

**MINUTES OF THE JOINT MEETING  
OF THE  
ASSEMBLY COMMITTEE ON GROWTH AND INFRASTRUCTURE  
AND THE  
SENATE COMMITTEE ON GROWTH AND INFRASTRUCTURE**

**Eightieth Session  
February 21, 2019**

The joint meeting of the Assembly Committee on Growth and Infrastructure and the Senate Committee on Growth and Infrastructure was called to order by Chair Daniele Monroe-Moreno at 1:39 p.m. on Thursday, February 21, 2019, in Room 4100 of the Legislative Building, 401 South Carson Street, Carson City, Nevada. The meeting was videoconferenced to Room 4401 of the Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. Copies of the minutes, including the Agenda ([Exhibit A](#)), the Attendance Roster ([Exhibit B](#)), and other substantive exhibits, are available and on file in the Research Library of the Legislative Counsel Bureau and on the Nevada Legislature's website at [www.leg.state.nv.us/App/NELIS/REL/80th2019](http://www.leg.state.nv.us/App/NELIS/REL/80th2019).

**ASSEMBLY COMMITTEE MEMBERS PRESENT:**

Assemblywoman Daniele Monroe-Moreno, Chair  
Assemblyman Steve Yeager, Vice Chair  
Assemblywoman Shea Backus  
Assemblywoman Shannon Bilbray-Axelrod  
Assemblyman Richard Carrillo  
Assemblyman John Ellison  
Assemblyman Glen Leavitt  
Assemblywoman Rochelle T. Nguyen  
Assemblyman Tom Roberts  
Assemblyman Michael C. Sprinkle  
Assemblyman Howard Watts  
Assemblyman Jim Wheeler

**ASSEMBLY COMMITTEE MEMBERS ABSENT**

None

**SENATE COMMITTEE MEMBERS PRESENT:**

Senator Yvanna D. Cancela, Chair  
Senator Chris Brooks, Vice Chair  
Senator Moises Denis  
Senator Pat Spearman



Senator Scott Hammond  
Senator Joseph P. Hardy  
Senator James A. Settelmeyer

**SENATE COMMITTEE MEMBERS ABSENT:**

Senator Kelvin Atkinson (excused)

**GUEST LEGISLATORS PRESENT:**

None

**STAFF MEMBERS PRESENT:**

Michelle L. Van Geel, Committee Policy Analyst  
Marjorie Paslov Thomas, Policy Analyst  
Jessica Dummer, Committee Counsel  
Darcy Johnson, Committee Counsel  
Lori McCleary, Committee Secretary  
Debbie Shope, Committee Secretary  
Alejandra Medina, Committee Assistant

**OTHERS PRESENT:**

Kristina L. Swallow, Director, Department of Transportation  
William H. Hoffman, Deputy Director, Department of Transportation  
Tina Quigley, General Manager, Regional Transportation Commission of Southern Nevada  
Angela Castro, Senior Director, Government Affairs, Media Relations and Marketing, Regional Transportation Commission of Southern Nevada  
Korii Brown, Private Citizen, Las Vegas, Nevada  
Bob Lucey, County Commissioner, District 2, Washoe County  
Lee G. Gibson, Executive Director, Regional Transportation Commission of Washoe County  
Lauren Rosenblatt, Principal, e-centricity, LLP  
Marie Steele, Principal, e-centricity, LLP

**Chair Monroe-Moreno:**

[Roll was called. Committee rules and protocol were explained.] The first presentation today will be from the Department of Transportation (NDOT).

**Kristina L. Swallow, Director, Department of Transportation:**

With me are some members of my team: Sean Sever, Bill Hoffman, Tracy Larkin-Thomason in Las Vegas, and Robert Nellis. I am excited to present an overview of our fabulous Department. I am still learning a lot about it and I hope to share with you as we go through the session.

This picture [page 1, ([Exhibit C](#))] shows one of our bridge inspectors on the Mike O'Callaghan-Pat Tillman Memorial Bridge [Hoover Dam Bypass]. I tried to make our slides more picture-heavy with less words, but I am an engineer, so bear with me if there are too many words.

Our team is responsible for the planning, construction, operation, and maintenance of over 5,400 highway miles and 1,200 bridges in the state of Nevada [page 2]. Our network carries over 50 percent of the automobile traffic and 80 percent of all heavy-duty truck travel on the network. Our mission is to provide, operate, and preserve a transportation system that enhances safety, quality of life, and economic development through innovation, environmental stewardship, and a dedicated workforce. Our vision is to be a leader and partner in delivering effective transportation solutions for a safe and connected Nevada.

We are governed by a seven-member board of directors [page 3] that includes the Governor; the Lieutenant Governor; the Controller; two representatives from District 1, which I will generally refer to as our southern district; one representative from District 2, which is the area we are in, so generally northwest; and one representative from District 3, which is generally northeast. I will show a map of those districts shortly. Our 1,800 employees are extremely dedicated to what they do. Our towns depend on them. They live in those towns, they contribute, they get up in the middle of the night, and they work through the night. We have had some weather recently, both here and in the south, and our crews are dedicated to keeping our roads clean, clear, and safe.

This slide [page 4] shows a map of the districts, and you can see more clearly where each district is. District 1 is the green portion in the south, District 2 is the yellow portion in the northwest, and District 3 is the orange portion in the northeast. Our main headquarters is in Carson City.

I mentioned our crews. They are distributed across the state with major maintenance stations in Ely, Tonopah, and Winnemucca [page 5]. Overall, we have over 50 stations. You can see all of them on this map. You can also see some of those roads are challenging. It is also challenging at times to find people to work in those areas. We work every day to make sure the state is covered.

I would like to tell you a little bit about what has happened recently in terms of maintenance. Last week during the snowstorm in District 3 in the northeast area, our NDOT workers assisted with 6 injury crashes, 9 property crashes, and 74 general motor assists in one day. In District 1 last week, Interstate 15 (I-15) was closed for five hours on Monday between

St. Rose Parkway and the California state line because of snow. We also had flooding throughout the valley. Today, we are dealing with closures in Arizona and California because of the snow in the south, which is impacting our ability to move people safely through our network. In the three districts, we have removed snow from 116,880 miles of roadways on 96 routes since October 1. Everyone keeps telling me this is not usual, but right before I got here, I heard this has been happening for the last three years. We go through ebbs and flows, so I am trying to get adjusted, as I am sure many of you are, but I am always impressed by our team and what they are doing. The picture on this slide [page 5] is from Mt. Rose Highway, which has received a ton of snow this season.

I would like to talk a bit about how we do what we do and some of our focus areas [page 6, [\(Exhibit C\)](#)]. We distributed to all the Committee members the "One Nevada Transportation Plan" ([Exhibit D](#)). We have spent over two years working on developing this plan. We have surveyed and engaged more than 2,000 Nevadans on developing it. We are really proud of what we came up with and hope it will help transform the future of transportation infrastructure in our state.

I would like to highlight the goals in the report [page 17, [\(Exhibit D\)](#)], because I think they speak to what we need to do together as transportation stakeholders to ensure the vitality of our state. First, we need to enhance safety [page 18]. Safety is critical. Everyone uses our roads in one way, shape, or form. We need to preserve our infrastructure [page 19]. We have invested a lot of money and resources into our infrastructure, so we need to make sure we preserve it and not let it fall into disrepair. We need to optimize mobility [page 20] and recognize where there are ways we can do it more efficiently and more effectively with less resources. We need to recognize our role in transforming economies [page 21]. The roadway network is a critical part in transforming our economies. We need to foster sustainability [page 21], and we are aware of that. When we sand the roads, we have to go back out there and sweep up all that sand because we cannot allow it to impact our air quality or our storm water quality. We need to be using our transportation system to connect our communities [page 22]. We are very proud of this document and we are working on the implementation of it to help prioritize how we spend our resources moving forward and how we implement projects.

This slide shows some pie charts [page 7, [\(Exhibit C\)](#)]. Overall, the high-level data you need to know is that roughly \$1.2 billion is generated from all revenue sources. Of that, NDOT keeps roughly \$900 million. Of that, roughly \$350 million to \$400 million is federal funding, which is great. We do a really good job of getting and using our federal resources. Oftentimes, we are able to get more funding at the end of the budget year, where other states have been unable to use theirs. We have done a really good job of making sure we are using the federal dollars as much as we can to leverage our state dollars.

The Department of Transportation is a partner and subscribes to the Vision Zero Network [page 8]. If you have not heard of Vision Zero, I encourage you to spend some time learning about it. Basically, Vision Zero means the goal is zero fatalities. That may seem crazy, but it is not crazy if it is your family member or your friend. To me, it is important that no one dies on our roadways. We are working every day to find ways to reduce crashes and improve safety on our roadways for every user of our network.

These are some projects you may be interested in in your areas [page 9]. In the north, we have the U.S. Highway 50 widening from Stagecoach to Silver Springs. It is the final phase of the project converting U.S. Highway 50 to four lanes from Carson City to Silver Springs. We have some safety issues there, and we are working on addressing them. Doing this widening has already had a significant impact.

