority over governing autonomous vehicles?

**Levi Andrist:** I think that you are exercising your state authority affirmatively in this regard. You are doing it in a way that is being a nationwide leader. This will be one of the few states that does this in a responsible and safe way that also allows for the technological advancement that consumers are looking for. The federal laws already apply. This is to make sure there is no ambiguity.

**Chairman Ruby:** Do you envision that there will still be administrative rules in some areas that would be drafted based off of this foundation?

**Levi Andrist:** As the bill is drafted now, **this section** is what governs autonomous vehicles. Therefore, the delegation of rulemaking authority that the Department of Transportation has in other scenarios, would not apply to autonomous vehicles. My opinion is that the Department of Transportation does not have the ability to write rules regarding autonomous vehicles as the bill is written.

**27:00**

**Jason Wetzel, Regional Director of Government Relations for General Motors,** spoke to support HB 1418 and provided written testimony. See attachment #2.

**Chairman Ruby:** Do you have some thoughts on some of the concerns of the committee?

**Jason Wetzel:** I do. There was a question about what if the AV is speeding or runs a stop sign. The thing to understand about this technology is that there is more of a challenge in the other direction. The technology is being built and coded to follow all state and federal laws to a T. If you are supposed to slow down 500 feet before a stop sign, that is exactly what the vehicle will do. The challenge is that the human behavior may not be so rigid in following the traffic laws. So, number one, the vehicle will not be speeding. Number two, the person who would be held responsible would be the owner of the vehicle. As you mentioned, Chairman Ruby, we don't see the technology going into private individual hands any time in the foreseeable future. It will probably be owned by a corporation that is self-insured.

**Representative Nelson:** I was questioning the autonomous vehicle's interaction with law enforcement.

**Jason Wetzel:** The machine has to comply with the law. The law says that you have to pull over when you see flashing lights. We are working with law enforcement so the vehicle (the code and software) recognizes every form of flashing light and beacon. Beyond law enforcement there are situations that motorists face every day that have to be accounted for. We have been testing and driving in San Francisco for the last several years. It is one of the most challenging environments, which is why we are testing there. We program our technology to account for many situations. It has not been perfected yet and are still being worked through. There are also social issues that will be part of this, like if someone has had

a drink. I want to stress that the technology, the way that it is being built and coded into the vehicles, it is very stringent on following the laws.

**Representative Nelson:** How are autonomous vehicles going to sense when the conditions require lower speed limits because it is not safe?

**Jason Wetzel:** It is important to understand the technology in the car is a series of redundant systems. That is the strength of this technology. Things like fog, or ice are also being incorporated into this technology. If the vehicle senses inclement weather, so it can't operate properly, it is not going to operate. In level three it is the human driver and the automated system trading off. The challenge right now for the industry is that humans are not as reliable as technology can be. The level four technology, which takes the pedals and steering wheel out of the vehicle, is where much of the industry is really focused. It is within a certain geofenced area. Level five technology can operate, in theory, anywhere in the world on its own. The industry is not anywhere near that yet.

**Representative Nelson:** If there is anything that I am sure of in my life, it is that electronics break. That is my concern, along with liability and who is actually responsible.

**Jason Wetzel:** The vehicles will also be talking to each other, Representative Nelson.

**Representative Weisz:** Are we going to require in the future that the Department of Transportation and Highway Patrol be able to communicate with the autonomous vehicle?

**Jason Wetzel:** Law enforcement will be able to talk to the vehicle by flashing light or sirens. The vehicle will be receiving all sorts of alerts. If a road is being closed, the vehicle will be made aware of that. In level three the vehicle will tell the driver when to engage again.

**Representative Hanson:** Section 1 Subsection 3, what is your opinion on a. and b. relating to political subdivisions being prohibited on making requirements, and the limitation on taxes on autonomous vehicles?

**Jason Wetzel:** We do support the local preemption. In Section b there may be some concerns. We could discuss that going forward with the bill.

There was no further support for HB 1418.  
There was no opposition to HB 1418.

**Andrew Alexis Harpole** (?), spoke in a neutral capacity: I am hoping that in this bill there is a clear delineation of responsibility for maintaining sufficient cyber security to ensure that actors do not take over any of the autonomous vehicles.

**Chairman Ruby:** On p. 2, lines 16-21, dealing with the tax requirement. Was there discussion on that, or did Legislative Council talk to you about that area? (Linda Sitz was asked to respond.)

**Linda Sitz, Department of Transportation:** That section was changed from what we originally submitted. When I read what was submitted by Legislative Council, my concern

was that we intended that no additional taxes and fees could be implied or imposed in cities, counties, and townships other than regular registration and titling. We didn't want a city to impose some additional type of parking fees or any additional type of taxes. But, the way this reads, it almost implies that there can be NO taxes on autonomous vehicles. That was not our intent. Autonomous vehicles should have the same registration and fees that a gas vehicle would have. There may have to be some sort of interpretation as to the legislative intent was in what was submitted. It was not what the committee had intended.

**Chairman Ruby:** Would you be able to get something drafted that would be consistent with what your intent was on that?

**Linda Sitz:** Sure.

**Chairman Ruby:** We would like that to be clear.

There was no further neutral testimony on HB 1418.  
The hearing was closed on HB 1418.

# 2019 HOUSE STANDING COMMITTEE MINUTES

**Transportation Committee**  
Fort Totten Room, State Capitol

HB 1418  
2/1/2019  
32007

- Subcommittee  
 Conference Committee

Committee Clerk Signature Jeanette Cook

## Explanation or reason for introduction of bill/resolution:

A BILL relating to automated vehicle network companies and autonomous vehicle operations; relating to nonmoving violations; and relating to unattended motor vehicles.

## Minutes:

**Chairman Ruby** brought HB 1418 back before the committee.

We had an issue with p. 2, lines 16-20, about the language that was put in on taxes. Linda Sitz did have some suggested language that I asked her to send to Christopher Joseph, but I have not seen that yet, other than what Linda wrote.

The other issue that would be on any amendment, that was not with theirs, would be to remove the repeal because we already made a change on that Section of Code.

**Representative Weisz:** I understand the tax part, but if there is reason the state thought there needed to be a tax because of a cost occurred, shouldn't that option be open?

**Chairman Ruby:** We will have to see what she drafts in the amendments.

**Representative Paur:** Can the state create a tax without Legislative approval?

**Chairman Ruby:** No.

**Chairman Ruby:** There is no fiscal effect in the bill. We will hold it until we get the amendments.

# 2019 HOUSE STANDING COMMITTEE MINUTES

**Transportation Committee**  
Fort Totten Room, State Capitol

HB 1418-3  
2/8/2019  
#32448

- Subcommittee  
 Conference Committee

Committee Clerk Signature Jeanette Cook

## **Explanation or reason for introduction of bill/resolution:**

A BILL relating to automated vehicle network companies and autonomous vehicle operations; relating to nonmoving violations; and relating to unattended motor vehicles.

## **Minutes:**

Attachment #1

**Chairman Ruby** brought HB 1418 back before the committee and reviewed what had been done before.

**Chairman Ruby** provided an amendment (See attachment #1) and on p. 4 remove line 6.

**Representative Weisz** moved the amendments.

**Representative Grueneich**

A voice vote was taken. The motion carried.

**Vice Chairman Rick C. Becker** moved a DO PASS as amended on HB 1418.

**Representative Paulson** seconded the motion.

**Representative Nelson:** I am not sure I am comfortable with line 12 p. 2, it says, unless otherwise provided in this chapter. If you go down to line 12, it says, a state agency or political subdivision may not impose requirements including performance standards specific to the operation. Are we setting up that the Department of Transportation can't write standards. This section of Code will be it for autonomous vehicles? The Department of Transportation can't do anything to regulate them?

**Chairman Ruby:** Probably to some extent. The Department of Transportation was with the associations that drafted this bill.

**Representative Nelson:** We are creating this section of Code. We are saying: no agency or political subdivision can impose any requirements including performance standards that aren't in this section of Code. I'm not comfortable passing this and saying that this is the total regulation of autonomous vehicles.

**Representative Weisz:** The language may be confusing, but it is not really different than what we do now. The state doesn't set any kind of performance standards on any vehicle. We defer to the federal standards. The state just requires safety equipment (39.01). I don't see that as a concern.

**Chairman Ruby:** If there are some laws or provisions, it would have to be in this chapter.

**Representative Nelson:** I think it is a little too broad.

**Chairman Ruby:** The carriage reference is about taxis.

**Representative Nelson:** I don't think we are leaving the Department of Transportation any option no matter what happens to write some Code. There are so many unknowns with the autonomous vehicles; the Department of Transportation could have very good reason to want to put a restriction on something. We are saying they can't. I don't feel comfortable with this.

**Chairman Ruby:** It does require them to be in compliance with Section 3 of 3901.01.2.

**Representative Nelson:** That is a small paragraph that doesn't say anything.

**Representative Jones:** On page 3, line 19, #2, it says they must be capable of operating in compliance with all the applicable federal and state laws except ..... Does that mean that the Department of Transportation does have an opt in there?

**Chairman Ruby:** They do have to be compliant with other vehicles, but if they get into a position where there are systems without human drivers, there are a lot of provisions about being in control of the vehicle that are no longer applicable.

