NOTICE AND AGENDA OF
PUBLIC MEETING

BUS SHELTER AND BENCH ADVISORY COMMITTEE

3:00 P.M. APRIL 18, 2019

RTC/RFCD ADMINISTRATION BUILDING
600 S. GRAND CENTRAL PARKWAY, ROOM 108
LAS VEGAS, NV 89106
(702) 676-1500

This agenda with full backup is available at the Regional Transportation Commission Administration Building, 600 S. Grand Central Parkway, Las Vegas, Nevada; the Regional Transportation Commission’s website, http://www.rtcsnv.com; or by contacting Marin DuBois at (702) 676-1836.

THIS MEETING HAS BEEN PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS:

Clark County Government Center
500 S. Grand Central Pkwy.
Las Vegas, NV 89155

City of Henderson
Office of the City Clerk
240 Water Street
Henderson, NV 89015

CC Regional Justice Center
200 Lewis Ave.
Las Vegas, NV 89155

RTC
600 S. Grand Central Pkwy.
Las Vegas, NV 89106

RTC Website
www.rtcsnv.com

Nevada Public Notice
https://notice.nv.gov

BY:

DocuSign Envelope ID: 06B859F9-0167-4C47-9DFA-52F5CA5241C0
Item 2 is an item for possible action. Items 1 and 3 through 6 are discussion items and no action can be taken. Please be advised that the Bus Shelter and Bench Advisory Committee has the discretion to take items on the agenda out of order, combine two or more agenda items for consideration, remove an item from the agenda or delay discussion relating to an item on the agenda any time.

1. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

2. APPROVAL OF THE MINUTES: Meeting of February 21, 2019 (FOR POSSIBLE ACTION)

3. RECEIVE AN INFORMATIONAL PRESENTATION REGARDING RIDERSHIP DATA

4. RECEIVE AN INFORMATIONAL PRESENTATION REGARDING THE FEDERAL GRANT RECEIVED BY THE CITY OF LAS VEGAS AND THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA TO DEVELOP A TRANSPORTATION PLAN IN THE LAS VEGAS MEDICAL DISTRICT

5. RECEIVE AN INFORMATIONAL PRESENTATION REGARDING THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA’S LIGHTS CAMERA ACTION CAMPAIGN

6. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

| During the initial Citizens Participation, any citizen in the audience may address the Committee on an item featured on the agenda. During the final Citizens Participation, any citizens in the audience may address the Committee on matters within the Committee’s jurisdiction, but not necessarily featured on the agenda. No vote can be taken on a matter not listed on the posted agenda; however, the Committee can direct that the matter be placed on a future agenda.

  Each citizen must be recognized by the Chair. The citizen is then asked to approach the microphone at the podium, to state his or her name, and to spell the last name for the record. The Chair may limit remarks to three minutes’ duration, if such remarks are disruptive to the meeting or not within the Committee’s jurisdiction.

  The Regional Transportation Commission of Southern Nevada keeps the official record of all proceedings of the meeting. In order to maintain a complete and accurate record, copies of documents used during presentations should be submitted to the Recording Secretary.

  The Regional Transportation Commission of Southern Nevada appreciates the time citizens devote to be involved in this important process. |

In compliance with Nevada Revised Statute 241.035(4), the Regional Transportation Commission of Southern Nevada shall create an audio and/or video recording of the meeting and retain such recording(s) for the required period of time.

| The Regional Transportation Commission of Southern Nevada Meeting Room and Conference Room are accessible to the disabled. Assistive listening devices are available for the hearing impaired. A sign language interpreter for the deaf will be made available with a forty-eight hour advance request to the Regional Transportation Commission of Southern Nevada offices. Phone: (702) 676-1500 TDD (702) 676-1834 |

Any action taken on these items is advisory to the Regional Transportation Commission of Southern Nevada.
REGIONAL TRANSPORTATION COMMISSION
OF
SOUTHERN NEVADA

AGENDA ITEM

<table>
<thead>
<tr>
<th>Metropolitan Planning Organization</th>
<th>Transit</th>
<th>Administration and Finance</th>
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<tbody>
<tr>
<td>SUBJECT: CITIZENS PARTICIPATION</td>
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<tr>
<td>PETITIONER: TINA QUIGLEY, CHIEF EXECUTIVE OFFICER</td>
<td>REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA</td>
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<tr>
<td>RECOMMENDATION BY PETITIONER: THAT THE BUS SHELTER AND BENCH ADVISORY COMMITTEE CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION</td>
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<tr>
<td>GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM</td>
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FISCAL IMPACT:
None

BACKGROUND:
In accordance with State of Nevada Open Meeting Law, the Regional Transportation Commission of Southern Nevada (RTC) Bus Shelter and Bench Advisory Committee (Committee) shall invite interested persons to make comments. For the initial Citizens Participation, the public should address items on the current agenda. For the final Citizens Participation, interested persons may make comments on matters within the Committee’s jurisdiction, but not necessarily on the current agenda.

