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Tina Quigley,
General Manager

January 23, 2013

Director Rick Combs
Legislative Counsel Bureau
Administrative Division
401 S. Carson Street
Carson City, NV 89701-4747

SUBJECT: 2012 REGIONAL RAPID TRANSIT AUTHORITY FINAL REPORT

Dear Director Combs,

As Chairwoman of the Regional Rapid Transit Authority Advisory Committee, I am pleased to submit to you the enclosed Regional Rapid Transit Authority Advisory Committee 2012 Final Report. In 2011, the Nevada Legislature approved Senate Bill 151, which called for the Regional Transportation Commission of Southern Nevada to establish a Regional Rapid Transit Authority (the Authority).

The Authority's purpose was to study the issues concerning the development of a regional rapid transit system. As noted in that legislation, the Committee must submit a report on or before February 1 of each year. The Authority met on a bi-monthly basis since November of 2011 and concluded with a final report and recommendations in July of 2012. Please find the attached final report that outlines the activities and meetings of the Authority and its recommendations.

With the enclosed recommendations, the Authority respectfully concurred that the work of the committee was complete and that additional meetings are not needed at this time. Should you have any questions about the Authority or its final report, please contact me directly at quigleyt@rtcsonv.com or by phone at (702) 676-1771.

Sincerely,


TINA QUIGLEY
GENERAL MANAGER

REGIONAL RAPID TRANSIT AUTHORITY ADVISORY COMMITTEE 2012 FINAL REPORT

I. Background

Southern Nevada's transit system is relatively young: public transit service began in December of 1992, when the Regional Transportation Commission of Southern Nevada (RTC) launched the Citizens Area Transit system which was commonly referred to as CAT. In the first full year operation, the system carried 21.8 million riders. Today, the system is known as RTC Transit and served nearly 58 million passengers in 2011.

RTC Transit is among the most efficient and cost effective systems in the nation. In 2008, the Federal Transit Administration's (FTA) National Transit Database, a clearinghouse for transit statistics for systems around the nation, found that the RTC operated the most cost efficient system in the nation. That efficiency is due in large part to the fact that the RTC contracts operation of the entire public transit system to the private sector. This public-private partnership helps to manage costs and that, in turn, allows the RTC to operate a more robust system than the agency could if costs were higher.

Traditional fixed-route transit service typically includes frequent stops, usually every quarter-mile. This service provides passengers the convenience of not having to walk long distances to access service, but it also makes the system much slower than traveling in an automobile. For more than a decade, the RTC has been planning, funding, and constructing a regional rapid transit system to provide faster, more commuter-friendly service that is more competitive with regard to travel time that it takes commuters to drive to work. These services complement the RTC's existing fixed routes that operate throughout the Las Vegas Valley (Valley).

