

TRB – Future of the Interstate
February 23, 2017

- **Introduction**

- Carlos Braceras, Executive Director of Utah DOT and current President of the Western Association of State Highway Transportation Officials.
 - Represents 18 western states.
- Utah, like the other western states, is home to beautiful landscapes and fast-growing vibrant urban centers.
 - URBANIZATION
 - I have seen statistics showing Utah as either the eighth or ninth most urbanized state in the country.
 - With 65% of the land in Utah being owned by the federal government, and another 10% owned by State and local public agencies, 9 of every 10 Utahans live in an urban environment.
 - So, when you are in rural Utah you are in a very rural place. You can drive over 100 miles between communities.
 - **Five of the top ten** most urbanized states are in the West, including Nevada and Arizona, which are similar to Utah in that they have cities where there is water and large rural areas everywhere else.
 - GROWTH
 - And, we are going fast.

- In fact, Utah is the fastest growing (based on US Census Bureau data, percentage growth 2015 to 2016)

We expect to almost double our population within the next 35 years.

2. Nevada
3. Idaho
5. Washington
6. Oregon
7. Colorado
8. Arizona

- In the west, we depend on our transportation systems, especially our **Interstates and National Highway System, to connect our urban centers and rural communities.**

- In fact, I have heard many times from one of our Metropolitan Planning Organizations, Cache MPO, that they are the only MPO in the country that isn't connected by an Interstate. They feel that is a big detriment.

- I can drive over 350 miles, north-to-south, and still be in Utah. And, in many of our WASHTO states the distances are even longer.

- To put that in perspective, Providence, Rhode Island is 359 miles from Washington, D.C.

- I would like to thank the Committee for taking the time to conduct this hearing in the West.

- History of Interstate

- If you go back in time and take a look at any major civilization you will find that they all had one thing in common...outstanding transportation systems
- Transportation systems connect people and facilitate the movement of good, services, people, even ideas.
- This was true of the Silk Road, in a very literal way, and it remains true today. Freight traffic represents a high percentage of vehicle traffic in the West. (25% of interstate traffic in Utah; 50% of I-80 traffic in Wyoming)
- The Roman Empire at its peak had a staggering 248,000 miles of roadway, of which 50,000 miles were paved.
 - Rome was able to conquer because it's military was mobile.
- What about the United States?
- The original effort was to “get America out of the mud,” so we could get our farm products to market. So we started paving roads.

- In 1919 President Eisenhower was serving in the army as a lieutenant colonel.
- Led 300 soldiers on cross-country road trip to test
- Washington D.C. to San Francisco took a total of 62 days.
- Compared to Germans to convince Congress in 1956 to pass the Federal-Aid Highway act, creating our interstate highway system.

LET US CREATE A VISION

- Over 50 years ago our country had a vision of what this country could and should be.
- I would argue that the Interstate System was probably the most important national investment to support the growth of our nation's economy and quality of life.
- **Today it is incumbent upon us to create a vision for the interstate 50 years from now.**
- Mission & Vision – all states probably have similar missions and goals, even if the words they use are a little different.
- Goals
 - Dashboard
 - Zero Fatalities
 - 94%
 - Improve Mobility
 - Reliability
 - Delay
 - Mode Split
 - Preserve Infrastructure
 - Pavements & Bridges
- **ECONOMIC BACKBONE**
- The Interstate, and in fact the entire National Highway System, is arguably the most important component of our national transportation system.

- Within urban regions, which we know account for most of our nation's economic activity, our transit and active transportation systems are critical links that create the integrated transportation system that support our economic growth.
- But, it is the Interstate System that ties our country together.
- It is the Interstate System that allows a small company in Utah to move its products across this county and around the world.

- **Freight** - Interstate system makes up only 1.2% of road mileage, yet it handles 25% of total VMT and 40% of total truck traffic.
- The interstate doesn't and cannot stand on its own.
- For the interstate to perform the way it does, it needs to be connected through the NHS.
- Especially in the west, when you look at NAFTA, goods to and from Mexico are not traveling on the interstate.
 - Interstate highways are farther apart in the west.
 - The west comprises 61% of land area, but has only 39% of interstate centerline miles.