No action can be taken on any matter discussed under this item, although the Committee can direct that it be placed on a future agenda.

Respectfully submitted,

M.J. MAYNARD
Deputy Chief Executive Officer

BSBAC Item #1
April 18, 2019
Non-Consent
MINUTES
BUS SHELTER AND BENCH ADVISORY COMMITTEE
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
FEBRUARY 21, 2019

These minutes are prepared in compliance with NRS 241.035. Text is in summarized rather than verbatim format. For complete contents, please refer to meeting recordings on file at the Regional Transportation Commission.

THIS MEETING WAS PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS ON FEBRUARY 13, 2019

Clark County Government Center
500 S. Grand Central Pkwy.
Las Vegas, NV 89155

City of Henderson
Office of the City Clerk
240 Water Street
Henderson, NV 89015

CC Regional Justice Center
200 Lewis Ave.
Las Vegas, NV 89155

RTC
600 S. Grand Central Pkwy.
Las Vegas, NV 89106

RTC website
www.rtcsnv.com

Nevada Public Notice
https://notice.nv.gov

CALL TO ORDER
Ms. Erin Breen, Chair, called the meeting to order at 3:03 p.m. in Meeting Room 108 of the Regional Transportation Commission of Southern Nevada Administration Building.

MEMBERS PRESENT:
Erin Breen, Chair
Shannon Ahartz, Vice-Chair
Ace Acosta
Audrey Asselin
Briceida Castro
Chris Lujan
Sgt. Robert Stauffer
Bill Redfairn
Rick Skipton

MEMBERS ABSENT:
Robert Lee

RTC STAFF:
David Swallow, Senior Director of Engineering and Technology
Carl Scarbrough, Director of Transit Advertising and Amenities
Ellen Marciel, Manager of Transit Advertising and Amenities
Ron Floth, Bicycle and Community Outreach Coordinator
Marin DuBois, Management Analyst

INTERESTED PARTIES:
Ken Ackeret, Kimley-Horn
Chelsie Kakaula, Kimley-Horn
Niel Rohleder, Sierra Transportation and Technology
Matt Robson, Sierra Transportation and Technology
Ian Duddy, Tara Precision

BSBAC Item #2
April 18, 2019
Non-Consent
<table>
<thead>
<tr>
<th>Item: 1.</th>
<th><strong>CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Comments:</strong></td>
<td>No comments were made.</td>
</tr>
<tr>
<td><strong>Motion:</strong></td>
<td>No motion was necessary.</td>
</tr>
<tr>
<td><strong>Vote/Summary:</strong></td>
<td>No vote was taken.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Item: 2.</th>
<th><strong>APPROVAL OF THE MINUTES: Meeting of December 20, 2018 (FOR POSSIBLE ACTION)</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Comments:</strong></td>
<td>No comments were made.</td>
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<tr>
<td><strong>Motion:</strong></td>
<td>Mr. Shannon Ahartz made a motion to approve the minutes.</td>
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<tr>
<td><strong>Vote/Summary:</strong></td>
<td>9 Ayes, 0 Nays. The motion carried.</td>
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<tr>
<td>Nays:</td>
<td>None</td>
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<tr>
<td>Absent:</td>
<td>Robert Lee</td>
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<tr>
<th>Item: 3.</th>
<th><strong>RECEIVE AN UPDATE ON THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA’S MARYLAND PARKWAY PROJECT</strong></th>
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<tbody>
<tr>
<td><strong>Comments:</strong></td>
<td>Following a detailed PowerPoint presentation [attached], Mr. David Swallow, Senior Director of Engineering and Technology for the Regional Transportation Commission of Southern Nevada (RTC), presented an update on the RTC’s Maryland Parkway Project. He began with an overview of the route, highlighting the different hubs and key institutions connected by the 8.7-mile project. The route starts at McCarran International Airport (Airport), extends north along Maryland Parkway, connecting the Bonneville Transit Center, Downtown Las Vegas (Downtown), and the University of Nevada, Las Vegas (UNLV) main campus and the UNLV medical school campus in the Las Vegas Medical District. Mr. Swallow noted that the route is one of the most productive routes in the transit system, second only to the Las Vegas Strip, in terms of passengers and fare box recovery, and connects to 25 of the 39 routes in the transit system. It provides the most direct route from the Airport to Downtown, providing an opportunity to move tourists, as well as serving major employers such as the Airport, UNLV, and the Las Vegas Medical District. In terms of regional connectivity, the route connects to various regional lines at the Bonneville Transit Center. Next, Mr. Swallow reviewed the different improvement options available, since, despite being the most productive route, it is also the slowest in the system. He said the inefficiency is due to multiple factors including the high level of demand, congestion, and the number of stops along the route. He explained that the underlying goal of the different options is to improve route efficiency with minimal capital investment. First, Mr. Swallow introduced an Enhanced Route 109 option, which would increase the distance between bus stops to one-third of a mile apart, thereby reducing the number of stops and the route’s length of time. He noted that this strategy was successfully implemented on other routes such as the...</td>
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Boulder Highway route, Sahara Avenue, and Flamingo Road. According to Mr. Swallow, all the examples he gave had seen an increase in ridership following the reduction of the number of the bus stops along the routes. He showed a rendering of the Enhanced Route 109 improvements and said it would include some additional amenities such as new bus shelters, benches, and garbage cans. The capital investment would be minimal and would result in an approximately 10 percent increase in ridership and a 5 percent travel time reduction.

