MINUTES OF THE
SENATE COMMITTEE ON TRANSPORTATION

Seventy-ninth Session
February 28, 2017

The Senate Committee on Transportation was called to order by Chair Mark A. Manendo at 8:35 a.m. on Tuesday, February 28, 2017, in Room 2135 of the Legislative Building, Carson City, Nevada. The meeting was videoconferenced to Room 4412 of the Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. Exhibit A is the Agenda. Exhibit B is the Attendance Roster. All exhibits are available and on file in the Research Library of the Legislative Counsel Bureau.

COMMITTEE MEMBERS PRESENT:

Senator Mark A. Manendo, Chair
Senator Kelvin Atkinson, Vice Chair
Senator Don Gustavson
Senator Scott Hammond
Senator Patricia Farley

STAFF MEMBERS PRESENT:

Michelle Van Geel, Policy Analyst
Darcy Johnson, Counsel
Tammy Lubich, Committee Secretary

OTHERS PRESENT:

Stacy Howard, Western Regional Representative, National Business Aviation Association
Paul J. Enos, CEO, Nevada Trucking Association
Brian Mitchell, Director, Office of Science, Innovation and Technology, Office of the Governor
Britta Kuhn, Broadband Manager, Office of Science, Innovation and Technology, Office of the Governor
Reid G. Kaiser, P.E., Assistant Director, Operations, Nevada Department of Transportation
Dagny Stapleton, Deputy Director, Nevada Association of Counties
Randy Robison, CenturyLink
John P. Lopez, Government Affairs Manager, Cox Communications, Inc.

Michael D. Hillerby, Charter Communications
Randy J. Brown, AT&T
Mike Eifert, Executive Director, Nevada Telecommunications Association
Bobbi Thompson, Airport Manager, Minden-Tahoe Airport; Nevada Airports Association
William Baumann, Chair, Veterans Services Commission, Department of Veterans Services

CHAIR MANENDO:
We will begin this meeting with a presentation from the National Business Aviation Association.

STACY HOWARD (Western Regional Representative, National Business Aviation Association):
The National Business Aviation Association (NBAA) is an association of approximately 11,000 member companies. A group of business people who had converted transport category aircraft from WWII founded the NBAA in 1947 to further their businesses. The association members are small, medium and large-sized companies operating throughout the United States and internationally. Seventeen percent of the member companies still use single engine, reciprocating engine and propeller-driven aircraft, not just the business jets.

These aircraft make these businesses more competitive in the business environment. As noted in our presentation, Business Aviation in Nevada (Exhibit C), 92 percent of Fortune 500 companies are using business aviation to provide higher production revenue, earnings, capitalization and return on investments for their stockholders. The companies are rated among the best places to work in America and are some of the strongest and most responsible companies. These are the companies you want to be located in Nevada.

Business aviation is a subsection of general aviation. These companies use general aviation, contributing approximately $150 billion to the U.S. economy and employing more than 1.2 million people. The carbon footprint is so small with regard to the international standard, most business aviation flights are exempt from carbon and emission plans. Business aviation reaches ten times the number of airports as the airlines. There are 5,000 public use airports in the U.S. and 500 of those airports have actual airline service; 70 percent of the airline services go to 35 airports in the U.S. By contrast, business aviation uses

all 5,000 airports; however, it accounts for only 4 percent of the total traffic at the busiest airports. While sharing the same airspace and the same runways, business aviation fits easily within the airline schedule. The safety record compares to the airlines and it enables companies to operate efficiently.

The NBAA is creating an environment for business aviation members to thrive through communications, professional development and advocacy. At the national level, our offices are in Washington D.C., but we also work at the state and the local levels with policymakers, elected officials and the Federal Aviation Administration (FAA) to assure there is access to public airspace and public airports.

The 2013 statistics listed on Slide 8 of Exhibit C show general aviation in Nevada, of which business aviation is a piece and provides 1,100 direct jobs in the State. Indirect and induced jobs are 5,100 which is close to 0.50 percent of the economy in the State. Nevada ranks 36 among the 50 states in the share of the States' economy contributed by general aviation.

The direct labor income is $122 million and indirect and induced labor dollars is $271 million. This is 0.58 percent or better than 0.50 percent of the income economy and shows aviation jobs pay above average wages. Nevada is ranked No. 34 of the 50 states.

The NBAA likes to help create a good environment for business aviation to thrive throughout the United States. Nevada can help create a good environment for business aviation by having a friendly tax environment. Nevada made a step forward in the competitive rate structure by granting abatement in 2015 for aviation sales on aircraft parts and services. This is an incentive for companies to grow in the State and for new companies to relocate to Nevada.

Nevada needs a sustainable airport funding program to have a good airport infrastructure. Arizona, which is always in the top ten for general aviation gross income and economic impact, has a state program of approximately $16 million a year.

If Nevada can find a way to get $1 million a year to the rural airports, and if Clark and Washoe Counties join the State program, then the tax money sent to Washington D.C. can come back. I believe there was an earlier presentation on the importance of matching the federal dollars so those dollars can come back

into the State. For every 50 cents Nevada spends on airport infrastructure, the State receives $9 back from the federal government. These dollars have already been sent to Washington D.C., and if the dollars are not used in Nevada, they are distributed to another state. A sustainable airport program will get the national dollars back into the State and create a safe and adequate system with instrument landing systems. The larger aircraft prefer to use a precision approach into the airport. Emergency services, such as medical and law enforcement, need to be able to get into the airports at night in bad weather, so the instrument approaches need to be put together with the right runway configurations, paving and ramp strength for this kind of aircraft to operate.

A prepared workforce is also needed. Nevada needs an educated workforce, in business, technology and aviation education so businesses will come back to Nevada and use business aviation to get around the State. Nevada's aviation skilled military personnel have a lot to offer Nevada, and they need to stay in the State.

The FAA reauthorization is a national issue. There is a trust fund in place, funded through fuel, ticket, cargo and international taxes for incoming flights. This tax money has to be budgeted back to the FAA to be reauthorized back to the State. The last time the FAA reauthorized tax money back to the State was last year and only until September 2017, due to a controversial piece in the reauthorization.