FUTURE OF INTERSTATE – WHAT DOES IT LOOK LIKE & HOW DO WE GET THERE?

FUNCTIONAL CLASS and SAFETY

- It is the Interstate System, with its consistent standards, that results in the lowest fatality rate of any other functional class.
- What about the future?
 - We have all heard that autonomous vehicles are just about here. Some variants are already out on the road today.
 - I believe this future can be broken into three paradigms:
 - Automation
 - Electrification
 - Mobility as a Service
 - And, it will give us a much clearer path to:
 - **Zero Fatalities**, by eliminating the 94% of crashes due to human error
 - Reliable, sustainable, **mobility**.
 - Greater and more efficient utilization of our infrastructure that will allow us to move more people, more reliably, and with less impact to our environment.
 - Greater integration of modes
 - And, yes, a **better-maintained** road and bridge system that results in a **lower cost of ownership**.

CAV & WHAT THE FUTURE LOOKS LIKE

- What does this mean for Transportation?
 - **CAV** – Vehicles that can drive by themselves, but are also communicating with each other and the infrastructure.
- - **DSRC** – it is critical to preserve the spectrum

- Sharing appropriate and needed autonomized /data with public sector, will allow vehicles to communicate real time traffic, and infrastructure conditions.
 - Today in Utah, we're working to connect our TOC with other states because we're convinced that will allow us to better operate the system.
- Imagine that DOTs will know the second a pothole develops because a vehicle hit it.
- **In fact, data will become the new asset.**
 - DOTs will be maintaining a real time 3D model of their transportation systems. That will work in tandem with the vehicle's sensors to provide the needed redundancies to assure that the future transportation system is one without crashes.
 - Those 3D maps will tell vehicles when to anticipate a stop sign. If a vehicle doesn't "see" it, the vehicle will communicate with the DOT that it needs to be replaced.
 - Our traffic signals will communicate continuously with every vehicle on the road. Vehicles will know before signal should change.
 - Can you imagine? A Future of crashless intersections.
 - NEEDS

- **National data standards are needed**, so when you drive from state to state the rules are the same.
 - **National data security** is needed.
- But, we can't snap our fingers and have the entire needed infrastructure in place to facilitate this future.
- I believe that **we need to consider creating a new category of functional classifications** that would describe the level of integration with the automobile of the future.
- I believe this effort should start with the interstate.
- We need to find the right **balance** between setting appropriate standards and allowing the innovation that sets our country apart to flourish.
- FUNDING
- We need sustainable, long-term solutions needed.
 - We need for one-time funding "solutions" to STOP.
- The current funding structure is inadequate to meet current and future transportation needs of a growing western population, increasing freight and commerce, and our aging infrastructure. To help meet those needs, the study should consider:
- **User-base fee** is the backbone; part of our future reality.

- Strong support for user fees to fund transportation.
- Road user charging **pilot**
 - Continue the work of RUC West, the western road usage charge consortium representing 14 western states by applying a road usage charge pilot model nationwide.
- HOWEVER, RUC **does not address needs of very rural states**
- National **research**
- **Tolling flexibility** – need latitude for states to employ it if it fits their needs.
- Greater value for public investment – Congress has been evolving **to performance-based program**. A block grant is the next logical step.
- Support policies and provide technical information and training to help states implement a “**good roads cost less**” **approach** that lowers the cost of ownership by adequately focusing on maintaining and preserving the system.

PARTNERSHIP: THE TASK AT HAND – CREATE A VISION

- We hope to see the continuation of a unique and very successful partnership. I would go so far as to say it’s one of the best partnerships in the country.
- The federal government has worked to support the owners and operators of the vast majority of the system—the states.
- It’s time our country develops the vision for the next 50 years.
- This is important work, and I believe that this isn’t just about the future of some “roads.”
- **No, it’s about the future of our country.**

- What we want our communities to look like
- What kinds of jobs we want our children to have
- What we value as a country.
- It's a future where transportation becomes an **enabler to our goals, and not a restrictor.**
- That is why I am so excited about the work of this committee, that is why I was so flattered to be asked to speak today, and it's why this is so important.
- I thank you for your time.