ATKINS

NEVADA DOT

Lake Tahoe Basin Transit Needs Assessment

Final Report

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Plan Design Enable

Executive Summary

Effective and efficient government relies on informed decision-making. The most appropriate allocation of federal and state funding—incorporating current information and meaningful consideration of stakeholder perspectives—is particularly vital. This thoughtful engagement of stakeholders was the goal of the Lake Tahoe Basin Transit Needs Assessment, convened by the Nevada Department of Transportation (NDOT) and facilitated by Atkins, in cooperation with LSC Transportation Consultants, Inc.

While the focus of the study was on how to best allocate funding available to NDOT for Nevada projects and operations, consideration of the entire Lake Tahoe Basin without regard to geopolitical boundaries was essential. Additionally, connectivity into and out of the Basin and the nearby communities was integral to the evaluation. Stakeholders included representatives from NDOT, the Tahoe Transportation District

(TTD), the Tahoe Regional Planning Agency (TRPA), Nevada State Parks, U.S. Forest Service, Carson Area Metropolitan Planning Organization (CAMPO), Washoe County Regional Transportation Commission (RTC), Douglas County, Placer County, Tahoe Area Regional Transit (TART), and the private sector. Broad representation on the steering committee ensured NDOT that the study recommendation focusing on NDOT's allocation of resources captured the perspectives and ideas from throughout the region.

Several study elements captured the broader perspective that shaped the study recommendations for NDOT. Specialty working groups were formed to identify specific needs associated with employee travel, social services, and tourism/recreation. Representatives from the private and public sectors were invited to participate in the discussions these groups conducted. Other study elements reached out to the broader community to elicit and explore their insights, ideas and concerns about mobility and transit throughout the region. Interviews were conducted with citizens at open houses held at Lake Tahoe, in Carson City, and in Minden/Gardnerville. Transit riders were interviewed at transit centers at Lake Tahoe and in Carson City and at storefronts in Incline Village and Stateline. Senior citizens were interviewed at the Zephyr Cove Senior Center and at the Incline Village Conversation Cafe, and potential transit riders were interviewed at the park-and-ride near the junction of US 50 and US 395 in Carson City. This broad and comprehensive engagement of citizens and stakeholders allowed the plan to be shaped by those most affected by public transportation in the region. It complemented and helped validate and refine the demographic and ridership data, which served as the technical foundation for the plan.

This comprehensive engagement of citizens and stakeholders generated a broad understanding of what transit mobility means to the individuals and communities throughout the region. Ultimately, the aggregation of the demographic and ridership data which serves as the technical foundation for plan conclusions and recommendations was validated, refined, and given meaning with the invaluable insights the community provided.

The study was organized into four phases:

- A system analysis of existing services, summarized in Appendix A: Technical Memorandum 1.
- A needs assessment, which identified unmet public transportation needs and potential expansions to existing services, summarized in Appendix B: Technical Memorandum 2 and Appendix C: Stakeholder Engagement.
- A coordinated public transportation plan, which is reflected in this document.
- Final report documentation, including information to assist NDOT and study stakeholders in future efforts.

The following conclusions and recommendations were identified through the study process and documented in the coordinated plan:

- Increase public awareness/support of the existing Washoe RTC vanpool and trip matching programs to expand commute alternatives between Incline Village and Reno/Sparks, focusing on outreach to major employers.

- Continue to support BlueGO services connecting Minden/Gardnerville, Carson City, and South Tahoe.
- Continue to support TART service in the Incline Village/Crystal Bay area and connections to the California portions of the North Shore.
- Support the proposed summer East Shore shuttle demonstration program.
- Set an example to the business community by offering transportation fringe benefits to state employees. In particular, allow employees to have their transit and vanpool expenses taken out of their checks before taxes and consider offering parking cash-out, especially where parking is either leased or in short supply.
- Identify ways in which transit-related topics can be tracked within the many diverse planning contexts such as community health, youth services, environmental degradation, and the retiring of the baby boomer generation. Tracking these topics will provide continuous input into resource allocation and performance measurement.

These conclusions and recommendations reflect viable transit services and connections in the Tahoe Basin, as evidenced in the South Shore area where larger population and more employment create greater need for transit. The current BlueGO services connecting the South Shore to the Carson Valley and Reno areas are meeting the current and expected short-term demand and needs of the area's residents and employees. While service is limited on the North Shore, the anticipated need and demand will be met by extending current services. TART services provide a vital transit link for people traveling between California and Nevada. This service is important and needs to be continued.

Expansion of transit services beyond the East Shore Transit does not appear to be warranted beyond the pilot program proposed to run the summer of 2012. However, funding and planning for developing and strengthening vanpool and carpool programs appear viable. Based on this needs assessment, intercity travel between Reno/Carson City and the North Shore could potentially prove successful given the identified ridesharing user base. Such potential intercity transit service should result in better commute transportation options for these users.

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INTRODUCTION

This document presents a review of public transit alternatives that focus on addressing mobility needs between Lake Tahoe (particularly the communities in Nevada) and other nearby Nevada communities and cities, thus providing key regional connections. These alternatives have been developed in consideration of the existing programs and goals for public transit services in the study area, and in light of the existing demographic/geographic conditions and associated travel demand. This document discusses both potential new services/programs and the continuation of current transit programs.

Considering the relatively minimal travel demand and needs identified in previous efforts as well as the overall purpose of the study, this document provides a qualitative discussion of the various alternatives, rather than a detailed analysis of

ridership estimates/impacts and costs. Regardless, the following plan elements provide guidance for decision-making and funding allocations, as well as a necessary framework for further development of future services.

SERVICE ALTERNATIVES

Incline Village-Reno Transit Service

Transit needs and demand associated with trips between Reno and Incline Village are generally commute-related. The needs assessment in Technical Memorandum 2 showed that few needs were generated from social service or medical trips between the two areas. The analysis also showed that there was only a potential demand for 34 daily one-way passenger trips for commute purposes, with the majority (30 trips) in the Reno-to-Tahoe direction. Due to this low potential demand, fixed-route service would not be warranted because the cost to operate the service would not be in proportion to the actual benefits received. Other potential programs to enhance mobility options are discussed below.

Carpool and Vanpool Programs *(http://www.rtcwashoe.com/)*

In lieu of fixed-route service, an option would be to enhance the Regional Transportation Commission of Washoe County (RTC) SMART TRIPS vanpool and trip matching programs currently in place through the RTC. As a means to encourage and develop a greater ridership base, the vanpool program should enhance marketing efforts for this Reno-to-Tahoe market. As of the date of this document, no vanpools in the program were traveling to Lake Tahoe, although there has been activity from interested parties.

Ridesharing through carpooling and vanpooling could be a viable option for both Reno and North Lake Tahoe residents because it is based specifically on the demand for service to another area. For vanpools, interested riders would register with the program and identify their trip origins and destinations and specify whether they would like to be a driver, rider, or both. Once registered, the rideshare program matches individuals based on common trip parameters and preferences and the vanpool begins, provided there are enough interested participants (vanpools must have a minimum of five passengers). The program's website will organize the vanpool and announce empty seats.

Carpools can be set up similarly through the same website, which is managed by the RTC and provided by Ecology and Environment Inc. (under the web platform name of GreenRide Connect). Commuters enter their origins, destinations, and travel preferences and potential carpool matches are provided. People can create multiple trip profiles to search for matches for recurring trips (such as to work) and one-time trips (such as to special events). An advantage of carpools is that fewer participants are required to make the option work; given the limited demand in the corridor, this option may be more viable. According to the rideshare program's website, four persons have the same starting and ending zip codes for trips to Incline Village, and four have the same zip codes for trips to Reno. The zip codes include 89511 (South Reno, including the SR 431 and SR 341 corridors), 89503 (Northwest Reno, west of Highway 395 and north of I-80) and 89502 (Reno, east of Highway 395, including the Reno-Tahoe Airport and Hidden Valley). Marketing of the program has, however, been somewhat limited.

There are many incentives to using vanpools and carpools for commuting. In addition to reducing the number of vehicles on the roads in Lake Tahoe, substantial cost savings can be realized for gas and car maintenance. Further, many rideshare operators offer personal incentives to vanpool participants to encourage and increase ridership. Such incentives may be a key component to increasing participation in the current rideshare program in the area. Examples of incentives offered include:

- San Joaquin County (California) offers $150 per month for 1 year to drivers who start a new vanpool program. For residents residing within the San Joaquin Valley Air Pollution Control District boundaries, the agency offers a $350 subsidy for new vanpools for 1 year.
- Contra Costa County (California) offers a fare reduction of 50 percent for new riders for the first 3 months of service.
- Both Solano and Napa counties offer $100 gas cards for 2 months to back-up drivers, and they offer $100 gas cards per empty seat to drivers who start a new vanpool for the first month.

Many programs, including the one provided through the RTC, provide a "guaranteed ride home" program that provides free taxicab rides for vanpool or carpool participants in cases of illness or family emergencies. Such programs are in place to reduce the fear of being stranded without a car; however, requests for such rides are rare.

The RTC owns no vehicles; rather, they have partnered with VPSI, Inc., to run and operate the vanpool program. VPSI provides the vehicles and pays for their maintenance and insurance. Vanpool participants split the cost of the lease and gas. The RTC provides a subsidy to encourage vanpooling of 40 percent of the lease price (including tax) for each vanpool. Originally, the RTC used Congestion Management Air Quality (CMAQ) funds for the subsidies; however, the subsidies are now supported by Surface Transportation Program–Local (STP Local) funds. STP Local funds are also used to cover administrative costs associated with the vanpool program.

As a means to encourage new ridership using these programs, the RTC may want to explore working with employers to offer financial or other incentives for new and recurring riders. The above examples offer insight into what programs might work best.

It is recommended that enhanced marketing techniques be employed to increase program participation. Efforts could include developing partnerships, mainly through local Incline Village employers. One way to promote this option and make it more attractive would be for employers to allow employees to pay for their vanpool or transit expenses on a pre-tax basis (as allowed under the Commuter Benefits guidelines in Internal Revenue Service (IRS) Code Section 132 (f)) to allow additional cost savings to participants.

For this service to be used, no new set-up activities are required, other than commuters expressing their interest on the RTC SMART TRIPS website (www.rtcwashoe.greenride.com). Employers should increase awareness by posting flyers and other materials advertising how the program can be used and how employees can sign up. Employers should also appoint in-house administrators to customize text and upload

company-specific logos. Further, employers should work with the RTC to determine how pre-tax incentives can be used to further encourage participation.

Volunteer Driver Program/Transportation Reimbursement Program

Senior transportation is currently provided through the Incline Village General Improvement District as part of the 55+ Senior Transportation Program. This service provides transportation for residents on specific days of the month through "fixed" schedules to specific areas. Current schedules are:

- Carson City: 1st and 3rd Tuesday of every month
- Reno: 2nd and 4th Tuesday of every month
- Local/Incline Village: 1st and 3rd Wednesday of every month
- Local/California: 4th Wednesday of every month

Similar senior transportation is also available through the volunteer driver program offered by the Incline Village Veteran's Club, which provides trips to medical services in outlying areas of Nevada (such as Reno and Carson City) as well as local trips. These services are a valuable resource for seniors; however, similar services are currently unavailable for medical and other social service trips for the non-senior population.
To have a well-rounded transportation system that provides options to residents in Incline Village and Crystal Bay, the community should look into developing a volunteer driver program that serves qualified residents. A volunteer driver program can be useful in rural areas and smaller communities where budgets will not allow all areas to be served, or where demand is so low and infrequent that regular service is not warranted.