Now the Airport and Airway Trust Fund is funded through fuel taxes, ticket taxes, and cargo taxes. About 76 percent of the total FAA budget comes from the Airport and Airway Trust Fund. This trust funds the airport improvement program, aircraft and airmen certification, air traffic controller facilities, and facility maintenance for navigational aids and the physical properties that the FAA operates.

The controversial proposal is to separate the air traffic organization from the FAA and create a privatized air traffic control system. Congressman Bill Shuster, Chair of the House Transportation and Infrastructure Committee, introduced this proposal last year. The NBAA fully expects the proposal to be introduced again this year. User fee programs would fund the privatized air traffic control system. This would set up a complex administrative system of invoicing, auditing and billing versus fuel taxes that are paid up front. This would be easy and inexpensive to administer. A board of directors heavily weighted in favor of the

airlines would operate the privatized air traffic control system. General aviation might get one seat on that board. As I mentioned, the airlines are operating at 70 percent at 35 airports versus the 5,000 public use airports. The Committee can see that the airlines would direct their funding and their personnel to where they are operating now versus keeping services in the smaller communities and relief airports such as Henderson, North Las Vegas, Stead, Elko and Ely and the rural communities that need air traffic services.

The National Business Aviation Association considers a privatized air traffic control system a genuine threat to general and business aviation. In every country where a privatized system has been put into place on a user-fee basis, the fees continue to increase. Some business aviation and general aviation could have reduced access to the preferred routes and access for landing and takeoff to airports, making it costly to operate.

The NBAA urges you to take a position of keeping the FAA and the national airspace system under Congress' oversight, as it is now, so Congress would have to approve changes.

The Committee may hear arguments about modernization. The NBAA is in favor of modernization, but moving this to a privatized system will slow the process. The FAA is actually moving forward rapidly now that the basics are in place for speeding up the system.

Business aviation aircraft are used to conduct proprietary conversations in cockpits and cabins, deliver just-in-time parts, technicians, and legal teams, bring customers to manufacturing plants, and visit multiple locations in a day. They visited all 5,000 airports. The people who use and desire these aircraft are decisionmakers. The State of Nevada should welcome them.

The next national convention is October 10 through 12 in Las Vegas. The NBAA holds one of the top five conventions in the Nation. The last convention was held in Las Vegas in 2015 with over 27,000 participants and 100 aircraft parked at the Henderson Executive Airport. The NBAA invites the Committee to come and see our exhibits, go to Henderson to see the jets and enjoy visiting with business people that are looking for a better place for their businesses.

SENATOR HAMMOND:
You mentioned the $9 return on a 50-cent investment. It seems like a lot. Are we getting back the $9 now, or is that the potential we can get?

MS. HOWARD:
Yes, it is what the State is getting now. In the last Session, the Committee appropriated $200,000 for airport improvements. That can be leveraged into a couple of million dollars in federal investments in the State. If you appropriated $500,000 a year, a million dollars for every other session, the State can double and triple the amount of investment.

SENATOR HAMMOND:
Is this the way Arizona is making the sustainable source of income of about $16 million? Is that yearly?

MS. HOWARD:
Yes, that is annually.

SENATOR HAMMOND:
How did they arrive at the $16 million?

MS. HOWARD:
In Arizona, there is a flight property tax in place on all airline property. There is also an "in lieu" personal property tax that we have here in Nevada on aircraft, but it goes into the General Fund. In Arizona, it goes into the state aviation fund. In addition, there is an aviation gas tax at the state level that goes into the fund and a small registration fee. This all goes into the state aviation fund. The jet fuel tax in Arizona does go into the general fund.

CHAIR MANENDO:
The next presentation will be from the Nevada Trucking Association.

PAUL J. ENOS (CEO, Nevada Trucking Association):
The Nevada Trucking Association (NTA) was established in 1932 and will be celebrating its eighty-fifth anniversary this year. Trucking is an industry that touches every single sector of the economy.

In America, 70 percent of freight is moved by the trucking industry. In Nevada, 92 percent of all the manufactured tonnage in the State is moved by the

trucking industry. When trucks stop, there is a ripple throughout the economy. Just-in-time manufacturing factories keep a few hours of raw materials on hand to be shipped. Gas stations carry one to two days of fuel. With the mountain pass closed, grocery stores in the Reno area were affected this winter. Some stores were without fresh produce and certain commodities. The hospitals' oxygen supplies were also affected. Even though our clean water comes from pipes, cities only have two to four weeks of chemicals on hand to keep the water potable.

To show where the trucking industry is today, it is important to look at its history. A little over 100 years ago, goods transportation throughout the West was by horse and mule trains. There were mule teams as shown on Slide 7 of our presentation (Exhibit D). This is where the Teamsters got its name and the horse as its logo. Slide 8 shows the horse teams in cities. These horse teams caused a public health crisis due to the emissions and waste. Feeding and watering the thousands of horses in cities like New York and Chicago was hard. The dead animals, shown on Slide 9, Exhibit D, also caused health crises in the cities.

Thankfully, the combustible engine was developed in 1903, as shown on Slide 10, and started the trucking industry. This was a way to address the public health crisis of horses in the city.

In 1919, Dwight D. Eisenhower was a second lieutenant and needed to move troops and ammunition across the country, which took 62 days using the trucks shown on Slide 11 of Exhibit D.

The trucking industry was, and still is, regulated in some ways by the federal Motor Carrier Act of 1935. This amended the Interstate Commerce Act of 1887 to regulate the rates, routes and services of the trucking industry. The NTA is a legacy entity of that progression toward delegating certain regulatory responsibilities to the states.

In 1956, Dwight D. Eisenhower, through the Federal-Aid Highway Act of 1956, formed the Interstate Highway System to move commerce, munitions and people across the country. This was paid for by the fuel tax and is still paid for by the fuel tax. On the federal side, there has not been a fuel tax increase since 1992. In looking at ways to pay for the roads, the fuel tax is liked by the

trucking industry due to 97 cents of every dollar collected going back to the roads. This is the best way to fund the roads and the infrastructure.

The Interstate Highway System created a golden age in trucking. The use of the citizens band radio helped create an iconic trucker culture as seen in movies like *Every Which Way But Loose* and *Smokey and the Bandit*.