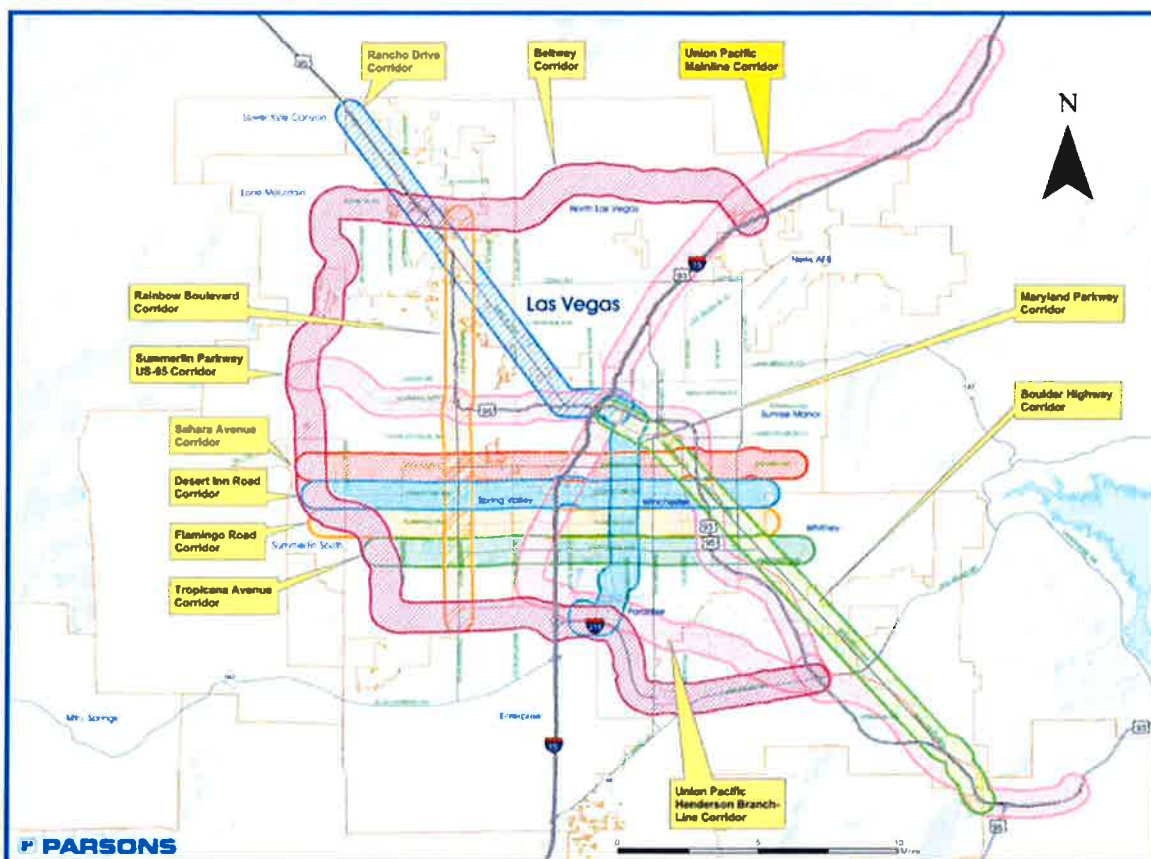
Those efforts began in 2002 when the RTC completed a System Plan (Plan) that identified twelve corridors for rapid transit. Those corridors included: Boulder Highway, Maryland Parkway, the Union Pacific Main line, the 215 Beltway, Rancho Drive, Rainbow Boulevard, Summerlin Parkway/U.S. 95, Sahara Avenue, Desert Inn Road, Flamingo Road, Tropicana Avenue, and the



Union Pacific Henderson Branch line as illustrated in Figure 1. This Plan examined several technologies for consideration including: traditional bus service, bus rapid transit (which includes buses in dedicated transit lanes), at-grade light rail, grade-separated light rail, heavy rail, and automated guideway transit. The Plan narrowed the preferred technologies to bus rapid transit and light rail as most appropriate for the major travel corridors.