The second option, Mr. Swallow continued, was Bus Rapid Transit (BRT), which would convert two of the six travel lanes to dedicated bus lanes. The goal of this option is to emulate light-rail-type buses and allow buses to move more freely. In order to maintain the traffic capacity, cars would still be allowed to use the dedicated bus lanes to make right turns. Right turn lanes would be added at intersections where most of the bottlenecks occur. The benefit of this option is that transit would move faster. He said the projected increase in ridership would be from 30 to 40 percent.

Mr. Rick Skipton asked for more detail on the additional bike lanes, sidewalk width reduction, and moved light posts. Mr. Swallow explained that the changes include adding separated bike lanes located behind the curb that are level with the sidewalk. The separated bike lanes create a distinctive space and buffer for the cyclists and protect them from traffic. He added that it would create a different pedestrian experience and add to cyclists’ safety. It also creates a buffer between traffic and the pedestrians.

Mr. Skipton asked why the bike lanes were not included as part of the design in the Enhanced Route 109 option. Mr. Swallow said it was mostly due to trying to contain costs. The projected cost for the Enhanced Route 109 option is $25 million with $15 million earmarked for new replacement buses and the rest for facilities. By comparison, the BRT option has an estimated cost of $335 million, primarily due to the length of the route and the intensive roadway improvements needed.

Mr. Skipton asked what the additional cost would be to incorporate bicycle lanes into Option 1. Mr. Swallow responded that he did not have that figure, but that it would probably be a significant cost increase, and that simply adding the bicycle lanes would not improve bus transit operations.

Vice-Chair Shannon Ahartz asked if the BRT option would require more right-of-way. Mr. Swallow responded that it would require an additional two to three feet on each side of the right-of-way.

Mr. Ron Floth, Bicycle and Community Outreach Coordinator for the RTC, asked if the bike lanes would be level with the sidewalk. Mr. Swallow confirmed and explained that it was due to the lanes being behind the curb. He added that it would also help pedestrians getting on or off the bus. The bike lanes would be paved with asphalt for a smoother ride and delineate the area for pedestrians and cyclists.

Ms. Audrey Asselin inquired about the bike lanes’ width. Mr. Swallow responded that the bike lanes would be approximately four to five feet wide.

Mr. Floth asked if there would be rolled curbs. Mr. Swallow said there would not be any rolled curbs and that cyclists would need to exit at a driveway.

Chair Erin Breen asked if that was a safe option. Mr. Swallow said that design pushes cyclists into the sight angle, and pavement markings would be added to inform drivers to look out for pedestrians and cyclists.
Chair Breen asked whether bicyclists on the proposed bike lanes would be treated as vehicles and be required to ride with traffic or if they would be considered pedestrians. Currently, cyclists who ride on sidewalks are not cited. She suggested that it may require statutory changes in order to regulate their activity if they are placed in a pedestrian area instead of on a road. Mr. Swallow said directional pavement markings would be placed on the bicycle lanes. Mr. Bill Redfairn added that bicycles would not be considered vehicles. Sgt. Robert Stauffer responded that bicycles are required to follow vehicular laws when on the roads, but are not doing so. He also said it would be difficult to enforce direction of travel. Mr. Redfairn said that moving the bicycles to the pedestrian side and away from traffic might require some legislative changes since cyclists are expected to comply with vehicular laws. Chair Breen agreed with Mr. Redfairn’s recommendation. Mr. Swallow advised against pushing for legislative action, citing the amount of time before any construction begins, and he recommended getting input from the bicycling community. Mr. Redfairn said most of the issues would not arise from the bicycle community, but rather, from casual or young cyclists. The statutory changes would simply allow law enforcement agencies to police the riders. Mr. Floth said that cyclists currently do not follow direction of travel on existing bike lanes despite it being illegal since it is on the roadway. Mr. Skipton said the new lanes would be similar to bike trails where cyclists are not required to follow direction of travel. Chair Breen said her primary concern is safety. Ms. Asselin said that for her agency, the issue stems from previous projects where the bicyclists continued to use the highways and roadways despite the availability of bike trails. The new bike lanes would still not offer a complete solution since there is the probability that some cyclists would continue mixing with traffic.