During the golden age, a need for regulation was required due to crashes and fatalities. Nevada does a good job in regulating the trucking industry. The NTA has a great relationship with the Nevada Highway Patrol. They are our partners in safety. Nevada does not have weigh stations as do other states; the Highway Patrol goes out for traffic enforcement. If an unsafe lane change or speeding is observed, the truck is pulled over. The Federal Motor Carrier Safety Administration states crashes can be prevented 4.5 times more often through traffic enforcement than using inspection weigh stations. Nevada is one of the better states in the Country in terms of truck fatalities.

A truck typically weighs 80,000 pounds or more. In Nevada, the truck weight can go up to 129,000 pounds. To visualize the weight, a truck weighs as much as 22 Ford Mustangs.

To avoid damage, there are different weights for different axles to distribute the weight. A single axle weight limit is 20,000 pounds; the tandem axle weight limit is 34,000 pounds; and the tridem axle weight limit is 42,000 pounds, as shown on Slides 28 through 30, Exhibit D. On Slide 31 is a picture of the thirteen-axle truck which was used to move the bridge by the MGM Grand which goes over the Strip in Las Vegas.

The State of Nevada also allows different lengths, such as longer combination vehicles: double and triple trailers, Rocky Mountain doubles and triples with cargo lengths of up to 95 feet, as shown on Slides 33 through 35, Exhibit D.

No matter what configuration of truck, the driver has the responsibility to make sure that the truck is in proper working order every day. The drivers have to perform pre-vehicle/pre-trip inspections and post-trip inspections with a list to make sure everything is in proper working order.

Drivers are required to carry medical cards and be enrolled in a drug-testing consortium program. New this year, drivers will have hours of service limits,

with 11 hours of driving time during 14 hours of duty with a half-hour break in the first 8 hours. It would be better to have federal uniformity since certain states have their own rules and make it complicated.

Drivers fill out logbooks to track their hours of operation, and most violations are due to the logbooks being filled out incorrectly, not because someone has driven more hours than allowed. In December 2017, a mandate will be put in place for Electronic Logging Devices (ELDs) to be used instead of paper logbooks. About a quarter of the trucking industry has adopted this mandate, but there will be more to follow. A couple of seminars are planned in March 2017 to talk about the adoption of ELDs. The ELDs are only to verify that drivers are not driving over the 11-hour-a-day limit.

The ELDs are creating more problems for parking for an 80,000-pound, 100-foot-long truck. Truck parking is becoming an issue, not just in Nevada, but throughout the Country.

Truck stops do not necessarily have the capacity for all the trucks that need to park to comply with the hours-of-service requirement. The Nevada Trucking Association is trying to invest more in truck parking.

Unfortunately, prostitution and human trafficking takes place at truck stops. In Nevada, Kim Yeager, the Director of Member Services and Events for the Nevada Trucking Association is a driving force to stop and help the victims of human trafficking by providing education. The Nevada Trucking Association has been working with all of the members to make sure education is being given to all employees to recognize the signs of human trafficking. Whether it is at a truck stop or roadside, the Nevada Trucking Association is doing its part in educating the industry.

Deregulation and disruptive innovation is seen in the trucking industry going back to the 1980s. Truckers were regulated by the Interstate Commerce Commission as to where truckers went, what could be carried and how much could be charged. In 1980, Nevada Senator Howard Cannon sponsored the bill to deregulate the industry with the Motor Carrier Act of 1980. With the Motor Carrier Act of 1980, there was more competition, the number of trucking companies skyrocketed, and the profit margins were reduced. Because of the disruptive innovation, the trucking industry saw companies like Consolidated Freightways go by the wayside because they could not adapt.

There were tremendous benefits throughout the rest of the economy with just-in-time deliveries. Just-in-time deliveries helped manufacturers reduce their footprints by not having to store a huge amount of raw materials, and helped retailers to reduce the size of their storerooms. It also helped consumers by lowering the cost of transportation and the cost of commodities.

Disruptive innovation has changed how products are received today and impacted the trucking industry that moved the CDs, books and video tapes or DVDs. Last Session, the battle was between the taxi companies and Uber. Disruptive innovation is a different way to deliver to consumers, and there are challenges. Ultimately, the consumer sees the benefit from the companies that are willing to adapt. Today, it is seen with Amazon dash buttons as shown on Slides 52 and 53. Consumers no longer need to go to the store, they just put the buttons on the inside of their cabinets or washing machines, hit the button and United Parcel Service (UPS) or FedEx shows up the next day and delivers products right to their doors. This disruptive innovation is happening all over, and it does have an impact on how things are received and consumed. There will not be as much Tide going to Walmart because it is now going from a warehouse onto a UPS or FedEx truck and delivered right to the consumer's door.

In the next 10 years, there is going to be a 27 percent uptick in the amount of freight tonnage being delivered by truck.

Truck driver is one of the most common jobs in a number of states, as shown on Slide 55, Exhibit D. Nevada is not included since its most common job is retail clerk. This excludes salespersons. Truck drivers are the most common profession in 35 states. There is a tremendous problem in trying to find drivers. Just like the aviation industry, the trucking association is looking for drivers in the military. After legislation was passed last Session, the Department of Motor Vehicles is now required to report the number of returning veterans who are turning in their military Commercial Driver's Licenses (CDLs) and getting Nevada CDLs. There have been hundreds of veterans in Nevada taking advantage of this opportunity. Approximately 50,000 drivers are needed per year to continue to move the amount of freight that is demanded every day.

The trucking industry is a great industry. The average age of truck drivers is 49, compared to the average American worker who is 42 years of age.

When looking at how diverse the trucking industry is in terms of gender, a great job is done in hiring people from different backgrounds. Thirty-nine percent of the trucking industry is non-white. The trucking industry has not been successful in getting women into the industry in terms of drivers. In the general workforce, 40 percent of employees are women, and in the trucking industry, only 6 percent of drivers are female.

One of the issues the trucking industry has is detention times. Slide 58, Exhibit D, shows the Port of Oakland. At this port, the wait time for drivers can be hours getting loaded and unloaded. This causes issues with hours of service, truck parking and is one of the detractors in trying to get more people into our industry. It is also costly to purchase a truck. When I started, the cost to purchase a truck was $85,000. Today, the cost is $125,000 and if you want a more state-of-the-art specialized truck, the cost could be up to $200,000. A sticker as shown on Slide 59, Exhibit D, means that the truck costs $20,000 more because it is the cleanest truck and is a requirement if a truck is driven in California.