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Figure 1: 2002 System Plan



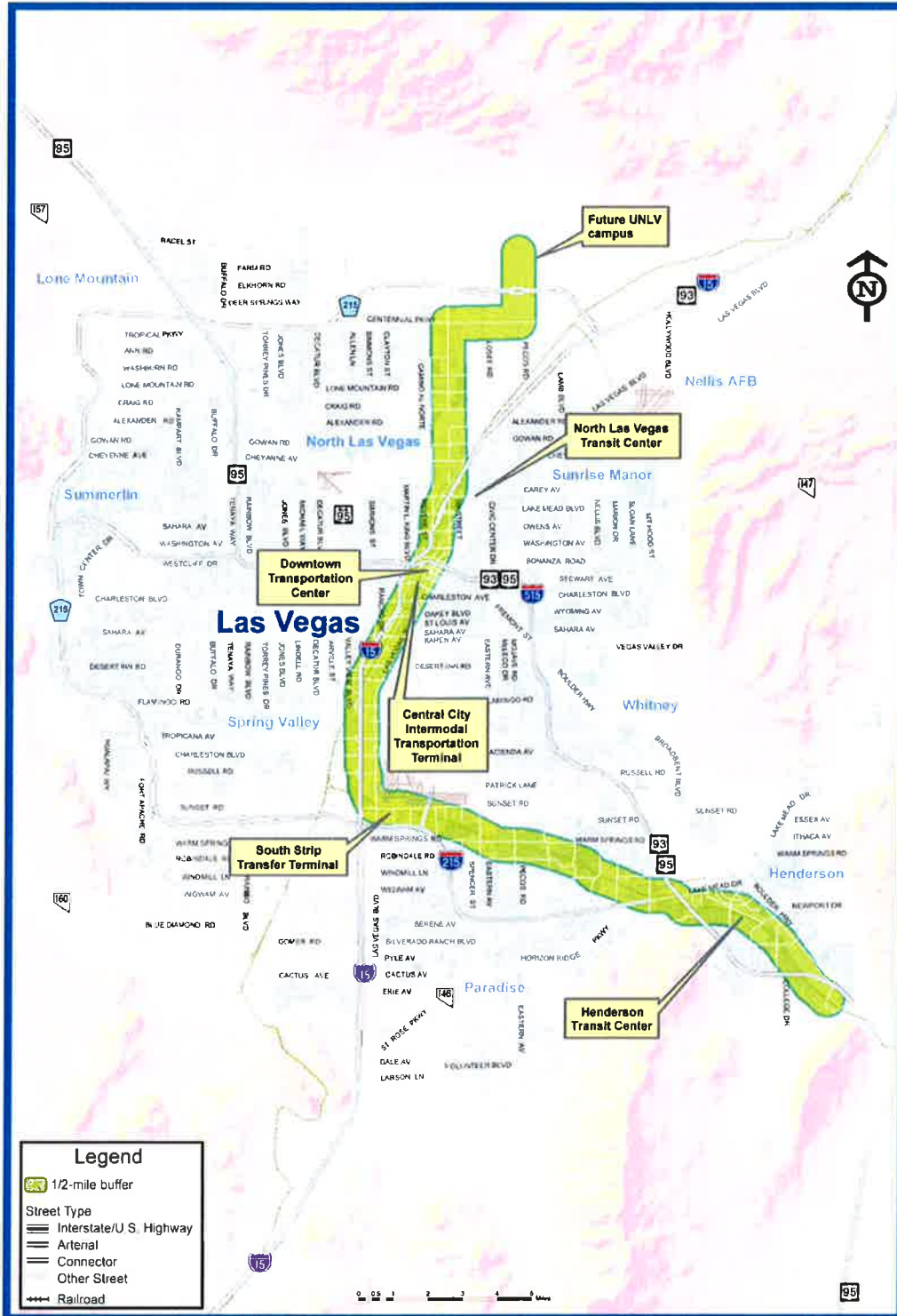
Between 2004 and 2006 the RTC conducted the Regional Fixed Guideway study that was the first of several corridors to be studied in more detail. The study included the development of the Regional Fixed Guideway Steering Committee, an advisory committee to provide input on potential corridors and the preferred technologies for a new rapid transit system. The Steering Committee considered both light rail and bus rapid transit technologies. Following the two-year study, the Steering Committee recommended that the RTC pursue light rail as the preferred technology and the further recommended that the rapid transit system be built along a 33-mile corridor that linked Henderson, the resort corridor, downtown Las Vegas and North Las Vegas as illustrated in Figure 2. At the time that the alternatives analysis was completed, the estimated cost to build the 33-mile corridor as a light rail system was \$488 million. Citing the steep cost and a lack of an ability to pay for the system, in April of 2006 the Regional Transportation Commission Board of Commissioners directed RTC staff to pursue bus rapid transit technology rather than light rail for the new rapid transit system.

Based on additional studies since 2006, the RTC aggressively began an effort to design and construct bus rapid transit lines in the Valley's busiest corridors. Today, the RTC boasts seven express rapid transit services, the newest of which opened for revenue

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service in May of 2012 in the Sahara Avenue corridor. Most of the geographical areas covered by those seven rapid transit lines were identified in the original 2002 System Plan.