The State Route 28 Shared Use Path, Lake Tahoe, is the most beautiful, four-mile bike and walking path in America. I challenge anyone outside of the state on that statement. Two and a half million vehicles travel on State Route 28 annually, and they mix with the pedestrians and cyclists. We are working to make that safer and help separate those different users.

We are working on repaving more than 12 miles of interstate on Interstate 80 (I-80). Along with that project, we will be doing some safety improvements, including wrong-way driver alert systems so we do not have wrong-way drivers on our interstate. We will be installing longer merge lanes and wider shoulders, which are things that will improve the condition of the road, but also improve safety for the users.

The Reno Spaghetti Bowl Xpress is focused on the eastbound I-80 to southbound Interstate 580 movement, recognizing the extreme growth in population and congestion that it is receiving and the safety issues there. That movement already experiences two to three crashes per day, so we are working on advancing that project quickly.

In southern Nevada, we have similar large-scale projects [page 10]. I do not have Project Neon on the slide, but in case you were wondering, Project Neon has its ribbon cutting in May. I understand we are going to have all items of work done shortly thereafter. I am super excited about it, and I know many of you have been watching it and experiencing the roads as it has been under construction.

We also recently started on the second phase of our Blue Diamond Road widening. It is the final phase in converting the road to four lanes from Las Vegas to Pahrump to address safety along that corridor. We are working on some issues in the northwest valley and the Centennial Bowl and also the new interchange at U.S. Highway 95 and Kyle Canyon Road.

One of the new projects is the Starr Avenue Interchange, which will help alleviate traffic in the southern part of the valley and reduce crashes and alleviate congestion off of Eastern Avenue, Cactus Avenue, and St. Rose Parkway. Just this one interchange will have an

impact on three others nearby. We are continuing to work with connections on the I-15 north and Interstate 215 north beltway. We are working on an interchange there. The Tropicana Avenue and I-15 interchange has been due for an upgrade, and we are working on getting that project started.

We do not want to forget our rural areas [page 11, ([Exhibit C](#))], and we definitely do not. It is something we talk about regularly. We are repaving five miles of U.S. Highway 50 from Ely to County Road 44A, the Ruth exit. At the same time, U.S. Highway 6 will be paved from Great Basin College to Bobcat Drive, with pedestrian crossing improvements added to address safety concerns there. We are working on a Complete Streets Program in Ely, recognizing that we do not all drive. Some of us like to ride our bikes, some of us like to walk, and some of us have no choice and have to do either of those, so we are making sure to make the road right for every user.

We are very aware of the increasing truck traffic from Idaho to I-80. We are working on finding ways to add some truck passing lanes and truck climbing lanes in that area to help facilitate the movement of the traffic and make it safer for our passenger vehicles. Passenger vehicles get stuck behind the trucks and we need to make sure they are not making poor decisions, so we are providing opportunities for the trucks to pull out and let cars pass. We are also adding a truck climbing lane to I-80 over Pequop Summit and looking at other areas of paving on I-80. We are working to make sure we are addressing the needs across the entire state.

I would like to tell you about two bills we are going to have this session. Assembly Bill 7 is in the Assembly Committee on Government Affairs. It is a simple clarification of the State Board of Examiners' approval authority over NDOT. The second bill is in your Committees, Assembly Bill 22, which revises the amounts we can retain on construction projects until the project is complete. We have been working with the stakeholders on that bill and are looking forward to presenting that bill to you and briefing you further on the bill in the future.

I would like to summarize by telling you our goal is a safe and connected transportation system that meets the needs of every Nevadan.

**Chair Monroe-Moreno:**

Are there any questions from the Committees?

**Assemblywoman Bilbray-Axelrod:**

About an hour ago, I received information that I-15 at Primm was closed due to snow. I was wondering how that determination is made. You mentioned the road flooding on St. Rose Parkway, which makes sense, but when does too much snow become an issue? My other question is about Project Neon. I am so excited about Project Neon. Can you remind the Committees and the new members what the budget was, the timeline, and where NDOT is currently in the process?

**Kristina Swallow:**

I will answer the snow question to the best of my ability, but I will defer the Neon Project to Mr. Hoffman. In terms of the snow, we are currently closed at Primm because California asked us to close due to their concerns with the mountain pass south of Primm and also Cajon Pass, as I understand it. The same conditions are at Interstate 11 going into Arizona with snow in Kingman, Arizona. They are trying to get ahead of it before there are too many cars and possible collisions. One of the things I have learned in the last two and a half weeks is how critically important it is to be able to clean our roads and sometimes, when we have vehicles on the road, we cannot clean them. I thoroughly understand and respect Arizona and California, as they are trying to make sure they get those roads safe and clear before more accidents pile up and it becomes harder for them to clear.

In terms of what NDOT is doing, I have regular conversations with our assistant director, Thor Dyson, who is here in the audience. I have also been talking with our district engineer, Mary Martini. Tracy Larkin-Thomason, our deputy director in the south, and I have been talking specifically about what has been going on in southern Nevada. Mr. Dyson and I have been talking for the last three weeks about what is going on here in the north. We are really looking at the safety issues. One of the biggest challenges is weather. We are not weather predictors. Even the weather predictors do not always get it right. We are constantly trying to provide the best advice we can provide in terms of how and when to close the roads. This morning in southern Nevada there was a 3:30 a.m. call among all the agencies in the south to talk about our recommendations to keep everyone safe. This did not just involve our roads but also the school districts. There are a lot of people involved in those decisions.

**William H. Hoffman, Deputy Director, Department of Transportation:**

Regarding Project Neon and the total cost, it is right around \$900 million. That includes construction, design, and right-of-way. The construction itself is right around \$600 million. We hope to finish this project by June of this year.

**Assemblywoman Bilbray-Axelrod:**

Can you remind us about the predicted time allotted, and is the project on budget?

**Bill Hoffman:**

We are very close to budget and we have been very close to being on schedule for the entire project. I am very proud of the team. Cole Mortenson and the project management staff have done a great job with that project in southern Nevada.

**Assemblyman Sprinkle:**

I am curious about the wrong-way driver technology. If I understand correctly, it is still in a testing phase. Could you expand on that and let us know how it works and what NDOT is doing?

**Kristina Swallow:**

I will attempt to answer that question, but I may rely on my team as well. First, the history is that we have had significant collisions due to wrong-way drivers entering the off-ramp and going the wrong direction on the freeway. There is a system that will read that the vehicle has crossed the wrong direction and will flash lights. It will also notify NDOT if that happens. Mr. Hoffman can provide more technical information.

**Bill Hoffman:**

The technology we are using is newer, but these technologies have been used in other states. We can send you that information if you would like. Because of the number of wrong-way drivers we are starting to see on the roadways, we have to do something. From a technology standpoint, a testing standpoint, and a piloting standpoint, what we have seen across the country is that these systems will definitely work. We really do have to do something with regard to this issue.

**Assemblyman Sprinkle:**

What is the next step? After NDOT is notified, is that information then passed on to the Nevada Highway Patrol (NHP), Department of Public Safety, and the NHP tries to apprehend the driver? Do they do traffic stops for the cars going in the correct direction?

**Kristina Swallow:**

How it will ultimately be addressed is more of a question for the NHP. How they respond and what they need to do will probably depend on the actual case. The goal is to notify the NHP that it has happened. In the past, if someone gets on the freeway going the wrong way, the vehicle can go for quite a distance before we know where it is to stop it. The intent is that it will help alert the driver to deter the action in the first place. Sometimes, it is just simply a mistake because of signage, which we are working on as well. It will also help notify the responding parties as to where the vehicle is so it can be stopped before a collision occurs.

**Chair Cancela:**

I have a question related to funding. Could we look at the slide that shows how transportation funding operates and the State Highway Fund [page 7, ([Exhibit C](#))]? I know when we passed legislation a few sessions ago related to transportation network companies (TNCs), we said 3% of TNC revenue would go toward the Highway Fund. I am curious if that is happening, and if it is, how is it being used in relation to the overall Highway Fund monies?

**Kristina Swallow:**

The TNC revenue that has been coming into NDOT has been used for two primary purposes. The first purpose is to help augment or build electric infrastructure. So far, we have built two electric charging stations along U.S. Highway 95. There is a third one in design, and we



are just starting the process. That was a priority to ensure we are able to accommodate the new cars. The other portion has been spent on driver and transportation safety education programs. Those programs were historically funded with federal funds. In the most recent federal legislation, they limited our ability to do education programs.

The key is that so much of our network can be improved and made safer through education. For instance, getting Nevada to the point where the majority of the public wears a seatbelt has a huge impact on our system because, if we have a crash, the crash could be reduced to property damage only instead of an injury. By doing that, we are able to open the roadways faster, and it has less of an impact on the overall flow. It is important to NDOT to be able to have revenue we can use on driver and passenger behavior safety education.

**Assemblyman Ellison:**

It was great to talk to you in my office the other day. While we were talking, you touched on the electric cars and hybrids and the impact on our roads. We are extending our road base by adding more miles and we are doing more construction, but we are still losing the gas tax from these vehicles. I know you are going to Washington, D.C., this coming week. Is that one of the issues you are going to bring up when you are there?