Retired Senior Volunteer Program

The Nevada Rural Counties Retired and Senior Volunteer Program (RSVP) is a self-sponsored non-profit 501 (c) (3) corporation with a demonstrated record of outstanding service to the elderly and other citizens in need of assistance in Nevada for more than 34 years. Formed in 1973 to serve five rural counties, it has grown—through strong program and financial management—to include 15 of the 17 counties in Nevada (Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lincoln, Lyon, Mineral, Nye, Pershing, Storey, and White Pine).

RSVP's mission is to provide meaningful volunteer opportunities for people aged 55 and older, with a lifetime of experience, to serve in a variety of volunteer settings throughout their communities. The group's Independent Living Programs help keep low-income seniors independent and in their own homes as long as possible. Last year, more than 1,200 RSVP volunteers in rural Nevada provided more than 160,000 hours of service to 184 public and non-profit community agencies and to Nevada's elderly population.

RSVP has played a vital social services leadership role in the communities they serve, and they continue to expand the role of assisting not only low-income and homebound seniors but all people in need—enhancing the quality of life for all citizens.

The Independent Living Programs help keep seniors in their own homes; the Lifeline Program provides an emergency telephone response security system for those living alone; the Resistance Exercise Program helps keep seniors active by providing light weight training; the

Transportation Programs provide critical care trips to medical and dental appointments; the Care Law Program provides pro bono legal services for low-income seniors; and the Respite Care Program provides volunteers to give 24/7 caregivers breaks for personal time.

In addition, RSVP volunteers serve their communities through a variety of non-profit organizations and government agencies. Activities include crime prevention, adult literacy tutoring, Medicare and Medicaid counseling, environmental surveys and education, center-based nutrition programs, hospital volunteer service, public museum docent services, library services for the community and the homebound, computer assistance for the elderly and needy, veterans memorial services, USDA commodities food distribution, free "Senior Farmer's" produce coupon distribution, and many more.

People 55 or older can be RSVP volunteers and need not be retired. They come from all walks of life and all backgrounds. The unselfish sharing of their time and energy, however, makes them all vital and valuable members of their communities.

Pros and cons of existing volunteer driver programs in similar settings include:

- Volunteer driver programs typically start from a grassroots effort based on an identified need.
- Overseeing volunteers requires a dedicated individual, likely a paid employee. In some cases, the program is overseen by a board with the rotating chairperson overseeing day-to-day operations.
- Some volunteer programs provide reimbursements; others do not.
- The biggest challenge is to recruit and maintain volunteers and make them feel that they are providing a worthwhile service. Turnover can be high due to burnout or declining driver ability.
- As gas prices and auto insurance costs increase, it can become more difficult to recruit volunteers.
- Grant funding can be obtained to offset costs of reimbursed driver volunteer programs. Using such grants may limit trip purpose and client eligibility.

Many other models from existing programs can be used as guidance. Tehama County, Trinity County, and the Sonoma/Mendocino Coast, in California, may serve as a useful models for service between Incline Village and both Carson City and Reno, as discussed below.

Example: Tehama County, California

Tehama County has a volunteer driver program to provide medical transportation. The 23 year-old program is under the direction of the Transit Manager (Department of Public Works), with a supervisor working part-time Monday through Wednesday to oversee daily operations. The supervisor is paid $9.34 per hour without benefits and has an annual maximum of 1,000 hours.

Tehama County Medical Transportation Services (METS) currently has 12 volunteer drivers who use their personal vehicles and are reimbursed at the federal IRS rate (currently $0.485 per mile). Drivers are recruited by word-of-mouth. Ten-year Department of Motor Vehicle records are required, but fingerprinting is not. As of this year, drivers are covered by Workman's Compensation Insurance.

The supervisor coordinates appointments and assigns trips to drivers. The supervisor is also

responsible for recruiting volunteers, maintaining records, and reimbursing drivers. For efficiency, efforts are made to assign drivers who live closest to the passengers in need.

Passengers are asked for a $5.00 round trip donation within Tehama County or a $10.00 round trip donation to Butte, Glen, or Shasta counties. An estimated 80 to 90 percent of passengers donate. METS receives a $0.14 per mile reimbursement from the American Cancer Society for passengers seeking cancer treatment (150 regular passengers). The program provides between 60,000 to 90,000 reimbursed vehicle miles each year. While the program is for medical trips only, passengers may do shopping in conjunction with picking up prescriptions, at the driver's discretion. Passengers must be ambulatory to use the service. Spouses or attendants may accompany the passenger if desired. Most passengers are elderly, though some children and other adults use the service.

Example: Trinity County, California
In response to the need for increased transit services in rural Trinity County, the Trinity County Planning/Transit Department implemented a transportation assistance program. Human Resource Network (HRN), a private non-profit organization, is contracted to administer the program. The HRN program serves residents in the northern portion of the county. A similar program is administered through Southern Trinity Health Services to serve the southern portion of the county. Different from the Tehama County example, Trinity County's program does not have a list of volunteers. Persons needing transportation to medical or social service appointments may recruit their own volunteer who will then be reimbursed for mileage at the rate of $0.25 per mile. Persons are eligible for the program if they are:

- Trinity County residents
- Unable to transport themselves because of no transportation or are unable to drive due to medical reasons or advanced age
- In a low-income category (income no more than 200 percent of the poverty level) and have no money for gas

HRN has developed a process to ensure that the program is not abused. The volunteer and applicant are required to meet with HRN staff to discuss the arrangement. HRN staff confirms that the driver holds a valid California Driver's License, valid insurance, and vehicle registration. The medical or social service provider is also contacted to verify the appointment. The volunteer driver records the trip mileage and submits a receipt for transportation funds to HRN. Staff compares the mileage to the actual distance between major destinations before paying the driver.

Trinity County will also reimburse residents needing transportation to medical or social service appointments who are able to drive themselves but cannot afford to pay for gas. Again, the medical or social service provider is contacted before a fuel voucher is provided. The fuel voucher is valid for 7 days. Volunteers/applicants are not limited as to where they can travel for medical and social service appointments, but they will be reimbursed only up to the equivalent of one tank of gas.

HRN was an established non-profit agency in Trinity County before the transportation assistance program was implemented; as a result, actual

staff time and set-up costs for the program were minimal. HRN already had a database system in place to record volunteer trips and they had existing relationships with vendors such as the Mini-Mart (HRN reimburses persons in need of propane).

Each quarter, HRN bills Trinity County for the cost of the vouchers. Additionally, Trinity County paid HRN an administrative fee of 10 percent of contract costs at the beginning of the contract. The original contract in Fiscal Year 2006-2007 to operate the Transportation Assistance Program with HRN was $15,000 per year. The program was so popular that an additional $10,000 was added within the first year of operation. Currently, Trinity County spends about $30,000 on the Transportation Assistance Program. HRN staff feel that the administrative fee they are paid does not completely cover actual administrative time spent on the program. Between meeting with the program participant, contacting providers, and accounting for the trip, HRN staff estimate it takes about 1.5 to 2 hours of staff time for each new program participant; this equates to roughly a quarter-time administrative position.

Example: Community Resources Connection, Sonoma/Mendocino Coast, California
Community Resources Connection (CRC) was started in 1999 as a telephone referral service for South Coast Seniors, Inc., in Gualala, California. CRC gave referrals to individuals seeking services in the community and offered a handy-person service wherein volunteers would go to callers' homes to do minor repairs. As in Nevada County, the majority of phone calls were inquiries regarding transportation services, primarily for medical appointments. Responding to this need, CRC organized a volunteer program offering free transportation to anyone in the region with an "essential need."

Approximately 35 volunteer drivers who use their own private vehicles and gasoline provide transportation. Drivers do have the option of receiving gas cards as partial reimbursement for their mileage, but 90 percent of drivers opt out of reimbursement. In addition, the regional transit provider (Mendocino Transit Authority) leases a Dodge Caravan to CRC for $1.00 per year. The van goes to Fort Bragg on the first Wednesday of each month, to Santa Rosa on the first Friday of each month, then on each Thursday for the remainder of the month. The van also uses volunteer drivers. Approximately four volunteers are currently qualified to drive the van; in the past, as many as eight volunteers could drive. Van drivers must be fingerprinted and trained. Passengers are not charged a fare, but they are encouraged to make a donation to the CRC; most donate a nominal amount.

The CRC subsequently shifted from being part of the South Coast Seniors to receiving administrative oversight from Redwood Coast Medical Services. In 2004, however, CRC became a 501(c)(3) nonprofit corporation. CRC has a board consisting of 11 volunteers who meet monthly to handle normal board matters and manage the organization's administrative functions. In addition to board members, CRC has volunteer committee chairs and members who are not on the board.

The Redwood Coast Medical Services (RCMS), the only local medical clinic in the region, provides for the operating cost of the van

(insurance, gasoline, and maintenance). The in-kind service by RCMS includes office space, office expenses including a toll-free phone number, and insurance, maintenance, and gasoline for the van. Approximately 60 RCMS clients use the van service annually.

In addition to costs covered by the RCMS, the CRC provides a cash outlay of approximately $5,000 per year. This cash covers the cost for directors and officers, general liability insurance, office supplies, and an annual volunteer appreciation dinner. Cash contributions are received from passengers, the general public, and board members.

CRC provides approximately 500 one-way passenger trips annually: 410 local (less than 20 miles round trip) and 90 to Fort Bragg or Santa Rosa (110 to 170 miles round trip). Passengers can call CRC Monday through Friday between 12:00 p.m. and 4:00 p.m. to schedule trips, with a 48-hour advance notice required. Most trips are for medical or dental appointments or for other daily living errands including grocery shopping. Phone volunteers who arrange the trips encourage passengers to make efficient use of the service by completing several errands in one trip rather than scheduling trips on multiple days. In total, CRC provides approximately 18,000 miles per year: 12,200 in private vehicles and 5,800 in personal vehicles.

Establishing a Volunteer Program in Incline Village

The first step when establishing a volunteer driver program is to determine who will oversee the program. The RTC would be a likely candidate because they are the County's transit and transportation entity. Tehama County's METS program provides good models for this setup. Operating under the County would require a half-time administrative position to recruit and train volunteers, market the program, oversee volunteer dispatching efforts, and maintain records. Including benefits, this position is likely to cost approximately $15,000 annually.

Another potential candidate to initiate the program is the Incline Village General Improvement District's (IVGID) senior program through the Recreation Department. While many senior transportation programs have grown out of volunteer programs, it is uncommon to see volunteer programs follow an established transportation program, such as what the Senior Center currently provides. Nonetheless, seniors are often both the volunteers and clients of volunteer driver programs, and association with the Senior Center might increase recruiting efforts. Seniors may, however, experience declining health and frailty, thus making turnover high and retaining volunteers difficult. Despite this, experience has shown that it is not a problem for volunteers to see the need for their services even when a paid program is available, so long as it is focused on trips that the public transit program is not also serving. Volunteers understand that the County cannot pay to provide service to all portions of the county at all times, and volunteers are willing to step in to provide service beyond the area served by public transit.