Mr. Chris Lujan asked for clarification on the integration of bus shelters. Mr. Swallow responded that the shelters would generally be located behind the sidewalk to allow for unobstructed movement and would include pavement markings to caution cyclists to yield to pedestrians. He noted that cyclists in general know to yield to bus traffic, and he again recommended getting input from the bicycling community regarding the best way to address some of the issues raised by the discussion. Vice-Chair Ahartz suggested speaking with the City of Henderson, which already has raised bike lanes, for recommendations.

Mr. Redfairn asked about the decision to use the color green for the bike lanes. Mr. Swallow said that it was a standardized color commonly used on bike lanes to increase visibility. It was applied on some of the Downtown bike lanes with positive results in keeping vehicles from driving in the bike lanes.

Mr. Swallow resumed the presentation by discussing the third option, light rail (LRT) or modern street car, which was recommended based on the ridership densities along the Maryland Parkway Route. He compared the travel times for each option, saying the Enhanced Bus Route 109 would take 44 minutes, BRT would be 38 minutes, and LRT would be 32 minutes. The time saved with the LRT option comes from the decrease in time spent on mobility device boarding. Currently, loading people on mobility devices using a ramp can add two to three minutes per stop. Since the train would be level with the sidewalk, there would not be a need to use a ramp, thus reducing the loading or unloading time. Securement on trains would also be less labor intensive and faster. He noted the similarities to the BRT option, which includes converting two of the existing lanes, adding the separated bike lanes, and allowing vehicles to use the LRT lanes for turning. This option is projected to increase ridership by approximately 60 percent and would potentially draw more development along the rail line.

Mr. Swallow summarized the costs, ridership, and travel timesavings of each option. He said the current projected capital costs was as follows: $15 million for Route 109 Improvements; $30 million for Enhanced Bus Route 109; $335 million for BRT; and $750 million for LRT. He also noted that the LRT option would produce a significant increase in the annual operations budget.
Mr. Skipton asked if it would be possible to implement the BRT option first and then upgrade to the LRT at a future time. Mr. Swallow responded that doing so would cost more since it would require doing some of the corridor prep work such as relocating the utilities as part of the BRT option, a cost which is not factored in to the current estimate, or doing the prep work and interrupting service at a future date. He also said that politically it might be difficult to gain support for two large expenditures in a short time period given other needs within the transit system.

Mr. Swallow discussed the public comment period being held between February 4, 2019 and March 7, 2019. He reviewed the different presentations and events scheduled during that time. The RTC wanted to provide as many opportunities for public input as possible by scheduling events at different times and locations. A broadcast via Facebook Live was also done for those who could not attend any of the sessions. The RTC is looking for the community to provide input on which option is preferred. The results of the public comment period will be presented to the RTC Board of Commissioners in order to aide in the selection of the locally preferred alternative. The environmental study is expected to be finalized by the summer of 2019 with engineering activities commencing the following year. He said another important component of the project will be to apply for as much federal funding as possible and match the local contributions that have already been secured.

Mr. Redfairn asked if the possibility of receiving federal funding and then having that funding pulled, like in California, had been discussed. Mr. Swallow said that the California situation was a unique one that resulted from changes made to the design not in the original contract and that RTC is mostly applying for federal grants. Mr. Redfairn asked whether those grants were less likely to be pulled. Mr. Swallow clarified that once a grant is awarded, there is a binding contract in place that cannot easily be reneged on without cause. It is a possibility, but not a very likely one.

Chair Breen asked if the public presentations included any information on the transit-oriented development (TOD) and the benefits that the LRT could produce. Mr. Swallow said that the RTC does not want to over speculate. The focus is mostly on mobility.

**Motion:**
No motion was necessary.

**Vote/Summary:**
No vote was taken.

**Item:**
4. RECEIVE AN INFORMATIONAL PRESENTATION REGARDING THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA’S BICYCLE PEDESTRIAN PLAN

**Comments:**
Following a detailed PowerPoint presentation [attached], Mr. Ron Floth, Bicycle and Community Outreach Coordinator for the Regional Transportation Commission of Southern Nevada (RTC), provided an overview of the RTC’s Bicycle Pedestrian Plan. Mr. Floth reviewed the project’s timeline, saying the RTC updated the 2008 Bicycle Pedestrian Plan on May 2017. The 18-month study involved input from advisory groups and stakeholders from all over the Las Vegas Valley. It identified the existing network (868 miles) and created a plan for a larger bicycle network that would total 2,023 miles once built out. He said that the City of North Las Vegas is currently holding public input meetings and has open online surveys as part of its citywide bike and pedestrian plan. In terms of facilities, North Las Vegas has 24 miles of bike lanes, 4.1 miles of shared bus bike lanes, 26 miles of shared use paths, and 5.7 miles of side path. The RTC bike map confirms an overall lack of bicycle facilities in north and southwest Las Vegas.
Next, Mr. Floth referred to the Deer Springs District Livable Centers Study (Study), which is looking to create a 2.5-mile job creation zone with bicycle lanes and dense living areas. He said one of the recommendations coming from the Study meetings is to create neighborhoods without walls around the communities, which prevent children from walking and riding to school. Developers interested in the Study are already committed to the design change.

