Under the Paperwork Reduction Act, a federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control number. The OMB Control Number for this information collection is xxxx-xxxx (expiration date: MM/DD/YYYY). Responding to this collection of information is estimated to be approximately 15 minutes per response, including the time for reviewing instructions, completing, and reviewing the collection of information. All responses to this collection of information are voluntary. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Information Collection Clearance Officer, National Highway Traffic Safety Administration, 1200 New Jersey Ave, S.E., Washington, DC, 20590

#### **Pre-Drive Questionnaire**

As part of this study, it is useful to collect information describing each participant. The following questions ask about your basic demographic information, your trust in automation, and your understanding of a driving automation system. Please read each question carefully. If something is unclear, ask the researcher for help. Your participation is voluntary, and you may skip any questions that you do not wish to answer.

### **Demographics**

- 1. What is your age?
- 2. What is the sex listed on your driver's license?
  - a. Male
  - b. Female
  - c. X
- 3. How do you identify with respect to your gender identity?
- 4. What is your race and/or ethnicity?
  - a. **American Indian or Alaska Native** Enter, for example Navajo Nation, Blackfeet Tribe of the Blackfeet Indian Reservation of Montana, native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, Aztec, maya, etc.

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- b. Asian Provide details below.
  - i. Chinese
  - ii. Vietnamese
  - iii. Asian Indian
  - iv. Korean
  - v. Filipino
  - vi. Japanese

	vii.	Enter, for example, Pakistani, Hmong, Afghan, etc.
c.	Black (	or African American – Provide details below.
	i.	African American
	ii.	Nigerian
	iii.	Jamaican
	iv.	Ethiopian
	٧.	Haitian
	vi.	Somali
	vii.	Enter, for example, Trinidadian and Tobagonian, Ghanaian, Congolese,
		etc
d.	Hispar	nic or Latino - Provide details below.
	i.	Mexican
	ii.	Cuban
	iii.	Puerto Rican
	iv.	Dominican
	٧.	Salvadoran
	vi.	Guatemalan
	vii.	Enter, for example, Colombian, Honduran, Spaniard, etc.
e.	Middle	e Eastern or North African – Provide details below.
	i.	Lebanese
	ii.	Syrian
	iii.	Iranian
	iv.	Iraqi
	٧.	Egyptian
	vi.	Israeli
	vii.	Enter, for example, Moroccan, Yemeni, Kurdish, etc
f.	Native	Hawaiian or Pacific Islander – Provide details below.
	i.	Native Hawaiian
	ii.	Tongan
	iii.	Samoan
		Fijian
		Chamorro
	vi.	Marshallese
	vii.	Enter, for example, Chuukese, Palauan, Tahitian, etc.
g.	White	- Provide details below.
	i.	English
	ii.	Italian
	iii.	German

iv. Polish

- v. Irish
- vi. Scottish
- vii. Enter, for example, French, Swedish, Norwegian, etc.

### **Trust Scale**

Below is a list of statements for evaluating trust between people and automation. There are several scales for you to rate the intensity of your feeling of trust, or your impression of the system while operating a machine. Please select the value (1 – Not at all through 7 - Extremely) that best describes your feeling or your impression.

Scale: (Not at all) 1-2-3-4-5-6-7 (Extremely)

## Define the system to which they were randomly assigned.

- 1. The [condition]system is deceptive
- 2. The system behaves in an underhanded manner
- 3. I am suspicious of the system's intent, action, or outputs
- 4. I am wary of the system
- 5. The system's actions will have a harmful or injurious outcome
- 6. I am confident in the system
- 7. The system provides security
- 8. The system has integrity
- 9. The system is dependable
- 10. The system is reliable
- 11. I can trust the system
- 12. I am familiar with the system

# **Mental Model Assessment**

The following questions will ask you about a driving automation system you might experience today. For each question, please indicate whether the statement is "True" or "False", then rate your confidence in your response (No Confidence, Slight Confidence, Moderate Confidence, High Confidence).

- 1. While the system is active/engaged, the driver needs to monitor surroundings in case they need to take over control of the vehicle
- 2. The system will monitor the driving conditions and will notify the driver when they need to resume control
- 3. When active/engaged, the system is completely self-driving and requires no monitoring by the driver
- 4. The system will alert you when you are looking away from the road for too long
- 5. The system will deactivate when you come to a complete stop
- 6. The system can handle gentle corners
- 7. Inclement weather may impede the system's ability to identify objects and road markings
- 8. The system can assist you while you enter or exit the interstate
- 9. The system will work on roads without lines or markings

- 10. The system will be deactivated if it no longer senses a vehicle ahead
- 11. You may read a book while the system is active/engaged
- 12. The system can be deactivated at any time
- 13. The system automatically suspends itself when the vehicle exceeds a certain speed
- 14. The system will be automatically suspended when the windshield wipers are set to high
- 15. Pressing the brake or the accelerator will deactivate the system
- 16. The system responds to pedestrians walking on the sidewalk
- 17. The system provides both steering and braking to avoid a pedestrian
- 18. The system may not detect a pedestrian who suddenly crosses in front of you
- 19. Dark conditions may reduce the system's ability to respond to pedestrians
- 20. The system will warn you when you enter an area with heavy congestion
- 21. The system may react to traffic lights and/or signs
- 22. The system will provide steering input to keep the vehicle in its lane
- 23. The system can drive in a work zone where lanes have shifted from their usual location
- 24. The system will change lanes to pass a slower moving vehicle ahead
- 25. The systems maintains the speed that you have set when there are no vehicles detected in the lane ahead
- 26. The system will accelerate if a slower vehicle ahead moves out of the detection zone
- 27. The system ss meant to be used on highways and interstates
- 28. The system may not correctly detect stopped vehicles in your lane
- 29. The system reacts to stationary objects on the road (construction cone, tire, ball)
- 30. The system is meant to be used in slow and heavy traffic
- 31. The system will react immediately to vehicles merging onto the road in front of you
- 32. The system reacts to oncoming traffic
- 33. The system adjusts the vehicle speed when approaching tight curves
- 34. The system works even when the radar sensor is dirty