Finally, the local Veteran's Club may wish to expand their volunteer driver program beyond seniors and provide this service to other residents who do not have access to a vehicle or cannot afford gas. This would be the least

intensive method because the program is already established and would require expansion only of volunteers, and possibly vehicles.

Incline Village–Carson City Service

Similar to the Incline Village–Reno service needs, trips to or from Carson City are not in substantially high demand. Commuters potentially generate the greatest need, followed by social service and/or medical trip needs. The needs assessment analysis identified a total commute demand of 15 daily one-way trips between Incline Village and Carson City, with the majority (14 one-way trips) being in the "to Tahoe" direction. This low number does not warrant fixed-route service alone, and because senior needs are generally covered by the services provided through IVGID and the Incline Village Veteran's Club, demand is not substantially increased by other groups.

Rideshare and Vanpool Programs

To be eligible for the Washoe County RTC vanpool program subsidy, one must live or work in Washoe County; however, while incentives are often offered initially to encourage people to vanpool, vanpooling can offer many people significant transportation savings without any subsidy. It also has other benefits such as eliminating the stress of driving and providing the opportunity to use the time to read, sleep, surf the net, etc. Further, while the guaranteed ride home program is limited to work trips for people who either live or work in Washoe County, the trip matching service is not geographically limited; people from Minden could look for matches to Carson City or South Lake Tahoe in addition to or instead of trips into Washoe County. Consequently, businesses or outlying communities could choose to promote ridesharing and direct people to the trip matching services. According to the trip matching program online, two persons have expressed interest in carpooling from the 89708 zip code in Carson City to Incline Village.

The discussion under the "Incline Village–Reno Transit Service," starting on page 2 of this document, contains additional details on the program and how it could be implemented for Incline Village-to-Carson City trips. It should be noted that the RTC programs are available for travel between Carson City and Incline Village because at least one end of the trip is in Washoe County.

Volunteer Driver Program/Transportation Reimbursement Program

In addition to Reno-bound trips, Incline Village residents are in need of trips to Carson City for medical and social service purposes and shopping. A volunteer driver program or transportation reimbursement program, as discussed in the preceding section, could also provide service to Carson City when needed. The volunteer driver/transportation reimbursement program discussion under "Incline Village–Reno Transit Service" provides details on such programs and how one could be established in Incline Village.

Continuation of Support for Tahoe Area Regional Transit Incline Village Service

Tahoe Area Regional Transit (TART) currently provides service in Incline Village and Crystal Bay along Highway 28, as well as in neighborhoods to the south of the highway. This service area includes the major shopping centers, the Hyatt Lake Tahoe, beach areas, and low-income housing units. This service plan is generally adequate and meets the needs of most residents. TART ridership between California and

Nevada has increased approximately 4.75 percent over the past year according to the most recent data available in March 2011. Overall, ridership crossing the state line comprises approximately 11 percent of total TART ridership. While productivity of this service is relatively low compared with typical values in urban areas, this service has proven productive in comparison with those seen in other smaller communities.

Additional service to more residential neighborhoods could be created by using the second half-hour of each TART hour; however, this could work only in the winter and off-season because the summer schedule does not have extra time built in to allow for this. It is likely that adding this service would not increase ridership substantially, and would therefore not be financially beneficial.

Continuation of Support for BlueGO Services between Stateline and Carson City and between Stateline and Minden/Gardnerville

The BlueGO transit system has undergone many changes in recent years due to reduced funding and changing populations. One of the more successful changes was the reconfiguration of the routes that serve Carson City and Minden/Gardnerville. As a joint effort between Jump Around Carson (JAC), Douglas Area Rural Transit (DART), and BlueGO, a more efficient route structure and system was created that provided for enhanced connections between services; as such, commuting between the South Shore area and Carson City and Minden/Gardnerville was improved.

Routes servicing the Carson Valley and Stateline are 19x, 20x, 21x, and 24x (these designators have replaced the previous "Triangle Route" designation). The 19x leg travels between Gardnerville/Minden and Carson City, 20x travels between Gardnerville/Minden and Stateline, and 21x travels between Stateline and Carson City. Since the implementation of new service on these routes, ridership has increased by 93 passenger trips between November 2010 and November 2011. Despite a loss of passenger trips on 20x, increases on 19x and 21x resulted in an overall gain in ridership. This suggests that, as the routes become more stabilized and passengers become more familiarized with them, ridership is likely to continue increasing. In turn, additional services, such as vanpools, may be unnecessary because public transit service would be adequately meeting the area's demands/needs.

The commuter needs assessment section of this study (Technical Memorandum 2) identified a demand of 38 total daily one-way passenger trips between Minden/Gardnerville and the South Shore, all of which were traveling in the "to Tahoe" direction. Similarly, there were a total of 20 daily one-way trips between Carson City and the South Shore, also with a majority in the "to Tahoe" direction. In total, according to the U.S. Census Bureau, roughly 1,255 persons commute to the South Shore from Minden/Gardnerville and 643 persons commute from Carson City; this indicates that the number of commuters has decreased in the past 10 years as evidenced by the Tahoe Interregional/Intraregional Transit Study, completed by LSC Transportation Consultants, Inc., in 2006, which noted that 2,570 employees in the South Shore area commuted daily from the Carson Valley (includes Carson City and Minden/Gardnerville.

Vanpool/Carpool Programs between South Shore and Carson City/Minden/Gardnerville

Another option would be to establish vanpool/carpool programs between the South Shore and Carson City/Minden/Gardnerville. The Tahoe Interregional/Intraregional Transit Study recommended implementing a vanpool service between the South Shore and Carson Valley at a time when fixed-route services outside of the South Shore area were not offered. With the improved services to Carson City and Minden/Gardnerville, coupled with the decline in overall commuters, it is not recommended that a vanpool program be implemented at this time. The demand does not warrant funding of a new program, particularly with existing fixed-route service available in these areas.

Recreational Transit Services

With the tourist-driven nature of the Lake Tahoe area, recreational activities generate a substantial potential demand for transit. Winter (skier) demand is largely addressed through existing public transit programs or through private shuttle services operated by the individual ski areas. Technical Memorandum 2 in this study includes information on winter and summer visitor patterns. The data indicates that the majority of winter day visitors to Lake Tahoe's North Shore were from California, while the summer season had a higher number of day visitors from Nevada. On the South Shore, the majority of day visitors in both seasons were from California; however, with respect to Nevada residents, the greatest number were visiting in summer. This suggests the summer season generates greater unmet demand for trips in Nevada. The survey of Sand Harbor State Beach visitors in 2011 showed that more than one half of visitors were originating from Nevada communities that were within driving distance of the beach. Further, parking shortages at Tahoe beaches indicate transit service could be a viable option for day visitors.

East Shore Summer Transit Pilot Plan

To address the summer parking and traffic congestion issues along Highway 28 near the East Shore beach areas and to reduce vehicle miles of travel in the Tahoe Basin, the Tahoe Transportation District (TTD) is leading a program to develop and implement a demonstration shuttle program for the 2012 summer season. The Sand Harbor unit of Lake Tahoe–Nevada State Park and adjacent beach areas, such as Hidden Beach, are popular during the summer months. There is limited off-street parking for these facilities, thus requiring visitors to park on narrow highway shoulders and walk to beach trails. Data collection conducted by LSC Transportation Consultants, Inc., indicated that over the past 10 years, peak shoulder parking along the Highway 28 corridor has grown significantly, and parking utilization counts showed that legal parking areas were at or near capacity during the peak hours (2:00 p.m. to 3:00 p.m.) of peak days (generally weekends and holidays).

Beginning in summer 2012, the TTD proposes to operate a summer shuttle program from June 15 through Labor Day. The shuttle will run from 9:00 a.m. to 6:00 p.m., seven days per week, and will offer service on 20-minute headways. From parking locations in Incline Village, a shuttle will travel to the Sand Harbor State Beach with service stops at the Hyatt Lake Tahoe, Tunnel Creek/Hidden Beach, and finally Sand Harbor. The service requires a fare of $3.00 for adults and $1.50 for youths under the age of 12. Only service

animals are allowed on the shuttle. Ridership estimates show an expected 46,000 passenger-trips per year will be generated by this service.

The service will be operated as part of the existing contract with the same operator used for the BlueGO transit service. Vehicles for winter shuttle routes in the BlueGO system that would otherwise be out of service will be used for the summer shuttle, thus negating the need for new buses.

Approximately 60 percent of the required subsidy necessary to operate the service would come from FTA 5311 funds (through NDOT), with the required match supplied by the Southern Nevada Public Lands Management Act.

Also analyzed was an additional alternative that included a second shuttle operating from the south, starting near the US 50–Highway 28 junction and traveling toward Sand Harbor. This route would serve additional beach locations along Highway 28, including Skunk Harbor and Secret Harbor. This option would be attractive to persons coming from Carson City or the South Shore; however, the analysis showed there was substantially less ridership potential and parking demand was less in these areas.

The two-shuttle service plan may be a future option if the pilot program proves successful and if funding allows. However, at this time, it is recommended that the single-shuttle service plan from Incline Village to Sand Harbor be funded in future years using FTA funds.

CONCLUSIONS AND RECOMMENDATIONS

Based on the discussion presented above and the overall goals for transit services in the region, the consultant team recommends the following:

- Increase public awareness/support of the existing RTC vanpool and trip matching programs to expand commute alternatives between Incline Village and Reno/Sparks, focusing on outreach to major employers.
- Continue to support BlueGO services connecting Minden/Gardnerville, Carson City, and South Tahoe.
- Continue to support TART service in the Incline Village/Crystal Bay area and connections to the California portions of the North Shore.
- Support the summer East Shore shuttle demonstration program, proposed to operate in the summer of 2012.
- Set an example to the business community by offering transportation fringe benefits to state employees; in particular, allow employees to have their transit and vanpool expenses deducted from their checks before taxes and consider offering parking cash-out, especially where parking is leased or in short supply.
- Identify ways in which transit-related topics can be tracked within the many diverse planning contexts such as community health, youth services, environmental degradation, and the retiring of the baby boomer generation. Tracking these topics will provide continuous input into resource allocation and performance measurement.

The overall study shows that transit services in the Tahoe Basin provide adequate connections, particularly in the South Shore area where there is greater population, more employment opportunities, and thus, greater need for transit. The current BlueGO services connecting the South Shore to the Carson Valley and Reno areas are providing a level of service that meets the demand and needs of area residents and employees. While service is limited on the North Shore, need and demand has shown to be minimal compared to the South Shore. TART services provide a vital mode of transportation to many persons traveling between California and Nevada, and continuance of funding for this service is important.

While there does not appear to be a need for expansion of transit services beyond the East Shore Transit pilot program proposed for the summer of 2012, funding and planning efforts would be well spent on developing and strengthening vanpool and carpool programs. Based on the needs assessment, commuting between Reno/Carson City and the North Shore has the potential for a successful ridesharing user base and could result in better commute transportation options for these groups.