The trucking industry is innovative, making sure the trucks are more fuel efficient, lighter, etc. Slide 60, Exhibit D, shows a Volvo SuperTruck, which runs on natural gas, has tail fairings, is aerodynamic to decrease drag and parts of the truck are made of carbon fiber. Making sure the trucks are light and aerodynamic saves tremendously in fuel.

United Parcel Service and FedEx are rolling labs. They test almost 50 different types of fuel on the road daily to figure out which works best for their operations. Slide 61, Exhibit D, shows a hydrogen powered Total Transportation Services, Inc. truck and a natural gas-powered UPS truck.

Safety is for the industry. The trucking industry spends approximately $9.5 billion a year on safety. This does not just include the technology but includes training programs, making sure the drivers are the best in the industry.

In terms of technology, one of our Nevada carriers, Nev-Cal Transportation Services, on Slides 63 and 64, Exhibit D, displays a Bendix blind spot indicator. This is on the side of a truck so that if another car is in the trucker's blind spot, it will flash red on the device as a warning not to move over.

Slide 65, Exhibit D, shows a camera above the license plate which is a part of the Bendix Wingman system. This looks forward, and if there is an obstacle in front of the vehicle, it will apply the brakes before the driver does. Ninety percent of the time, the brakes will be applied before the driver can even react. This is where computer technology can be seen being applied to this industry. This helps mitigate the safety and hazard issues that are on the road.

Slide 66, Exhibit D, shows a Samsung developing technology that puts screens on the backs of trucks. It is frustrating when traveling to or from Las Vegas and not knowing if it is safe to pass. Samsung is also working to eliminate blind spots behind the truck.

Truck parking is a big issue in the trucking industry. Connected parking spots are being looked at similar to parking at airports, and having signs on the road telling what parking is available at the different rest areas and exits.

Slide 69, Exhibit D, shows an example of connected vehicles. This is how vehicles are wirelessly connected together along with infrastructure. One of the places we first had connected vehicles tested was in Nevada. Peloton Technology, a member of the Nevada Trucking Association, is testing trucks platooning in Nevada. The driver in the first truck is controlling the braking of the second truck. It is believed that there can be a number of trucks in line saving on fuel due to less drag. This is being tested now, and many companies are investing in platooning type technology, which is legal in the State of Nevada. The State has done this very well, and the trucking industry gives a lot of credit to the Department of Motor Vehicles and the Department of Transportation in working with the trucking industry to develop these new technologies.

Automated driving is changing the industry tremendously. Many drivers wonder if they will be replaced. I do not see it as a replacement for drivers, but making the drivers' lives easier. It is controversial in whether or not it is safe. Partial automation already exists. Some cars have adaptive cruise control where if the vehicle is closing in on another car, it will automatically apply the brakes.

Slide 76, Exhibit D, shows the Freightliner Inspiration truck which was first driven in Nevada in May of 2015. The mirror on the driver's side of the truck has a camera, which gives the driver the ability to see the blind spots that could not be seen before. Above the steering wheel on the dash the zero will flash

green when the truck is ready to go into the autonomous mode. Slide 77, Exhibit D, shows the driver with no hands on the wheel going down the road. The best item of this truck is it has a Nevada autonomous license plate.

Slide 79, Exhibit D, is a picture of OTTO, being tested in the State of Nevada. There is a driver in the front of the truck monitoring the system, making sure that if something goes wrong there is a driver to take control of the vehicle. While this vehicle is going down the road, it is collecting a tremendous amount of data. It knows if there is an obstacle in the road that should not be there. While OTTO operates in California, with some testing in Nevada, the first autonomous delivery was made in Colorado.

In addition, the industry is seeing UPS and FedEx looking at deploying drones for last-mile, right-to-the-house commodities.

The trucking industry is seeing a tremendous amount of disruptive innovation in the industry and favors some form of regulation to keep Nevada as a state that encourages innovation instead of stifling innovation.

CHAIR MANENDO:
I always thought you have to have a driver. When the truck eventually runs out of gas, who will pump it?

MR. ENOS:
When you have freight worth thousands, hundreds of thousands and millions of dollars, you want to make sure there is a human watching over that freight.

SENATOR GUSTAVSON:
There are currently drivers in the autonomous trucks. How long before there will no longer be drivers?

MR. ENOS:
Hopefully, there will always be drivers in the trucks.

SENATOR GUSTAVSON:
Similar to our autonomous automobiles, they are transporting people so there will be a person in the car 90 percent of the time.

MR. ENOS:
I believe in the autonomous technology as being a fail-safe helping the drivers.

SENATOR HAMMOND:
Are the ports the only place that there is congestion?

MR. ENOS:
Detention happens in many places. Yes, it does happen in ports, but it also happens at a shipper's facility where the load is not ready. A driver misses the window due to traffic and is caught in the detention time of waiting or goes off duty.

SENATOR HAMMOND:
What causes the detention with the trucking industry?

MR. ENOS:
The problem is with certain shippers and the trucking companies. Some shippers are great; the trucks are in and out without a problem. Then there are shippers that trucking companies do not want to deliver to due to the issues of not being ready, thereby detaining the drivers.

SENATOR HAMMOND:
It has to be frustrating; it would seem that the shippers should be able to tell the truckers when they are ready to be loaded.

MR. ENOS:
Some shippers are better than others and have the technology to communicate with the truckers.

SENATOR HAMMOND:
In 1973, when you started in trucking, the cost of a truck was $85,000, and today it costs $200,000?

MR. ENOS:
Not in 1973, it was when I started in 2005.

SENATOR HAMMOND:
Is there a do-not-pass policy for platooning trucks?

MR. ENOS:
At this time, the platooning technology does not change lanes; it goes in a straight line. However, if another vehicle gets in between the trucks, one truck would be able to break off and the technology will notify all the trucks in the platoon.

CHAIR MANENDO:
We will now hear Senate Bill (S.B.) 53.

SENATE BILL 53: Revises provisions relating to the installation, operation and maintenance of telecommunications facilities. (BDR 18-234)

BRIAN MITCHELL (Director, Office of Science, Innovation and Technology, Office of the Governor):
In his 2016 State strategic planning framework, Governor Sandoval created three goals with respect to broadband development. The first goal was to increase the percent of cities, libraries and schools connected with broadband. The second goal was to increase the percent of Nevadans that have access to broadband at speeds that meet the national benchmarks. The third goal was that by 2025 all rural hospitals, health clinics and State correctional facilities were to be connected to a broadband connection sufficient to provide telehealth services.