Figure 2: Regional Fixed Guideway Corridor



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II. Advisory Committee

Purpose:

In 2011, the Nevada Legislature approved Senate Bill 151, which called for the Regional Transportation Commission of Southern Nevada (RTC) to establish a Regional Rapid Transit Authority (the Authority). The Authority's purpose is to study the issues concerning the development of a regional rapid transit system in Southern Nevada.

Membership:

Based on the direction of the Nevada Legislature, the RTC's General Manager serves as Chair of the Authority. The legislation prescribed the interests that should be represented on the committee. The Authority's current members are listed below:

- RTC General Manager Tina Quigley, Chair. Please note that Ms. Quigley replaced the previous RTC General Manager, Jacob Snow, in March of 2012.
- Clark County Commissioner Chris Giunchigliani
- Las Vegas City Councilman Steve Ross
- North Las Vegas Chamber of Commerce Chief Executive Officer (CEO) Curtis Cummings
- Henderson City Councilwoman Debra March
- Nevada Resort Association President Virginia Valentine
- Nevada Development Authority CEO Somer Hollingsworth
- Nevada Department of Transportation Director Susan Martinovich
- Dr. Robert Fielden, Architect (Representing the Nevada Arts Commission)

Activities & meetings:

The Regional Rapid Transit Authority Advisory Committee has met on a bi-monthly basis since November of 2011. Meeting minutes from each of those meetings are attached in Appendix 1. At the first meeting, held on November 8 2011, committee members were introduced to Mr. Phil Hoffmann with Parsons Transportation Group, the facilitator who would work with the Authority as they studied rapid transit options. Mr. Hoffmann has previously conducted feasibility studies and alternative analyses for a variety of rapid transit studies in Southern Nevada and had served as a facilitator on the Regional Fixed Guideway planning process.

Over the course of nine months, the Authority has studied the need for a rapid transit system in the Valley; the potential technologies, the cost associated with such a system, and implications of developing such a system; and the opportunities and constraints of developing a regional rapid transit system.

Need for a rapid transit system:

The Authority began their work by thoroughly reviewing the previous studies that indicated the need for a rapid transit system in the Valley. Specifically, the committee reviewed the 2002 and 2004 studies that the RTC conducted. As noted in the background section of this report, the RTC's 2002 System Plan identified twelve corridors in the Valley that were viewed as viable corridors for future rapid transit service (see Figure 1).

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The 2004 Regional Fixed Guideway study identified a 33-mile corridor that included the Henderson branch of the Union Pacific Railroad, Las Vegas Boulevard, and a branch extending along North Fifth Street into North Las Vegas (see Figure 2).

RTC staff provided the committee with an overview of the rapid transit lines that the RTC has completed to date, many of which are the corridors identified in the 2002 and 2004 plans. Four transit centers link the Valley's seven express transit routes to provide a network of faster transit connections for the Valley's residents and visitors. The express services were designed with speed and convenience in mind. They span more than 240 miles throughout the Valley and link the area's major employment areas with the most populated residential areas. Routes in operation include:

- Strip & Downtown Express, which links the Las Vegas Strip, downtown Las Vegas, and community, government and cultural facilities;
- Centennial Express, which connects the Centennial Hills area with downtown Las Vegas, the Strip and UNLV;
- Westcliff Airport Express, which travels from Durango Drive and Westcliff Drive to downtown, the Strip, and McCarran International Airport;
- Metropolitan Area Express, which travels along Las Vegas Boulevard North from downtown Las Vegas towards Nellis Air Force Base;
- Boulder Highway Express, which travels along Boulder Highway from Henderson to downtown Las Vegas;
- Henderson Downtown Express, which travels from Water Street in downtown Henderson to downtown Las Vegas;
- And the newly-opened Sahara Express, which travels from the Red Rock Hotel and Casino on the west end of the Valley to Sahara Avenue and Lamb Boulevard on the east end of the Valley. From there, the route branches into three routes and serves surrounding neighborhoods (see Figure 3, next page).

