



# MEETING SUMMARY

## MEETING ATTENDEES

Attendee	Representing
Sarah Bales	Brubaker and Associates, Inc. on behalf of Tesla
Jeff Barghout	Robocist, Inc.
Jeff Barnhart	McGuireWoods Consulting LLC on behalf of Uber
Charles Blackwood	Orange County Sheriff's Office
Chris Blue	Town of Chapel Hill
Eric Boyette	NC Department of Transportation
Katie Brunk	Kimley-Horn and Associates
Reba Calvert	NC Division of Motor Vehicles
Thomas Chase	Institute for Transportation Research and Education
Michael Clamann	UNC Highway Safety Research Center
Kyle Clark-Sutton	Research Triangle International
Jeff Dale	Kimley-Horn and Associates
Wei Fan	UNC Charlotte
Anna Gallup	City of Charlotte
Amanda Good	Kimley-Horn and Associates
John Hardin	NC Department of Commerce
Stephanie Harmon	Kerr-Tar Regional Council of Governments
Heather Hildebrandt	NC Department of Transportation
Jeff Jaeger	NC Department of Transportation
Dennis Jernigan	NC Turnpike Authority
Torre Jessup	NC Division of Motor Vehicles
Wendy Kelly	Focus Public Affairs, LLC on behalf of Toyota
Kevin Lacy	NC Department of Transportation
Joe Lanier	Troutman Sanders LLP on behalf of Continental Automotive
Katie Marshall	Self-Driving Coalition for Safer Streets
Thomas Moore	Cardinal Government Affairs on behalf of General Motors
Laurie Onorio	Walk West on behalf of the Association of Global Automakers
John Policastro	NC Automobile Dealers Association
Kaitlin Rothecker	Brubaker & Associates, Inc. on behalf of Tesla
Debbie Smith	City of Charlotte
Paul Steinman	HNTB
Stephanie Sudano	NC Department of Transportation
Ed Turlington	Brooks Pierce on behalf of Tesla
Jason Wager	Centralina Council of Governments
Ariel Wolf	Self-Driving Coalition for Safer Streets



## MEETING NOTES

Attendees were welcomed to the meeting followed by a brief outline of the meeting agenda. Ariel Wolf and Katie Marshall, both from the Self-Driving Coalition for Safer Streets, provided a presentation regarding the Coalition members and their approach for AV policymaking. John Hardin from the NC Department of Commerce provided a presentation regarding the Department's Science, Technology & Innovation (STI) Policy and Programs in NC.

Each presentation had a short Q&A session:

### Questions and Answers

1. Has the Self-Driving Coalition reached out to personal delivery device (PDD) vendors?

*The industry is excited about adjacent spaces, but our focus is on vehicles. PDDs are not considered motor vehicles since they travel on sidewalks. Although there may be some cross over areas – opportunities for both to bring benefits forward.*

2. Has there been any partnerships with automated bus rapid transit (BRT) or other technologies?

*We have not had partnerships specially regarding BRT as we are technology agnostic. However, if automated driving systems (ADS) are involved, we would partner to identify strategies to help remove barriers.*

3. What is your position on remote operations?

*(A1) The Self-Driving Coalition does not take a position unless there is an impact to AV technology. Also, remote operations are a little different from AVs since someone else is operating rather than the vehicle making their own decisions.*

*(A2) The idea regarding remote operations could be the monitoring of the AV when said person could take control if there are issues that may arise. This is being actively tested.*

4. How does the Coalition recommend achieving minimal risk conditions without remote operations?

*Per the definition of the Society of Automotive Engineers (SAE) J3016, the ADS itself would know how to reach minimal risk condition – issue arises, the vehicle would travel to the shoulder. The*



*Self-Driving Coalition would defer to their members to articulate how their vehicles integrate minimal risk.*

*It was stressed the importance of each AV manufacturer/vendor having an emergency engagement document that informs law enforcement/emergency operators what they need to/not need to know when engaging with an autonomous vehicle.*

5. Regarding the Department of Commerce's Outreach Program, has there been any outreach regarding NC's favorable laws/structure regarding AV?

*Although there is a program, the outreach is somewhat ad hoc. The Committee has been primarily focused on outreach to policy makers and identifying funding opportunities. But more information can be provided.*

### *Additional Updates*

#### **Automated Operation of Vehicles Act Comments**

The FAV Committee was asked to review the Act noted above and provide feedback. Responses ranged from comments on specific sections to terms and definitions of items within the Act. Overall, there were 9 responses: 6 were good to enact while 3 were not. The feedback was provided to the Uniform Law Commission.