**A roll call vote was taken for a DO PASS as amended on HB 1418**

**Aye 9 Nay 3 Absent 2**

**The motion passed.**

**Representative Grueneich will carry HB 1418.**

DP 2/8/19

19.1043.01002  
Title.02000

Adopted by the Transportation Committee

February 8, 2019

PROPOSED AMENDMENTS TO HOUSE BILL NO. 1418

Page 1, line 3, after the semicolon insert "and"

Page 1, line 4, remove "; and to repeal section 39-10-51 of the North"

Page 1, line 5, remove "Dakota Century Code, relating to unattended motor vehicles"

Page 2, line 16, remove "A tax or requirement may not be imposed on an autonomous vehicle without a"

Page 2, replace lines 17 through 20 with "A state or local agency or political subdivision may not impose a tax, fee, or other requirement specific to the operation of an autonomous vehicle that is in compliance with subsection 3 of section 39-01-01.2, an automated driving system, or an on-demand vehicle network. This prohibition does not affect vehicle registration and titling fees otherwise required by law."

Page 4, line 3, remove the overstrike over "~~39-10-51~~"

Page 4, remove line 6

Renumber accordingly

Date: 2-8-19  
 Roll Call Vote #: 1

**2019 HOUSE STANDING COMMITTEE  
 ROLL CALL VOTES  
 BILL/RESOLUTION NO. HB1418**

House Transportation Committee

Subcommittee

Amendment LC# or Description: 19.1043.01002 (attach. #) + below change

- Recommendation:  Adopt Amendment  
 Do Pass     Do Not Pass     Without Committee Recommendation  
 As Amended     Rerefer to Appropriations  
 Place on Consent Calendar  
 Other Actions:  Reconsider     \_\_\_\_\_

Motion Made By Weisz Seconded By Grueneich

Representatives	Yes	No	Representatives	Yes	No
CHAIRMAN RUBY			REP LAURIEBETH HAGER		
VICE CHAIR BECKER			REP KARLA ROSE HANSON		
REP JIM GRUENEICH			REP MARVIN NELSON		
REP TERRY JONES					
REP TOM KADING					
REP EMILY O'BRIEN					
REP MARK OWENS					
REP BOB PAULSON					
REP GARY PAUR					
REP ROBIN WEISZ					
REP GREG WESTLIND					

*Voice Vote Carried*

Total (Yes) \_\_\_\_\_ No \_\_\_\_\_

Absent \_\_\_\_\_

Floor Assignment \_\_\_\_\_

If the vote is on an amendment, briefly indicate intent:

p.4 and remove line 6  
Attach. 1

Date: 2-8-19  
 Roll Call Vote #: 2

**2019 HOUSE STANDING COMMITTEE  
 ROLL CALL VOTES  
 BILL/RESOLUTION NO. HB1418**

House Transportation Committee

Subcommittee

Amendment LC# or Description: 19.1043.01002

Recommendation:  Adopt Amendment  
 Do Pass     Do Not Pass     Without Committee Recommendation  
 As Amended     Rerefer to Appropriations  
 Place on Consent Calendar

Other Actions:  Reconsider     \_\_\_\_\_

Motion Made By Becker    Seconded By Paulson

Representatives	Yes	No	Representatives	Yes	No
CHAIRMAN RUBY	X		REP LAURIEBETH HAGER		X
VICE CHAIR BECKER	X		REP KARLA ROSE HANSON		X
REP JIM GRUENEICH	X		REP MARVIN NELSON		X
REP TERRY JONES	X				
REP TOM KADING	X				
REP EMILY O'BRIEN	A				
REP MARK OWENS	A				
REP BOB PAULSON	X				
REP GARY PAUR	X				
REP ROBIN WEISZ	X				
REP GREG WESTLIND	X				

Total (Yes) 9    No 3

Absent 2

Floor Assignment Grueneich

If the vote is on an amendment, briefly indicate intent:

**REPORT OF STANDING COMMITTEE**

**HB 1418: Transportation Committee (Rep. D. Ruby, Chairman)** recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (9 YEAS, 3 NAYS, 2 ABSENT AND NOT VOTING). HB 1418 was placed on the Sixth order on the calendar.

Page 1, line 3, after the semicolon insert "and"

Page 1, line 4, remove "; and to repeal section 39-10-51 of the North"

Page 1, line 5, remove "Dakota Century Code, relating to unattended motor vehicles"

Page 2, line 16, remove "A tax or requirement may not be imposed on an autonomous vehicle without a"

Page 2, replace lines 17 through 20 with "A state or local agency or political subdivision may not impose a tax, fee, or other requirement specific to the operation of an autonomous vehicle that is in compliance with subsection 3 of section 39-01-01.2, an automated driving system, or an on-demand vehicle network. This prohibition does not affect vehicle registration and titling fees otherwise required by law."

Page 4, line 3, remove the overstrike over ",-39-10-51"

Page 4, remove line 6

Renumber accordingly

**2019 SENATE TRANSPORTATION**

**HB 1418**

# 2019 SENATE STANDING COMMITTEE MINUTES

**Transportation Committee**  
Lewis and Clark Room, State Capitol

HB 1418  
3/7/2019  
33366

- Subcommittee
- Conference Committee

Committee Clerk: Liz Stenehjem
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## Explanation or reason for introduction of bill/resolution:

A bill relating to automated vehicle network companies and autonomous vehicle operations; and relating to nonmoving violations.

## Minutes:

4 Attachments
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**Chairman Rust:** Opened hearing on HB 1418.

**Representative Dan Ruby, District 38, Minot:** Over the last two years the Department of Transportation and the partners and interested parties in these industries have done some extensive work conducting a study. Initially they thought DOT would be bringing this as an agency bill, but they were directed to report to legislative management. So they chose not to set it up as an agency bill. So I was asked to sponsor this bill along with Chairman Rust to bring this forward, so all the work they did, and they really did come together and got some extensive input from all the parties. So what you see here is language that sets the framework for the ability for autonomous technology to be used in North Dakota. That's basically what this is, it doesn't require anything, there's no cost to the state for us doing this. It's going to require these vehicles to be operated will the rules of the road we have now except for having a driver, potentially. I see very limited use of this in the near future. This is more in the testing. There are some very limited places I could see maybe some campuses or confined areas where you might see some autonomous vehicles going around a certain pattern and being used basically for transportation for people. However, there's also a lot of talk about eventually delivering of packages and all kinds of uses for this type of technology. So it's kind of amazing what we may see in our time and definitely the younger generation is going to see a much wider advancement in use of this type of technology. You more than likely already have some form of autonomous technology in your vehicle. Whether you have sensors that slow you down if you have the cruise control and you're getting too close to a vehicle you're following or if you have something the warns you that you're getting too close to the line on the road or something. This is more advanced. This is stuff that needs to be put in place to allow for fully autonomous vehicles, where either the driver is in the seat but he's not operating it or potentially there's not even a steering wheel and there's no driver.

**Chairman Rust:** The third section talks about the state may not impose any requirements, including performance standards specific to the operation. A state or local agency or political subdivision may not impose any tax or fee. Anything you would like to say about that?

**(6:30) Representative Ruby:** Basically, just like our vehicles, we have a requirement for registration, but we don't allow a political subdivision to add another registration to that vehicle. So that's basically what it is doing. It's very similar to what we have on the transportation networks; like Uber and Lyft. We already have that in statute for those entities.

**Chairman Rust:** We also have a letter from Global Auto Makers, see **Attachment #1** for letter from Global Auto makers. Did you get that letter as well?

**Representative Ruby:** No, I don't believe I did. They can certainly give their reasons why. I looked at that and it's similar to up on line 3 with human driver, although somebody who's driving it might not be an operator, especially if they're not in the vehicle; if they're operating the system.

**Senator Clemens:** Would these vehicles be registered in North Dakota? When it comes to any traffic violations or whatever, they're subject to all our laws and the owner of the vehicle would be cited then if there were any violations?

**Representative Ruby:** Yes, they are required to be registered and insured. The insurance issue has always been kind of interesting. Obviously they have to have vehicle insurance just like other vehicles. I would guess that there is liability insurance from the network company that may own it. Obviously the manufacturers have liability insurance for any defects in there. There will be some discussion that you will hear about that because there will be a proposed amendment. I'm not sure yet where I'm at on that, I was just presented with it this morning. So I don't know if it's necessary. Generally, with insurances; even with the bill we had dealing with raising the level where you need to notify law enforcement when you have an accident. One insurance agent that is in the House said we could almost get rid of that level completely. Because insurance always divide the liability basically, they determine liability and either split or agree that one or the other takes it. A lot of times there's just generally a subrogation of it and they determine who gets what. So that kind of stuff I'm pretty sure is all covered in this as well. Between vehicle auto insurance and; it would be interesting to see how they insure them, because they have to assess their risk and determine their premiums based on that so it will be interesting how they approach that. But then there's of course the liability insurance of anybody that might own the system. Also then the manufacturer has their liability as well, so I think they are well covered.

**Senator Bakke:** On page 2, line 15; where they talk about tax or fee. Is this like it could operate like a taxi cab. That's possible correct? So do we charge a tax to taxi drivers?

**Representative Ruby:** I do believe some cities do charge taxis a fee, a permit basically. But, like I said Uber and Lyft, those Transportation Network Companies are exempt from that. Because they are regulated more at the state level. We have a section of code dealing

with taxis, but it is very antiquated, so there basically are some provisions but most of that is delegates to the political subdivisions for taxis. That was decided a few sessions ago when we had all the discussion about all the transportation networks and the ride shares, those kinds of things. That we would basically have a consistent regulation across the state.