**Kristina Swallow:**

Yes. Funding is something we are going to be addressing when we go to Washington, D.C., next week. It is a priority. Members of my team and I are going to Washington, D.C., as part of the American Association of State Highway and Transportation Officials and we will be talking to our federal legislators on several priority areas, one of which is overall federal funding of our system. The federal share of the fuel tax revenue we receive has not been increased since 1993. At the same time that has not been increased, our Corporate Average Fuel Economy standards and the fuel efficiencies of our cars, be it electric or otherwise, has increased. Our ability to operate, maintain, and build a transportation system is limited. That is something we will be addressing.

**Assemblyman Ellison:**

I want to publicly thank you for U.S. Highway 93. If people have driven on that road between Wells and Jackpot, it is awful. I am happy to hear you are addressing that issue and getting some passing lanes. I also want to thank you for the work the NDOT employees are doing trying to keep these roads open. I drive home every week over two major passes. It usually takes me about five hours. The employees are keeping those roads open and clear. There was an accident on the bridge the other night when I was coming back to Carson City. I had never seen so many police cars, trucks, ambulances, and wreckers trying to get that road cleaned up. I want you to give a thank you from me to all your employees.

**Assemblyman Leavitt:**

I have a follow-up question to my colleague's question about the potential to help fund roadways through some sort of electric vehicle indexing. My concern is the way the funding is disseminated. Our two largest counties are indexed, and if we dedicate the major funding toward the Highway Fund, then I think it discourages those taxes in the two largest areas of the state. I think we need to look at how we are going to disseminate that funding and look at the indexing model and perhaps disseminate it in that way.

**Chair Monroe-Moreno:**

Are there any further questions from the Committees? [There were none.] Thank you for taking the time to meet with me, and I want to welcome you to your new position. I know you have only been here for a few days. From all the members of our Committees, thank you so much for what your team does to keep the roads safe for all of us.

Our next presentation is an overview from the Regional Transportation Commission of Southern Nevada.

**Tina Quigley, General Manager, Regional Transportation Commission of Southern Nevada:**

I am honored to have some guests at the table here for the Black History Summit. Korii Brown is representing Alpha Men and Divas of Tomorrow. Brian Young is with the Kappa Youth Leadership & Development League. Thank you for joining me today.

I will do a quick overview as to who we are [page 2, ([Exhibit E](#))]. The Regional Transportation Commission (RTC) of Southern Nevada is the roadway planning and funding agency. The funds that are distributed in southern Nevada flow through the RTC, whether they are federal, state, local, or fuel indexing funds. We work with the county and the different jurisdictions in prioritizing where those monies go and then they take on the role of design and construction. We are also the administrators of Southern Nevada Strong, which is our very first regional plan. We are also the traffic management center. It is very unusual to have just one traffic management center. We are also the public transit agency. Again, it is unusual for such a large metropolitan area to have one public transit agency. All of this is under one umbrella, which allows us to leverage the agency to get a lot done in an efficient manner.

Revenues are \$583 million for the entire organization of RTC [page 3], of which about one-third comes from the sales tax revenue; one-third comes from motor vehicle fuel tax revenue, whether that is the base motor vehicle fuel tax or the fuel revenue indexing money; 13 percent comes from passenger fares; and about 20 percent is coming from grants.

Our expenses [page 4] are split almost evenly between our contracted services, which is the money we pay out to those who operate and maintain our service, and capital outlay. Debt service is 15 percent, and salaries and benefits make up 7 percent.

We have a very robust planning and funding program in southern Nevada [page 5]. In large part, that is thanks to the Legislature. In 2013, the Legislature enabled Clark County, through Assembly Bill 413 of the 77th Session, to tie motor vehicle fuel tax to inflation. That allowed us to bond for about \$700 million worth of work. In 2016, the Legislature enabled us to have a vote of the people, which did pass by about 56 percent. We call those programs Fuel Revenue Indexing 1 and Fuel Revenue Indexing 2 [pages 6-8]. We promised we would come back to the Legislature regularly to report on the status. As part of our original fuel revenue indexing [page 7], which we have now completed, we awarded 225 contracts, 78 of which went to local small businesses that received work as a result. We have awarded \$628 million, which economists tell us is about 8,101 jobs. All of those projects will be completed by the end of this year.

The Fuel Revenue Indexing 2 [page 8] started in 2017. The progress report through the end of last year is: 59 contracts awarded, 16 local small businesses having received work, \$141 million expended, and economists tell us that is the equivalent of 1,228 jobs.

Las Vegas grew in spite of itself, not necessarily because of itself [page 9, ([Exhibit E](#))]. It grew without a strategic plan or a lot of thought, coordination, or collaborative input. The Southern Nevada Strong regional plan was created to help facilitate collaboration between 18 different partners with the goal of accessing quality jobs, housing, education, and transportation. The partners include not only the jurisdictions, the county, and the cities, but also other organizations that are instrumental in the community, including the school district; conservation district; health district; University of Las Vegas, Nevada; Southern Nevada Water Authority; Southern Nevada Regional Planning Coalition; Las Vegas Metropolitan Police Department; and the United Way of Southern Nevada. Together, we have been working on a plan that has several goals and tasks associated with it. As the administrators of the plan, we are not necessarily responsible for executing all the goals and tasks with the plan, but we are responsible for coordinating, collaborating, and convening the groups to execute them. We are raising awareness of the long-term planning tools, encouraging regional collaboration and coordination with the stakeholders, and also engaging the public more than we ever have before, and continuing to keep this regional plan significant and moving toward the goals of the community as a whole.

I mentioned it was unusual to have one traffic management center for an entire region, but it makes it a lot easier to coordinate and execute a regional plan [page 10]. In Los Angeles, there are 133 different traffic management centers. When individuals leave one jurisdiction, they are going into another jurisdiction's traffic management synchronization, priorities, and politics. Having one allows us to execute a much more continuous and synergistic program. Companies who are dabbling in technology and want to execute new pilot programs or introduce the ability for traffic signalization to communicate and coordinate with cars or other applications, only have to make one phone call to us. In Los Angeles, they would have to talk to 133 different agencies.

Public transit [page 11] consists of our regular fixed route service, our paratransit service, and specialized services for seniors and veterans.

Last year, our bus service [page 12] carried almost 64 million passengers. We have 39 transit routes. It costs the RTC about \$171 million per year to operate. We do continue to be the most efficient system in the United States. The Federal Transit Administration (FTA) of the U.S. Department of Transportation ranks agencies on an annual basis so they know how money is being spent. The Regional Transportation Commission of Southern Nevada regularly comes back as being number one. In one category that we traditionally ranked number one, which was fare box recovery, this year we ranked two by a half a percentage point, with New Jersey Transit taking the number one spot. We are about the fourteenth busiest system in the United States.

Whenever an agency operates a fixed-route service, the FTA requires a paratransit service to be operated within three-quarters of a mile for those who are cognitively or physically disabled or not capable of riding the fixed route [page 13]. This is a very expensive service to operate. For perspective, it costs the RTC about \$2.20 to move a fixed-route passenger and it costs almost \$34 per trip to move a paratransit passenger. It is certainly a service that is needed, but it is also one we have to manage and oversee diligently and efficiently, otherwise it could cause a lot of problems with our budget.

Some specialized services we offer in order to help reduce the demand of paratransit include several different services [page 14]. Some are oriented toward seniors and some toward veterans. By offering these alternative services, it gives us some relief to the demand we have for paratransit.

This slide [page 15, ([Exhibit E](#))] is the fiscal year 2018 transit revenue for operations. It is just related to transit, not to highways, streets, or our traffic management center. Our revenue for transit, for the most part, comes from sales tax and is 65 percent of our revenue for operating our service. About 32 percent of the revenue for operating this service comes from the fare box itself and then a small amount in grants and other. Other includes things like selling our transit guides or transit identifications.

For the most part, our transit expenses [page 16] are going to our fixed-route contract. Our fixed route carried about 64 million passengers last year. About 20 percent goes to paratransit. We move a significantly higher number of people on fixed route than we do on paratransit, yet paratransit is a little less than half of the overall contract amount for fixed route. The remainder is for security, fuel, transfers, and wages and benefits. If any of you would like to go into more detail on transit revenues or expenses, we would certainly be willing to spend time with you on those details.

In the transit industry, there have been a tremendous amount of disruptions occurring due to other modes and alternatives to consider when individuals are moving from one point to another and do not want to drive themselves [page 17]. I am specifically talking about the TNCs. Uber Technologies, Inc. and Lyft, Inc. have come into Las Vegas and they are certainly leaving a mark. Our public has embraced them and we are glad there are other services and other modes to get around, but it is leaving a mark on the transit industry, not just in Las Vegas but at a national level. At a national level, there has been about a 5 percent drop year over year since the TNCs have started operations in the United States. On the resort corridor in particular, we are seeing a dramatic decrease.

The three green bars represent revenue from the years 2015-2016, 2016-2017, and 2017-2018. There was a time when the RTC made a \$6 million profit in operating the resort corridor. There is no such thing as a profit in the world of transit. Generally, on average, fare box recovery is about 20 percent of the total operations. In Las Vegas, we have about 50 percent, so we are very lucky. However, this drop is going to start to have a significant effect on us moving forward. We are at a point where we have to start looking at the service and consider what we are going to do moving forward. There was a 12 percent drop between the years 2016 and 2017, and a 7 percent drop between the years 2017 and 2018.