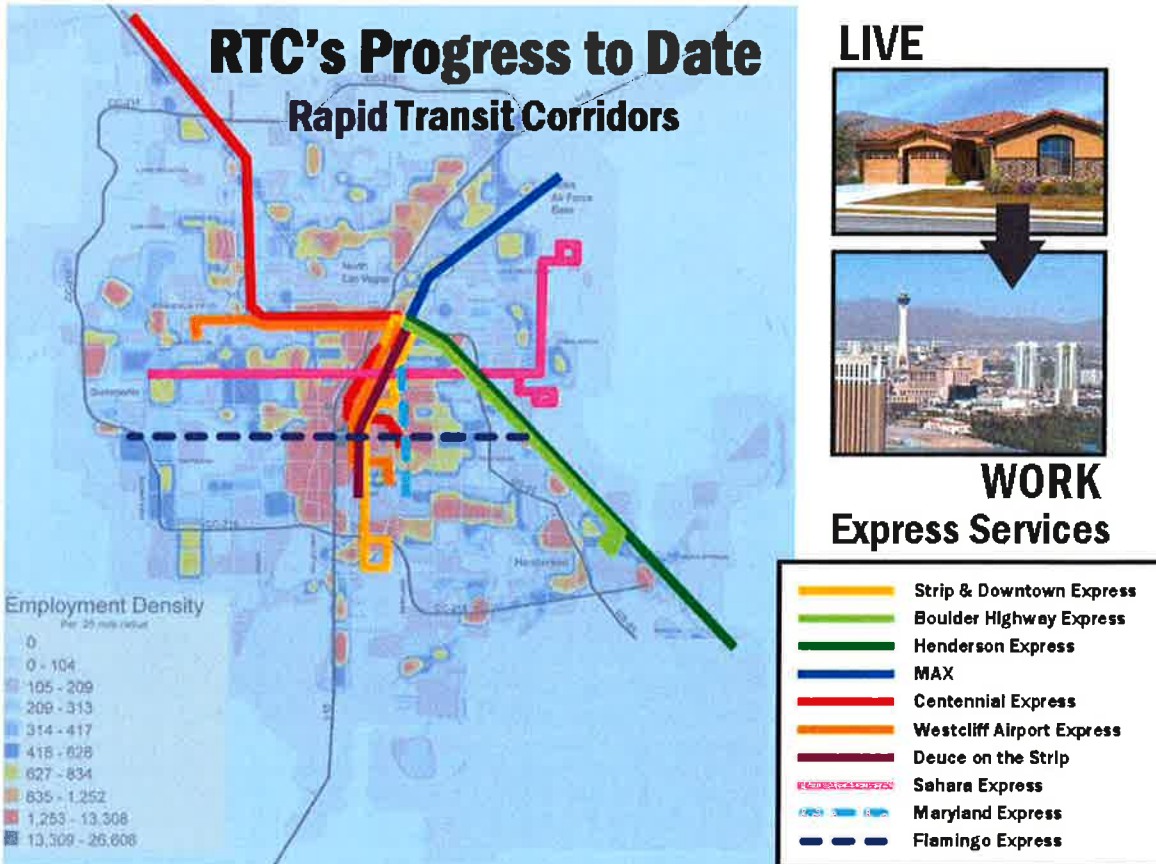
These routes all feature dedicated lanes for a portion of the route. In many cases, the dedicated lanes are transit-only lanes, such as on Sahara Avenue, Boulder Highway, Las Vegas Boulevard North, and in downtown Las Vegas along Grand Central Parkway and Casino Center Boulevard. Express services that travel along U.S. 95 utilize the high occupancy vehicle (HOV) lanes on the freeway to increase speed and to reduce travel times. Other corridors that were identified in the 2002 System Plan are also in development, including Flamingo Road and Maryland Parkway. Pending the availability of funding, the RTC can begin final design and construction on Flamingo Road. An Alternatives Analysis is currently underway for Maryland Parkway, one of the busiest transit corridors in the Valley.