**Senator Bakke:** So if a city decided to charge a tax or a fee for the use of this where does it go?

**Representative Ruby:** They cannot impose any additional fees or taxes with this.

**Senator Dwyer:** I'm sure that others behind you will address the safety issue of these things.

**Representative Ruby:** That's been an ongoing testing thing they've been working on. Yes, there have been a couple of tragic incidents across the nation. Very few I think for as many as are being tested, but of course one is too many for that person and their family. That's something they are working on constantly improving. The technologies have improved. From whether you're using GPS, well there's some limitations with that, well then there's others that use markers that are land based and things like that. I think they use a combination. Like I said, at times I believe these will be, especially in any near use (which when I say near I don't mean next year) they'll be limited. You won't be going don't the highway and looking over and seeing a driverless vehicle any time in the near future, unless they're testing it.

**Levi Andrist, GA Group:** Today I have the pleasure of introducing Leighton Yates.

**Leighton Yates, Director, State Affairs, Alliance of Automobile Manufacturers:** Please see **Attachment #2** for testimony.

**Jason Wetzel, Regional Director of Government Relations, General Motors:** Please see **Attachment #3** for testimony.

**Chairman Rust:** Did you list the four agencies?

**Mr. Wetzel:** I did not. We have North Dakota Department of Transportation, North Dakota Highway Patrol, North Dakota State Insurance and NDSU.

**Senator Clemens:** So initially will this testing just be passenger vehicles or how is that going to work?

**Mr. Wetzel:** I can speak for our company. What we envision for testing would be fleet vehicles that we would retain the ownership, liability and the insurance. Yes, what we're considering is for what you would compare to taxi cab type services. Right now we don't have any plans for selling the vehicles to private individuals.

**Senator Bakke:** Could you answer the question why they have human drivers and operators on page 3? There was a question as to why those definitions were necessary.

**Mr. Wetzel:** I might ask Leighton to come up here to answer this?

**Chairman Rust:** I think it goes along with the question I had from GlobalAutomakers. Please see **Attachment #1**.

**Mr. Yates:** We have the human driver definition which you can understand. But, for the operator definition, many instances of higher levels of automation when someone is in their AV and not in control of the vehicle the ADS (the Automated Driving System) is deemed the operator. So that is the reasoning for the definition operator. When the human driver is not in control the ADS is considered the operator.

**Linda Sitz, Strategic Innovation Manager, North Dakota Department of Transportation:** I can give some clarity to that too. Currently underneath the definitions of 39-01-01 there is a definition for operator. So when we worked on this legislation we felt there needed to be a definition underneath the autonomous vehicle section to show the difference between what this one was in 39-01-01 which is currently out there in law. And what we are going to be doing with the changes to autonomous vehicles, because there's a difference between those two definitions.

**Jaclyn Hall, Executive Director, North Dakota Association for Justice:** Please See **Attachment #4** for testimony.

**Senator Dwyer:** I'm gathering you would be opposed to the bill if the amendment didn't pass?

**Ms Hall:** North Dakota Association for Justice is supportive of the bill. Our concern is that without this additional language, if an accident occurs it will sit in litigation for years and no one will be held liable.

**Senator Clemens:** If the autonomous vehicle had a driver in the driver's seat, would you agree that that driver would be liable?

**Ms Hall:** I believe it depends on what the driver is doing. If the driver is engaged I believe that the driver should be liable, but if the vehicle is in the Automated Driving System that they were mentioning before was fully in control of the vehicle, I think the code and the manufacturer that is running that ADS should be the one that's held liable.

**Senator Clemens:** It's my understanding if there is a driver present, he is to be in control whether it's under ADS or not because that's why he's in there is a backup. I guess I'm asking for a little more clarification on if there's a driver present if he would be liable then and not the manufacturer?

**Ms Hall:** I think that question would be better answered by the manufacturer.

**Chairman Rust:** Were you involved in the drafting of this bill?

**Ms Sitz:** Yes, I was the facilitator at the meetings for the Department of Transportation.

**Chairman Rust:** What was the name of the group again?

**Ms Sitz:** We called it the HAV, Highly Autonomous Vehicle.

**Chairman Rust:** According to Representative Ruby he said he thought it would be an agency bill but it became a report and then he was asked to present the bill.

**Ms Sitz:** That is correct.

**Chairman Rust:** What kinds of things had you folks talked about, had you talked about at all responsibility as the last speaker had asked about. Who's responsible when something happens, did you guys talk about that?

**Ms Sitz:** Yes, we did talk about it. But at that time when we were looking at this legislation we were looking at something just to introduce it into the rules so that we had something to go by so that North Dakota could start some testing on their autonomous technology. We knew that this legislation was not cement. That we would, eventually as technology evolved we would have to come in and do some amendments on it. So we didn't see this as a final, we saw this as a way to introduce technology so that we could just start having autonomous testing on the roads in North Dakota.

**Chairman Rust:** Is the agency comfortable with the bill in its present form?

**Ms Sitz:** Yes. The only thing that we asked to have changed when this was over on the House side was that section 3b. because the way it read it implied that we couldn't register autonomous vehicles in the state of North Dakota and that was not the intent. So we had our legal team work on this language and that's what we came up with, so they still would have to be registered in the state of North Dakota, but that the cities, counties and townships couldn't add additional taxes on to these vehicles. If they go into like a parking garage or that type of thing they would still have to pay those types of fees. We just didn't want the cities and townships to all of a sudden say, "ok we have this new thing in our city, so let's tax them." We didn't want them to have additional taxes or fines because it was something different. So that's why we added that section.

**Chairman Rust:** Looking at the recommended amendment of the "automated driving system's manufacturer is responsible for a failure to comply with the applicable traffic and motor vehicle safety laws and regulations of this state during automated operation." Any opinion on it?

**Ms Sitz:** In all fairness I just received it. I think what we should do is probably visit with industry. Because we're the ones that worked on this bill together and I think that we should have an opportunity to look at it and just do a little research to say, ok how would this work for us?

**Senator Clemens:** I would be interested in looking into liability of these vehicles with and without a driver present. I think we need to have a clear understanding of liability if one of these vehicles was involved in a fatal accident. I think that should be addressed.

**Senator Bakke:** If law enforcement wants to pull this vehicle over does it even know it's being pulled over if there's nobody in it?

**Ms Sitz:** An AV is programmed to follow the rules of the road. Part of the rules of the road is, when there are red lights behind you, you either pull over because it's an ambulance or you stop because it's a highway patrol. So yes, they are programmed that way.

**Chrystal Bartuska, Division Director, Rate and Form Product Filing Division, North Dakota Insurance Department:** Just to give everyone a little bit of background and those that are in the room can obviously correct me if I'm wrong that were part of the working group that Linda mentioned. We did discuss who's "liable," the driver or the manufacturer and to be completely honest it's a big question. We don't know, obviously there's a lot of lawyers in the room that can give you a lot of different theories. There's product liability laws that would come into play, that type of thing. But I think what everyone needs to remember is that this bill is designed to get them in the state for testing. It's not necessarily that I can go buy a Level 5 AV. You heard previous testimony that this is going to be geared towards fleet vehicles in the beginning, and that type of insurance would then be owned and operated by either GM or the fleet owner. (inaudible) being in the working group it's going to be some years before any one of us can go and buy a Level 5 AV where we don't have to be in the vehicle and it can take my kids to daycare and I get to come to work. It's going to be years before we get to that level. So this bill is really like Linda said to get these vehicles here for testing. We can see being in front of Transportation committees on the House and Senate sides for years to come, because this technology is coming. As far as where the companies are, GM, Ford, all of the companies that are creating these types of vehicles are I guess I would defer to them on where they are with the amendment. Because if they're liable for everything, that's a big risk for them as well.

**Chairman Rust:** You mentioned Level 5, so there must be a Level 1, 2, 3 and 4 also. Can you briefly tell us what each level is?

**Ms Bartuska:** I'm going to defer that to Leighton, because I am not the tech person.

**Mr. Yates:** The spectrum is actually zero to five. So zero would be bare bones with not even cruise control in your vehicle, level one usually brings in one phase of automation; so think of your adaptive cruise control or your lane departure warnings. Level two, the way I always remember it is, two or more features; so if you have lane departure warning systems with adaptive cruise control that is level two. Level three and up is when we get what we are speaking about, autonomous vehicles. The Teslas that were mentioned before, those aren't automated vehicles, those are Highly Advanced Level Two Systems. So they would not actually even be governed by this. Level three brings in more features of automation with the expectation that the human will need to take over if the system notifies them. It could be a vibration in your seat, a display on your windshield or a ding in the car that you need to take over. Level four is really what we'll see more of on the roads, as Jason and some of the previous testifiers mentioned; those would be fleet settings. Usually what we anticipate is they'll be geo-fenced; so as Chairman Ruby mentioned earlier your closed campuses, that kind of last mile transportation getting you to your job, college campuses, getting around campuses in that capacity. As well as some of the transportation network companies operating in, it could be urban settings, they could have certain

parameters that they can only operate within; which is defined in the bill as operational design domain. Which is essentially what is the vehicle programmed to do and where is it programmed to do that. Level five is the holy grail of automation. You're not expected to take over, the vehicle can navigate roads in any condition, in any capacity. That is extremely far off from now. Some of us will be lucky if we even see it in our lifetime. I would say the level three and level four are closer to introduction than level five, and that's still quite some time off.

**Senator Dwyer:** I think I heard both DOT & the Insurance Department say that maybe we would put this in place so there can be testing and worry about the liability down the road. But certainly there could be an accident in the testing. So it seems like it's something we should deal with as part of this authorization and not kick that down the road to deal with later. So I guess my question is twofold, it seems like we should deal with it now and you probably need some time to respond to the amendment because you could say the that the ADS's manufacturer and/or owner is responsible. So if you're prepared to respond to it now you can or you can say I need some time to look at it.