While the 2018 transit operating revenue currently exceeds transit operating expenses by \$7 million, it does not tell the full story [page 18]. Over the past three years, the gap between the transit operating revenue and expense has been narrowing, as this chart shows. Our financial projections show this gap narrowing more in the future and becoming negative when transit operating expenses will exceed revenues. That looks to be around the year 2023. We really need to keep a \$14 million gap between those two numbers because we need that money for purchasing and replacing buses. We need that \$14 million to continue to keep the fleet updated. In 2023 you will see no gap, so there will be a problem moving forward. We know this is an issue and our board knows it is an issue. We will be coming up with plans and alternatives to address it moving forward.

Items specifically impacting our transit budget [page 19] include the fact that we do need to maintain a \$14 million annual cost for fleet replacement. We do have decreasing transit ridership on the Las Vegas Strip. Throughout the general market—the residential areas—we have not seen a dramatic shift or drop in ridership or revenue. In fact, we are plateauing. In the general market we are okay, but it is the Strip area where we have traditionally had a profit and are now seeing the most significant impact. At this point, we have no new sources for transit revenue. These are all things our board is taking a look at and considering.

Some of our current initiatives [page 20] are to start addressing the fact that we need to reinvent ourselves, we need to take a look at transit, and we need to be embracing technology. Testing and deploying new ways of providing service or new technologies to experiment with might provide efficiencies. We also have a Transportation Resource Advisory Committee (TRAC). The TRAC is made up of 36 different business stakeholders in southern Nevada with no elected officials. We meet with these stakeholders quarterly.

We supply them all the information we are supplying you. We seek direction and advice from them in moving forward, and hopefully we are building champions among them as well for transit.

In terms of reaching out to the community [page 22] to also share and learn how we can improve, we have started the On Board mobility study that we call "Your Future Transit Plan." It is the most extensive public outreach we have ever done as an agency. We have heard from and engaged with about 80,000 people and we have heard from 22,000 residents through our survey. We asked them things like: What is important to you? Do you want to see new types of services? Do you want us to enhance the existing services? Should we be taking a look at new technologies? Should we be looking at high capacity systems, such as light rail? We will be reporting those findings to you as it concludes.

Waycare [page 23, ([Exhibit E](#))] is one of the initiatives you will hear about next week, but I wanted to take time to share it with you now because it is one we are particularly proud of. A small Israeli start-up company, Waycare, came to us a while ago and told us they thought they had the ability to predict where the next accident or incident is going to occur along a demonstration portion of I-15. We worked with NDOT, NHP, and Waycare to make it come true. It took a while, but we have gotten to the point where they can indeed identify the hot spots. We are able to take measures to reduce speeds in certain areas by using dynamic message signs or we work with NHP to put a patrol car in the area. We have learned that 90 percent of all drivers will reduce their speed to the limit. We have reduced the number of accidents by 20 percent. When there is an accident, we are able to respond 12 minutes faster than we were previously able to respond. It is an example of how technology is making us more efficient and providing a safer infrastructure environment for our residents.

As for the initiatives in workforce transit, we have formed a partnership with Fanatics, Inc. and Lyft [page 24]. This is a demonstration program that at this point is getting a lot of national attention for its uniqueness and its success. Fanatics is a warehouse in North Las Vegas in the industrial area. It is a couple of miles away from our closest bus stop. There were several employees who were walking from the end of our bus route to their employment center. Fanatics originally asked us if we could extend our transit line. That would cost us about \$300,000 and there are only about 200 employees at Fanatics.

Our Deputy General Manager over transit came up with the idea of RTC partnering with Lyft and Fanatics to provide that service free to the employees. The way it works is Lyft reduces their rates for this service, the RTC contributes \$1 to every ride, and the employer, Fanatics, pays the rest. Over 80 employees have signed up for it and are using it every day to get them from our bus stops to work. There are 13 different designated bus stops that these employees can take their Lyft ride to or from. It has gotten so much attention that other warehouses across the nation have asked Fanatics for the model and are considering it as part of their businesses.

Another initiative we have gotten underway in the world of transit is, we were recently awarded a \$5 million federal grant to provide additional connectivity in the medical district area, connecting the Bonneville Transit Center with the medical district [page 25]. There are four hospitals in that area. We are using four autonomous vehicles and will be putting a lot of technology infrastructure investment to heighten pedestrian amenities, pedestrian safety, and to protect some of the more vulnerable users in the area.

We are taking a look at creating a microtransit system that would operate from the airport to the resort corridor. Currently, we do not have a direct route from the airport to the Strip. The routes on the Strip that we do have stop every quarter of a mile or every third of a mile. The microtransit service is much like a Lyft or Uber pool. Using an on-demand app, individuals will be able to request our transit van to take them from the airport to any destination along the resort corridor. It will be a shared ride, not private, but it will be a direct, point-to-point type of service. We will be experimenting with that probably in June of this year.

We will also be experimenting with an airport express fixed-route service as well [page 27] that will go from the airport along the resort corridor in a more traditional fixed-route fashion.

I am open to any questions the Committees may have.

**Senator Brooks:**

On the medical district route that you are going to expand, where will the last stop be?

**Tina Quigley:**

Some of those details are still evolving. We are just now scoping the project out and will be reporting to the FTA the details regarding frequency, actual stop locations, and eventually the technology as well. We will have to do a request for proposal for the manufacturer of the autonomous shuttle.

**Assemblyman Watts:**

Going back to On Board and some of the other planning processes that you undertake, I think several years back I took a survey from the RTC and I think I get all of them now. I love participating in those processes. For people who are not like me and do not return surveys, what are the other ways you go out into the community to gather feedback on things like On Board, the Boulder Highway improvements, or some of the other projects.

**Tina Quigley:**

We actually have a bus that we have retrofitted called the "On Board bus" [page 22]. Inside that bus, we have a bar of iPads and a children's play area so we can talk to the parents while the kids play. We take that bus to any and all events we can. Our staff probably goes out eight times a week with that bus. We have also done extensive outreach through electronic sources and by setting up booths to meet with groups whenever we are invited.

**Angela Castro, Senior Director, Government Affairs, Media Relations and Marketing,  
Regional Transportation Commission of Southern Nevada:**

We do extensive community engagement and outreach and we truly connect with the community. We do community conversations where we invite people to come in. We give presentations at Rotary clubs or events like that. We also attend public meetings and public events because that is where there are a large number of people. We do electronic activities as well. There are multiple layers of community engagement and outreach. We also follow up with the community. I am hoping my team has followed up with you, Assemblyman Watts, because you should get a thank you message, and we keep you in the database. I am glad you are still in our database.

**Korii Brown, Private Citizen, Las Vegas, Nevada:**

We were actually just discussing another way of communicating with those people who do not get outside much. Making a local phone call could be another way. Some people do not go out that much because there are several ways to get stuff to them instead of going out. I feel like local phone call surveys would also be a good idea.

**Assemblyman Carrillo:**

You mentioned the ridership on the Strip going down. Have there been considerations about extending bus routes to underserved areas or areas that are not even served by buses?

**Tina Quigley:**

Expanding traditional transit to areas beyond what we are already serving is not something we can consider financially. It is extremely expensive. However, we do want to explore the different types of microtransit applications that are not as expensive and can connect people to those fixed routes. The microtransit from the airport to the resort corridor was an easy one to start testing and deploying because we know we have so much demand in that area. We wanted to see what kind of efficiencies and what kind of costs come with it. If that is successful, then I can easily see not only us, but the nation as a whole, start to deploy that type of service into areas that would not otherwise be serviced because of cost.

**Assemblyman Carrillo:**

Regarding the autonomous vehicles used for the medical district, are they equipped to transport those with wheelchairs as well?

**Tina Quigley:**

Yes. As part of the FTA grant, they are required to be compliant with the Americans with Disabilities Act (ADA) of 1990.

**Assemblyman Leavitt:**

For full disclosure, for these four months the people of Nevada are my boss, but for the other eight months out of the year, Ms. Quigley is my boss. The red bus we saw [page 22, [\(Exhibit E\)](#)] has been my bus for the last year and a half. I would like to commend you for your innovation in working with TNCs. I know a lot of people would consider public



transportation and a TNC at odds with each other. However, you have managed to find a way to help enhance the overall transit system of southern Nevada by utilizing TNCs and coordinating with them. With the loss of revenue potentially due to the TNCs, what could be the future detriment to the public transportation system if there cannot be a way to further coordinate that effort?

**Tina Quigley:**

If the revenues continue to drop, we will have to take a look at the overall route structure and frequency to figure out where we do not have the demand to continue that route or frequency. We have not yet seen the revenues plateau. We can never get to a point where our operational expenses are significantly exceeding our revenues. I do not want to be negative, because the entire nation is dealing with this as well. I feel strongly that we are at a point of disruption. It is our responsibility to reinvent ourselves. If that old business model is not working and there is no demand for that service, then it is our responsibility to evolve and figure out how to offer a service for the community's mobility needs.