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Technical Memorandum 1

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STUDY BACKGROUND

Benefits of prioritizing and developing a Lake Tahoe Basin Public Transportation Needs Assessment and Coordination Plan are numerous, including environmental, economic and social. The topography of the Lake Tahoe Basin, along with the area's ecosystems, severe winter weather, funding sources and political structure present challenges associated with defining a plan. Acting as a recipient for various Federal Transit Administration (FTA) grant funds, NDOT is taking the lead role working with localities and other agencies to develop and implement a coordination plan that aims at improving the transit services in the Lake Tahoe area.

Planning for public transit services in the Lake Tahoe region is a challenging undertaking. At the same time, public transit is an important strategy for achieving environmental and economic goals for the region. Environmental restrictions and the challenging geography of the area allow for little expansion of the region's roadway network. Transit programs will need to become more efficient and/or expand if overall mobility is to be improved. Furthermore, water quality studies have increasingly shown the impact that roadway runoff and re-entrained atmospheric deposition have on the clarity of Lake Tahoe. Various regional plans consistently call for improvement or expansion of public transit programs to address environmental goals.

This study will address the above mentioned issues and provide NDOT with a means of prioritizing limited public funding to ensure resources are allocated in a way that maximizes overall benefits to the region, as well as Northern Nevada as a whole. The study will also provide a broader opportunity for coordination among the various jurisdictions to yield a coordinated vision for a region encompassing both the Tahoe Basin, as well as the other portions of Northern Nevada generating demands for public transit service to and from Lake Tahoe.

Study Area

Lake Tahoe is located within California and Nevada, roughly 190 miles northeast of the San Francisco Bay Area, 105 miles east of Sacramento, and 40 miles south of Reno, Nevada. Overall, the Lake Tahoe Basin watershed encompasses roughly 515 square miles, much of which is protected as part of the United States Forest Service and various state land agencies. The area includes a number of major roadways, including State Route 28 along the north and west shores, and U.S. Highway 50 along the east and south shores. Primary routes to the Lake Tahoe Basin from California include Interstate 80, State Route (SR) 89 and U.S. Highway 50, while from Nevada access is primarily through Nevada Highway 431 (from Reno) and U.S. Highway 50 (from Carson City). Other roadways include SR 267, which links I-80 to Kings Beach in California, and

SR 207 which connects U.S. 395 to Stateline in Nevada. Figure 1 provides a graphic overview of the general study area.

The region lies within multiple jurisdictions including El Dorado and Placer Counties in California and Washoe County, Douglas County and Carson City in Nevada. On the north shore, the most populous communities include Tahoe City and Kings Beach (both in California) and the Crystal Bay-Incline Village area in Nevada. On the south shore, South Lake Tahoe (California) and Stateline (Nevada) are the major activity areas. In addition to the local government associated with these jurisdictions, the Tahoe Area Regional Planning Agency (TRPA) is charged with further land use regulation, focusing on environmental protection of the lake and it's surrounding habitats. It is the first bi-state regional environmental planning agency in the United States. The regional planning agency was formed through a bi-state compact in the 1960's by California and Nevada lawmakers; in 1969, the United States Congress ratified the agreement and created the TRPA as it is at present day.

The Lake Tahoe Basin contains a variety of recreational opportunities, creating a largely tourist-based economy. There are many popular year-round activities, including alpine and cross-country skiing, boating, snowmobiling, hiking and mountain biking. In total, there are roughly seven ski resorts within the Lake Tahoe Basin and another five just outside the Basin that are easily accessible from the region. Additionally, the Nevada areas of Lake Tahoe, specifically Crystal Bay and Stateline, are home to numerous casinos that not only offer gambling, but music and entertainment throughout the year.

Structure of the Study

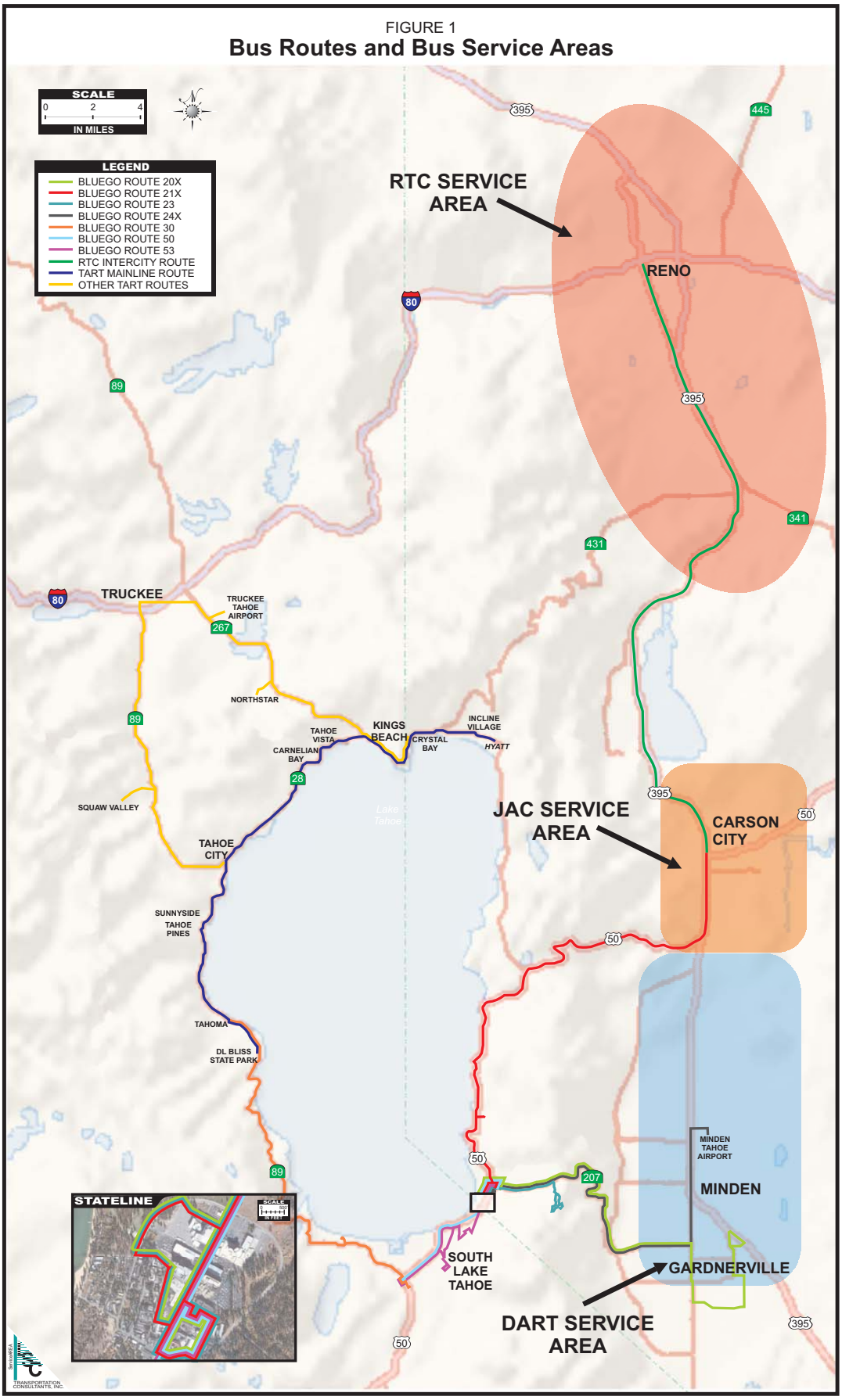
This study will be presented in a series of two Technical Memoranda, a draft coordinated transportation plan, and a final report. The Technical Memoranda will provide the background information and the needs assessment for the Lake Tahoe Basin, including demographic data and information regarding existing transit services in the area. The development of the coordinated plan will be submitted as a draft report document and upon incorporation of comments from agency staff, focus groups and the general public, a final plan will be developed.

Contents of the First Technical Memorandum

The first Technical Memorandum presents the system analysis, a detailed review of transit services within the Lake Tahoe Basin, as well as other services within Northern Nevada just outside the Basin. This interim document defines existing transit services, funding sources, and operating data such as ridership and performance analysis, all of which will provide a valuable resource for the remainder of the study.

FIGURE 1

Bus Routes and Bus Service Areas



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Section II
Existing Transit Services

INTRODUCTION

The following discussion provides detail on the existing transit services within the study area, including public transit providers and private airport shuttle operations. Topics for each service include information regarding the service (i.e. routes, service area, etc), ridership data, operating costs and revenues, transit facilities and fare structure. This information is used to determine the current levels of service to the study area, and will be used in upcoming study tasks to assist in examining where service deficiencies/gaps may exist. It is important to note that not all of the services operate routes within the Lake Tahoe basin. Other services in the Reno, Carson City and Minden/Gardnerville areas are included in the discussion to provide information regarding public transit transfer or connection opportunities between the Lake Tahoe basin and other communities in Northern Nevada.

BLUEGO

BlueGO is a fixed-route and demand-responsive public transportation program of the Tahoe Transportation District, serving the South Lake Tahoe area as well as connecting services to Carson City, Gardnerville and (in summer) Tahoma on the West Shore.

Service Description

BlueGO fixed route service is offered in the South Lake Tahoe city limits, as well as in areas of Nevada including Stateline, Zephyr Cove Kingsbury, Gardnerville and Carson City. The fixed route services in Nevada are as follows:

- **Route 20x** provides service from the Stateline Transit Center to Gardnerville. Service to the Lake Tahoe basin consist of five runs operated between the hours of 5:35 AM and 3:35 PM, including one afternoon run, while service to Gardnerville is provided six times per day between 8:45 AM and 7:45 PM, including only one morning run. This route provides connections to DART services in Gardnerville. The service is operated seven days per week, year-round.

- **Route 21x** operates between the Stateline Transit Center and Carson City providing eight runs in each directions from 5:38 AM to 7:28 PM, Monday through Friday, and between 6:30 AM and 7:28 PM Saturday and Sunday, year-round. Passengers can connect to JAC and RTC Intercity.

- **Route 23** travels between the Stateline Transit Center and the Ridge Resorts, located along State Route 207 (Kingsbury Grade). The route provides transit services to the resort, as well as the Heavenly Ski Resort's Stagecoach Lodge. Service is offered between 7:30 AM and 12:25 AM Sunday through Thursday, and between 7:30 AM and 1:25 AM Friday and Saturday.

- **Route 24x** provides service between the Kingsbury Transit Center and the Minden/Tahoe Airport. The route is intended to provide service to students of the Grace Christian Academy in Minden, but is available to all passengers. The route is operated only on school days – one morning eastbound run is provided from the Kingsbury Transit Center at 7:42 AM, and two westbound runs are offered from the Minden/Tahoe Airport at 12:50 PM and 3:05 PM.

In 2011, Routes 20 and 21x will be replaced with a new route called the "Triangle Plan", in order to streamline services within Carson City, Minden/Gardnerville and Stateline/South Lake Tahoe. The new plan will include five roundtrips daily, operating between the three locations. The result will be more efficient operation of the routes, providing both cost savings and the opportunity for increased ridership. The route will travel in two directions (both clockwise and counter-clockwise) using three vans based in Minden, one van based in Carson City, and one van based in South Lake Tahoe.