The 2004 Regional Fixed Guideway study identified three corridors that should be considered for dedicated transit lanes: a connection linking Henderson with Las Vegas, North Fifth Street to connect North Las Vegas and Las Vegas, and Las Vegas Boulevard South. Today, two rapid transit connections exist between Henderson and Las Vegas and a single line connects Las Vegas with North Las Vegas. While the corridors served are slightly different than those in the 2004 study, the goal of connecting these parts of the

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region has been achieved. Las Vegas Boulevard South remains the sole corridor from the 2004 study where dedicated transit lanes do not exist.

Figure 3: Current and Proposed RTC Rapid Transit Lines



Technology:

With Las Vegas Boulevard South being the only remaining corridor from the 2004 Regional Fixed Guideway study that does not have dedicated transit lanes, the Authority weighed the decision of whether dedicated lanes on the Strip are feasible, which technology would provide the most benefit, and the potential cost of a rapid transit system on the Strip.

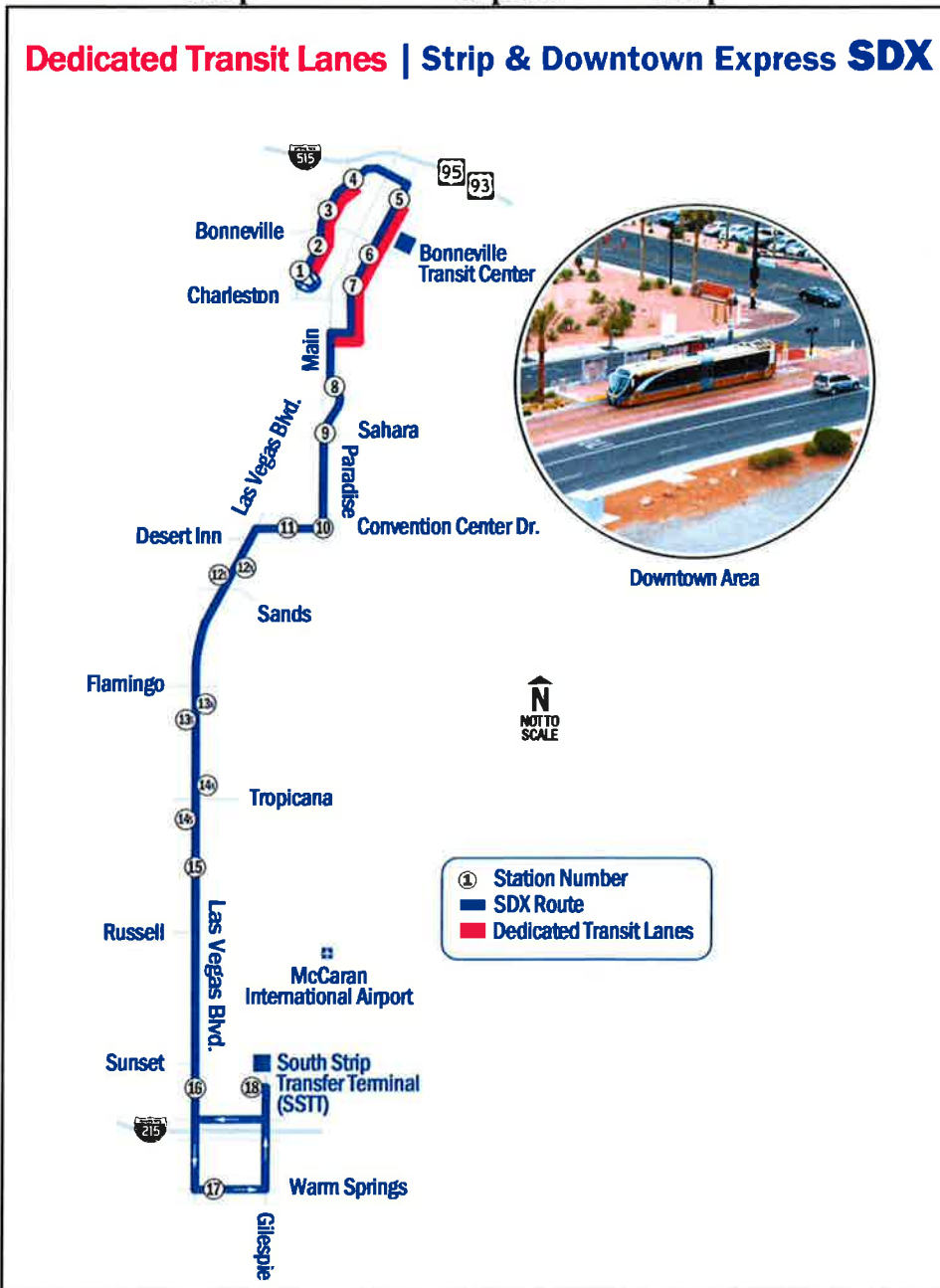


In 2011, the RTC carried 13.9 million passengers on the RTC's Strip & Downtown Express and Deuce double-deck buses on the Strip, or nearly 25 percent of the system's total ridership. Traffic congestion on the Strip impacts transit vehicles' ability to move quickly through the corridor, creating delays for buses and slowing service. To see the impact first hand, the Authority members conducted a tour of the RTC's Strip &

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Downtown Express route in March 2012. That route begins on Grand Central Parkway, near the Las Vegas Premium Outlet Mall, and travels in dedicated transit lanes through downtown Las Vegas. From the Bonneville Transit Center in downtown, the route extends to the Las Vegas Convention Center, and then travels on Las Vegas Boulevard in mixed flow traffic, as illustrated in Figure 4. Members traveled from downtown Las Vegas to the Las Vegas Strip at Flamingo Road and back, seeing firsthand the benefits that the dedicated transit lanes in downtown Las Vegas provide and the delay in travel time that riders experience once the vehicle must travel in mixed flow traffic.

FIGURE 4 – Strip & Downtown Express Route Map