**Senator Spearman:**

You mentioned disruptive technology. One of the things I think we are going to be grappling with within the next five years is not just the TNCs, but the different modes of transportation as it relates to fuel, hybrid, et cetera. Have you given any thought to what that might look like and how you might be able to drive some of that technology?

**Tina Quigley:**

Yes. Right now we are transitioning toward a 100 percent compressed natural gas fleet. That was our first step. We are also starting to take a serious look at the electrification of fleets. In southern Nevada, we are a bit concerned that the power draw we need for air conditioning in the summer could not be met through electric vehicles. However, we do not know that for a fact. We are actually going to have a summit this summer where we have invited manufacturers of electric vehicles to test and deploy during the hottest time of the year. We will do a lot of data analysis on the runs. Our maintenance workers will be looking at it to figure out whether or not that technology is, in fact, ready for the heat and the weather conditions we have in southern Nevada.

**Assemblywoman Bilbray-Axelrod:**

I would like to talk about the Fanatics model. It is very intriguing. I think you said they have 200 employees and 80 of them are participating. That is amazing. The employees are riding a bus from their home to a bus stop. Where are those bus stops located?

**Tina Quigley:**

We have 13 different locations. I can get you a map for them, but they are in the North Las Vegas area toward the Apex Industrial Park. I do not know the cross streets offhand, but we can provide them for you.

**Assemblywoman Bilbray-Axelrod:**

To confirm, these employees come from all over the valley to the North Las Vegas area and Lyft provides them a ride for the last mile or so. Is that correct?

**Tina Quigley:**

We do call it a first-mile, last-mile solution. Some of them are even two miles away. There were employees who were walking the last mile or so.

**Senator Hammond:**

I have a comment. I actually have to set straight the freshman assemblyman from Boulder City. If this is, in fact, your red bus, then why is the tall, good looking man in the gray suit leaning over and getting the keys to that bus? I believe that shows ownership. If you have not figured it out already, that tall, good looking man is me.

**Chair Monroe-Moreno:**

In defense of my colleague in the Assembly, I host an annual barbeque for the Fourth of July in my community. The RTC was very gracious to join us with the On Board bus. My colleague, Assemblyman Leavitt, was the one who brought that bus out. I believe he does have ownership.

**Senator Hammond:**

I loaned it to him.

**Assemblyman Leavitt:**

Thank you for the defense, Madam Chair. I appreciate those comments from my very senior colleague, but 18 months proves ownership and that is how long I have had it.

**Chair Monroe-Moreno:**

Are there any further questions from the Committees? [There were none.] Thank you for what you are doing in the community by keeping the lines of communication open and all the events you attend. Members, if you do have a special event in your community, the RTC is more than happy to bring the bus out so you can share with your constituents what RTC has to offer in the south. One of the reasons we had the Black History Summit today was so we could open the doors of the people's house to the children in our community. Thank you for allowing some of those kids to come up to the table with you.

The next presentation is an overview from the Regional Transportation Commission (RTC) of Washoe County.

**Bob Lucey, County Commissioner, District 2, Washoe County:**

I serve as the chairman of the RTC of Washoe County. I am joined here today with our executive director, Lee Gibson; our deputy executive director, Amy Cummings; and our public affairs administrator, Michael Moreno. We are here to give you a brief presentation on our organization of the north and answer any questions you may have for us.

**Lee G. Gibson, Executive Director, Regional Transportation Commission of Washoe County:**

The board of the RTC of Washoe County consists of five elected representatives [page 2, [\(Exhibit F\)](#)]: two appointed by Washoe County; two from the largest city, which is Reno; and one from the City of Sparks. Kristina Swallow, the new director of the Department of Transportation (NDOT), sits as an ex officio member on the board.

The RTC serves three primary functions [page 3]. The first is as a metropolitan planning organization. This is a regional planning function through which we develop the long-range transportation plan and the transportation improvement program. Most importantly, those products help us link planning to service delivery. We are very proud of the fact that we are a seamless, turnkey organization delivering both transit and highway projects. As a recipient of federal funds, we also administer federal funds, local fuel and sales tax funds, and a program that is very unique and innovative, our impact fee program.

All of our programs, projects, and services are centered around the "2040 Regional Transportation Plan" [page 4]. This was recently updated in August 2018, and it was updated specifically to deal with the spaghetti bowl project in Washoe County, a project we are very pleased to be in partnership with NDOT on. I would like to commend NDOT for moving that project very quickly through the federal regulatory process. We are a community-based organization. We work very closely with our community. We probably have a public event once a week in Washoe County where we meet with the citizens and go over our projects, programs, and services to receive feedback on how we are doing. As I said earlier, we do all types of transportation and we are fiscally responsible for the federal and local funds we receive, specifically the funds the Nevada Legislature was so generous with in the 2009 Session when we started fuel revenue tax indexing to help us build and meet needs, especially during the Great Recession.

Our guiding principles are to provide and contribute to safe and healthy communities [page 5]. Commissioner Lucey is also a champion for safe and healthy communities. We are not just in the road-building and bus-driving business, we are in the community building business and the community-operations business. We are there to help people achieve their life's goals. We are there to help people find jobs. We are there to be responsible with the environment. We think those are very important missions we all take very personally.

These are some of the major projects we have going on [page 6, [\(Exhibit F\)](#)]. I named pedestrian safety improvements. We see the trends that Ms. Swallow talked about in her presentation on changes in safety. We are putting safety investments in all of our projects for pedestrians. We also have a \$1 million per year Transportation Alternatives Set-Aside Program specifically targeted to work with our entities to help deal with critical safety areas for pedestrians. Each of the projects listed on this slide I will be talking about in more detail and, again, it is a reflection of the fact that we have a very close working partnership with NDOT.

The next slide [page 7] is important. It tells you what we do. About 17 percent of our program is dedicated to pavement preservation. When we build a new road, because of the weather conditions, et cetera, in the north, as you have all experienced recently, we have a tendency to wear our pavements out. We like to get out there in advance to preserve those pavements and keep the useful life of those roads for the long term.

We are also deeply involved in capacity improvements. This reflects the rapid growth we have seen in northern Nevada in the last few years, especially as we have reached basically full employment in our economy. We are also investing in multimodal improvements, which are projects that look at not just the pedestrian realm, but the bicycle realm, the transit realm, as well as the automobile realm.

As I will talk about more next week, we find that when we do multimodal projects, when we coordinate all of the different users of our transportation system into one project and into one unified design, we see substantial improvements in safety. For example, we will see cars start driving the speed limit. We will see pedestrian/vehicle conflicts reduced substantially. It helps create a very safe environment, and I think it brings a bottom-line advantage to our citizens in the low insurance rates we have for automobiles.

We have an Advanced Mobility Planning and Technology initiative [page 8]. These are some of the projects and initiatives we have. I will talk a lot about these next week in the hearing on Infrastructure and Technology Day. I do want to focus on the partnership we have with the University of Nevada, Reno (UNR) and the Living Labs they have there. For the last several years, we have been collecting extensive data on what goes on in the environment around a moving bus: What kind of animals? People? Cars? Who cuts others off? Who does not? What happens when a tumbleweed flies by, or some other sort of event? We have been working to collect this baseline data on behavior so we can understand the challenges, especially as we look to artificial intelligence applications for autonomous and assisted vehicle technologies in buses, to help us improve safety. It is interesting to note, in the bus business today, a lot of the technologies available on automobiles are not yet readily available, and we want to help move that forward to create a safer transit environment.

What have we completed since the last regional transportation plan [page 9]? I also like to ask what we have completed since the last legislative session. There are four major projects. The Pyramid Way and McCarran Boulevard intersection was a \$70 million partnership with NDOT and is now open. We have completed the Evans Avenue bicycle path on the east side of UNR, which is actually near many of their new buildings and is a heavily travelled pedestrian and bicycle area for students who commute for classes during the day and in the evening. The Southeast Connector was our \$300 million project. We have completed it and it is open. I would encourage you to try it. I had a compliment today from someone who said it was a nice alternative to the freeway because of the snow. It also has a heavily patronized multiuse path for pedestrians and cyclists. We think it is quite an advancement in

sustainable highway design. We recently opened the 4th Street/Prater Way Bus RAPID transit service. This is a \$60 million project and was a partnership with the Federal Transit Administration (FTA) through their Capital Investment Grants Program and is a project where we operate all electric buses, which I will talk more about later.

Regarding public transportation, we have our vigorous RTC VANPOOL program. I would like to talk about our electric bus program expansion and the upgrades we had to make to accommodate that. We are moving forward with the Virginia Street Bus RAPID Transit Extension Project and North Valleys Improvements Project Phase 3 to help improve connectivity and pedestrian safety in that area.

The next slide is some quick facts about our regional roads [page 11]. This is a map of the roads we jointly plan with our member entities at NDOT, as well as deliver roadway projects, multimodal projects, preservation projects, and operate our transit system over. Interstate 80 is part of that. An interesting note about usage of roads is about 70 percent of our regional roads are local roads, which are residential streets [page 12]. Our regional roads are 30 percent of the lane miles, approximately 1,500 lane miles in Washoe County. However, as you can see in the other pie chart, 89 percent of the traffic is on those 1,500 lane miles. A lot of our focus is on improving those roadways across the board for all users.