The Office of Science, Innovation and Technology (OSIT) is charged in *Nevada Revised Statutes* (NRS) 223 with coordinating the State's broadband strategy since its creation by the 2015 Legislature. In the last 18 months, OSIT has examined national and other states' best practices for engaging stakeholders in Nevada. The State's broadband task force is made of representatives from the industry and State government that made a number of recommendations to the Governor. Senate Bill 53 would implement policies from recommendations that support and incentivize investment in the State's fiber infrastructure essential to providing broadband services throughout the State.

Nevada is mostly federal land and telecommunication providers often use the State's highway rights-of-way to connect cities to broadband. However, there is a high cost to deploy new fiber, including digging up roads and new trenching. The high costs result in limited access in many areas in both urban and rural Nevada and limited broadband capacity.

Senate Bill 53 implements two policies to develop and expand fiber throughout the State, which are dig once and fiber trading.

Dig once requires the State to add excess conduit into any road construction project which is not currently permitted and changes the definition of transportation facility to include conduit or other infrastructure for conveying telecommunications. Current and future technology will become an integral part of transportation in the twenty-first century.

Fiber trading is a way to allow telecommunication providers to access the excess conduit added because of dig once in exchange for helping the State expand fiber in Nevada. This allows both parties to expand their networks without the cost of permitting and digging trenches. Utah has had a fiber trading policy for the last 20 years and added over 1,500 conduit miles at a value of over $50 million. From 2011 to 2015, Utah entered into 18 trades adding 812 miles to the state's network at a value of $29 million.

The need and appetite for broadband in Nevada is great. Senate Bill 53 would directly benefit the State's transportation and fiber infrastructure, increasing transportation safety and facilitating innovation in machine-to-machine communication and autonomous vehicles. These policies will also assist OSIT in its mission to expand broadband access to schools, libraries, hospitals, clinics, prisons, businesses and homes that lack adequate connections.

BRITTA KUHN (Broadband Manager, Office of Science, Innovation and Technology, Office of the Governor):
There are three distinct parts to S.B. 53. The majority addresses broadband policy in the context of transportation. The first part of S.B. 53 expands the responsibility of OSIT. The second part addresses public records requests for certain data, maps or information pertaining to the fiber assets and broadband, incorporating them into our own critical infrastructure. The third part seeks to implement a policy that will promote and encourage expansion of the fiber infrastructure in Nevada.

The two key parts involved are the need to change the definition of transportation facility to include excess conduit or other infrastructure for conveying fiber, wire or telecommunication assets, and second is to give the Nevada Department of Transportation (NDOT) the authority to enter into

public-private partnerships with telecommunication providers for cooperative fiber trade agreements.

Section 1 of S.B. 53 expands on legislation enacted in 2015 that created OSIT. This section imposes additional responsibilities on OSIT to include the creation of a strategic State broadband plan, the authority to pursue certain federal or State grants and manage State matching funds to help the State draw down federal E-rated funding to reimburse schools and libraries for their incurred costs of broadband connectivity. This section also gives OSIT the authority to prioritize the State's broadband construction projects and work with NDOT in the planning and implementation of a fiber trade policy. The charge of responsibility is given to OSIT to collect and store data relating to the acquisition of ownership of fiber and fiber assets by a State agency.

This does not mean that OSIT will require telecommunication providers to turn over their data or mapping information. This provision is intended to focus on data from State agencies making OSIT the central repository for information that governs fiber assets, fiber leases and indefeasible rights of use. This information is currently held by different agencies, making it difficult for one agency to know what assets another has and the limitations of its use. The agreements and data would offer a better, holistic picture of State assets and will be essential for OSIT's information in creating a State strategic plan.

Sections 2 through 3 of S.B. 53 address the data, maps, information and records concerning telecommunication and fiber infrastructure subject to public record requests. Either the Legislative Council Bureau auditor or the Governor, who have the ability to declare such information confidential, may hold records involving the State's critical infrastructure to a higher level of review.

Drawings, maps, plans or records that reveal critical infrastructure of primary buildings or facilities used for the delivery of gas, water and electrical services may be deemed confidential due to an impact on the public welfare, safety or homeland security. Section 2 would expand the definition to include fiber optic systems, microwave towers or other telecommunication assets used by response agencies, public safety and public health personnel. Communication facilities are just as essential as gas, water and electricity during times of disaster or an emergency event.

Sections 4 through 29 of S.B. 53 would authorize NDOT to implement a dig once policy as well as a fiber trade program. This program would help develop and expand fiber infrastructure throughout the State by allowing NDOT to install excess conduit in certain highway projects and offer access to that conduit in exchange for something of equal or greater value.

The Federal Highway Administration (FHWA) supports this practice and urges states not only adopt their own dig once policies, but to promote the innovative use of private resources in support of intelligent transportation system (ITS) development. The FHWA has cited the success of the Utah Department of Transportation's (UDOT) fiber trade program as a best practice for other transportation departments to follow.

The dig once policy states that transportation departments should minimize excavations by installing excess conduit when the road is dug up. The Nevada Department of Transportation has not been able to install excess conduit because the current definition of transportation facility does not allow NDOT to include excess conduit or other infrastructure used to convey the telecommunication lines in their highway construction projects. Senate Bill 53 will expand the definition to include excess conduit, provide for the transportation of information and give NDOT the authority to engage in public-private partnerships with telecom providers for the purpose of entering into fiber-trade agreements.

A fiber-trade agreement works when NDOT plans a project and works with other telecom providers to install an ITS that relies on a fiber optic line to convey information and data. The Nevada Department of Transportation will ask which providers wish to be included in the construction and then NDOT assigns a value to the trenching, conduit and for the work and fiber. An evaluation is prepared and presented to the telecom providers, who are given the option to pay in-kind or cash match or in-kind or trade for something of equal or greater value.