Then, Mr. Floth talked about the possibility of the City of North Las Vegas applying for a Bicycle Friendly Community Designation. He explained that the designation is given by the League of American Bicyclists. Other cities in the region have received the designation at varying levels. He said going through the application process can help cities identify areas of improvement towards becoming more bicycle friendly. Mr. Rick Skipton mentioned that he had requested the application be included as part of the Citywide Bike and Pedestrian Plan when it is presented to the City of North Las Vegas City Council. Mr. Floth explained that some of the benefits of being a bicycle friendly city include increased safety; promotes healthy active transportation; more attractive cities to live, work, and play; and increases transit accessibility.

Ms. Briceida Castro thanked Mr. Floth for showing the RTC bike map because it provided a good visual of the different trails. She asked what he recommended for next steps. Mr. Floth said that agencies are actively trying to install bike lanes on streets undergoing re-surfacing and where there is sufficient right of way. Ms. Castro also asked if it would be possible for the public to request bike lanes as part of the comment period for the Citywide Bike and Pedestrian Plan. Mr. Floth said residents could make suggestions and details are available on the website. He added that the RTC map is online.

Mr. Skipton asked if any plans were made to account for the potential increase in bus/bicycle riders. Mr. Floth said additional bike racks were added to the buses, especially in North Las Vegas. He noted a trend in people using bicycles for first- and last-mile commutes. The question of having bicycles and scooters on the buses was discussed, but posed space issues. Foldable electric scooters and bicycles are permitted on buses so long as they fit under the seat.

Ms. Audrey Asselin asked if more bike lanes would increase the number of first- and last-mile commutes and whether people were using the bus because of safety concerns with the bike lanes. Mr. Floth said there would probably be an increase and that the use was mostly to make connections on long commutes versus any safety concerns. Ms. Asselin followed up by asking whether people would use bike lanes if they provided safer and faster access than riding the bus. Mr. Floth said that shared bike paths would probably be the ideal solution since safety is the primary concern for cyclists. It is part of the reason people ride on sidewalks. He also noted that the City of North Las Vegas is the only city in the region that has an ordinance prohibiting bicycles from using sidewalks. The majority of the other cities, including the City of Henderson, do not prohibit it.

Motion: No motion was necessary.

Vote/Summary: No vote was taken.

Item: RECEIVE AN INFORMATIONAL PRESENTATION REGARDING THE STATUS OF THE BUS STOP BOLLARDS PILOT PROGRAM

Comments: Following a detailed PowerPoint presentation [attached], Dr. Ken Ackeret, Kimley-Horn, provided an update on the Bus Stop Bollard Pilot Program (Program). He explained that the Program is in the site
selection phase to determine which 20 Regional Transportation Commission of Southern Nevada (RTC) bus stops will be included in the Program. The bus stops will be varied, including stops with only benches, stops with bus shelters, and stops set back from the street. The selection criteria are based on vehicle volume, speed of adjacent roadways, ridership volumes, frequency of service, and the number of crashes occurring at the bus stop.

Next, Dr. Ackeret remarked that the bollard type will be selected according to American Society for Testing and Materials (ASTM) Standards. It will probably have an M50 designation, meaning it can withstand the impact of a 15,000-pound truck traveling at 50 miles per hour, and a P1 designation that means it does not pass the bollard by more than one meter. Bollards with an M30 designation are also under consideration, which is similar to the M50, but lighter and can withstand less impact.

Mr. Rick Skipton asked if the bollards were designed to bend on impact instead of shearing off. Dr. Ackeret confirmed the bollards are intended to stop vehicles and bend. It would depend on installation since they are drilled into the ground. Others such as an L-shape bollard require a shallower installation, but still bend. Since multiple bollards are installed, it is likely that a vehicle will hit more than one bollard, which will stop the vehicle and offer more protection. The standards are based on Department of Defense (DOD) standards, which are slowly replacing ASTM standards.

Mr. Bill Redfairn asked about the rating for the bollards installed on the Las Vegas Strip. Dr. Ackeret responded that the bollards were rated M50 P1, which is the gold standard. In addition to the bollard designation, the Program will also consider the design. The bollard can be designed according to the angle in which the bollard is hit. This would allow for different combinations of bollards. For example, having two 90-degree M50 P1 bollards at each end and lighter bollards in the middle. The geometry of the roadway will also be factored into potential placement.