With respect to our budget [page 14], our total revenue for fiscal year 2019 is \$188.6 million. Fuel tax is our number one revenue source, followed by federal funds. Working with the Federal Highway Administration of the U.S. Department of Transportation, NDOT, and the FTA is critical for us. Sales tax is our third most significant revenue source. Sales tax is the primary source we use to fund public transportation. We will have to take a hard look in the next several years about how we fund public transit in this state. We face enormous needs. We are seeing an increase in sales tax but, unlike our highway program, we do not have an inflation-protected program for dealing with the provision and operation of public transit.

We have some other significant sources of revenue, including our Regional Road Impact Fee (RRIF) program. We do not quite have the passenger fare levels of southern Nevada, but they are a significant source.

In terms of where we will spend those monies [page 15], our mobility projects are the largest source of expenditures along with our pavement preservation projects. Our fixed-route operation, which we call RTC RIDE, is at \$31 million per year. Our capital program to support that system is about \$16 million per year. We pay about \$9 million for our paratransit.

In summary, from an assessment of financial condition [page 16], we are in good shape. We have had stable economic conditions now for seven years. We have had ten years of fuel tax growth thanks to fuel tax revenue indexing. The low unemployment, job growth, and personal income growth—which is not quite where we would like to see it—are all contributing factors in helping make our job a success. We are a lean organization. We only

have 67 public employees. We put about 95% of our revenue out to our private sector partners, including the design firms, the construction firms, as well as the transit operating companies that operate our service.

I do want to touch on our RRIF program because I do believe this is an innovative initiative. This is where development helps pay for infrastructure needs. We also help to connect and coordinate transportation and land use. This is done through a memorandum of understanding (MOU) with our local governments. In the last ten years, we were able to deliver \$233 million in projects for capital. We worked very closely as partners with developers, who can either build or contribute toward the construction of regional roads. In exchange for that they get offsets for the impact fees they would pay. When they do that we are able to get a road delivered earlier, and that road is designed for the capacity and is outlined in the Regional Transportation Plan and in the ten-year Capital Improvement Plans so we can avoid Sawtooth conditions in and around our area.

As mentioned earlier, we are the Metropolitan Planning Organization (MPO) [page 18, [\(Exhibit F\)](#)]. That is a regional planning function, but is also a priority-setting process through which our federal funds are prioritized, our partnership with NDOT is expressed as we define priorities for us to pursue in terms of projects, and it is also where I think we do some of our most creative work.

I would like to highlight a few of these plans [page 19]. The ADA Transition Plan will help set the priorities for capital infrastructure, including sidewalks, roadways, and things that help the pathway to the bus stop become accessible and easier for our paratransit customers to use.

We are also engaged in an affordable housing study. We are looking at how we can partner with local entities and private developers and leverage some of our federal funds. What we think we should champion is helping to encourage developers to build affordable housing near and around our transit stations. There are federal grant opportunities available to help do that. This study will help us lay the foundation and groundwork for us to continue to pursue that.

We are also a transit operator [page 21]. We operate a fixed-route service called RTC RIDE, two bus rapid transit (BRT) lines which is branded as the RAPID, the Sierra Spirit service which is the downtown circulator, as well as the regional connector. The regional connector is a commuter line from Carson City to Reno. I believe we will have the bus here next week. It is an all-electric, zero-emission vehicle we operate for that service.

We have 26 routes, we operate 72 buses, and we cover 1,000 bus stops. We are privately operated by a contractor, MV Transportation, Inc. We carry 8.2 million riders a year.

I do want to mention our microtransit demonstration project. This is a new project we will be doing in downtown Sparks. We actually become a transportation network company (TNC). People can book a ride and it will be at their door within 15 to 30 minutes. It will also be a blending of the paratransit and fixed-route service. Paratransit customers can use this service to get to a destination within the zone or get to a station where they can pick up a paratransit ride and move on to their final destination.

With respect to paratransit [page 22], we have our ADA service. I think it is important to remember that ADA is a civil right that we have to meet and extend. It is an important civil right to ensure the disabled community is served and participates in our economy. We also operate an eligibility process. We see a lot of differential in eligibility here because of climate. We see some folks who, part of the year, can get to a fixed-route stop, but on days like today, they are paratransit eligible. It is demand-responsive with reservations one to three days in advance. We carried 221,000 people last year, and that is also privately operated by a firm called Ride Right, LLC.

The RTC VANPOOL Program is at 157 vans, which is a 20 percent increase [page 23, [Exhibit E](#)]. It is heavily used out to the Tahoe Reno Industrial (TRI) Center. It is something that has been a lifesaver for many of those businesses in the TRI Center. It is also providing significant environmental benefits as seen by the number of single-ride-occupant vehicle trips that are being provided by the RTC VANPOOL program and not by cars. I would like to give a shout out to My Ride to Work, which is a private operator who uses our facility at Centennial Plaza. They operate a commuter bus service and are carrying almost 2,000 folks a day out to the TRI Center. That is a significant number of cars that are not driving on I-80.

I am very proud of the Electric Bus Program [page 24]. This is a project that has been going on for almost nine years. We now proportionally operate the largest electric fleet in the United States. We have 21 vehicles in service today, and it has provided a 16 percent savings in our diesel fuel bill, as well as providing significant environmental benefits by reducing carbon dioxide. That is the equivalent of 15,558 trees planted, which I think is a significant contributor to our air quality. I would like to highlight the bus in the lower right-hand corner of the slide. That is a bus in our Lincoln Line service. That is the new 4th Street and Prater Way BRT system we just opened in December.

We are working to identify parcels of land and a comprehensive approach to partnering with social service providers to see if we can encourage affordable housing in and around our BRT stations and other transit stops [page 25]. There are opportunities through the FTA Joint Development program to use grant funds to help be a partner in those projects and create a stream of income that could then go toward public transit operations. That is how joint development works. We partner with a private developer, sort out the particulars with respect to the investment and the income generated from the investment, and determine what proportional share flows to the transit agency into the transit fund to be available for operations and services. This is something I think you will be hearing more about and is

something that will help us match where people live to where they need to access transportation to help them get to their destination. Remember, after your home mortgage, transportation expense is the second largest household expense. If we can help close that gap through a joint development project with affordable housing, I think that is something we could all agree would be a positive for our community.

Regarding roadway construction and operation efforts, the first is the Virginia Street BRT project. This is a three-mile, \$80 million project with a completion date of 2021. If you drive down Virginia Street while you are here, you will see a lot of cones. We are wrapping up the utility relocation effort. I am proud to say that effort is also helping to establish an infrastructure for the 21st or maybe the 22nd century because of a lot of fiber optics and technological improvements we have put underground for future businesses. This project's design concept and scope focuses on pedestrian safety, ADA and transit improvements, and will connect UNR to the downtown area and to the growing and rapidly improving midtown area. We get a lot of requests from the students at UNR, as well as staff and faculty, to be able to make that connection.

With respect to pedestrian safety issues [page 28], we are also a partner in the Vision Zero effort. We are making all kinds of spot improvements, as well as improvements within the major projects we are doing to ensure pedestrian safety. A couple of these pictures are examples of pedestrian crossings where the actuation helps slow and stop traffic for pedestrians. We also have an example of the Evans Avenue bike and pedestrian improvements.

The Pyramid Way and McCarran Boulevard intersection [page 29] was a \$70 million project that opened in December 2017. That was quite an extensive project with over 70 relocations of residential homes, whose owners were all happily relocated. It was a very positive experience for those homeowners.

Our 4th Street and Prater Way BRT project opened in December and was a \$57 million project [page 30]. The picture shows Congressman Amodei with the FTA at the ribbon cutting.

The Southeast Connector is a 5.5 mile, \$300 million project [page 31]. Off to the left of the picture is the pedestrian path.

What is our ask of the state [page 32]? Let me qualify this by saying these are not specific bill draft requests; they are more broad policy and partnership efforts we are working through. One is the commitment to the spaghetti bowl. The last time we checked, it was the number one crash location in the state. The SBX [Reno Spaghetti Bowl Express] Ms. Swallow mentioned is critical to our region and we want to see that move forward. We are contributing \$30 million of the \$150 million total cost toward that project.



We also believe a good, strong dialogue needs to occur promoting land use and transportation coordination between NDOT, the RTC, regional entities, and local entities. It is important and imperative today, especially with a lot of the challenges we are facing in dealing with the federal government, as we deal with growth, development, our freeway system, our arterial system, and use of federal funds. It is critical that we have the dialogue and the partnerships necessary to allow for coordination between development and transportation investments. We need to continue our commitment to a coordinated federal and state strategy to leverage funding and promote positive and good regulations for transit-oriented development, affordable housing, and public/private partnerships. From a northern Nevada perspective, we are focusing on our affordable housing study. That is going to be critical to us to be able to assemble the land, to find the developers, to bring grant funds, and move things forward.

Last but not least is a change in the property disposition statute. We at the RTC of Washoe County acquire land as part of our road projects. We want to be able to have a disposition procedure in statute that would allow us to be able to sell property to another local government. That local government, for example the Housing Authority of the City of Reno, could then use that property for a public purpose consistent with their statute. In short, our highway fund would be made whole through the sale but they would have a public purpose that would allow them to be able to do something, perhaps in the affordable housing arena.