A hypothetical would be if NDOT wanted to expand the ITS along North Las Vegas Boulevard north to Mesquite. A couple of years ago, there was a huge washout on that road where the interstate was taken out and, at the time, there were no closed-circuit cameras or other ways to collect data to assess the situation. To know how bad the damage was, public safety had to go out, take pictures and relay them back. If an ITS system were installed as shown in our

fiber-trade overview (Exhibit E) on slide 2 and closed-circuit cameras exist along the interstate, then truckers could be alerted to delays or other road conditions. Assuming this program requires coordination between telecom providers and NDOT, NDOT would let telecom providers know about the project so they could express an interest.

An example would be if telecom A wanted to add conduit to a NDOT project, NDOT would place a value on the conduit and the work; then telecom A would need to provide something in return to NDOT.

For instance, as shown on Slide 3 of Exhibit E, if telecom A had dark or unused fiber located in another place, NDOT could tell telecom A, there is dark fiber going up U.S. Route 95, and NDOT wants access to the dark fiber and would request that telecom A build a lateral off from Indian Springs to the correctional facility.Option 2 on Slide 4, Exhibit E, shows NDOT having no fiber running south on Interstate 15 (I-15) from Sloan to Primm. With telecom A having fiber there, it could give NDOT fiber strands or access to the conduit in a trade.
Option 3 on Slide 5, Exhibit E, is an example of a possible fiber trade. The Nevada Department of Transportation requires microwave facilities or towers needing access to vertical assets in the north be owned by a telecom provider. That way NDOT could exchange access for the conduit on I-15 for access to the facilities or towers.

There are many things that can be traded under such a program. It is not just limited to conduit for conduit or fiber for fiber. It is any aspect of a telecommunication facility.

Slide 5, Exhibit E, shows where facilities and towers are needed in Elko for additional telecommunication to provide service in the valleys.

Slide 6, Exhibit E, shows UDOT had 631 miles of fiber conduit and traded about 100 miles in 2006. From 2006 to 2015, Utah had only constructed 330 miles to expand the ITS system. By 2015, as shown on Slide 7, Exhibit E, Utah had received approximately 900-plus miles in traded fiber/conduit and circuits. Using this policy, Utah was able to reach the rural areas as well.

Utah has been doing this for 20 years and Nevada can use this as a best practice and look to Utah for guidance. On Slide 8 of Exhibit E, the graph shows

UDOT's Fiber Optic Network for 15 years from 2001 to 2015. The first four years is when UDOT was developing and expanding the ITS system and putting in excess conduit. The first four years does not show a return because in order to trade, there must be conduit in the ground to offer. As Slide 8 of Exhibit E shows, it starts to slowly ramp up with trade growing as real estate becomes more valuable.

Slide 9, Exhibit E, shows the number of trades UDOT has completed from 2011 to 2015. There are 18 trades with a total of 812 trade miles and a trade value of $29 million.

Section 17 through 25 of S.B. 53 explains how the trade policy will work, how valuations will be established and the ground rules for working with telecommunication providers. The process must be open, fair, transparent and competitively neutral. The goal is to treat telecommunication providers equally showing no favoritism and keeping the process transparent.

In addition, the Telecommunication Advisory Council will be created under this legislation in order to ensure trade values are fair and reasonable for any agreement. The Council will have the authority to review, approve or deny any trade agreements. The Council will be responsible to review and provide oversight for those trade values and make sure those trade values are reasonable.

Also required in this bill is that NDOT will be responsible for promulgating any regulations necessary to carry out the program.

A proposed amendment (Exhibit F), submitted by OSIT, is to make the definition as set forth in section 4 to read the same as set forth in section 29. Section 4 is the definition in chapter 338 of NRS that has to do with public works, and chapter 408 of NRS addressed in section 29 adds to the definition of transportation facility.

The Office of Science, Innovation and Technology received feedback from several telecommunications providers concerning section 18, subsection 2 that states NDOT shall not pay any costs for the relocation of a telecom facility owned by a telecom provider which has been granted longitudinal access or wireless access to a right-of-way pursuant to a trade agreement. This section will be removed. The Nevada Department of Transportation has rules already

governing utility relocations in place, and OSIT does not wish to complicate the right-of-way matter.

Senate Bill 53 will require a two-thirds vote because sections 17 and 21 require NDOT to establish rates of compensation, and that any compensation received, not in the form of a trade, would be deposited into the State Highway Fund. Therefore, by virtue of this provision, the bill could generate State revenue.

The state of Utah favors doing trade agreements with telecoms because it works better and provides additional flexibility. As a result, Utah has had a vast majority of trade or partnerships with telecoms that have resulted in trade agreements and not in-kind compensation.

In conclusion, this bill will help minimize future excavations, save money and help facilitate broadband investment. It will also reduce broadband deployment time and cost, allowing for the addition of excess conduit and access to the rights-of-way. By implementing this policy, Utah has not only realized a healthy return on its investment, but has resulted in facilitating the expansion of fiber infrastructure into unserved and underserved areas.

CHAIR MANENDO:
Have you had discussions with the industry?

MS. KUHN:
Yes, OSIT has had discussions with AT&T, CenturyLink and others and welcomed their feedback. As a result, changes were made, as noted in the record, and has provided clarification to address their concerns.

SENATOR GUSTAVSON:
In section 9, page 7, you are using 30 linear meters instead of feet? Are we changing over from feet to metric?

MR. MITCHELL:
The Legislative Counsel Bureau drafted the 30 linear meters. When NDOT testifies, they can determine whether to use meters or feet. As long as it is the exact amount of distance, OSIT will be comfortable with whichever way it is expressed in the bill.

SENATOR GUSTAVSON:
With technology continually changing, are you aware of anything that will replace fiber optics?

MS. KUHN:
No, there have been improvements in the quality of the fiber optic cable and the technology. Instead of using large bundles of fiber optics, they are using microfiber. Microfiber is slightly thinner and is put together differently in the bundle. The changes that have occurred with fiber optics are in the electronics that operate them. Years ago, the signal was sent down one fiber line and received on another. Now with the change in electronics, signals can send up hundreds of different colors of light down one fiber optic. You can also send, transmit and receive on the same line.

SENATOR GUSTAVSON:
The new technology is amazing. We are putting a lot of money and investment into this project, and I do not want to spend more money on something new.