BlueGO also operates Route 50 fixed-route service between the Kingsbury Transit Center in Nevada and the South Y Transit Center in California. In Nevada, this route provides hourly service year-round to the South Stateline casino core area as well as the Douglas County offices and Lakeside Casino and Resort, from 5:15 AM to 11:15 PM.

In winter, additional BlueGO routes are operated to serve resorts and to address the overall higher need for public transit during the winter ski season. BlueGO winter route service is comprised of seven different routes, with buses making stops at most major lodging properties and all Heavenly base facilities: the California Base Lodge, the base of the Gondola at Heavenly Village in California as well as Stagecoach and Boulder Lodges in Nevada. The buses serve each of the bus stops as frequently as road and weather conditions permit, typically every 15 to 30 minutes. While winter routes are operated in both California and Nevada, key routes primarily serving Nevada are:

- **Green Route 12**: Casino area to Gondola Base and Stateline Transit Center. This route will operate every 30 minutes with timed connections to Blue Route 15 at the Stateline Transit Center.

- **Purple Route 14**: The Ridge Resorts to Heavenly Boulder Lodge and Heavenly Stagecoach Lodge only.

- **Blue Route 15**: Gondola Base and Stateline Transit Center through Casino area to Boulder and Stagecoach Lodges. Starting in 2009, this service became express

between Stateline Transit Center and Heavenly Boulder and Stagecoach Lodges on 30 minute headways (using two buses).

- **Black Route 17X**: This service is oriented towards Heavenly Resort employees, though it is open to all passengers traveling from South Y Transit Station to Heavenly California Lodge, Heavenly Boulder Lodge and Heavenly Stagecoach Lodge via employee housing on Pioneer Trail, employee parking on Ski Run Boulevard and Stateline Transit Center. Limited stops are made on US 50, SR 207, and Pioneer Trail.

All winter route shuttles are free, wheelchair accessible and can accommodate bicycles, and are open to all riders. Shuttles generally operate from late November through April, between the hours of 8:00 AM and 6:00 PM.

In addition to the fixed routes serving Nevada discussed above, on a year-round basis BlueGO also operates Route 53 between the Stateline Transit Center and the Y Transit Center, providing hourly service from 6:45 AM to 10:45 PM seven days a week. While both ends of this route are also served by Route 50, Route 53 serves neighborhoods and other key transit activity centers (including Lake Tahoe Community College) south of Route 50.

A final BlueGO fixed route that can be accessed from Nevada is the summer seasonal Route 30 service. This route provides hourly service from the South Y Transit Center to Camp Richardson, Emerald Bay, and Tahoma on Lake Tahoe's West Shore, from 9:15 AM to 5:15 PM.

BlueGO also operates the "BlueGO On Call" demand response service (both general public and ADA paratransit) within the City of South Lake Tahoe and nearby areas of Nevada. Service is available between the hours of 5:30 AM and 12:30 AM, seven days per week. Service cuts over the past few years have reduced the fixed route service area, and to accommodate the passengers, an On Call transfer policy has been developed. This allows persons residing outside the fixed-route service area to be picked up through the demand response service and be dropped off at a fixed-route transfer point at a reduced fare, where they are able to access the fixed-route service. This enables most residents to be able to take advantage of the transit services provided within the South Lake Tahoe area.

Ridership

Ridership on the BlueGO system is expected to total roughly 828,000 passenger-trips for the next fiscal year, which would reflect all of the recent service changes implemented in 2010 and early 2011. Of this total, approximately 39 percent is generated on the Nevada routes, or 321,700 passenger-trips. This includes operation of the new "Triangle Route", which would essentially replace Routes 20 and 21x, as noted

above, and add service between Minden/Gardnerville and the south end of Carson City This figure also includes the Winter routes, which generate significant ridership (132,200 passenger-trips).

Fare Structure

The BlueGO fare structure provides a range of options for passengers, including one-way and multi-pass tickets. One-way fares range from $2.00 on local routes for general passengers to $4.00 on the regional routes (including Routes 20X, 21X and 24X). Discounted fares, one-half the full fare, are offered for senior, disabled and youth passengers. The OnCall fares are $10.00 for the general public and $3.00 for passengers that qualify for the discounted fare. The BlueGO system also offers a variety of passes, as follows:

- 10-Ride pass (local fixed routes only) - $18.00 general public / $8.00 discount
- 10-Ride Express pass - $30.00
- 20-Ride Express pass - $55.00
- 10-Ride On Call pass - $60.00 general public / $15.00 discount
- Monthly pass (local fixed routes only) - $70.00 general public / $35.00 discount
- Monthly Express pass - $100.00

Existing Transit Fleet

There are a total of 41 vehicles available in the BlueGO fleet (as of April 2011) in five classes of vehicle as defined by the Federal Transit Administration. Currently, roughly 5 vehicles need to be replaced immediately, and an additional 19 will need to be replaced by Fiscal Year 2015-2016.

The vehicles range in type from specialty use buses, such as the trolley/cable car vehicles, to 44-passenger diesel heavy duty transit buses. The vehicles are fueled by diesel, gasoline, bio-diesel, and Compressed Natural Gas (CNG). The two diesel vehicles in service are in need of immediate replacement.

Most of the vehicles have been paid for through FTA grant funds, particularly FTA 5308 (Clean Fuel funds) and 5309 (Transit Capital Improvement Grant funds).

Operating Costs and Revenue Sources

In Fiscal Year 2011-2012, marginal operating costs are expected to total $4,267,400 for all services (including the Triangle Plan element). This represents a slight increase from the previous year, where costs were estimated to total $4,170,500. The marginal operating cost for only the Nevada routes is estimated at $857,800 for the Fiscal Year.

Based on the estimated ridership levels, passenger revenues will total roughly $546,000 for the 2011-2012 Fiscal Year systemwide, and $143,150 for the services within Nevada only. This results in a required operating subsidy of $3,721,400 to operate the BlueGO services systemwide, and $714,600 for the Nevada fixed-routes only. Funding is available from private contributions, as well as local, federal and state grants and contributions. On a local level, subsidy is provided through California's State Transit Assistance (STA) and Local Transportation Fund (LTF) programs, local public utility district funds, Tahoe Transportation District funds, and others. Federal funding sources are obtained primarily through FTA 5311 (Caltrans and NDOT), Carson Area Metropolitan Planning Organization (CAMPO) Federal Funds, Southern Nevada Public Lands Management Association (SNPLMA) and California CMAQ funds. Services wholly within Nevada are primarily funded through the FTA grants and other Nevada sources (SNPLMA, CAMPO, and private contributions).

Existing Transit Facilities

Transit Centers

BlueGO has four transit centers. The region's major passenger facility is the Stateline Transit Center, located on US 50 at the base of the Heavenly Gondola in Heavenly Village. This facility has enough space to accommodate 13 buses at one time. The enclosed building provides a waiting area with restrooms and a visitor center. The US Forest Service shares the space and provides local visitor information. Passengers can purchase fare media at this location.

A second facility is located at the South Y Transit Station on the southwest corner of the intersection of US 50 and Emerald Bay Road (SR 89). This lighted facility is equipped with restrooms, a waiting room, phone, change machine, ATM, vending machine, customer service window, and a BlueGO phone. The South Y Transit Station can accommodate three buses at a time.

A third transit center is located at Kingsbury Grade. This lighted facility is also equipped with restrooms, a waiting room, and a phone. It is located at Kahle Drive and US 50 and can accommodate up to five buses.

Lastly, a fourth transit center is located at Lake Tahoe Community College. This minimal facility has bus shelter, lighting, and a BlueGO phone. This facility can accommodate a total of three buses.

Passenger Amenities

In addition to the transit centers, BlueGO currently has 12 shelters within the service area. The Tahoe Transportation District currently has plans to implement an additional 5 shelters within the Nevada service area.

Maintenance Facilities

BlueGO is operated out of a maintenance/administration facility located at 1679, 1669, and 1663 Shop Street in the western portion of South Lake Tahoe. This facility is owned by the City of South Lake Tahoe. This site is conveniently located for the operation of most BlueGO services. The facility includes bus storage, bus maintenance, parts storage, contractor offices, driver training/break room, and restrooms.

Existing Marketing

BlueGO markets their services in a variety of ways. First, they maintain a website with information regarding existing services, service changes, and other system details. Additionally, informational flyers/pamphlets are produced, which are available in a number of locations within the area, including the major casinos in Stateline, hotels throughout South Lake Tahoe and other popular tourist destinations.

TAHOE AREA REGIONAL TRANSIT

Public transit services in the North Tahoe region (in both California and Nevada) consists of the Tahoe Area Regional Transit (TART) services operated by the Placer County Department of Public Works.

Service Description

TART's "Mainline" route runs year-round along the shoreline of Lake Tahoe between Tahoma on the West shore to Incline Village, Nevada on the East shore. During the winter and shoulder seasons, hourly service is provided between Sugar Pine Point on the West Shore of Lake Tahoe and Crystal Bay, Nevada at the California/Nevada border, while half-hourly service is provided between Crystal Bay and the Hyatt in Incline Village. During the summer months, half-hourly service is available between Tahoe City and the Hyatt in Incline Village while hourly service remains on the west shore part of the route. TART mainline service hours are generally from 6:00 AM to 7:30 PM. TART buses operate seven days per week, except for Christmas Day.

TART also operates hourly route service between Tahoe City, Squaw Valley and Truckee along State Route (SR) 89 with additional runs during the winter and summer months. Beginning in winter 2007/08, TART added winter route service between Truckee, Northstar and Crystal Bay along SR 267. During the summer months, bus service is provided on SR 267 between Crystal Bay and Northstar only from 7:30 AM to 5:30 PM. No service is provided along SR 267 during the shoulder seasons.

In addition, Placer County Public Works Department operates free summer-only night time Trolley services on the North Shore of Lake Tahoe between Squaw Valley and the

Hyatt in Incline Village. Evening service hours run from 7:00 PM to midnight with the last Trolley departing the Hyatt at 11:00 PM. Trolley services are financed by Placer County Transient Occupancy Tax (TOT) funds managed by the North Lake Tahoe Resort Association as well as RTC funds and NDOT funds for service in Nevada.

TART currently contracts with Alpine Taxi to provide complementary paratransit service, in accordance with the Americans with Disabilities Act (ADA). Service is available to eligible passengers within three-quarter miles of the TART routes in both California and Nevada. TART staff reviews eligibility requirements and provides the contractor with a master list of eligible patrons. Riders schedule trips directly with Alpine Taxi.

Ridership

Systemwide ridership for TART totaled 342,876 passenger-trips in Fiscal Year 2009-2010 (most recent full year), of which 45,574 passenger-trips (12 percent) were generated from the Nevada service. To date (as of March 2011) for the current Fiscal Year 2010-2011, overall TART ridership totals 304,693 passenger-trips, with Nevada trips comprising 34,259 passenger-trips of the total. These numbers indicate ridership has experienced growth over the past year, with total ridership up 9.4 percent and the Nevada share up 4.75 percent to date.

