OPENING STATEMENT

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Subcommittee on Research and Technology
Committee on Science, Space, and Technology

"U.S. Surface Transportation: Technology Driving the Future"
Research and Technology Subcommittee Hearing

June 12, 2015

Good morning and thank you, Chairwoman Comstock, for calling this hearing. I appreciate the witnesses being here and look forward to their testimony.

Whether by car, train, bus or by foot we all have to rely on the transportation system for our daily commutes and longer distance travel. When it works everyone is happy, but when it doesn't the results can range from annoying to catastrophic. With the U.S. population predicted to increase by nearly 30 percent by 2050, we have to find ways to move people and freight more efficiently and more safely. Our current system of roads, bridges, railroads, and transit lines will not be sufficient to support the additional influx of people. Moreover, it is not clear that we will have the funding, the popular support, or the land to just build more. Instead, we must make our infrastructure work smarter.

Surface transportation used to be rather staid, unimaginative. Some might say boring. But today the very concept of "mobility" is being reinvented. I believe that research and development are critical to meeting the future transportation demands of our Nation, and we in Congress must do our part to help bring about this revolution.

The research title of the upcoming surface transportation bill provides an important opportunity for this Committee to provide more guidance to the Department of Transportation on national transportation R&D priorities for highways, public transportation, rail, and freight. As I discussed in my recent Op-Ed in *The Hill*, we have to make federal investments in research that will provide a safer transportation environment for future generations. Long-term, transformational research must be prioritized in the federal budget and we have to ensure that our federal research partners, particularly University Transportation Centers, are able to conduct advanced research.

I am working on a bill that will help the U.S. usher in a new age of transportation innovation. I look forward to hearing the panel's thoughts in this direction.

Among the issues I think need to be addressed is freight research. I represent part of Chicago, a city through which 25% of all freight travels at some point in its journey. Freight volume is projected to increase 25% by 2025. Freight is a national problem, and we need a federal research program to address these challenges.

I recently convened an advanced transportation technology roundtable in Silicon Valley in which I heard from OEMs, Tier 1 suppliers, and tech start-ups. While I heard about new ideas for making mobility more efficient, more environmentally friendly, and more available to everyone, a common theme was the need for improved connected infrastructure and information technology capabilities. Cars talking to each other was once a thing of science fiction. At a Connected Car Coalition Roundtable I attended in March, automakers, telecom industry, and DOT all agreed that this technology is now at hand. This includes wireless communications that can help cars see around corners. The 5.9 Giga Hertz spectrum that is currently reserved for transportation safety communication can prevent up to 80% of crashes according to NHTSA. It is important that this spectrum be used to prevent accidents and save lives.

Next on the horizon are autonomous vehicle systems. This week the National Transportation Safety Board recommended that all new vehicles be equipped with Active Collision Avoidance Systems, and Google has indicated fully autonomous cars could be only 5 years away. As we will hear from Delphi, they drove a vehicle across the U.S. that was autonomous for 99% of the time. Until that very challenging last 1% of automation is achieved, we need human factors research to understand how drivers will re-engage with driving after being engrossed in their phones or a movie for an extended period of time. These technologies incorporate findings from many areas of basic research and related technologies that have been funded for decades by agencies such as the National Science Foundation, the National Institute of Standards and Technology, NASA, and the Department of Defense. It is not difficult to imagine how planetary rover technology for space exploration and how defense robotic technology is playing a part in advancing driverless car technology. It is imperative that the Department of Transportation continue to actively collaborate with other agencies to help translate this research into advances in autonomous vehicles.

I hope Mr. Winfree and Dr. Meyer will let us know what Congress can do in the next reauthorization to help the Assistant Secretary advance these and other modal administrations' research recommendations. Identifying the research priorities for the nation's transportation system is critical to the safety of our citizens and our economic competitiveness, and the Committee on Science, Space, and Technology has an important role to play. Again, I want to thank the Chair for calling this hearing, and I look forward to the witnesses' testimony on this important topic.

I yield back.