**Mr. Yates:** To the amendment specifically, I couldn't speak to it because I haven't seen it in person. However, in liability in general how manufacturers see it we refer to motor vehicle product liability law. Right now if you get a vehicle and the brakes don't work as they should and it's only because they weren't installed properly or there's a malfunction, that would go back on the manufacturers as liability. Even if you cause a crash due to that brake malfunction, that would fall back on us due to motor vehicle product liability law. How we see it with the ADS is if the system malfunctions and causes a crash, that's on the manufacturer. If the vehicle gets in a crash and it was due to an outside vehicle, barring and investigation it would likely be that outside vehicle. In a setting where the vehicle is able to hand control over to the human as I mentioned in a Level 3 vehicle, if that person does not respond, does not take the vehicle back or if the system is manipulated or changed in some way that isn't approved of by the vehicle manufacturer then that would likely go to either the person who altered the system or the person who did not use the system how it's supposed to be used. Just for instance, I know it's not an AV; but the Tesla crash the person driving the vehicle was found liable because they were not able to take over where the vehicle notified them. At the same time that is also one of the vehicle manufacturer's existing systems with an Uber AV system on top of that. We do not think currently that it needs to be addressed, if you refer to any insurance industry they will tell you the same thing that it's too far off to really start navigating the roads of insurance and liability because honestly they don't know how it's going to affect their industry. Right now there's a framework within every state as far as product liability goes that involves and investigation, a court process. We would support the existing framework in the state here.

**Chairman Rust:** Closed Hearing on HB 1418.

# 2019 SENATE STANDING COMMITTEE MINUTES

**Transportation Committee**  
Lewis and Clark Room, State Capitol

HB 1418  
3/14/2019  
33759

- Subcommittee  
 Conference Committee

Committee Clerk: Liz Stenehjem

## Explanation or reason for introduction of bill/resolution:

A bill relating to automated vehicle network companies and autonomous vehicle operations; and relating to nonmoving violations.

## Minutes:

1 Attachment

Committee had a brief discussion about the bill and previous testimony heard on the bill. Went over the levels of an autonomous vehicle, zero through five.

**Chairman Rust:** Please see **Attachment #1** for letter from GlobalAutomakers read.

Josey Munson, Legislative Intern, Senate Transportation Committee: In the Legislative Manual Drafting Handbook it says, in drafting all of laws, you're supposed to review the definitions applicable to the Century Code Title and Chapter in which the substance of the bill is located and avoid any duplicate definitions. If you look at your bill, the part that defines "operator," on page three is under 39-01-02.1 and if you look at that it has the same exact definition for operator as in the bill except for saying every "means every person who drives" it says "every individual who drives." I went and spoke with the people who included that in the bill and they said that they did not realize that they changed one word, they did not mean to change one word. So we would want that to be the same. Also, I ask why they specifically included operator in the bill and she said, "we just wanted people to know that this definition of operator applies to this section of the code." However, that's unnecessary because those listed definitions already apply to everything in the chapter, so they already apply to that section. So according to the manual the definition of operator should be removed since it is duplicated.

**Chairman Rust:** I just thought I would have her tell you this information as well, since I had asked her to do that work for me. What I think I need to do now it take the bill to Legislative Council as well as talk to the bill sponsors and affected parties.

# 2019 SENATE STANDING COMMITTEE MINUTES

**Transportation Committee**  
Lewis and Clark Room, State Capitol

HB 1418  
3/21/2019  
34144

- Subcommittee  
 Conference Committee

Committee Clerk: Liz Stenehjem

## Explanation or reason for introduction of bill/resolution:

A bill relating to automated vehicle network companies and autonomous vehicle operations; and relating to nonmoving violations.

## Minutes:

2 Attachments

Brief discussion of the bill and previous testimony and attachments.

**Chairman Rust:** Please see **Attachment #1** for amendment 19.1043.02001 in the Christmas tree version of the bill. Please see **Attachment #2** for explanation of the levels of automation. Levi, would you go through this bill and just tell us in your estimation; what does this bill do?

**(11:23) Levi Andrist, GA Group, Auto Alliance:** These amendments accomplish three things that address concerns that came from the hearing. One is the liability issue that was raised by the Association for Justice; and the chairman did an excellent job. Essentially saying, nothing in this bill changes the laws of liability and then it quotes about seven or eight sections. Those sections that they're quoting are the laws of insurance, think no fault insurance, products liability, negligence things like that. So that's the first part of the bill. That is included in the first section of the bill and the second section of the bill. The first section of the bill deals with systems, think autonomous vehicles with Uber. The second section of the bill deals with the individual use of an autonomous vehicle, so think that's when a senator or somebody owns their own autonomous vehicle. So we included that liability language in both sections. The second purpose of the amendment is the Global AutoMakers concern that the bill defines the term operator but it's never used. That's just a really good catch from them.

**Chairman Rust:** Section two deals with what?

**(12:46) Mr. Andrist:** Individual operation, where an individual is operating it, not a network. So the first section of the bill deals with on demand autonomous vehicle networks and the second section of the bill deals with autonomous vehicle operations by a person or individual. So the second purpose of these amendments is to remove the term "operator" because that term is just not used. What I'm thinking in talking with Don who represents

GM, I think that was included in this whole 18-month process with the DOT. Because in an earlier version of the bill that we worked on operator was included in the bill. While the one that was introduced it wasn't, and thus it's appropriate to take that out. The third purpose of the bill is to address another legitimate issue raised by Global AutoMakers where essentially they said the bill should be clarified to make clear that level 3 vehicles are not included under the definition of automated driving system and as currently drafted the bill would allow for a level 3 to operate without a driver. So the very technical amendment that the chairman just walked through are to just make crystal clear, but the use of various defined terms that the operator of an AV must be licensed if they're driving a level 3. If you look at what a level 3 is, a driver is a necessity. This is a person sitting behind a steering wheel who must be ready to take control of that vehicle at any time should there be some activity or system failure. So the responsibility to get a minimal risk condition; let's say there's a system failure and you have to pull to the side, the driver has got to be able to take control of that car and pull to the side. Of course with a level 4 and a level 5 it's expected that the vehicle itself, the technology accomplish that minimal risk condition. Ultimately that page 3, line 26 on, those essentially accomplish that level 3 distinction. Page 4 essentially make the distinction clear between level 4 and level 5. So if you start on line 1 of page 4 an individual using an AV is exempt from having to get a license if it's a level 4 or level 5. a and b on lines 4-8 those are what makes a car a level 4 or level 5.

**Chairman Rust:** You know this chart we have here, the level one did I do that right, there's maybe some assistance like cruise control? What's a level two then?

**Mr. Andrist:** A level 2 an example, it would be a tesla model 3. So you read about Teslas, that would be a level 3 SAE autonomous vehicle.

**Chairman Rust:** So then what is the difference between level 2 and level 3?

**Mr. Andrist:** Level 2 there has to be combined automation features. So you're using cruise control, lane assist; so it's sensing where the lines are to keep you in the lane, and there is also maybe an approach feature where there's a sensor that judges how fast you are going versus how fast something in front of you is or isn't going. That will automatically slow you down or speed you up. To my knowledge there are no level 3s on the market. This is a very nebulous.

**Chairman Rust:** That would be like sometimes you see the picture of the Uber car and the little thing turning up above and they have a driver in there but the driver isn't doing anything, right?

**Mr. Andrist:** Yeah, you could probably have those as a level 3 or a level 4 depending on the role of the human in that vehicle. The primary difference between a level three and a level four is the that in a level four the vehicle has to be capable of doing everything. What we call the entire dynamic driving task. In that instance, the first instances we think you're going to see in the market is what you heard of maybe, geo-fencing. So in certain areas, you're going to have a corridor that's got all the correct signages and the correct striping. Maybe it's a route along a college campus where you have an automated bus of some kind. That's the type of technology where you don't need a human intervention. Although with a level 4 that human may still have an option to control that vehicle.

**Senator Fors:** So a three-year old with good knowledge of technology could take over a level 4 vehicle?

**Mr. Andrist:** You mean as the bill is or just theoretically speaking?

**Senator Fors:** Just theoretically speaking. I mean if it's got a certain route and that individual gets in there, he/she climbs into the front seat where all the controls are and some of these kids are pretty good with punching buttons.

**Mr. Andrist:** That's an excellent question. For a level 3 that would be illegal, because indeed the must have a person with a license, with a level 4 rather there's nothing in this bill that would set an age limit or restrict. What it says is if you meet the high automation that's required in a level 4 you don't need a driver's license to go in there. Now what the bill also doesn't decide is kind of those responsibility laws with essentially the conduct of a minor. This bill does not address those philosophical kind of things. With the idea that this DOT working group that put it together, the idea is to let the market develop here. I think we talked about maybe 14 or 16 at one time, but the idea was that's ultimately a policy decision for the legislature to ultimately address. Understanding this technology is getting closer, but it's still years away; a level 4, that wasn't addressed in the bill.

**Chairman Rust:** But yet we do have something in the bill kind of does address a level 4 type thing?

**Mr. Andrist:** The top of page 4 lines 1-8, that essentially quantifies that you don't have to have a driver's license for level 4 and level 5.

**Chairman Rust:** On page 3, part 3 in you must have a driver's license. "Does not require a human driver to operate on the public highway if the autonomous vehicle is capable of achieving a minimal risk condition in case a system failure occurs." So there you'd have to have a drive with a driver's license in 3, right?

**(21:49) Mr. Andrist:** That's correct, yeah. To put it very starkly, a level 3 vehicle does require a human driver because it can't achieve a minimal risk condition without one.