Fare Structure

The TART general public one-way fare is $1.75, with a discounted fare of $0.85 available to seniors (60 or older), youth (6 – 12 years old) and disabled passengers. Day passes or 24 hour passes are available at the same price as two one-way trips ($3.50 for the general public and $1.75 for seniors/youth/disabled). Transfers between routes are charged the normal fare so passengers are encouraged to purchase a day pass for trips that require more than one boarding. TART also offers a variety of multi-day discount passes:

- 10 Ride Pass General Public - $14.00
- 10 Ride Pass Discount - $7.00
- 14 Day Unlimited Ride Pass General Public - $30.00
- 14 Day Unlimited Ride Pass Discount - $15.00
- 30 Day Unlimited Ride Pass General Public - $53.00
- 30 Day Unlimited Ride Pass Discount - $26.50

Existing Transit Fleet

The TART fleet consists of three Trolleys, two 35-passenger Gillig transit buses and ten 40-passenger Orion V CNG buses. The mainline route which serves Nevada is operated using three of the Orion buses in the winter and four in the summer.

Revenue Sources and Operating Costs

Fiscal Year 2009-2010 marginal operating expenses for TART systemwide services were $2,015,906, of which $368,678 were for the Nevada TART services. After subtracting fare revenue generated in Nevada ($53,431), operating subsidy required for the Nevada services was $315,247. Total expenses (operating and administrative) for TART systemwide were $2,830,446 in Fiscal Year 2009-2010, while the Nevada services totaled $508,563.

As the TART serves two states and four counties, transit revenues come from a variety of sources. California Transportation Development Act (TDA) funds (which are derived from sales tax) are the largest source of revenue for TART public transit operations. TDA funds are allocated to TART services by both the TRPA and the Placer County Transportation Planning Agency (PCTPA). In Fiscal Year 2009-2010, Placer County contributed roughly $80,000 for the Nevada TART services. Federal Transit Administration (FTA) funds are another important source of revenue for TART, where nearly one-half of the operating subsidy for Nevada services is paid for with NDOT 5311 funding (approximately $227,566). TART also receives revenues from the following local government entities, including Washoe RTC, who pays for roughly one-third of the operating cost for Nevada services. The North Lake Tahoe Resort Association funds the summer night Trolley service, which serves Incline Village and Crystal Bay in Nevada.

Existing Transit Facilities

TART operates from an operations/maintenance facility located at 970 Cabin Creek Road approximately two miles south of Truckee along the SR 89 corridor. The facility has 3,900 square feet of office space and a 7,750 square foot maintenance area with three repair bays, a wash bay, a parts room, and a mechanics office. There is also a 3,300 square foot bus storage building for five buses and an open parking lot for five buses. Diesel and CNG fueling is located on-site. Maintenance space is leased to Placer County DPW Fleet Services for repair of non-TART fleet.

Ground has been broken on a new transit center in Tahoe City near the intersection of SR 28 and SR 89. The inter-modal facility will include 6 bus bays and 130 parking spaces, outdoor covered passenger waiting areas, drop-off areas, bathrooms, bike racks, ski/snowboard racks and connections to the existing trail system.

Existing Marketing

The Truckee/North Tahoe Transportation Management Association conducts marketing efforts for local public transit services (including TART) in the region. The TNT-TMA produces schedules and maintains a website for all transit services in Truckee/North Lake Tahoe. The majority of marketing materials for TART services are produced and distributed through the TNT-TMA; however Placer County does create and maintain

TART-only schedules on the buses for passengers. Schedules and transit information can also be found on Placer County's website

OTHER CONNECTING NORTH SHORE TRANSIT SERVICES

- Summer Night Rider -- To supplement the summer Tahoe Trolley free evening service operated by TART, the Tahoe Truckee Transportation Management Association provides a free evening service along SR 267 from Northstar to Crystal Bay from 6:00 PM to 10:30 PM.

- Winter Night Rider – During the winter months, Night Rider travels between Squaw Valley, Tahoe City and Stateline, as well as Northstar to Stateline. Hourly service is available from approximately 7:00 PM to midnight.

DOUGLAS AREA RURAL TRANSIT

Service Description

DART (Douglas Area Rural Transit) is the local transit service for Douglas County residents in the Carson Valley. DART offers a deviated fixed route and Dial-A-Ride transportation for seniors, special needs individuals, and the general public in Minden/Gardnerville. Deviated fixed route service is offered generally from 8:00 AM to 6:30 PM on hourly headways on weekdays. The deviated fixed route has three "express" runs between the Carson Valley Inn in Gardnerville and Costco in Indian Hills (Carson City) at 5:45 AM, 7:20 AM and 3:30 PM. This schedule allows commuters to transfer to/from the Carson City JAC service. Other scheduled stops include Wal-Mart, Target, Stephanie and Vicky Lane, Starbucks, the Carson Valley Swim Center and on-call stops are possible at shopping centers along the way. Dial-a-Ride services are available for shopping and medical appointments from 8:00 AM to 5:00 PM Monday through Friday. Advanced ride requests are required.

As funding allows, DART would like to add a future loop in the Ranchos neighborhood as well as additional stops along Main Street. Previously, DART had direct transfers with BlueGo's Kingsbury Express route and would like to continue the practice after the Triangle Plan is implemented. Passengers can also transfer to/from JAC Route 3 at Fuji Park in northern Douglas County.

Ridership

The DART system carries roughly 1,975 passengers per month, on average. On a yearly basis, DART estimates that the system serves between 23,700 passenger-trips to 24,850 passenger-trips.

Fare Structure

The fare structure is the same for the deviated fixed route and DAR services. Passengers age 60 and over are requested to make a $1.00 donation per one-way trip. The general public fare is $2.00 per one-way trip, students are $1.00 and Medicare trips are $1.00.

Existing Transit Fleet

DART services are operated using seven 16 – 24 passenger cutaway transit vehicles.

Operating Costs and Revenue Sources

DART annual operating costs are approximately $420,000. Revenues and funding sources are primarily obtained from Douglas County (roughly $170,000), federal FTA funding ($250,000, on average) and from Douglas County Aging and Disability Services ($20,000).

Existing Transit Facilities

DART is operated by Douglas County Senior Services. Administrative staffers are located at the Senior Center in Gardnerville, while the vehicles and dispatch is located at the County Yard near the airport.

Existing Marketing

The DART program has undergone some recent changes due to budget cuts. There is minimal marketing material currently available. New logos were recently developed for the buses and DART staff is working with the County on developing a more comprehensive website and brochures.

WASHOE RTC INTERCITY AND RTC RIDE

Service Description

The Washoe County Regional Transportation Commission (RTC) began operating transit services in 1978. Today there are numerous route and service options offered, including RTC RIDE and RTC Intercity.

The RTC Ride service consists of 30 fixed routes serving Reno, Sparks and other areas of Washoe County (exclusive of the Tahoe Basin). In total, there are over 1,200 bus stops within the RTC Ride service area. Connections to the Lake Tahoe area are not directly provided through RTC RIDE, however they are available through the RTC Intercity service. Routes 56 and 57 travel to the southern portion of Reno, serving the

Damonte Ranch and South Meadows areas. Connections can be made from Route 57 to the Intercity Service at the Wal-Mart in Damonte Ranch. There are currently no direct transit routes serving the Summit Sierra Mall, which is located at the base of State Route 431 (Mt. Rose Highway) in the southernmost area of Reno.

The RTC Intercity service consists of commuter transportation between Reno and Carson City. The route serves five stops in total, including three in Reno (4th Street Station, Meadowood Mall and the Wal-Mart at Damonte Ranch) and two in Carson City (N. Carson Street and College Parkway, and the NDOT offices on Little Lane). The route offers two morning runs – at 5:47 AM and 6:47 AM to Carson City, and at 6:50 AM and 7:50 AM to Reno. In the afternoon there are three departures in each direction – at 3:05 PM, 4:05 PM and 5:27 PM to Carson City, and at 4:10 PM, 5:10 PM and 6:32 PM to Reno.

Washoe RTC Intercity service provides connections to both JAC and BlueGO services. Transfers to the JAC service can be made in Carson City at the Downtown Transfer Plaza. With the new Triangle Plan, BlueGO passengers on most runs will need to first transfer to JAC before transferring to RTC Intercity.

Ridership

Overall, the RTC system had a total of 7,474,905 passenger-trips in Fiscal Year 2009-2010 (July through June), which was an 11.5 percent decline from the previous year (8,449,134 passenger-trips). Of the FY 2009-2010 total, roughly 37,824 passenger-trips were generated by the Intercity service. This route also experienced a decline in ridership between FY 2008-2009 and 2009-2010 (24 percent), which had a total of 49,876 passenger-trips in FY 2008-2009.

Fare Structure

Fares for the RTC Intercity service include general, reduced (seniors 65 years and older, and youths 6 to 18 years) and disabled (with RTC Access card); children under the age of 5 years old ride for free. General one-way fares are $4.00 and $2.75 with a transfer to the RTC Ride from another service. The reduced and disabled one-way fares are $2.00, and $1.25 (reduced) or $0.85 (disabled) for one-way fares with a transfer. Ten-ride ticket passes are also available for $34.00 (general) and $17.00 (reduced).

Transfers to the JAC service in Carson City are free, while transfers to the BlueGO service are $2.00.

Existing Transit Fleet

The RTC Intercity service utilizes three 2005 Gillig Suburban Phantom buses, which have a seating capacity of 38 passengers.

Operating Costs and Revenue Sources

Operating costs for the RTC Intercity service totaled roughly $360,077 in FY 2009-2010, while fare revenues totaled $99,821, resulting in an operating subsidy of $260,255. Washoe RTC splits the cost of running the service with Carson City. Carson City contributes roughly 26 percent of the operating subsidy, which covers the portion of the route within their jurisdiction. The remaining costs are generally funded through the FTA Jobs Access Reverse Commute (JARC) program and local sales tax dollars.

Existing Transit Facilities

Washoe RTC has two major transit centers, located in Reno and Sparks, and a transfer station in Reno. The RTC 4th Street Station in downtown Reno is served by all RTC RIDE routes and the RTC Intercity route. This new facility opened in October 2010 and has capacity for 22 buses. The second center, the Centennial Plaza facility in downtown Sparks is only served by RTC RIDE, and has a total of 15 bus bays.

Transfers can be made at the Meadowood Mall, located south of downtown Reno on South Virginia Street. The facility was recently reconstructed in November 2010 and can hold up to 10 buses. In addition to RTC RIDE, this facility is a major stop along the Intercity route.

Existing Marketing

The Intercity service is marketed through distribution of brochures and information printed in the RTC RIDE Bus Book, a comprehensive rider's guide for the transit services.

WASHOE RTC VANPOOL AND RIDESHARE PROGRAMS

Service Description

RTC offers a vanpool program through a partnership with VPSI. VPSI provides the vehicles and pays for their insurance and maintenance. Vanpool participants share the costs of gas and the van lease. Each vanpool has a primary driver, a back up driver or two, a coordinator who reports ridership data, and a person who leases the vehicle and collects payments. RTC provides a subsidy for each vanpool, equivalent to up to 40% of the monthly van lease including tax. In order to be eligible for the RTC subsidy, vanpools must register for the program, have an origin or destination within Washoe County (including the Tahoe Basin portion of Washoe County), and maintain and report ridership data.