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The Authority members questioned whether dedicated transit lanes on the Strip would increase the capacity to carry more people through the crowded resort corridor. RTC staff confirmed that dedicated lanes on the Strip would allow the agency to move additional passengers on the Strip. The Authority reviewed the two likely technologies, namely, light rail and bus rapid transit, for a rapid transit system on Las Vegas Boulevard South. Capital cost estimates for the two technologies showed a significant gap between the two. Bus rapid transit, which includes dedicated transit lanes, station platforms, and often traffic signal prioritization, costs an estimated \$5 to \$20 million per mile, while light rail costs an estimated \$40 to \$60 million per mile. The cost of both technologies can be significantly impacted by the need to purchase right of way, a cost that would be extremely high on the Strip. Federal funding can assist with up to 50 percent of the cost of a light rail system, but the remaining portion must come from local sources. Operations and maintenance costs are also higher for light rail, an estimated \$195 per vehicle per revenue hour for light rail compared to \$130 for bus rapid transit. The Authority felt strongly that Las Vegas Boulevard was an appropriate corridor for a rapid transit system with dedicated lanes for the service, but the committee recognized that cost is certainly a constraint. Given the continuing economic challenges of high unemployment in the valley, the likelihood of voter approval of bonds for the measure is not likely at this time.

Opportunities and Constraints:

RTC staff provided the Authority with the background on previous discussions with the resort community on the possibility of building dedicated transit lanes on the Strip. Following the RTC Board's decision in 2006 to opt for bus rapid transit, the RTC pursued the idea of dedicated lanes on Las Vegas Boulevard South. Several resort properties expressed concern at the time over losing travel lanes on the Strip to accommodate rapid transit. The project was shelved. The Authority felt strongly that the opportunity to move people through the resort corridor, whether for work or those visiting Nevada, merited additional discussion with the resort community to gauge whether their interest had changed. The RTC has made significant improvements to transit service on the Strip and throughout the Valley since 2006. The Authority asked the RTC staff to revisit the idea to see if the resort owners on the Strip were amenable to the idea today. The Authority also asked whether mobility was a problem for tourists visiting Las Vegas and whether that problem would negatively impact their trip and/or hinder the likelihood that they would return to Las Vegas.