Mr. Redfairn asked if the different scenarios would be calculated using computer modeling. Dr. Ackeret responded that the vector analysis is done using simple geometry. An engineering analysis would be done for the design and impact, a bending analysis for example. This is meant to be a high-level analysis to explore the best options available and possible combinations. Mr. Redfairn asked if this would be done through the vector analysis. He confirmed it would be based on the vector analysis and the different variables. There will not be a one size fits all. It’s more about determining a series of available options. Other variables that they will have to consider is Americans with Disabilities Act (ADA) and Public Right-of-Way Accessibility Guidelines (PROWAG) compliance, bus design and bollards that would permit for rapid installation to minimize service disruption. Ms. Ellen Marciel, Manager of Transit Advertising and Amenities for the RTC, noted that one of the bollards with reflectorized tape that was shown could be easily installed and maintained by RTC staff. The selection process will narrow down all existing bus stops to the top 100 by March 4, 2019. The top 20 will be selected from those top 100. The project will then look at planning, bollard specifications, and construction estimates.

Chair Erin Breen asked if the Kimley-Horn team had access to all the bus stop data compiled by the RTC. Mr. Carl Scarbrough, Director of Transit Advertising and Amenities for the RTC, confirmed that the team has access to all the data, including information on two recent incidents. He noted that the Kimley-Horn team would do its own measurement of utilities.

Mr. Redfairn asked if the stop located at Buffalo Drive and Lone Mountain Road was under consideration given the current construction. Mr. Scarbrough said that by the time the project was fully underway, construction would be completed.
Ms. Audrey Asselin asked if the bollards located along the Las Vegas Strip had a shallow foundation and if any had been hit. Dr. Ackeret said the majority had a shallow foundation due to the utilities located along the right-of-way. A few have been hit by a passenger bus and a car and produced scratches and scrapes, but no damage to the bollard.

Ms. Asselin asked if it would be better to angle the bollards versus placing them at 90-degree angles given the probability of how a car would hit them. Dr. Ackeret said that the steel rebar tying each bollard together underneath helps absorb the impact. Bollards with a deeper foundation would withstand impact at any angle.

Chair Breen asked if different bollard designs are being considered since not all bus stops are the same. Dr. Ackeret said the team will start with the three basic bus stop designs for general configurations. All bus stops have their different variables that will be considered as part of the analysis.

Ms. Asselin added the program is a pilot and more of a starting point. Mr. Scarborough said the goal is to include bus stops from all the cities so as to be able to have conversations about next steps once the pilot is completed. He said that the idea of having a rigid object goes counter to the traditional idea of what goes on the roadway. Mr. Chris Lujan added that the Program can lead to a more collaborative review process for future major projects.

**Motion**
No motion was necessary.

**Vote/Summary:**
No vote was taken.

**Item:**
7. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

**Comments:**
No comments were made.

**Motion:**
No motion was necessary.

**Vote/Summary:**
No vote was taken.

**ADJOURNMENT**

The meeting adjourned at 4:41 p.m.

Respectfully submitted,

Marin DuBois, Recording Secretary

Marek Biernacinski, Transcription Secretary
PROPOSED ROUTE

- Downtown to Airport
- 8.7-Miles
- Technology Options:
  - Enhanced Bus
  - Bus Rapid Transit
  - Urban Light Rail
- 25 Station Locations
  0.35-mile spacing
WHAT IS BEING CONSIDERED?

Enhanced Route 109  Bus Rapid Transit (BRT)  Light Rail (LRT)

ENHANCED ROUTE 109
## BENEFIT / COST COMPARISON

<table>
<thead>
<tr>
<th></th>
<th>Existing Route 109</th>
<th>Enhanced Route 109</th>
<th>BRT Build Alternative</th>
<th>LRT Build Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ridership (opening year)</td>
<td>9,000</td>
<td>10,000</td>
<td>13,300</td>
<td>16,100</td>
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<td>Average travel time (min)</td>
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<td>Capital cost (YOE $)</td>
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<td>$29M</td>
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<td>O&amp;M cost per boarding</td>
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<td>$2.27</td>
<td>$1.80</td>
<td>$2.38</td>
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## JOIN US

**Public Comment Period: Feb. 4 – March 7**

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<thead>
<tr>
<th>Presentation</th>
<th>Open House</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wednesday, Feb. 20</strong> 4 – 6 p.m. *</td>
<td><strong>Friday, Feb. 22</strong> 11 a.m. – 3 p.m. The Boulevard Mall</td>
</tr>
<tr>
<td>RTC Administrative Building</td>
<td>The Boulevard Mall</td>
</tr>
<tr>
<td><strong>Wednesday, Feb. 27</strong> 4 – 6 p.m. Historic Fifth Street School</td>
<td><strong>Tuesday, Feb. 26</strong> 11 a.m. – 3 p.m. UNLV Student Union</td>
</tr>
<tr>
<td><strong>Thursday, Feb. 28</strong> 6 – 8 p.m. Cambridge Community Center</td>
<td></td>
</tr>
</tbody>
</table>

* Facebook Live session
NEXT STEPS

- Public Comment Period (Feb. 4 – March 7)
- Review community input & present to RTC Board
- RTC Board adopts Locally Preferred Alternative
- Begin preliminary engineering
- Begin corridor enhancements