**Chairman Rust:** It might be able to, but it might now. Right?

**Mr. Andrist:** Correct.

**Chairman Rust:** So, if you are getting in front of a committee and you were going to give them the long and short of this, you would tell them that the first section deals with system, networks, right? Deals with networks such as Uber, Lyft. The second section deals with individuals as the operators, right?

**Mr. Andrist:** That is correct.

**Chairman Rust:** Some people might ask, what's real reason for this bill, why do we need this bill? What's the answer?

**Mr. Andrist:** What the state of North Dakota is telling the United States of America; if it should choose to pass this bill, is that we welcome advances in technology that advance human safety on the highways. And we're sending a signal that we want to maximize technology that's good for our economy and it's good for the safety of our citizens. I think that's the biggest take away. Of course there's a market for manufacturers to make cars that enhance technology. But from a public policy making perspective, if you read some of the reports like McKenzie & Co one of the world's leading consultancies, what's really going to be thrown, I think into the mix is property and casualty insurance for vehicles. Because ultimately, the goal is there is going to be a lot less accidents and a lot less losses to property be cars essentially won't be getting in accidents. Which hopefully means a lot less loss of human life as well. There's other really great; we represent the Anne Carlson Center as well, if I can take a little tangent. You should ask them about people with disabilities and that promise that autonomous vehicles provide for independence for those folks. There's a lot of great cultural up sides. The other answer to your question is, states like North Dakota where we have inclement weather for time to time, it's going to be very interesting to see how rapidly this technology deploys in a place like North Dakota, because if you have lines that are covered in snow and ice...you know safety has to be number one. This bill sets up a regulatory regime that allows the operation of these. It doesn't require anybody to buy one or anybody to operate one, but it says we're open for business and we want safer transportation in our state.

**Senator Clemens:** Could you see that in the future this could be expanded to rail and air travel and just keeps going on?

**Mr. Andrist:** I am not qualified to answer that question. What I will say is; from a person who follows technology, automation and artificial intelligence are fundamentally changing our daily lives and for us to say that that wouldn't be that case, I don't think there would be a basis for that. I think the question is, how far out is that? Not necessarily will it happen.

**Chairman Rust:** Do you feel there are sufficient protections in here for people when the system fails?

**(26:16) Mr. Andrist:** Yes, they're found throughout the bill and they're somewhat technical in nature. If the committee looks at the definitions of what and automated driving system is, what the dynamic driving task is, the role of the human driver as that's defined and the minimal risk condition. Which that's a critical one when you're talking about if the system fails. So, page 3, lines 9-13; "Minimal risk condition" means a low - risk operating mode in which an autonomous vehicle operating without a human driver achieves a reasonably safe state, such as bringing the vehicle 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. What that's saying is, if you want to be able to operate in North Dakota, your vehicle has to be able to achieve a minimal risk condition. If it's a level 3 a human is a part of that equation. If it's a level 4 or a level 5, it's all up to the technology. I can tell you, if there's anybody that's concerned about consumer confidence and trust, it's the people that are making and manufacturing these vehicles. They've essentially got the most to lose which is why they've got some of the smartest people in the world working on advancing this technology. The other just more practical aspect for the committee's knowledge, please know that for that 18-month study that we went through with the DOT,

law enforcement was at the table at every meeting we had. They had an active and present voice and they participated and gave many great insights to make this bill what it is.

**Senator Dwyer:** I think this was talked about at the hearing, but what's the timing of the technology on all this? I mean, how far out are we?

**Mr. Andrist:** If you don't mind, I'm not sure if Don has some GM example for particular. Again, not representing one individual company, not knowing their kind of product development time line, it's really hard to give you an answer. It a period of years, not many years.

**Senator Dwyer:** On page 3 line 9, which is an autonomous vehicle operating without a human driver; so that mean level 4 or level 5, right?

**Mr. Andrist:** it could still be a level 3 in an autonomous mode.

**Senator Dwyer:** Okay, "achieves a reasonably safe state." That seems like less than really. That's a little troubling.

**Chairman Rust:** Isn't that the reason for having a driver there?

**Mr. Andrist:** If I'm a personal injury lawyer or if I'm an insurance defense lawyer, that's a word you're litigating right there. It's the best that the common law offers when it comes to negligence, essentially if somebody was acting as a reasonably prudent person in those circumstances I can't disagree with you. It's like I ask my 8-year-old son to act reasonably well at the neighbor's house and you hope that he does.

**Senator Clemens:** Are the vehicles now that you're going to be using are they capable of stopping on their own at a stop light or a stop sign? If they do, how do they signal that? Are the current stop lights setup to handle that now?

**Mr. Andrist:** Right now, the highest level of automation of the market that I'm aware of is a level 2. That does not have the technology, it would be illegal in fact to not have a driver at the wheel taking care of that and stopping at the stop sign. Ultimately, it very much depends on; take the instance of geo fencing. Let's say there's a corridor on 83 from Minot to Bismarck. If that's geofenced you're probably also going to have sensors on the lights that are communicating with the sensors on the car. If it's not a geofenced area you probably have sensors that are trying to perceive red lights in a way that communicates to the software to slow down or stop. So it depends on the level of automation. But currently, to answer your question, that technology is not commercial.

**Senator Patten:** Would it be fair to say that this is just the first step and this bill if it passes into law, will not be in law that will be in place once we actually get there because of the technology development and so forth? So we're not going to solve all the issues here, there will be some changes as the taskforce moves forward and the technology develops?

**Mr. Andrist:** Absolutely. I would actually be surprised if in the next one or two biennium the industry and stakeholders aren't coming back to make this better or more reflective of the marketplace.

**Chairman Rust:** I think it's pretty safe to say this is a futuristic bill.

**Senator Bakke:** Are they going to be able to tell where they can and can't park?

**(34:24) Mr. Andrist:** With a level 4 and a level 5, yes parking is absolutely going to be part of how that area is geofenced or how the sensors interact with each other.

**Senator Dwyer:** So what if we took out that word "reasonably" and just said "achieves a safe state."? Knowing that we're going to be probably looking at this every biennium until we get there.

**Chairman Rust:** If we took out that word I think you'd really hand tie the industry, because then what you're saying is, it has to be 100% safe. Is anything 100% safe?

**Mr. Andrist:** You've asked a really reasonable question, ironically enough. I would say, what that would do from a legal perspective is it would make this a strict liability situation. Where you wouldn't be able to have comparative fault between be it software engineers or human operators and you would essentially say was it safe or wasn't it? And because it was an accident, there's a failure you are not achieving a minimal risk condition. So I would encourage the committee to keep reasonably in there to keep that balance.

**Chairman Rust:** I would wonder, like even in today's regular car. You said it's safe. You know, I think you really opened up a road. You're now saying this thing is safe. You can't possibly get hurt and I would guess even cars today are reasonably safe. Probably not safe, but reasonably safe. I'm just guessing, but if you took out the word reasonably you would really tie the hands of these companies to the point where the bill would be useless to them.

**(36:37) Don Larson, General Motors:** First off I would say as a North Dakotan and taking my General Motors hat off for a second, the reason for this bill, North Dakota has been on the leading edge of unmanned technology. You look at what we're doing in unmanned aerial systems across the state and we are that leader. We are pushing forward the technology that's not only going to be used across the country but used around the world, it's being developed right here in our state. From an automakers perspective today they can not to that same type of research design and testing in the state of North Dakota because our laws aren't setup to allow it. So this bill would allow testing to go on. Are people going to start owning autonomous vehicles in the next decade or so? Likely not. From a General Motors perspective; as Jason had testified during committee, their planning isn't to initial offer these out for public sale. They will probably operate them as fleets first, starting out with fleets for their employees as they finish up with testing and then fleets where you can subscribe to it and have a car come pick you up, take you to work and you subscribe to it like you'd subscribe to your cable television and it would take around. So we are a long way off from; at least from a General Motors perspective, someone being able to go out and by an autonomous corvette to drive in the state of North Dakota. The question

that was asked about, can these things see stop lights and stop signs and signal and all that. General Motors has a product call "the cruise" it's operating every day in San Francisco right now, in the harshest environment known to drivers and they have a person behind the wheel; just because they are still doing their testing and development, but the vehicle senses the red light, it senses the yellow light, it senses the raccoon crossing the street and stops for it. It senses that there is a car double parked and when it's safe to move around it. So they're doing that every day to refine it. You can go on YouTube if you would like and there are some very good videos of how these things are operating everyday on the streets in San Francisco right now.

**Chairman Rust:** You said we will probably see fleet AVs before personal AVs, is that what you said?

**Mr. Larson:** That's correct.

**Chairman Rust:** What's your definition of fleet?

**Mr. Larson:** Owned by the company, sold in a subscription type service. From the General Motors perspective, the progression would probably go from the testing and development they're doing right now, to we're going to go pick up our employees and use these on the roadways and shuttle them to work and back to make sure we've got all the kinks worked out, to were going to sell a service that someone can subscribe to.

**Senator Bakke:** I move **Do Pass** on Amendment 19.1043.02001

**Senator Clemens:** I **Second** the motion.

**Roll call vote taken:**

**6-0-0 Do Pass Amendment 19.1043.02001**

**Senator Dwyer:** I move a **Do Pass as Amended**

**Senator Bakke:** I **Second** the motion.

**Roll Call Vote Taken:**

**6-0-0 Do Pass as Amended**

**Carrier:** Chairman Rust

March 21, 2019

SK  
3/2  
100

PROPOSED AMENDMENTS TO ENGROSSED HOUSE BILL NO. 1418

Page 1, line 3, remove "; and to amend and reenact subsection 1 of section 39-06.1-08 of the North Dakota"

Page 1, line 4, remove "Century Code, relating to nonmoving violations"

Page 2, after line 19, insert:

4. This chapter may not be construed to modify, limit, or restrict any statutory provision affecting liability, including chapter 26.1-40, 26.1-41, 28-01.3, 32-03.2, or 39-16.1.