At the Authority's request, the RTC commissioned Applied Analysis, a Nevada economic analysis firm, to complete an intercept survey of tourists in downtown Las Vegas and on the Strip to gauge whether traffic congestion on the Strip hampered the visitors' experience in Southern Nevada. Applied Analysis conducted an intercept survey of 800 visitors, 400 of them transit riders and 400 of them who had not been passengers on RTC's transit routes, on the Strip and in downtown Las Vegas. The research overwhelmingly showed that while the Strip is congested, that congestion is not problematic enough to negatively impact the guest's experience to the point that they would not return to Las Vegas. Based on the findings, 50.7 percent of visitors surveyed said that transportation is not an issue for them while in Las Vegas, and another 32.1

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percent said that although transportation was a challenge, it did not diminish their experience in Las Vegas. Only 1.3 percent of those surveyed said that mobility was problematic enough to impact whether they would return to Las Vegas in the future. Roughly 70 percent of those surveyed, both transit riders and non-riders, said that it is “easy” or “very easy” to travel through the resort corridor. (Applied Analysis’ full report is attached as Appendix II.)

The Authority’s members also asked that the RTC engage the resort community to gauge whether interest in dedicated transit lanes for either light rail or bus rapid transit has changed since the discussion last occurred in 2006. The RTC’s General Manager Tina Quigley and Virginia Valentine, President of the Nevada Resort Association, engaged in discussions with the resort community and received positive



feedback on the RTC’s current level of transit service. Ms. Quigley and Ms. Valentine related the findings of the Applied Analysis survey to representatives of the gaming community, who said that the findings reflected what they heard from their customers, as well. The resort community did not favor the idea of dedicated transit lanes at this time, but did express an interest in the RTC continuing efforts to enhance transit service for resort employees, especially along Maryland Parkway and Flamingo Road. As indicated in this report, those corridors are also priorities for the RTC.

III. Recommendations

After months of studying the challenges, benefits and opportunities associated with continued development of a rapid transit system, the Regional Rapid Transit Authority Advisory Committee members agreed that the current system in operation today provides robust service despite the challenges that exist. The Committee agreed that the Las Vegas Boulevard corridor is an ideal place for dedicated transit lanes, but felt that the constraints of limited right of way, lack of support from the resort community and the high implementation costs make it a challenge to pursue at this time. Given those challenges, the Authority agreed that an emphasis on workforce mobility, especially in and around the resort corridor, would serve the community well. Their recommendations include:

1. Identify how to move employees to reduce traffic congestion in the resort corridor. This includes exploring light rail and bus rapid transit in other corridors, such as Flamingo Road and Maryland Parkway, that would provide connectivity to the resort corridor. An Alternatives Analysis is currently underway for Maryland Parkway. The Authority also recommended that the RTC explore additional funding opportunities for those corridors. Additionally, the Authority

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recommended that the RTC identify linkages between the Monorail and the RTC's transit system to further improve workforce mobility.

2. Protect the existing bus rapid transit operations in the RTC's system and provide for public safety. The Committee recommended that existing transit lanes be protected in order to facilitate efficient service that dedicated transit lanes should be considered where feasible, and that those dedicated transit lanes should be accessible to emergency responders.
3. Consider alternate traffic movements such as one way travel lanes in the resort corridor during specific days and times to accommodate additional traffic. The Committee recommended that RTC continue to study ways to optimize the movement of people and cars through the resort corridor to maximum capacity.
4. Explore options for moving people to special events, including to proposed special events centers that may be constructed in the future.
5. Continue to provide park and ride options for employees throughout the Valley.
6. Continue to reach out to employers through the RTC's Club Ride program to incentivize employees to use alternative transportation modes.

The Authority recognizes that the recommendations above will require ongoing discussions with the stakeholders in the resort corridor and that future growth in the Las Vegas Valley will warrant an increasing demand for transit service by residents and tourists. The recommendations will help to improve workforce mobility in the short and long term, and do not close the door to additional technologies, including light rail, in the future. With those recommendations, the Regional Rapid Transit Authority Advisory Committee members respectfully concurred that the work of the Authority was complete and that additional meetings are not needed at this time. Additional meetings may be held if the community supported rapid transit on the Strip or if funding becomes available to pay for the service.