RTC Rideshare, in partnership with Greenride, provides a web-based service that is used to match potential carpoolers. Commuters enter in their origin, destination and travel preference and potential carpool matches are provided. Commuters can then contact each other to set up a carpool. Vanpools may also be set up if there are enough commuters with similar needs.

Ridership

In February 2011, there were a total of 196 people who used the vanpools for 5 or more trips per month. Currently none of the vanpools have an origin or destination in the Lake Tahoe area. RTC has talked with some interested persons about setting up a vanpool from the Reno area to Incline Village but to date it has not occurred.

Additionally there are about 800 people signed up on the rideshare website. It is unknown how many of these people are in active carpools, as they are not required to register their carpools.

Existing Fleet

There are currently 23 vans in the RTC vanpool program. They are all leased from VPSI, a nationwide supplier of vans, on a month-by-month basis. A variety of vans can be leased through VPSI. Most RTC vanpool use 8, 10, 12 or 14 passenger vans. The number and type of vans for the RTC program can be increased or decreased as needed.

Operating Costs

Vanpool costs are shared between RTC and the vanpool participants. RTC pays for 40 percent of the cost of leasing the vans and taxes on the lease. Vanpool participants then split the remaining 60 percent of the lease and taxes and 100 percent of the cost of gas. Lease prices for the vans vary based on the type of van and the number of people they can hold. Maintenance and insurance on the vans is provided by VPSI.

Existing Marketing

Marketing is mainly provided through the Smart Trips program, which is a free service provided by the RTC to assist local businesses to encourage employees to use alternative modes of transportation including carpooling and vanpooling as well as other modes. RTC also uses traditional media such as print and radio to advertise. VPSI also has marketing personnel that contact businesses about vanpooling.

JUMP AROUND CARSON (JAC)

Service Description

The public transit system serving Carson City (and northernmost Douglas County) is Jump Around Carson (JAC). JAC offers four fixed routes Monday through Friday from 6:30 AM to 6:30 PM, and on Saturdays from 8:30 AM to 4:30 PM. Buses operate on hourly headways from the Downtown Transfer Plaza on North Plaza Street (in front of the Federal Building). JAC connects to three different interregional transit services:

- Connections to the Nevada Tahoe Basin are possible by transferring to BlueGO Route 21X for a reduced fare at the Downtown Transfer Plaza. Transfers from BlueGo to JAC are free.

- Transfers with RTC Intercity to destinations in Reno are also possible at the Downtown Transfer Plaza. Transfers from RTC Intercity to JAC are free while a reduced fare is charged for transfers from JAC to RTC intercity.

- Three timed transfers with DART are possible at Costco in northern Douglas County. Transfers from DART to JAC are free.

JAC offers complementary paratransit service, JAC Assist, to ADA eligible passengers within one mile of the fixed routes.

Ridership

It is estimated that JAC systemwide carries approximately 150,000 one-way passenger trips per year. Of these trips, approximately 18,000 one-way trips are expected to be generated from JAC Assist. Records from 2009 show that the JAC fixed routes carried an average of 468 one-way passenger-trips per weekday.

Fare Structure

The general public fare on JAC is $1.00, with a 50 percent discount available to youth, seniors over 60 and disabled. Children under age 4 ride for free. Monthly passes and 10-ride passes are also available. One-way trips within three-quarters of a mile from the fixed route on JAC Assist cost $2.00. Trips between three-quarters of a mile and one mile cost $4.00.

Existing Transit Fleet

A total of seven vehicles are required for peak transit service: four for the fixed routes and three for JAC Assist. JAC maintains a fleet of 12 vehicles.

Operating Costs and Revenue Sources

Estimated 2010 operating expenses for JAC systemwide services are $878,395. JAC receives approximately $86,000 in passenger fare revenues, $1.4 million in FTA operating and capital grants, $32,000 from other state funds, a $10,000 contribution from Storey County and $300,000 from the Carson City general fund.

Existing Transit Facilities

All routes begin and end at the Downtown Transfer Plaza on N. Plaza Street. There is capacity for four vehicles at this transfer point. JAC is operated and maintained by the Carson City Pubic Works Department. Vehicles are stored and maintained at the Carson City Corporate Yard.

Existing Marketing

JAC produces an informative transit map and schedule, which is also available on the Carson City website.

NORTH LAKE TAHOE EXPRESS

Service Description

The North Lake Tahoe Express is an airport shuttle service, first initiated in 2006, operating between the Reno International Airport and the North Lake Tahoe area. Departures in both directions are offered at specific times throughout the day and vary depending on the pick-up or drop-off locations. There are three separate routes, offering service to three areas:

- The Red Route serves the Squaw Valley and Tahoe City/Sunnyside areas via I-80 and State Route 89, with up to 8 available trips in each direction daily during the winter, and 7 trips the remainder of the year. A total of 19 locations are served with key locations consisting of Squaw Valley resorts, River Ranch Lodge, Granlibakken Lodge, and Sunnyside Resort.

- The Green Route travels via I-80 and State Route 267 to serve Truckee and the Northstar area. Seven runs per day are offered in winter, and six in the remainder of the year. A total of seven stops are served, including the Ritz-Carlton Lake Tahoe, Northstar Resort, Cedar House, Larkspur Hotel (formerly Best Western) and the Truckee Train Station. Long-term paid public parking is available near the train station.

- The Blue Route serves Incline Village, Crystal Bay, Kings Beach, Tahoe Vista and Carnelian Bay, with up to 8 runs per day. Service is typically provided via Mt. Rose

Highway (State Route 431). The Hyatt Regency Lake Tahoe and Tahoe Biltmore are key stops among the total of 20 designated stops. Limited public parking is also available at the Incline Village Recreation Center.

These routes are typically operated separately, though infrequently a van completing one run will shift to another run to serve a particular ride request. Service begins as early as 3:30 AM, with the last departure from the airport at 11:45 PM. Importantly, the service does not operate on a fixed schedule regardless of passenger demand. Given the variation in ridership, service of a particular run is only guaranteed to operate if one or more passengers make a reservation at least one day in advance.

The service is operated by a contracted private transportation company, Airport Mini-Bus, which is part of a group of companies that also includes Bell Limo and Whittlesea-Checker Cab. With regards to the North Lake Tahoe Express program, Airport Mini-Bus is responsible for maintenance and fueling of the vehicles, providing drivers and all training, dispatching, operation of the reservations systems, staffing at the airport ticket counter, and maintaining records of the service.

Ridership

In Fiscal Year 2010-2011, the North Lake Tahoe Express is expected to carry approximately 21,653 passengers, roughly a 17 percent increase from FY 2009-2010 (16,547 passenger-trips).

A review of the ridership data shows that the Blue Route, with service to Nevada communities like Incline Village and Crystal Bay, has the highest proportion of runs operated. Additionally, compared to the other routes, the Blue Route has the most consistent levels of ridership throughout the year, and this route generates the most ridership during the spring and fall seasons. Furthermore, ridership data reveals that the Hyatt is the most popular location over the course of the year as a whole, particularly during the summer season.

Fare Structure

Fares for the North Lake Tahoe Express are dependent upon the number of persons in the party, with prices per passenger decreasing as the number of passengers increase. The fare structure is designed to “reward” frequent riders and group trips, and is also intended to make North Lake Tahoe Express fares competitive with other providers for larger groups. One-way trips vary from $40 for one person and up to $240 for 16 to 21 passengers, while roundtrips are between $75 for one passenger and $400 for 16 to 21 passengers.

Bulk ticket packages are also available that offer a greater discount than if each ticket was purchased individually. A 5-trip ticket can be purchased for $125, 10 trips for $200, 15 trips for $300, 20 trips for $400 and 25 trips for $500.

Reservations can be made online or over the phone at least 24 hours in advance in order to guarantee a seat. Walk up passengers are accommodated on scheduled runs, however there is no guarantee that such a passenger will be served.

Existing Transit Fleet

The North Lake Tahoe Express is operated by Airport Mini Bus, who supplies the fleet for the service. There are a total of 20 minibuses and 5 vans available, all of which are maintained by AMB or other vendors at their facility in Reno.

Operating Costs and Revenue Sources

Operating costs for the North Lake Tahoe Express for Fiscal Year 2010-2011 are estimated to total approximately $729,241. Revenues for the North Lake Tahoe Express are generated from passenger fares, as well as a variety of subsidy funding sources. The largest subsidy is provided by the North Lake Tahoe Resort Association. Funding for service in Nevada is provided by the Hyatt Incline Village, the Biltmore Casino and Hotel, and the Incline Village Crystal Bay Visitor and Convention Bureau. Nevada County sources for FY 2010-2011 include Truckee-Tahoe Airport, Cedar House Sports Lodge and the Larkspur Hotel. Depending on the private sources that commit to funding, the total subsidy received for the service can change from year to year.

Existing Marketing

The Truckee-North Tahoe Transportation Management Association (TNT/TMA) conducts extensive marketing for the NLTE service, which is essential to the success of the program. Efforts currently conducted include advertising on TART bus schedules and at bus shelters; flyers at local hotels and other businesses; advertisements on television and in newspapers, magazines and visitor guides; booths at community events; and advertisements on local visitor-based websites.

SOUTH TAHOE EXPRESS

Service Description

The South Tahoe Express is an airport shuttle service that provides transportation between the casino corridor area of Stateline, Nevada and the Reno Tahoe International Airport. The service is operated by Amador Stage Lines, a charter bus operator with offices in Sacramento, California and Reno, Nevada.

Stops include the Lakeside Casino, Horizon Casino, Harrah's, Harveys, the Embassy Suites and the Montbleu. Passengers staying in South Lake Tahoe but not at a participating hotel can also use the service, but must make arrangements to their hotel from one of the established stops. There are eight daily departures from the airport between the hours of 10:00 AM and 9:30 PM. Traveling to the airport, shuttles depart between 3:00 AM and 4:17 PM, depending on location of pick up.

Upon request, wheelchair equipped vehicles are available provided there is at least 48 hours notice.

Ridership

As this service is privately operated, ridership data was not available.

Fare Structure

South Tahoe Express offers general fares and discount fares for youths (ages 4 to 12 years old). One-way fares are $27.00 for adults and $15.00 for youths. Roundtrip tickets are slightly discounted – adult fares total $48.00 and youth fares total $27.00. Children age 3 years and younger do not pay fares, so long as they are accompanied by an adult. The service imposes a $5.00 service fee for changes made to existing reservations.

Tickets can be purchased online, at the airport, or through one of the participating hotels that are served by the shuttle. Reservations are recommended and guarantee a ride, however walk-on passengers are also able to purchase tickets if seats are available.

Existing Transit Fleet

As a private service, this data was not available.

Operating Costs and Revenue Sources

Because this is a private service, operating costs and revenue sources are not available.