Page 3, line 4, replace "controls all or part of the dynamic driving task" with "manually exercises in-vehicle braking, accelerating, steering, and transmission gear selection input devices to operate a vehicle"

Page 3, remove lines 14 through 16

Page 3, line 23, after "highway" insert "if the autonomous vehicle is capable of achieving a minimal risk condition in case a system failure occurs which renders the automated driving system unable to perform the entire dynamic driving task"

Page 3, line 24, after the underscored period, insert:

"4."

Page 3, line 24, remove "in which the"

Page 3, line 25, remove "automated driving system is completing the entire dynamic driving task"

Page 3, line 27, replace the underscored period with "if:

- a. The automated driving system is completing the entire dynamic driving task; and
  - b. The autonomous vehicle is capable of achieving a minimal risk condition if a system failure occurs that renders the automated driving system unable to perform the entire dynamic driving task relevant to the vehicle's intended operational design domain.
5. This section may not be construed to modify, limit, or restrict any statutory provision affecting liability, including chapter 26.1-40, 26.1-41, 28-01.3, 32-03.2, or 39-16.1.

Page 3, remove lines 28 through 31

Page 4, remove lines 1 through 3

Renumber accordingly

**2019 SENATE STANDING COMMITTEE  
 ROLL CALL VOTES  
 BILL/RESOLUTION NO. HB 1418**

Senate Transportation Committee

Subcommittee

Amendment LC# or Description: 19.1043.02001

Recommendation:  Adopt Amendment  
 Do Pass     Do Not Pass     Without Committee Recommendation  
 As Amended     Rerefer to Appropriations  
 Place on Consent Calendar  
 Other Actions:     Reconsider     \_\_\_\_\_

Motion Made By Senator Bakke    Seconded By Senator Clemens

Senators	Yes	No	Senators	Yes	No
Senator Rust - Chairman	X		Senator Bakke	X	
Senator Clemens - Vice Chairman	X				
Senator Dwyer	X				
Senator Fors	X				
Senator Patten	X				

Total    (Yes) 6    No 0

Absent 0

Floor Assignment \_\_\_\_\_

If the vote is on an amendment, briefly indicate intent:



**REPORT OF STANDING COMMITTEE**

**HB 1418, as engrossed: Transportation Committee (Sen. Rust, Chairman)** recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (6 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). Engrossed HB 1418 was placed on the Sixth order on the calendar.

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b. The autonomous vehicle is capable of achieving a minimal risk condition if a system failure occurs that renders the automated driving system unable to perform the entire dynamic driving task relevant to the vehicle's intended operational design domain.

5. This section may not be construed to modify, limit, or restrict any statutory provision affecting liability, including chapter 26.1-40, 26.1-41, 28-01.3, 32-03.2, or 39-16.1."

Page 3, remove lines 28 through 31

Page 4, remove lines 1 through 3

Renumber accordingly

**2019 TESTIMONY**

**HB 1418**

HB1418  
1-31-19  
#1 pol



**AUTO ALLIANCE**  
DRIVING INNOVATION<sup>SM</sup>

03 7th Street N.W., Suite 300 | Washington, DC 20001

02.326.5500 | [www.autoalliance.org](http://www.autoalliance.org)

January 31, 2019

Hon. Dan Ruby, Chair  
House Committee on Transportation  
State Capitol  
Bismarck, ND 58505

Re: House Bill 1418 – **Support** Automated Vehicle Operation

Dear Chair Ruby,

On behalf of the Alliance of Automobile Manufacturers, thank you for the opportunity to express our support for House Bill 1418 – legislation that will foster innovation and promote life-saving technology. The Alliance is a trade association representing twelve of the world's leading car and light truck manufacturers, including BMW Group, FCA US LLC, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America, and Volvo Car USA. Together, Alliance members account for roughly 70% of the cars and light duty trucks sold throughout the United States each year.

We are at a time in history when the automotive manufacturing industry is changing and evolving on a daily basis. Some have even claimed that the industry will experience more change in the next 10 years than in the last 50 years. This sentiment becomes a reality when we take a closer look at the vehicles currently on our roads today.

Today, vehicles are more advanced than ever and equipped with some remarkable features and capabilities. Most notable are the abundance of sensors strategically placed throughout the vehicle. It is common to see upwards of 100 sensors in any given new car which allows for multiple redundancies. In addition to sensors, a wide range of cameras work in unison to keep your vehicle's "eyes" on the road and allows you to keep yours looking ahead. Additionally, as of May 2018, rear view cameras will be standard on new motor vehicles. Many generations are familiar with cruise control, but now cruise control has evolved into a system that can allow you to determine your own safe following distance, maintain your lane placement, and even alert you when it is unsafe to change lanes. These features are just a fraction of what is available and just a piece of the vehicle's entire safety system.

Furthermore, these features have a primary goal in mind – passenger safety and saving lives. According to the U.S. Department of Transportation, more than a staggering 37,000 lives were lost on our roadways by the conclusion of 2017. What is more worrisome is 94 percent of these fatalities were a cause of human error – impaired driving, tired driving, taking a sip or bite, putting on makeup, or attempting to settle boisterous children in the back seat. These scenarios are endless and their outcomes further emphasize the importance of delivering these lifesaving automated vehicle technologies on the road.

In addition to the lifesaving potential, automated vehicles (AVs) will impact many more aspects of our daily lives. For the elderly and disabled communities, AVs can provide expanded mobility options – allowing these individuals to further participate and navigate their communities.

HB 1418  
1-31-19  
# 1 p. 2

Morning traffic jams and hour-plus long commutes will be calmed which will allow us to maximize our time – whether that is at home with loved ones, at the office, or enjoying more sleep. Efforts to utilize and develop land better will be enhanced due to smaller or more efficient parking lots/garages. Studies have shown that AVs may only need three to four inches of space between vehicles due to self-parking. The list of potential benefits continues to grow as industry continues to innovate and HB 1418 will put North Dakota in a prime position to reap the benefits.

HB 1418 is bill that promotes safety, while allowing automakers and industry to innovate within a basic framework for AVs. The bill:

- provides a set of definitions that are tied to industry terms used in the majority of states with AV laws.
- allows for automated vehicle operation on North Dakota roads with a requirement that they MUST comply with all North Dakota rules of the road.
- preempts local governments from regulating AVs in order to avoid a patchwork of municipal/county laws that would make enforcement and application difficult.
- allows for Transportation Network Companies to operate their autonomous networks once available to the public.
- requires any person or entity to have insurance or be self-insured.
- creates accident reporting requirements in the instance of a crash

The introduction of automated vehicle technology is an evolution, not a revolution. As the technology matures, we fully expect the laws to do so as well. HB 1418 is not expected to be the end-all-be-all for automated vehicle policy in the state, but it does prepare the North Dakota for the introduction of AV technology.

HB 1418 has been thoroughly vetted and supported by many in this room. In fact, many industries participated throughout the interim study activities that provided more than one year of stakeholder engagement, including state agencies. We are hopeful that the legislature will join in welcoming this technology that will help North Dakota and the U.S. get as close as possible to ZERO roadway fatalities. For these reasons, the Alliance urges this committee vote in favor of this bill with a “do pass” recommendation.

Thank you for your time and consideration.

Sincerely,



Leighton Yates  
Senior Manager, State Affairs

Cc: House Committee on Transportation

HB1418  
1-31-19  
#2

**General Motors Testimony: HB 1418**  
**North Dakota House Transportation Committee**  
**January 31, 2019**

Good afternoon Chair and members of the House Transportation Committee. My name is Jason Wetzel and I am Regional Director of Government Relations for General Motors.

I appreciate the opportunity to comment on House Bill 1418, relating to autonomous vehicles.

HB 1418 is the result of nearly eighteen months of collaboration between the administration – including four state agencies – as well as transportation and manufacturing leaders, such as GM, Waymo and Uber.

The bill requires an autonomous vehicle to be capable of operating in compliance with all applicable federal and state law, except to the extent exempted under applicable federal or state law, and may operate on the public highways of this state in full compliance with all vehicle registration, title, insurance, and all other applicable requirements under this title.

HB 1418 would put North Dakota in the lead for allowing AV testing and implementation, encouraging innovation within a structured and reasonable framework. Other states that have taken similar actions include Texas, Nebraska and Georgia.

This bill has been thoroughly vetted by four state agencies, local leaders, and many of the major players in autonomous vehicle technology.

Mr. Chairman and members of the Committee. We respectfully request that you consider support for HB 1418.

Thank you for the opportunity to testify, and I would stand for any questions.

HB1418 #1  
2-8-19

19.1043.01001  
Title.

Prepared by the Legislative Council staff for  
Representative D. Ruby  
February 1, 2019

PROPOSED AMENDMENTS TO HOUSE BILL NO. 1418

Page 2, line 16, remove "A tax or requirement may not be imposed on an autonomous vehicle without a"

Page 2, replace lines 17 through 20 with "A state or local agency or political subdivision may not impose a tax, fee, or other requirement specific to the operation of an autonomous vehicle that is in compliance with subsection 3 of section 39-01-01.2, an automated driving system, or an on-demand vehicle network. This prohibition does not affect vehicle registration and titling fees otherwise required by law."