I have concluded my presentation and would be happy to answer any questions.

**Chair Monroe-Moreno:**

Are there any questions from the Committees? [There were none.] I would like to talk to you more about the affordable housing partnerships you are looking to do. I made a trip to Colorado and Utah and saw some of that going on there. I am excited to hear what you have planned here in northern Nevada.

Our next presentation is from e-centricity, LLP.

**Lauren Rosenblatt, Principal, e-centricity, LLP:**

I am here with my partner, Marie Steele. We are e-centricity, LLP. We live and work in southern Nevada. Unlike the others you have heard from this afternoon, we are not transportation professionals. We are electric industry experts. We advise our clients, both public and private sectors, on the modernization of the electricity grid, the electricity markets, and the increasing number of new technologies that rely on them.

As energy professionals and residents of Nevada who are committed to its future, we were thrilled last summer when the Office of Energy, Office of the Governor sponsored us to conduct our study "Electrifying Nevada's 21st Century Transportation System" [page 2, ([Exhibit G](#))]. In fact, Director David Bobzien, Deputy Director Jennifer Taylor, and their entire team are here today. We are delighted that they see this big issue as something

important and have shown some enthusiasm in being part of the solution to tackle it. We are also pleased to be invited here today to talk to you about this study, why it is important, and what we have learned from it.

The world is approaching an intersection of demands on our transportation system and demands on our electricity system [page 3]. I am going to throw out just a few statistics. The price of batteries has dropped 85 percent in the last eight years, which has been a huge boost to the economics of electric vehicles (EVs). Most all major automakers have pledged to roll out new models of EVs within the next two to three years. Incredible sources, including Nissan USA, estimate electric vehicles will have price parity with gasoline-fueled vehicles as early as 2025. The number of EVs on the roads is small but growing fast. Sales of EVs in Nevada were up 74 percent in 2017 over 2016. Of the five million EVs that are on the roads around the world today, one million have landed there in the last six months. In short, the world of transportation is electrifying.

We at e-centricity realize the business of electricity in the desert represents a special opportunity for Nevada to take advantage of this trend. With our abundant sunshine and our robust renewable sector, the additional electricity demand from transportation not only boosts our economic development but does so without compromising the state's policy of energy independence.

What is exciting about this topic is that the positive externalities do not stop there. By providing a market for renewable generation, electric vehicles on the road not only directly decrease greenhouse gas emissions from fossil-fuel burning cars, but indirectly decrease emissions coming from our electricity generation. The benefits to air quality are good for our health and our economic development, and a robust renewable energy industry is also great for jobs in the state.

The subset of electric transportation solutions—advanced and autonomous transportation solutions for advanced mobility, which we believe will be electrified—also solve many of the problems we are facing in our transportation system today. What is great about this new high-technology sector is that it creates jobs: jobs to install infrastructure, hardware engineer jobs, and software engineer jobs. Perhaps some of these high technology companies may even consider locating here in Nevada.

At the end of the day, the question is not why electrification, but why not electrification [page 4, ([Exhibit G](#))]? Transportation as a policy is a complicated issue. I would like to say a few things about why it is going to require a long-term commitment by the state. Transportation planning is a complex issue and it will soon be factoring in electric sector planning, which is also complex. The key transportation concepts you see represented here come from about 20 different transportation planning documents in the state of Nevada. As you can see, they are all about system efficiency—reducing congestion, traffic, idling,

emissions, accidents, and right-sizing our transportation system just in time to meet our needs. Electricity will soon be fueling our transportation system. The issues around electricity as a fuel and delivering that electricity will influence the way the electric system evolves.

For a few examples: To what extent will transportation system users be relying on electrified infrastructure? Will our electric grid have prepared for those interconnections and have a process? How do we site our electric vehicle charging infrastructure? Do we do it in ways that are efficient for grid operations, or do we place it where it is best for efficient movement on our transportation system? These big questions are steps that Nevada has to be prepared to answer in the near term. However, Nevada has begun to take certain steps toward electric vehicles from an energy perspective.

**Marie Steele, Principal, e-centricity, LLP:**

We appreciate you letting us speak back and forth for a non-traditional approach, as we know we are the last presentation this afternoon. To date, there have been many piloted efforts to test and promote electric and autonomous vehicles in Nevada, some of it enabled by legislation of the Committee members here today [page 5, ([Exhibit G](#))]. It is great to hear about the Nevada Electric Highway and the Electric Vehicle Infrastructure Demonstration Program created by Senate Bill 145 of the 79th Session and just opened by NV Energy. We should not forget that Nevada had the first autonomous shuttle on public roads in Las Vegas. In addition, the Regional Transportation Commission of Washoe County's partnership with the Living Labs at the University of Nevada, Reno and Proterra, Inc. was the first autonomous bus pilot program in the states as well, and actually the world. When you think about it, this legislation is causing jobs and new pilot programs.

The movement has been significant, but as you might guess, the work ahead of us is even larger.

**Lauren Rosenblatt:**

As previously mentioned, the Office of Energy agreed that it is important to understand how transportation load can be nurtured by the state as a market for a fast-growing renewable sector. They awarded e-centricity a grant to look into that question. How did we do it? We interviewed 45 state, federal, commercial, and nonprofit entities that influence transportation, air quality, energy, and economic development here in Nevada. We conducted an extensive literature review, including reading the *Nevada Revised Statutes*, and we analyzed what actions might be within reach of the Nevada government agencies based on their authority, their resources, and the way they operate today.

The result is a comprehensive action plan involving approximately one dozen agencies and political subdivisions [page 6]. Because transportation electrification most directly affects transportation, we organized our proposal and our action items around five transportation outcomes. The 16 goals under these 5 outcomes and the over 40 action items go much further than transportation. Each action item in this report is a commonsense idea pointed at

a multiplicity of agencies. We have also identified various sources of funding. None of the actions involve only one agency, which reflects that all of the actions further multiply policy agendas in the state.

In the first area, we proposed that the policymakers of the state establish leadership on this issue [page 7]. We suggest that this requires action. In order to get action and investment on part of private and federal funds, the state should be signaling a commitment. This is where policymakers take center stage and take the crucial first step toward a modern, electrified transportation system. Legislation and executive orders that state a goal of transportation electrification, or perhaps the need to address climate change, would signal that commitment. Expressing goals in terms of outcomes frame the scope of that commitment.

Also important, policy leadership would go the furthest with the establishment of a resource leader and an office or staff dedicated to coordinating and supporting the execution of the actions needed to further this cause. An agency running point on this issue would be the strongest signal of all to the public to engage with Nevada on transportation electrification.

**Marie Steele:**

For Nevada, growing renewable energy development is an established goal. A recent study showed that the electric grid can integrate up to 30 percent more excess renewable energy by coordinating EV charging and demand response as a means of load shifting [page 8]. That sounds great, so we should do it. However, there is a fair question for the average person to ask when we talk about grid integration and transportation. It is not intuitive. Why does it matter when I charge my car? It does not matter when I fuel up my tank. The reality is how we integrate this new load into the grid. It needs to be smart or managed, which are our new favorite words, so it benefits everyone rather than increasing our peak load. This means starting the process to establish standards before mass adoption is critical such that the electric vehicle load can be flexible to smooth our electric peak as it changes.

Luckily for us, I believe Ms. Quigley and Mr. Gibson did a great job explaining what their movements are on electric transit buses. The next steps are to continue to support them on their adventure, realize the ability to assimilate funding, evaluate the technology as batteries increase and the range increases, and evaluate the operational capacities.

One of my favorite opportunities in Nevada is school buses. Nevada is uniquely positioned not just to deploy electric school buses, but to test vehicle-to-grid technologies. School buses sit idle in the afternoon and in the summer and can be utilized for grid benefits. This technology is new, but should be explored by Nevada to see if it is possible to provide transportation savings to school districts that can be put back into instruction, not to mention the health benefits.

To deploy electric school buses, we need to better assimilate separate funding sources for pilots—whether it is the Volkswagen Clean Air Act Civil Settlement funding or the Electric Vehicle Infrastructure Demonstration program and NV Energy—and explore alternative ownership models to deploy these pilot projects.

**Lauren Rosenblatt:**

The remaining recommendations in our report focus on opening the door to this technology shift [page 10, ([Exhibit G](#))]. For example, a multimodal system: for the uninitiated, it is about interconnecting many different forms of transportation to serve different trip lengths and use cases. It will rely on systems and infrastructure that will come from both public and private investment, but the architecture of that system itself, to be truly efficient, is in itself a public good. One of our recommendations is tax regimes for private partners: for example, the tax that Nevada already levies on ride-hail services. Those are a great area for policymakers to connect the revenues to the externalities and the needs of the businesses that pay them: for example, sending some of the receipts to the fare box as a public transit—those services compliment—and investing other revenues in the electrified infrastructure that those services will need once they decide to go electric.

Another area where there is a huge technology shift and was mentioned by Ms. Quigley in her presentation are intelligent transportation systems. This photo is courtesy of the Regional Transportation Commission of Southern Nevada [page 10]. It is just one example, but this is an area where technology goes beyond signs on the streets and is just exploding and emerging fast.