PROVIDE YOUR COMMENT TODAY

rtcsnv.com/Maryland-Parkway

We need your feedback

Maryland Parkway transportation project environmental assessment now available for review. Tell us what you would like to see implemented on Maryland Parkway:
- Enhance bus route 109
- Bus rapid transit
- Light rail

Submit your comment by Thursday, March 7, 2018
OTHER WAYS TO PROVIDE FEEDBACK

• **ONLINE:** rtcnv.com/Maryland-Parkway

• **EMAIL:** onboardsnv@rtcnv.com

• **FAX:** 702.676.1589

• **MAIL:**
  
  ATTN: Maryland Parkway transportation project
  
  600 S. Grand Central Pkwy, Suite 350
  
  Las Vegas, NV 89106
RTC Bicycle Initiatives

2017 Regional Bicycle and Pedestrian Plan

- Update to 2008 Bike/Ped Plan
- 18 month study involving advisory groups and stakeholders
- Adopted in May 2017 by RTC Board
- 868 total miles in existing network
- 2023 total miles in proposed network
North Las Vegas Citywide Pedestrian & Bicycle Plan

- Stakeholder meetings being held
- Interactive Public Input Map now Online
- Public Online Survey Open
- Alta Planning and Design

North Las Vegas Citywide Pedestrian & Bicycle Plan

- North Las Vegas Current Bicycle Facilities
  - 24 miles of bicycle lanes
  - 4.1 miles of shared bus/bicycle lanes
  - 26.4 miles of shared use paths
  - 5.7 miles of sidepaths
DEER SPRINGS DISTRICT LIVABLE CENTERS STUDY

- Quality, walkable, mixed-use places
- Increase multi-modal travel choices
- Improve environmental quality
- Promote economic development, housing choices, and better health outcomes
Bicycle Friendly Community Designation?

- North Las Vegas only city in Valley not yet recognized

Designations
Bicycle Friendly Community Benefits

Bike facilities increases safety
Cities are more attractive
Healthy active transportation
Accessibility to transit
Potential to be a world class cycling region

BICYCLE FRIENDLY AMERICA
Bicycle Friendly Community » Bicycle Friendly Business » Bicycle Friendly University

THE LEAGUE OF AMERICAN BICYCLISTS
BRONZE
BICYCLE FRIENDLY COMMUNITY
2017-2021
THE LEAGUE OF AMERICAN BICYCLISTS
CITY OF NORTH LAS VEGAS
RTC
RTC Bus Stop Bollards
Site Selection
February 21, 2019

Ken Ackeret, Ph.D., P.E., PTOE

Site Selection

- RTC pilot project to install bollards at up to 20 bus stops throughout the Las Vegas Valley
- Bus stops will be spread out amongst different jurisdictions
- Bus stops will cover different bus stop configurations

- Bench only
- Bus Shelter in Sidewalk
- Bus Shelter behind Sidewalk
Site Selection

Criteria
- Vehicle Volume per Day (VPD) of roadway adjacent to bus stop
- Speed of vehicles of roadway adjacent to bus stop
- Bus stop ridership volume
- Frequency of bus service
- Number of crashes at bus stop

Bus Stop #1332 (Paris)

Bollard Design
- Bollards to be crash-rated: M50 P1 or M30 P1 rating
- ASTM (American Society for Testing and Materials) F2656

M50  P1

50 MPH  less than 1 meter (3.3 feet) of penetration

15,000-lb vehicle
Bollard Design

- Bollard rating selection will be based on the following:
  - Angle of impact
  - Speed
  - Roadway and sidewalk geometry
  - Other site factors

Other Considerations

- Shallow bollards - 12” depth of removal, reduces utility conflicts
- Bollard separation to meet 48” PROWAG clearance
- Bollard spacing to accommodate bus doors
- ADA bus ramp access
- Rapid construction methods to limit bus stop closure time
## Schedule

### Where we are at

<table>
<thead>
<tr>
<th>Task</th>
<th>Duration</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notice to Proceed (NTP)</td>
<td>-</td>
<td>01/09/19</td>
</tr>
<tr>
<td>1. Site Selection: Data Collection and Site Survey</td>
<td>3 months</td>
<td>04/09/19</td>
</tr>
<tr>
<td>1.1 Currently narrowing down</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3300 bus stops to 100 by 3/4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 bus stops to final 20 by 4/9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Plans, Specifications and Estimate</td>
<td>3 months</td>
<td>07/09/19</td>
</tr>
<tr>
<td>3. Permits</td>
<td>2 months</td>
<td>09/09/19</td>
</tr>
<tr>
<td>4. Bollard Installation</td>
<td>2 months</td>
<td>11/09/19</td>
</tr>
<tr>
<td><strong>Total Duration</strong></td>
<td><strong>11 months</strong></td>
<td></td>
</tr>
</tbody>
</table>
Questions

Ken Ackeret, Ph.D., P.E., PTOE

6671 Las Vegas Blvd South, Suite 320
Las Vegas, NV 89119
Direct: 702-862-3601
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