Renumber accordingly

March 4, 2019

The Honorable David Rust  
Chair, Senate Transportation Committee  
State Capitol  
600 East Boulevard  
Bismarck, North Dakota 58505-0360

**RE: HB 1418 – RELATING TO AUTONOMOUS VEHICLES**

Dear Senator Rust:

Global Automakers, [www.globalautomakers.org](http://www.globalautomakers.org), represents the U.S. operations of international motor vehicle manufacturers, original equipment suppliers, and other automotive-related trade associations. Our goal in North Dakota (and elsewhere) is to foster an open and competitive automotive marketplace and to create public policy that improves motor vehicle safety, encourages technological innovation and protects our planet.

**OUR POSITION**

**Global Automakers supports HB 1418 with the following amendments.** In HB 1418, Section 2 includes redundant or unnecessary definitions. Is there a difference between “Human driver” and “operator”? We do not understand the need to define these new terms when “driver” is already defined in law. Moreover, we note that the substance of the bill never uses the term “operator,” and would therefore suggest that this defined term be stricken.

Under 39-01-01.2.3, the bill allows for driverless operation but does not adequately address Level 3 vehicles where a driver may be required to provide fallback to the system. The definition “Automated Driving System” must be clarified to make clear that Level 3 vehicles are not included under the definition and clarify that “Automated Driving System” only includes Level 4 and Level 5 vehicles (operating exclusively with the automated vehicle technology engaged). As currently drafted, HB 1418 would allow a Level 3 vehicle to operate without a driver.

Global Automakers looks forward to working with members of the North Dakota Legislature on advancing vehicle automation in the state.

Please let us know if you have any questions.

Sincerely,



Josh Fisher  
Senior Manager, State Government Affairs



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March 7, 2019

Hon. David Rust, Chair  
Senate Committee on Transportation  
State Capitol  
Bismarck, ND 58505

Re: House Bill 1418 – **Support** Automated Vehicle Operation

Dear Chair Rust,

On behalf of the Alliance of Automobile Manufacturers, thank you for the opportunity to express our support for House Bill 1418 – legislation that will foster innovation and promote life-saving technology. The Alliance is a trade association representing twelve of the world’s leading car and light truck manufacturers, including BMW Group, FCA US LLC, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America, and Volvo Car USA. Together, Alliance members account for roughly 70% of the cars and light duty trucks sold throughout the United States each year.

We are at a time in history when the automotive manufacturing industry is changing and evolving on a daily basis. Some have even claimed that the industry will experience more change in the next 10 years than in the last 50 years. This sentiment becomes a reality when we take a closer look at the vehicles currently on our roads today.

Today, vehicles are more advanced than ever and equipped with some remarkable features and capabilities. Most notable are the abundance of sensors strategically placed throughout the vehicle. It is common to see upwards of 100 sensors in any given new car which allows for multiple redundancies. In addition to sensors, a wide range of cameras work in unison to keep your vehicle’s “eyes” on the road and allows you to keep yours looking ahead. Additionally, as of May 2018, rear view cameras will be standard on new motor vehicles. Many generations are familiar with cruise control, but now cruise control has evolved into a system that can allow you to determine your own safe following distance, maintain your lane placement, and even alert you when it is unsafe to change lanes. These features are just a fraction of what is available and just a piece of the vehicle’s entire safety system.

Furthermore, these features have a primary goal in mind – passenger safety and saving lives. According to the U.S. Department of Transportation, more than a staggering 37,000 lives were lost on our roadways by the conclusion of 2017. What is more worrisome is 94 percent of these fatalities were a cause of human error – impaired driving, tired driving, taking a sip or bite, putting on makeup, or attempting to settle boisterous children in the back seat. These scenarios are endless and their outcomes further emphasize the importance of delivering these lifesaving automated vehicle technologies on the road.

In addition to the lifesaving potential, automated vehicles (AVs) will impact many more aspects of our daily lives. For the elderly and disabled communities, AVs can provide expanded mobility options – allowing these individuals to further participate and navigate their communities. Morning traffic jams and hour-plus long commutes will be calmed which will allow us to maximize our time – whether that is at home with loved ones, at the office, or enjoying more sleep. Efforts to utilize and develop land better will be enhanced due to smaller or more efficient parking lots/garages. Studies have shown that AVs may only need three to four inches of space between vehicles due to self-parking. The list of potential benefits continues to grow as industry continues to innovate and HB 1418 will put North Dakota in a prime position to reap the benefits.

HB 1418 is bill that promotes safety, while allowing automakers and industry to innovate within a basic framework for AVs. The bill:

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- requires any person or entity to have insurance or be self-insured.
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HB 1418 has been thoroughly vetted and supported by many in this room. In fact, many industries participated throughout the interim study activities that provided more than one year of stakeholder engagement, including state agencies. We are hopeful that the legislature will join in welcoming this technology that will help North Dakota and the U.S. get as close as possible to ZERO roadway fatalities. For these reasons, the Alliance urges this committee vote in favor of this bill with a “do pass” recommendation.

Thank you for your time and consideration.

Sincerely,



Leighton Yates  
Director, State Affairs

Cc: Senate Committee on Transportation

**General Motors Testimony: HB 1418**  
**North Dakota Senate Transportation Committee**  
**March 7, 2019**

Good afternoon Chair and members of the Senate Transportation Committee. My name is Jason Wetzel and I am Regional Director of Government Relations for General Motors.

I appreciate the opportunity to comment on House Bill 1418, relating to autonomous vehicles.

HB 1418 is the result of nearly eighteen months of collaboration between the administration – including four state agencies – as well as transportation and manufacturing leaders, such as GM, Waymo and Uber.

The bill requires an autonomous vehicle to be capable of operating in compliance with all applicable federal and state law, except to the extent exempted under applicable federal or state law, and may operate on the public highways of this state in full compliance with all vehicle registration, title, insurance, and all other applicable requirements under this title.

HB 1418 would put North Dakota in the lead for allowing AV testing and implementation, encouraging innovation within a structured and reasonable framework. Other states that have taken similar actions include Texas, Nebraska and Georgia.

This bill has been thoroughly vetted by four state agencies, local leaders, and many of the major players in autonomous vehicle technology.

Mr. Chairman and members of the Committee. We respectfully request that you consider support for HB 1418.

Thank you for the opportunity to testify, and I would stand for any questions.

Chairman Rust and members of the Senate Transportation Committee, my name is Jaclyn Hall and I am the Executive Director of the North Dakota Association for Justice. I ask for a Do Pass on HB 1418 with an amendment that I will supply in a moment.

On March 18, 2018, Elaine Herzberg, 49, was walking her bicycle across the street outside the crosswalk on a four-lane road in the Phoenix suburb of Tempe when she was hit by an Uber operated Volvo XC90 SUV engaged in automated driving. The vehicle was traveling about 38 miles per hour in a 35 mile per hour speed zone. There was a training driver in the vehicle at the time. Initial reports suggest that the vehicle did not brake before striking Ms. Herzberg. She died shortly after the collision.

Video of the crash was released by the local police on the night of March 21. The video shows Ms. Herzberg clearly illuminated in the middle of the street when Uber's speeding vehicle struck her at a fatal speed. It shows the training driver looking down at her phone immediately before the collision. Uber's system *never* correctly

identified Ms. Herzberg. Uber killed Ms. Herzberg by automated driving.

This is a shocking reminder of the dangers we face when handing over the keys to 4000 pounds of rolling death to a handful of Silicon Valley computer programmers.

The North Dakota Association for Justice does not oppose automated vehicles or the development of this technology. In fact, many of our members hail the promise of automated driving for the same reason many of you do. **However, we are concerned that under this bill it is unclear who will be responsible for automated operations.** This bill appears to abandon the at fault driver liability framework in a way that will allow reckless automated driving.

For example, if Tesla flips a switch tomorrow and its “full self-driving” vehicles begin operating “coast-to-coast” without real time human input, or even a human in the vehicle at all, who gets the ticket when Tesla runs a red light in Bismarck; passes a school bus when it is letting out children at the end of the school day; or hits a child while they are crossing the road. Shouldn’t the company who manufactured

the system and keeps it up to date, who warranted to the owner or any human in the car that this is a *full-self driving system* and they are free to read a book, watch a movie, or daydream—shouldn't Tesla be considered the driver here? We think they should.

As it stands today, this bill does not address who is considered the driver when the vehicle is under automated operation. The bill only requires a manufacture to design a vehicle *capable* of operating in compliance with the rules of the road. There is no provision for *actual compliance* with rules of the road. Every drunk driver is *capable* of staying between the lines when driving home—it doesn't make sense why a corporate driver should get an immunity that a human driver does not.

We recognize that the industry pushing this bill has reassured everyone that this is a safety technology and will never fail. If this is true, then the manufacturers should have no problem with being identified as the operator of the vehicle. In fact, this would help keep out dangerous operators who can only deploy because their technology is not as safe – making such companies responsible for the harm they

cause will ensure that only safe companies deploy in North Dakota. Manufacturers truly hoping to improve safety should *welcome* this accountability. They should welcome this common sense, American principle that people pay for the harm that they cause.

Collisions caused by automated driving are inevitable—industry admits this, and Ms. Herzberg’s death proves it. This legislation should ensure that the company with the control over the vehicle—the company who manufactured the system and keeps it up to date—is responsible for violations of the rules of the road and pays for the harm they cause. Only the manufacturer will have the control needed to fix the system to prevent future rule violations and to prevent future harm. Therefore, the manufacturer should bear the costs of violating the rules just like any other driver. If the systems are safe, this won’t be an impediment to their deployment. If they are not safe, if they will violate the rules of the road or cause a catastrophic collision, then maybe this small, common sense impediment to deployment is appropriate.

