Testimony of Steve Ingracia, PE
Deputy Director, Nebraska Department of Transportation
United States Senate Committee on Commerce, Science, & Transportation
Subcommittee on Transportation and Safety
June 25, 2019

Chairman Fischer, Ranking Member Duckworth and members of the Subcommittee, thank you for the opportunity to testify today.

My name is Steve Ingracia and I am the Deputy Director of Technology and Strategic Planning at the Nebraska Department of Transportation (NDOT). Our agency's 2,100 employees serve the state of Nebraska by operating and maintaining nearly 10,000 miles of roads and 3,500 bridges.

In Nebraska, we've carved out an approach to transportation policy that is practical, forward-leaning, and rooted in fiscal responsibility. Through the leadership of Governor Pete Ricketts and then State Senator Fischer, Nebraska passed the Transportation Innovation Act and the Build Nebraska Act which gave NDOT the resources to care for and improve transportation in Nebraska.

Technological innovation is happening at NDOT and nationwide across all DOTs, and I am pleased the Committee has asked us how Congress can support states, as shifts in technology will certainly alter the transportation industry in significant ways over the next 20 years.

We are continually looking for ways to incorporate technology into what we build. The Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) federal grant just awarded to NDOT, in partnership with the Wyoming and Utah DOTs, will advance technologies that improve mobility and safety across the multi-state I-80 corridor. This project will build upon Wyoming's successful connected vehicle pilot program to increase the flow of information to freight haulers and will ultimately improve safety along I-80.

We are also incorporating technology into the operational side of our business – systems like the Maintenance Decision Support System (MDSS) and Automatic Vehicle Location (AVL) have been installed on all 633 of our snowplows to allow us to make data-based choices on application rates and to better track quantities of materials used. We have taken this one step further by installing cameras in the front of our trucks to provide real-time snapshots of road conditions to the public through the web, which was immediately popular with the traveling public. NDOT's implementation of MDSS, along with our public-facing Plow Tracker site, was recently recognized by AASHTO with regional top honors as a Best Use of Technology and Innovation.

NDOT is also active in discussions regarding policy. Nebraska lawmakers passed a law in 2018 that opened Nebraska's roadways to Autonomous Vehicles (AV), and as a result the need for national AV standards has been at the forefront of our minds. I'd encourage continued conversations on best practices for standardization in design, maintenance, and operations of the roadway. The way a highway appears to an AV is very important, and a clear and concise nationwide standard would go a long way to support the development of AVs in the US.

I believe that the path to a national standard begins with groups of states agreeing amongst themselves to standards on key corridors. This multi-state approach to standardization offers a way forward to test and validate what works, and to gain an understanding of what needs to be developed in terms of national standards or regulation.

Through a recent INFRA grant proposal, we are part of such a multi-state coalition. Nebraska is part of a 12-state consortium that submitted an INFRA proposal for the Safe Acceleration of Automated Freight Infrastructure Readiness project in March of 2019. Through this proposal, covering over 3,400 miles of interstate highway including I-80 coast-to-coast, these states would develop, and agree to comply with, standards for striping, work zone design, and data exchange to support highway automation readiness.

This would effectively create a corridor for autonomous and connected freight movement across the continental US, while also demonstrating the ability of states to collaborate and develop design, operational, and data exchange standards that could ultimately become the de facto national standards.

Chairman Fischer, Ranking Member Duckworth, and members of the Subcommittee, I joined NDOT to help our state move forward with technology. In the transportation field, I believe we are at an inflection point, with multiple technologies advancing quickly and simultaneously. It is only through partnership between the federal government and the states that we will be able to keep pace with these changes, and I thank you for your willingness to consider the technology needs of states. I appreciate the invitation to join you today, and I look forward to your questions.