<table>
<thead>
<tr>
<th>SUBJECT:</th>
<th>RTC RIDERSHIP STATISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PETITIONER:</td>
<td>TINA QUIGLEY, CHIEF EXECUTIVE OFFICER</td>
</tr>
<tr>
<td></td>
<td>REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA</td>
</tr>
<tr>
<td>RECOMMENDATION BY PETITIONER:</td>
<td>THAT THE BUS SHELTER AND BENCH ADVISORY COMMITTEE (BSBAC) RECEIVE AN INFORMATIONAL PRESENTATION REGARDING RIDERSHIP DATA</td>
</tr>
<tr>
<td>GOAL:</td>
<td>ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM</td>
</tr>
</tbody>
</table>

FISCAL IMPACT:

None

BACKGROUND:

The Regional Transportation Commission of Southern Nevada’s (RTC) Transit Planning Department has compiled recent data for the entire fixed route system showing ridership and productivity by hour and day of the week. The data shows interesting trends that RTC staff will highlight and discuss with the Bus Shelter and Bench Advisory Committee.

Respectfully submitted,

M.J. MAYNARD
Deputy Chief Executive Officer
AGENDA ITEM

SUBJECT: GO MED FEDERAL GRANT

PETITIONER: TINA QUIGLEY, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE BUS SHELTER AND BENCH ADVISORY COMMITTEE (BSBAC) RECEIVE AN INFORMATIONAL PRESENTATION REGARDING THE FEDERAL GRANT RECEIVED BY THE CITY OF LAS VEGAS AND THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA TO DEVELOP A TRANSPORTATION PLAN IN THE LAS VEGAS MEDICAL DISTRICT

GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

FISCAL IMPACT:

None

BACKGROUND:

The Regional Transportation Commission of Southern Nevada in partnership with the City of Las Vegas are the recipients of a United States Department of Transportation (USDOT) Better Utilizing Investments to Leverage Development (BUILD) grant for the Las Vegas Medical District Automated Circulator and Pedestrian Safety Project, or GoMed. The purpose of GoMed is to develop an autonomous shuttle circulator that would connect Downtown Las Vegas with the Las Vegas Medical District. The project will demonstrate the ability to apply automated technology in a complex urban setting and enhance pedestrian safety. The Bus Shelter and Bench Advisory Committee will receive a presentation regarding the GoMed project.

Respectfully submitted,

M.J. MAYNARD
Deputy Chief Executive Officer

BSBAC Item #4
April 18, 2019
Non-Consent
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

<table>
<thead>
<tr>
<th>Metropolitan Planning Organization</th>
<th>Transit</th>
<th>Administration and Finance</th>
</tr>
</thead>
</table>

**SUBJECT:** LIGHTS CAMERA ACTION CAMPAIGN

**PETITIONER:** TINA QUIGLEY, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

**RECOMMENDATION BY PETITIONER:** THAT THE BUS SHELTER AND BENCH ADVISORY COMMITTEE (BSBAC) RECEIVE AN INFORMATIONAL PRESENTATION REGARDING THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA’S LIGHTS CAMERA ACTION CAMPAIGN

**GOAL:** ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

**FISCAL IMPACT:** None

**BACKGROUND:**

Bus stop safety is always at the forefront of the Regional Transportation Commission of Southern Nevada’s (RTC) activities. The RTC’s Government Affairs, Media and Marketing team put together a media campaign, called “Lights Cameras Action,” spotlighting the RTC’s efforts to keep its bus stops as safe as possible. The Bus Shelter and Bench Advisory Committee will receive a presentation regarding this new campaign.

Respectfully submitted,

M.J. MAYNARD
Deputy Chief Executive Officer

Respectfully submitted,

M.J. MAYNARD
Deputy Chief Executive Officer

BSBAC Item #5
April 18, 2019
Non-Consent
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

<table>
<thead>
<tr>
<th>Metropolitan Planning Organization</th>
<th>Transit</th>
<th>Administration and Finance</th>
</tr>
</thead>
</table>

SUBJECT: CITIZENS PARTICIPATION

PETITIONER: TINA QUIGLEY, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE BUS SHELTER AND BENCH ADVISORY COMMITTEE CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

FISCAL IMPACT:

None

BACKGROUND:

In accordance with State of Nevada Open Meeting Law, the Regional Transportation Commission of Southern Nevada (RTC) Bus Shelter and Bench Advisory Committee (Committee) shall invite interested persons to make comments. For the initial Citizens Participation, the public should address items on the current agenda. For the final Citizens Participation, interested persons may make comments on matters within the Committee’s jurisdiction, but not necessarily on the current agenda.

No action can be taken on any matter discussed under this item, although the Committee can direct that it be placed on a future agenda.

Respectfully submitted,

____________________________
M.J. MAYNARD
Deputy Chief Executive Officer

BSBAC Item #6
April 18, 2019
Non-Consent