I ask the committee to amend HB 1418 to add this suggested amendment language under Section 2:

**The automated driving system's manufacturer is responsible for a failure to comply with the applicable traffic and motor vehicle safety laws and regulations of this state during automated operation.**

I thank you for your time and will stand for any questions.

March 4, 2019

The Honorable David Rust  
Chair, Senate Transportation Committee  
State Capitol  
600 East Boulevard  
Bismarck, North Dakota 58505-0360

**RE: HB 1418 – RELATING TO AUTONOMOUS VEHICLES**

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Under 39-01-01.2.3, the bill allows for driverless operation but does not adequately address Level 3 vehicles where a driver may be required to provide fallback to the system. The definition “Automated Driving System” must be clarified to make clear that Level 3 vehicles are not included under the definition and clarify that “Automated Driving System” only includes Level 4 and Level 5 vehicles (operating exclusively with the automated vehicle technology engaged). As currently drafted, HB 1418 would allow a Level 3 vehicle to operate without a driver.

Global Automakers looks forward to working with members of the North Dakota Legislature on advancing vehicle automation in the state.

Please let us know if you have any questions.

Sincerely,



Josh Fisher  
Senior Manager, State Government Affairs

HB 1418 #1  
3/21/19

19.1043.02001

FIRST ENGROSSMENT

Sixty-sixth  
Legislative Assembly  
of North Dakota

ENGROSSED HOUSE BILL NO. 1418

Introduced by

Representative D. Ruby

Senator Rust

1 A BILL for an Act to create and enact chapter 8-12 and section 39-01-01.2 of the North Dakota  
2 Century Code, relating to automated vehicle network companies and autonomous vehicle  
3 operations; and to amend and reenact subsection 1 of section 39-06.1-08 of the North Dakota  
4 Century Code, relating to nonmoving violations.

5 **BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

6 **SECTION 1.** Chapter 8-12 of the North Dakota Century Code is created and enacted as  
7 follows:

8 **8-12-01. Definitions.**

9 As used in the chapter:

- 10 1. "Autonomous vehicle" means a vehicle equipped with an automated driving system.
- 11 2. "Client" means a person requesting service from an on-demand autonomous vehicle  
12 network. The term includes a passenger, a shipper, as defined by section 41-07-02, a  
13 person entitled under the document, as defined by section 41-07-02, or similar  
14 individual or commercial enterprise.
- 15 3. "On-demand autonomous vehicle network" means a transportation service network  
16 that uses a software application or other digital means to dispatch or otherwise enable  
17 the prearrangement of transportation with autonomous vehicles for purposes of  
18 transporting persons or goods, including for-hire transportation, transportation for  
19 compensation, and public transportation.

20 **8-12-02. General provisions.**

- 21 1. Notwithstanding any other provision of law, a person may operate an on-demand  
22 autonomous vehicle network. An on-demand autonomous vehicle network may  
23 provide transportation of persons or goods, including:  
24 a. For-hire transportation;

- 1           b. Public transportation; and
- 2           c. Transportation for multiple passengers who agree to share the ride.
- 3        2. An on-demand autonomous vehicle network may connect passengers to autonomous  
4        vehicles without human drivers in compliance with subdivision a of subsection 3 of  
5        section 39-01-01.2 exclusively, or subdivision b of subsection 3 of section 39-01-01.2  
6        as part of a digital network that also connects passengers to human drivers who  
7        provide transportation services, consistent with applicable law.
- 8        3. Unless otherwise provided in this chapter and notwithstanding any other provision of  
9        law, autonomous vehicles and automated driving systems without human drivers are  
10       governed by subsection 3 of section 39-01-01.2.
- 11       a. A state agency or political subdivision may not impose requirements, including  
12       performance standards specific to the operation of an autonomous vehicle or  
13       automated driving systems without human drivers in compliance with  
14       subsection 3 of section 39-01-01.2.
- 15       b. A state or local agency or political subdivision may not impose a tax, fee, or other  
16       requirement specific to the operation of an autonomous vehicle that is in  
17       compliance with subsection 3 of section 39-01-01.2, an automated driving  
18       system, or an on-demand vehicle network. This prohibition does not affect vehicle  
19       registration and titling fees otherwise required by law.
- 20       4. This chapter may not be construed to modify, limit, or restrict any statutory provision  
21       affecting liability, including chapters 26.1-40, 26.1-41, 28-01.3, 32-03.2, or 39-16.1.

22       **SECTION 2.** Section 39-01-01.2 of the North Dakota Century Code is created and enacted  
23 as follows:

24       **39-01-01.2. Autonomous vehicle operations.**

- 25       1. As used in this section:
- 26       a. "Automated driving system" means hardware and software collectively capable of  
27       performing the entire dynamic driving task for the vehicle on a sustained basis  
28       when installed on a motor vehicle and engaged regardless of whether it is limited  
29       to a specific operational design domain.
- 30       b. "Autonomous vehicle" means a vehicle equipped with an automated driving  
31       system.

- 1           c. "Dynamic driving task" means all of the real-time operational and tactical
- 2                   functions required to operate a vehicle in on-road traffic within the vehicle's
- 3                   specific operational design domain, if any, excluding the strategic functions such
- 4                   as trip scheduling and selection of destinations and waypoints.
- 5           d. "Human driver" means an individual with a valid license to operate a motor
- 6                   vehicle who ~~controls all or part of the dynamic driving task~~ manually exercises
- 7                   in-vehicle braking, accelerating, steering, and transmission gear selection input
- 8                   devices to operate a vehicle.
- 9           e. "Minimal risk condition" means a low-risk operating mode in which an
- 10                   autonomous vehicle operating without a human driver achieves a reasonably
- 11                   safe state, such as bringing the vehicle to a complete stop, upon experiencing a
- 12                   failure of the vehicle's automated driving system that renders the vehicle unable
- 13                   to perform the entire dynamic driving task.
- 14           f. "Operational design domain" means a description of the specific operating
- 15                   domain in which an automated driving system is designed to properly operate,
- 16                   including roadway types, speed range, environmental conditions, and other
- 17                   domain constraints.
- 18           ~~g. "Operator" means an individual who drives or is in actual physical control of a~~
- 19                   ~~motor vehicle upon a highway or who is exercising control over or steering a~~
- 20                   ~~vehicle being towed by a motor vehicle.~~
- 21        2. An autonomous vehicle must be capable of operating in compliance with all applicable
- 22                   federal and state law, except to the extent exempted under applicable federal or state
- 23                   law, and may operate on the public highways of this state in full compliance with all
- 24                   vehicle registration, title, insurance, and all other applicable requirements under this
- 25                   title.
- 26        3. An autonomous vehicle with automated driving systems engaged does not require a
- 27                   human driver to operate on the public highway if the autonomous vehicle is capable of
- 28                   achieving a minimal risk condition in case a system failure occurs which renders the
- 29                   automated driving system unable to perform the entire dynamic driving task relevant to
- 30                   the vehicle's intended operational design domain.

1       4. ~~An individual using an autonomous vehicle in which the automated driving system is~~  
2       ~~completing the entire dynamic driving task~~ is not driving or in actual physical control of  
3       the autonomous vehicle and, therefore, is exempt from licensing requirements.~~if:~~

4       a. ~~The automated driving system is completing the entire dynamic driving task; and~~

5       b. ~~The autonomous vehicle is capable of achieving a minimal risk condition if a~~  
6       ~~system failure occurs that renders the automated driving system unable to~~  
7       ~~perform the entire dynamic driving task relevant to the vehicle's intended~~  
8       ~~operational design domain.~~

9       5. ~~This section may not be construed to modify, limit, or restrict any statutory provision~~  
10       ~~affecting liability, including chapters 26.1-40, 26.1-41, 28-01.3, 32-03.2, or 39-16.1.~~

11       **SECTION 3. AMENDMENT.** Subsection 1 of section 39-06.1-08 of the North Dakota  
12 Century Code is amended and reenacted as follows:

13       1. A violation of section 39-04-11, subsection 1 of section 39-04-37 by an individual by  
14       becoming a resident of this state, subsection 4 of section 39-06-17, and section  
15       39-06-44, 39-06-45, 39-10-47, 39-10-49, 39-10-50, 39-10-51, 39-10-54.1, 39-21-08,  
16       39-21-10, 39-21-11, or 39-21-14, or a violation of any municipal ordinance equivalent  
17       to the foregoing sections.

## SAE AUTOMATION LEVELS

Full Automation



0

No Automation

Zero autonomy; the driver performs all driving tasks.



1

Driver Assistance

Vehicle is controlled by the driver, but some driving assist features may be included in the vehicle design.



2

Partial Automation

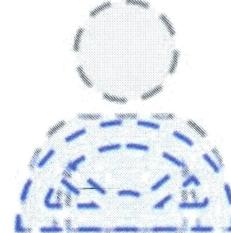
Vehicle has combined automated functions, like acceleration and steering, but the driver must remain engaged with the driving task and monitor the environment at all times.



3

Conditional Automation

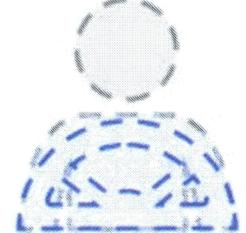
Driver is a necessity, but is not required to monitor the environment. The driver must be ready to take control of the vehicle at all times with notice.



4

High Automation

The vehicle is capable of performing all driving functions under certain conditions. The driver may have the option to control the vehicle.



5

Full Automation

The vehicle is capable of performing all driving functions under all conditions. The driver may have the option to control the vehicle.