MS. KUHN:
Additional capacity will be needed on the fiber infrastructure and the design of the fiber infrastructure needs to be redundant, meaning that if one line goes down the data and traffic can be rerouted. The Office of Science, Innovation and Technology wants to create a fiber infrastructure and footprint with redundancy and adequate capacity.

SENATOR HAMMOND:
The metric conversion of 3.3 linear feet is a little over 100 feet. In your testimony, you mentioned Utah has 20 years of knowledge to share with Nevada. You have been able to talk to all the telecoms and heard the suggestions. Have all the telecom companies you have spoken to said yes to this?

MS. KUHN:
I will let the telecom companies who are here speak for themselves.

CHAIR MANENDO:
Will the Council be publicly noticed, and will the public be able to attend meetings?

MR. MITCHELL:
Yes, the Council will abide by the Open Meeting Law and will be open to the public.

CHAIR MANENDO:
Anyone in favor of S.B. 53, please come up to the table.

REID G. KAISER, P.E. (Assistant Director, Operations, Nevada Department of Transportation):
To clarify, Senator Gustavson, NDOT is not going back to metric.

I will now read my testimony (Exhibit G).

DAGNY STAPLETON (Deputy Director, Nevada Association of Counties):
The Nevada Association of Counties (NACO) supports the policies in S.B. 53 to promote the creation of additional broadband and communication infrastructure throughout the State, especially in rural areas. Such infrastructure is key to public safety and other basic services that counties provide. In addition, this infrastructure is important to ensure that rural economies and communities thrive. A representative from NACO was on the broadband task force and was able to provide input on the policies.

RANDY ROBISON (CenturyLink):
CenturyLink in Utah has participated and benefitted from the program operated by UDOT. As Ms. Kuhn stated, most of those have been swaps rather than leases. CenturyLink's experience in Utah has been very favorable for this type of program.

Ms. Kuhn has been responsive to our concerns with the legislation. While the concept is on target, there are concerns that need to be addressed to be sure that the program will work for Nevada. Utah has had 20 years to perfect and refine the program to the benefit of all parties. I am sure you will hear from some of my colleagues in the telecom industry about these concerns.

SENATOR HAMMOND:
Is this process still working itself out?

MR. ROBISON:
Yes.

CHAIR MANENDO:
Are there any other changes you see needing to be done in the legislation?

MR. ROBISON:
I will leave that to the other telecom providers that are planning to testify.

CHAIR MANENDO:
Two letters of support were also received. One from Joan Hall, President of the Nevada Rural Hospital Partners (Exhibit H) and one from Richard Howe, Chairman, White Pine County, Board of County Commissioners (Exhibit I).

Anyone in opposition to S.B. 53, please come to the table.

JOHN P. LOPEZ (Government Affairs Manager, Cox Communications Inc., Las Vegas):
Cox Communications is the largest provider of Internet service in the State of Nevada. There are many intriguing ideas and innovative ways in this legislation to help deploy broadband throughout the State. Cox Communications supports this bill 100 percent. Cox's footprint is entirely in Clark County. Cox's Statewide Certificate of Authority allows Cox to provide video service in the five jurisdictions in Clark County. Cox has spent $1 billion over the last 10 years on the network to deploy one-gigabyte high-speed Internet to residential customers through the entire service area.

Right now, Internet speeds touch everything in the economy, whether it is homework for kids to telemedicine. Cox congratulates OSIT for putting forth this legislation and will work to refine the bill.

Cox is in opposition, until certain concerns can be worked through. Cox's main concern is S.B. 53 grants NDOT broad authority to set compensation rates for use of the rights-of-way, and the compensation criteria are calculated based on the geographic region of the State. Cox does want to pay for the value of the rights-of-way in which it operates. This is a lot of power being granted to NDOT, and if Cox decides that it cannot enter into an agreement with NDOT based on its criteria, then Cox is dead in the water.

CHAIR MANENDO:
Can you tell me where you are looking in S.B. 53?

MR. LOPEZ:
Yes, it starts on page 8, line 43.

CHAIR MANENDO:
For those following along, page 8, section 17, line 43.

MR. LOPEZ:
Cox Communications does not understand the requirement that an amount be set that encourages the deployment of digital infrastructure within the State. We do not understand whether the dollars are going to the Highway Trust Fund to be segregated out to pay for broadband deployment or if they go elsewhere in the State.

There are a number of questions Cox Communications has regarding the legislation and would like to continue discussions with OSIT and the Committee. At this time, Cox Communications is opposing S.B. 53, as it is written.

MICHAEL D. HILLERBY (Charter Communications):
This is a very qualified opposition, Charter Communications (Charter) would be in support of the proposed amendment that strikes the language in section 18, subsection 2. Charter is looking forward to working with OSIT on some of the same issues that Mr. Lopez brought up. Charter would like a better understanding of terms on how costs are going to be determined. The number of users suggests an income-based issue rather than recovering costs. Charter supports the proposed amendment to S.B. 53. A Charter representative will work directly with OSIT to make sure all questions are answered.

CHAIR MANENDO:
Is there anyone else in opposition? Anyone in the neutral position, please come to the table.

RANDY J. BROWN (AT&T):
Ms. Kuhn did a terrific job of articulating the few concerns of AT&T. The first being the data gathering which is contemplated in S.B. 53 which applies to the State's assets and not to the provider's assets. The locations of AT&T's facilities are not generally something shared publicly. The second concern is addressed in section 18, subsection 2, where the proposal identifies NDOT does not pay for any relocation costs of telecom facilities. There is a policy in place that if the telecom company is the cost causer for the relocation then the cost is

on us. However, if the telecom company is not the cost causer and is in the right-of-way legally, with authority, then the cost causer should pay the cost. As an example, if NDOT wants to reroute or widen the road, it is not something that is under the control of the telecom company.

MIKE EIFERT (Executive Director, Nevada Telecommunications Association):
I am speaking for the rural rate of return carriers. I am appreciative of Britta Kuhn and Brian Mitchell reaching out to the industry to discuss the various aspects of S.B. 53. I also appreciate Ms. Kuhn clarifying that the data mapping information changes within the bill are relevant to the State data and not specific to telecom providers. Hearing the concerns of both Cox and Charter, I can see where clarification is an issue and reiterating their position, I certainly would like to participate in any discussions so that those can be ironed out to everyone's satisfaction.

CHAIR MANENDO:
The hearing is closed on Senate Bill 53 and we will proceed with the Work Session on Senate Bill 14.