Vehicle-to-infrastructure communications and vehicle-to-vehicle communications are all very exciting, but they also pose a lot of thorny and technical issues that will need to be addressed. Nevada will also need to attract the talent to work and support those systems, meaning software engineers, hardware engineers, and individuals who are trained in connecting to the electric infrastructure.

Finally, government and commercial fleets that are high-energy users will lead the way toward electrified technology and infrastructure on our streets. The government, collectively the largest fleet operator in the state, will be the first to assess the benefits of the technology conversion from gas to electric. Equipment and infrastructure are large factors in that equation, as is the cost of the electricity itself and what rate should apply.

Our report ([Exhibit H](#)) as a whole, and the action items, look at these issues and how to resolve them from the standpoint of what actions are within reach of the agencies that should be addressing them and how those agencies and actors can move those issues forward today. If you have a chance to read the report and have questions, you are certainly free to call us.

We will spend the last few minutes of our presentation calling out a couple of highlights, or what we consider the most significant aspects of our proposal in moving this trend forward. I would like to go back to the importance of coordination on transportation electrification [page 12, ([Exhibit G](#))]. Electrifying our transportation system touches on many agency missions. Our primary finding is that all of the agencies you see named on this slide have a role to play: education, economic development, air quality, local government, and of course energy and transportation.

The many factors involved in transportation electrification may stretch any one government agency, even those focused on transportation, beyond the scope of their authority and capabilities, or it may present an issue that competes for priority with existing programming. We suggest a coordinating agency, something we call a joint program office. This function could be housed within an already existing agency. One candidate we identify in the report is the Governor's Office of Energy, if it is sufficiently resourced.

The primary function of this joint program office would be to do work for all of these agencies, coordinating projects and information, and identifying and moving forward joint efforts that have synergies between agencies and agency projects. For example, workforce training on key infrastructure installations may be planned to coincide with installation of a critical mass of public-sponsored infrastructure. There is a confluence of federal dollars coming out of both the U.S. Department of Energy and the U.S. Department of Transportation for vehicle technologies. A joint program office could be tasked with pursuing eligibility for those funds for projects within various agencies.

A multiagency counsel on a specific transportation electrification issue, such as the scope of oversight of electrified autonomous technologies, might need an administrator to further its work, and this joint program office could perform that. At minimum, the function would provide the means of information sharing among all these agencies so everyone understands where the issue is at any time and what role they have to play in it. There are many ways to inform, coordinate, and advance this collaboration. We recommend that to do so effectively, you need dedicated staff who is consistently focused on this issue.

I would also like to talk briefly about the possibility of a public charging needs assessment [page 13]. Nevada would benefit greatly from a public stakeholder, on-the-record process in which all public and commercial entities with an interest can discuss where stations are sited; what type of charging is installed; what features should be standardized, such as payment processing; and other details about what the charging infrastructure should look like. The process would not produce any rules or mandates, but a baseline assessment that would help guide efficient and appropriate investment in the network. It is something that might be revisited every two to three years.

At the same time, this charging network requires integration with our electric grid. We would want a similar process before the Public Utilities Commission of Nevada and a discussion with the same participants in the utility about interconnection standards, technical standards, data-sharing protocols, and how the utility might manage the charging infrastructure: for example, slowing down charging rates during periods of high grid usage in the middle of summer. This might also be a good forum for discussing whether a regulated utility should be a player in the arena of competitively provided charging infrastructure.

The importance of a well-conceived public charging infrastructure cannot be overstated. It serves the dual purpose of protecting the efficiency of the transportation system and also protecting the electric grid from operational and service issues. Only the government can initiate this process and we strongly recommend consider doing so.

**Marie Steele:**

As you know, we cannot have a conversation about infrastructure and electric vehicles without talking about how to pay for the roads [page 14, ([Exhibit G](#))]. What we do believe is Nevada needs to have a larger conversation about the sustainability of infrastructure funding given the substantial impact of inflation and fuel efficiency in our road funding. As NDOT states in its "One Nevada Transportation Plan" ([Exhibit D](#)), to meet the needs and vision of Nevada's transportation system, the Department needs to address its projected future funding shortfall.

What we do believe is that simultaneously or separately, Nevada can participate in a vehicle-miles-traveled pilot, possibly accessing federal funds like many other states have done. As well, Nevada could establish a task force or a working group on a comprehensive study on the sustainability of infrastructure funding with recommendations for solutions to be brought back to the 2021 Legislature.

We also need to talk about the status of electric vehicle fees [page 15], and I think it is good to have a discussion about that issue. Twenty states have fees ranging from \$50 to \$200. It should be noted, the nine states that enacted new fees in 2017 were parts of larger conversations and transportation funding packages, which brings us back to the conversation of equality and fairness. We need to have a much larger conversation about funding the roads in the future rather than just taxing electric vehicles.

We also want to touch on the way to move the personal or light-duty vehicle market [page 16]. There are many traditional state policies, some that have been passed by the Nevada Legislature, to provide different monetary and non-monetary incentives to move the market. The policy that is getting the most attention right now is the Zero Emission Vehicle, otherwise known as the ZEV mandate. Most recently, Colorado made an announcement on their intent to join other states in requiring automakers to sell electric vehicles in the state. A policy of this nature sends a long-term signal to the market of the state's commitment, which requires and invites additional investment to the state to drive electric vehicle adaptations.



That wraps up our summary of the report ([Exhibit G](#)). We are happy to take any questions.

**Chair Monroe-Moreno:**

Are there any questions from the Committees?

**Senator Spearman:**

I have a bill draft request that is designed to do part of what you said. I really hope we can get together and talk about it because I know we are on the cusp of becoming the world leaders that we can be. I think a lot of the things you said are doable. We just have to be committed and focused. I would appreciate if the two of you could stop by to see me again.

**Assemblyman Yeager:**

I missed part of your presentation, but as I was walking in you talked about the key takeaways. You mentioned an office to lead and coordinate. Could you give me a little more detail, and what exactly would your vision of that office be? What would be the day-to-day responsibilities of that office? It is an idea whose time has come and I am interested in trying to figure out how we can make that a reality.

**Lauren Rosenblatt:**

We tossed around the idea of a taskforce or a full-time employee assigned part time to information sharing between agencies. We felt that just would not go the distance based on the number of agencies and how fast this space is moving. We then decided upon a dedicated staff of at least two or three who would be spending a lot of time researching the different aspects of this space, such as the technologies, the funding available, and what other states are doing, and also using that information to work for a multiagency council. One aspect we had in mind was that, while it may be housed in one particular office, it would be responsive, like a matrix organization, to represent all the different agencies that we think have projects and missions that come to bear on this issue.

When agencies get together and talk about all the great things they can do, they tend to go back to their offices and get busy with their regular programming. The dedicated state employees we have here only have so much bandwidth. Having a dedicated staff to carry forward the ideas that come out of those meetings—not just memorializing them in minutes and reminding people of what they thought and what they wanted to do, but perhaps doing the research, initiating the projects, helping to coordinate the resources that would come from the different agencies, finding state resources that the agencies might not have known were available for these joint projects, and even identifying when projects in different agencies may have some synergies. I think that just scratches the surface of what this office could do.

**Chair Monroe-Moreno:**

Are there any further questions from the Committees? [There were none.] I know there are a number of bills that have been submitted on this subject matter, so I think we will probably see a lot more of you as the session goes on. Thank you for the presentation.



Is there anyone here in Carson City or Las Vegas for public comment? [There was no one.]

This meeting is adjourned [at 3:39 p.m.].

RESPECTFULLY SUBMITTED:

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Lori McCleary  
Committee Secretary

APPROVED BY:

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Assemblywoman Daniele Monroe-Moreno, Chair

DATE: \_\_\_\_\_

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Senator Yvanna D. Cancela, Chair

DATE: \_\_\_\_\_

## **EXHIBITS**

[Exhibit A](#) is the Agenda.

[Exhibit B](#) is the Attendance Roster.

[Exhibit C](#) is a copy of a PowerPoint presentation, dated February 21, 2019, titled "NDOT Overview," presented by Kristina L. Swallow, Director, Department of Transportation.

[Exhibit D](#) is a document titled "One Nevada Transportation Plan," submitted by Kristina L. Swallow, Director, Department of Transportation.

[Exhibit E](#) is a copy of a PowerPoint presentation titled "Moving Southern Nevada Forward," presented by Tina Quigley, General Manager, Regional Transportation Commission of Southern Nevada.

[Exhibit F](#) is a copy of a PowerPoint presentation, dated February 21, 2019, titled "Regional Transportation Commission," presented by Lee G. Gibson, Executive Director, Regional Transportation Commission of Washoe County.

[Exhibit G](#) is a copy of a PowerPoint presentation, dated February 21, 2019, titled "Electrifying Nevada's 21st Century Transportation System," presented by Lauren Rosenblatt, Principal, and Marie Steele, Principal, e-centricity, LLP.

[Exhibit H](#) is a report, dated January 2019, titled "Electrifying Nevada's 21st-Century Transportation System," submitted by Lauren Rosenblatt, Principal, e-centricity, LLP.