#### **Personal Delivery Devices (PDD)**

The PDD statute was passed in June 2020 as part of SB 739. It is intended to be a small, powered device for transporting items with AV technology. There is allowance for these vehicles to operate on the sidewalk or on the roadway under certain conditions. They are to be monitored by someone. The unknown is how are we going to know what's inside of these PDD and is it safe. There will need to be a 3rd party verification process to verify the contents are what they are.

*Question: There appears to be much overlap of PDD and e-scooters and e-bikes. How much language was used to write the Bill? (A) Not much. The Bill does permit municipalities to restrict the use of these. However, we are unaware of any current restrictions. Amazon and FedEx are the big pushers and they are intentional with a local platform moving forward.*



*Question: How would the AV technology be classified under this law? (A) The law provides specific dimensions and weight for classification; anything larger would be classified as a vehicle in the vehicle space.*

AAMVA has a working group, which Kevin Lacy is a member of, that is looking at these devices and developing a white paper on them. *Kevin will coordinate with Jeff Barghout regarding the white paper.*

### **NC AV Statute (HB 469)**

Based on recent reference to the Bill, it was clear during the registration process of the AV shuttle that the required equipment on the vehicle was a stumbling block that needs to be addressed. Some suggestions for an amendment to the Bill include:

- Provide a process for granting equipment waivers; NHTSA still controls some of the language, but these vehicles are to operate without some of the standard vehicle equipment (i.e., steering wheel, rear view mirror, etc.)
- Include testing language or at the minimum include a statement that anyone testing in the state needs to coordinate or communicate with DMV
- Require AV manufacturers who sell or operate elsewhere (outside NC), they will need to include an emergency document that informs NC law enforcement what to do/how to interact if involved in an incident

It was suggested for more federal guidance on what should or should not be part of an autonomous vehicle.

### *Open Discussion Items*

#### **Low-Speed Shuttle**

There was opinion that there could be faster deployment opportunities with low speed/controlled environment vehicles, such as the CASSI shuttle. *Question: Any updates regarding additional CASSI deployments? (A) There is a potential for a new deployment location, but there are preliminary discussions, and nothing has been confirmed.*



## Freight

*Question: Is anyone thinking about the impacts AV technology will have on freight? (A) Yes; there are considerations that AV is not just a last mile solution, but the whole trip; implications to the railroad in connection to freight; concerns with jobs if taking the driver out of the equation.*

Small trucking companies are looking at solutions such as platooning. With platooning, there could be a set of drivers for different types of vehicles. They could be regionally based or by territory. This could support a better work-life balance.

The trucking industry really needs to be part of the conversation. The Committee did have a trucking representative; unfortunately, that person retired. We will be reaching out for a new contact.

## Technology Concerns

There is a concern that if AVs don't encourage ride sharing and people use them as single occupancy vehicles, we will have the same level of congestion and perceived need for widening the roads.

Is AV technology going to have the same issues as Just-in-Time (JIT) inventory systems did where there will be more travel, more wear and tear on the roads? How should we prepare for this?

## Bus Rapid Transit/Transit

New Flyer is looking for host locations for automated buses and BRT (<https://www.newflyer.com/>).

Smaller transit systems, in light of COVID, are doing away with fixed route service temporarily and switching to on-demand service; could be long term effects to this.

## Parking Deck

There should be considerations for parking decks as these conversations are ongoing. The idea is to use upper decks for AV holding places and retail/housing on main levels.

## 2021 Meeting Focus

For 2021, we will plan to meet at least quarterly, and we would like the Committee's feedback on topics. Some initial suggestions include presentations from consumer reports, state



presentations, technology company presentations, and AV vendor presentations. We also would like to determine our focus for 2021. This will certainly help with identifying topic discussions.

Some of the other items mentioned are to *pull some of the action items noted earlier this year and begin drafting language* for the Committee to review and comment on then push forward towards the legislature to take up.

### Questions and Answers

*Question: Several MPOs in the Charlotte region are looking into shared language around CAVs being added to their currently being developed Metropolitan Transportation Plan updates. To this, are there policy or related items that MPOs should be including within the NC context in their MTP documents, some of which we have heard about today? (A) There were a few suggestions for additional discussions – specifically things that are being done in other states that may be relevant. Also, including the parking deck comments and curb management.*

*Comment: We have a real opportunity to begin positive messaging as to the purpose of the initiative. Being able to communicate: What it is; How it will work; How it will benefit the public; Why you shouldn't be afraid of it. We need to be in front of the questions with solid answers and they need to be consistent. (potential discussion topic)*

Finally, Amanda Good and Kevin Lacy thanked the Committee members and guests for their time, and the meeting was adjourned.