SENATE BILL 14: Revises the duties of the Investigative Division of the Department of Public Safety. (BDR 43-259)

MICHELLE VAN GEEL (Policy Analyst):
Senate Bill 14 requires the Investigation Division of the Department of Public (DPS) to provide investigative services to the other divisions of the Department as determined by the Director of DPS. The bill also requires the Chief of the Investigation Division to provide investigative services to the head of any other various State departments, agencies or institutions, upon request. There were no amendments for this measure noted in the work session document (Exhibit J).

SENATOR ATKINSON MOVED TO DO PASS S.B. 14.

SENATOR HAMMOND SECONDED THE MOTION.

THE MOTION CARRIED UNANIMOUSLY

* * * * *

CHAIR MANENDO:
We will now proceed with S.B. 37.

SENATE BILL 37: Makes various changes relating to the issuance and renewal of license plates which commemorate the 150th anniversary of Nevada's admission into the Union. (BDR 43-232)

MS. VAN GEEL:
Senate Bill 37 makes various changes relating to the issuance and renewal of license plates commemorating the 150th anniversary of Nevada's admission into the Union. The bill clarifies that the DMV may not issue this new commemorative license plate. Senate Bill 37 also removes the prohibition on the DMV to charge the $20 fee for renewal of the commemorative license plates after October 31, 2016, and it requires this money to be equally divided between the Division of Museums and History of the Department of Tourism and Cultural Affairs and the Division of State Parks of the State Department of Conservation and Natural Resources for educational and preservation projects as noted in the work session document (Exhibit K).

There were no amendments for this measure.

SENATOR ATKINSON MOVED TO DO PASS S.B. 37.

SENATOR GUSTAVSON SECONDED THE MOTION.

THE MOTION CARRIED UNANIMOUSLY.

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CHAIR MANENDO:
We will proceed with S.B. 141.

SENATE BILL 141: Revises provisions relating to special license plates for veterans with a qualifying service-connected disability. (BDR 43-636)

MS. VAN GEEL:
Senate Bill 141 revises provisions relating to special license plates for veterans with a qualifying service-connected disability. The measure provides that to be eligible for the international symbol of access on all such special license plates, a veteran, as a result of his or her service, must have suffered a "qualifying

service-connected disability" and receive compensation from the United States for the disability (Exhibit L).

Senator Hardy offered the attached mock-up amendment to clarify that a service-related disability of any rating that constitutes or includes a permanent disability qualifies a veteran for the international symbol of access on special license plates for veterans.

> SENATOR GUSTAVSON MOVED TO AMEND AND DO PASS AS AMENDED S.B. 141.
>
> SENATOR HAMMOND SECONDED THE MOTION.
>
> THE MOTION CARRIED UNANIMOUSLY.

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CHAIR MANENDO:
The work session is closed. Is there any public comment?

BOBBI THOMPSON (Airport Manager, Minden-Tahoe Airport; Nevada Airports Association):
In response to the first speaker who spoke about spending 50 cents to get $9 in federal funding, the 2015 Legislature put $200,000 into the Nevada Airports Aviation Trust Fund and the return netted was $25 million. Nevada stood thirty-fourth and thirty-sixth in economic input and jobs. The State is the last to receive funding. Perhaps with a little more, the State could do even better.

WILLIAM BAUMANN (Chair, Veterans Services Commission, Department of Veterans Services):
I stand in support of S.B. 141 and thank the Committee for bringing it to the floor. I wish to thank Senator Hardy for clarifying the service-connected disability.

MS. HOWARD:
Senator Hammond brought up Utah when talking about the trucking industry and broadband. I thought that Utah would make a good comparison to Nevada concerning aviation as well. When speaking about sustainable funding for the airports, Utah found that some of their rural airports were in bad condition. There was very little money available. To help the local communities come up

with their share, Utah put aside some of the rural communities since they had no dollars available for pavement. They had to prioritize other rural airports that provided services to a greater number of people.

Utah recognized that services to the rural communities came back to the urban communities in benefits such as blood and organ donations. Three times more donations came from rural communities and went to urban communities versus what is collected in urban communities and goes to rural areas.

Utah recognized other types of overnight delivery that needed to go back and forth, and taxes that were collected needed to be shared. In order to fix the problem, Utah passed H.B. 365 in 2008, adjusting the property taxes collected and gave a certain share back to the counties making a set aircraft registration fee based on weight. Nevada does not have a registration fee for aircraft. Utah increased the registration fee, which became the dedicated source of sustainable funding for the airport's programs. This rebalanced and took more aviation dollars to be dedicated for aviation, but did not increase the tax burden on the aircraft owners and the pilots. This was a good way to fix that problem. I believe Patrick Morely, Utah Aeronautics Director, would share with Nevada how this has benefited Utah and its airport system. If you are interested, I can get you a copy of Utah's legislation that actually created the funding source for aviation.

Remainder of page intentionally left blank; signature page to follow.

CHAIR MANENDO:
Seeing no further public comment or business for the Committee, this meeting is adjourned at 10:36 a.m.

RESPECTFULLY SUBMITTED:

Tammy Lubich,
Committee Secretary

APPROVED BY:

Senator Mark A. Manendo, Chair

DATE:

EXHIBIT SUMMARY				
Bill	**Exhibit / # of pages**		**Witness / Entity**	**Description**
	A	2		Agenda
	B	3		Attendance Roster
	C	12	Stacy Howard / National Business Aviation Association	Presentation
	D	81	Paul Enos / Nevada Trucking Association	Presentation
S.B. 53	E	9	Britta Kuhn / Office of Science, Innovation and Technology	Overview
S.B. 53	F	1	Britta Kuhn / Office of Science, Innovation and Technology	Proposed Amendment
S.B. 53	G	1	Reid G. Kaiser / Nevada Department of Transportation	Written Testimony
S.B. 53	H	1	Joan Hall / Nevada Rural Hospital Partners	Letter of Support
S.B. 53	I	2	Richard Howe / White Pine County Board of County Commissioners	Letter of Support
S.B. 14	J	1	Michelle Van Geel	Work Session Document
S.B. 37	K	1	Michelle Van Geel	Work Session Document
S.B. 141	L	9	Michelle Van Geel	Work Session Document