Existing Transit Facilities

As a contract type service, there are no passenger facilities directly associated with the South Tahoe Express. Amador Stage Lines, the shuttle service operator, has full maintenance capabilities at both the Sacramento and Reno properties. Each location has approximately 10,000 square feet of indoor maintenance space, which can accommodate up to seven buses for service activities indoors. Service amenities include full length service pits, hydraulic hoists, automatic bus washes and fueling stations.

Existing Marketing

Given the tourist-based nature of the operation, the service is generally marketed through tourism and convention bureaus, lodging facilities and recreational business such as ski resorts.

REGIONWIDE SUMMARY OF TRANSIT SERVICES IN THE NEVADA PORTION OF THE LAKE TAHOE REGION

Below is a summary of the public transit providers whose services travel within the Nevada portions of the Lake Tahoe Basin. Included is a review of the services offered, operational data, and funding details. These services are the TART Mainline bus and four BlueGO routes. For the purposes of this review, private services such as the airport shuttles were not included as the information available is not as comprehensive as the public transit services.

Services

There are four BlueGO routes that serve Nevada – 20x, 21x, 23 and 24x – each of which is discussed in detail in the previous section. Each of these services provides transportation opportunities for passengers between Stateline, Nevada and either Carson City or Minden/Gardnerville. Other communities served along these routes include Zephyr Cove, which is a popular summer beach destination, and the Ridge Resort, a popular winter destination. The TART Mainline service operates between Tahoe City and Crystal Bay/Incline Village.

Other than the BlueGO and TART services, there are no other options that provide public transportation directly to the Nevada portions of the Lake Tahoe Basin. In the summer months, connections between Crystal Bay and Incline Village can be made through the TART Mainline service, where transfer opportunities are available on the west shore (California) to the summer Trolley operated by BlueGO. Unfortunately, this is an extremely long trip and is rather inconvenient to passengers unless they are solely using the services for tourist-based trips with no time restrictions.

Current connections along the east shore of Lake Tahoe, which is wholly within Nevada, are not available; as such, residents and visitors are unable to travel via public transportation between South Lake Tahoe/Stateline and Incline Village. Along this stretch are highly popular beach destination in the summer, and without alternative transportation options, the two-lane roadway becomes very congested with traffic and with parking on the limited shoulder areas. One of the major problem areas in the summer is the Sand Harbor State Beach (roughly 8 miles east of Incline Village), which has limited on-site parking and results in overflow parking along the roadway shoulders.

In general, the Incline Village/Crystal Bay area is not well connected to other areas. In addition to the lack of connection to the south shore, there are also no transportation options to Reno or Carson City.

Ridership

As shown in Table 1, in total 364,311 passenger-trips per year are estimated to be made on public transit services within the Nevada portion of the Tahoe Region, including trips to/from other portions of northern Nevada. The busiest route is Route 23 in the BlueGO system, with 81,900 passenger-trips in the estimated Fiscal Year 2011-2012. This was followed by the portion of Route 50 within Nevada (61,532 passenger-trips), Route 20x with 23,500 passenger-trips, Route 21x with 19,400 passenger-trips, and Route 24x with 3,200 passenger-trips. While in total the Winter routes carried 132,205 passengers, this is a compilation of all routes serving Nevada rather than a single one. The Nevada portion of the TART Mainline service generated roughly 42,574 passenger-trips in Fiscal Year 2009-2010, which is approximately 12.4 percent of the total TART Mainline route ridership.

TABLE 1: Summary of Transit Services

Transit serving Nevada portion of Lake Tahoe Basin

Service	Ridership	Vehicle Hours	Vehicle Miles	Fare Revenues
TART [1]	42,574	4,600	100,467	$53,431
BlueGO [2]				
Route 20x	23,500	4,076	90,647	$16,500
Route 21x	19,400	3,103	81,301	$37,700
Route 23	81,900	6,378	85,686	$19,000
Route 24x	3,200	284	9,614	$10,925
Route 50 [3]	61,532	958	10,786	$69,750
Winter Routes	132,205	5,339	37,472	--
BlueGO NV Total	*321,737*	*20,138*	*315,506*	*$153,875*

Note 1: TART data is for Fiscal Year 2009-2010, the most recent full year available
Note 2: BlueGO data is estimated for Fiscal Year 2010-2011
Note 3: Route 50 data is for portions of the route that are within Nevada

Source: LSC Transportation Consultants, Inc., 2011; TART, 2011

Like many mountain resort destinations, Lake Tahoe experiences ridership fluctuations depending on the season. These fluctuations are the result of not only visitors for the summer and winter activities, but also seasonal workers that live in the Basin during the peak seasons.

The summer months (June through August) and winter months (December through March) tend to generate the greatest amount of ridership. In Fiscal Year 2009-2010, the highest ridership on the TART Nevada service occurred in the months of July and August. Data also shows that, overall, 33 percent of the total Nevada portion ridership is in summer, while winter (December through March) totaled 30 percent of the ridership. Fall (September through November) had a total of 23 percent of the Nevada ridership and the spring season (April and May) had 14 percent.

Data for the BlueGO Nevada fixed services from May 2009 through April 2010 (most comprehensive data available) shows that winter generates more ridership than summer. Approximately 43 percent of the total ridership on Routes 20x, 21x, 23 and 24x occurred in winter, while summer totaled 26 percent. Despite the fact that Route 24x was not in operation during that summer season, winter still would have generated a greater amount of passenger-trips. Similar to the TART patterns, 19 percent of the ridership occurred in fall and the remaining 12 percent in spring.

Vehicle Hours and Miles

Table 1 presents the operating characteristics for the services mentioned above, including ridership, vehicle hours and vehicle miles, by route or service. This data provides insight into the level of service each of the routes offer.

As shown, TART services within Nevada totaled 4,600 vehicle hours and 100,467 vehicle miles for Fiscal Year 2009-2010. Forecasting the current BlueGO service plan for Fiscal Year 2011-2012, Route 23 will require the greatest number of vehicle hours (6,378 hours), followed by the Winter routes combined (5,339 hours), Route 20x with 4,076 hours, Route 21x with 3,103 hours, Route 50 with 958 hours (in Nevada service area only) and Route 24x with only 284 hours. With respect to vehicle miles, Route 20x will have the greatest with 90,647 vehicle miles, followed by Route 23 (85,686 miles), Route 21x (81,301 miles), the Winter routes (37,4278 miles), Nevada portions of Route 50 (10,786 miles) and Route 24x (9,614 miles). The minimal number of hours and miles associated with Route 24 is due to the fact that it only operates on school days and with very few trips between South Lake Tahoe and Minden.

NDOT Funding

The Nevada Department of Transporation distributed federal grant funding to the various public transit agencies throughout the state. These funds include 5308 (Clean Fuel Funds), 5309 (Transit Capital Improvement Funds), 5310 (Elderly and Disabled

Funds), 5311 (Rural and Small Urban Funds), and 5316 (JARC- Job Access and Reverse Commute Funds). Below are the total funds NDOT distributed for the public transit services described in this section.

- BlueGO is anticipated to receive roughly $1,013,453 from NDOT for Fiscal Year 2011-2012.

- TART received approximately $227,566 in NDOT funding (5311 funds) for Fiscal Year 2009-2010. In Fiscal Year 2010-2011, TART received approximately $230,455 from NDOT.

- On average, DART receives federal transit funding through NDOT of approximately $250,000 annually.

- Washoe RTC splits the cost of running the Intercity service with Carson City, who pays approximately 26 percent of the costs. Of the remaining operating costs, over 50 percent is funded through JARC 5316 grants. For Fiscal Year 2009-2010, the total funding received from NDOT is estimated at roughly $120,000.

- In 2010, JAC estimates that they received over $1.4 million in FTA grant funds, through NDOT for operating and capital grants, as well as $32,000 in additional Nevada state grants.

Considering only those programs that serve the Tahoe Basin (BlueGO and TART), and assuming no change in the funding received from TART from Fiscal Year 2010-2011 and 2011-2012, existing annual NDOT funding totals approximately $1,243,908 for Fiscal Year 2011-2012.

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Section III
Existing Transit Service Performance Analysis

Conducting a performance analysis of a transit system is crucial to efficient and productive transit services. In general, it is a way for transit agencies to determine what services are operating at their optimum levels and are used for a variety of reasons, including 1) ways to manage costs, 2) where service changes may be warranted, 3) how to maintain or improve service quality, and 4) to aid in developing effective marketing efforts, among many others.

The analysis is guided by performance measures/indicators, which in this study includes the following:

- Cost per Passenger-Trip – This indicator measures the cost to serve each passenger-trip, where a lower number is considered ideal.

- Cost per Vehicle-Hour and per Vehicle-Mile – These indicators aid in setting standards for services and comparing multiple services.

- Subsidy per Passenger-Trip – Comparing operating subsidy (operating costs less passenger fare revenue) against passenger-trips looks at the total subsidy that is required for each passenger-trip. This is probably the single best means of measuring performance, as it directly relates the "goal" of public transportation (to provide passenger-trips) to the basic resource required (public dollars).

- Farebox Return Ratio – This measures the how well the fare revenues cover the operating costs. The higher the percentage, the better.

As a whole, this information provides a valuable resource for the remainder of the study, where it will serve as a basis for determining where needs may exist that aren't currently being met or where there is a potential for service expansion.

It is important to note that all cost data presented in this review reflects marginal costs – those costs directly incurred in the provision of the specific service, such as driver compensation, vehicle maintenance, and vehicle fuel. All of the services are provided as part of larger transit organizations that have other "fixed" costs, such as administrative staff compensation, facility costs, and marketing costs. In assessing (and funding) the overall programs these fixed costs must be considered. However, focusing on marginal costs allows a better comparison of the costs and performance of the individual routes serving Nevada. Another important note is that costs can vary significantly between providers, based on variations in costs. For example, TART costs may be higher as a result of the driver salaries and benefits, required deadhead hours and such.

This section focuses on the BlueGO routes and the TART Mainline service in Nevada portions of the Lake Tahoe Basin. Table 2 presents the performance evaluation of these transit services.

TABLE 2: Performance Evaluation of Transit Services

Transit serving Nevada portion of Lake Tahoe Basin. Excludes fixed costs.

Service	Marginal Cost per Passenger-Trip	Marginal Cost per Vehicle Hour	Marginal Cost per Vehicle Mile	Marginal Subsidy per Passenger-Trip	Marginal Farebox Return Ratio
TART	$8.66	$80.15	$3.67	$7.40	14.5%
BlueGO					
Route 20x	$6.04	$34.84	$1.57	$5.34	11.6%
Route 21x	$5.88	$36.74	$1.40	$3.93	33.1%
Route 23	$3.55	$45.61	$3.39	$3.32	6.5%
Route 24x	$4.84	$54.55	$1.61	$4.78	70.5%
Route 50	$0.65	$41.55	$3.69	-$0.49	175.2%
Winter Routes	$1.93	$47.87	$6.82	$1.93	--
BlueGO NV Total	*$2.67*	*$42.59*	*$2.72*	*$2.22*	*16.7%*

Note 1: Data is for TART services in Nevada only
Note 2: TART data is for Fiscal Year 2009-2010, and BlueGO data for Fiscal Year 2010-2011 (estimated)
Note 3: Route 50 data is for portions of the route that are within Nevada

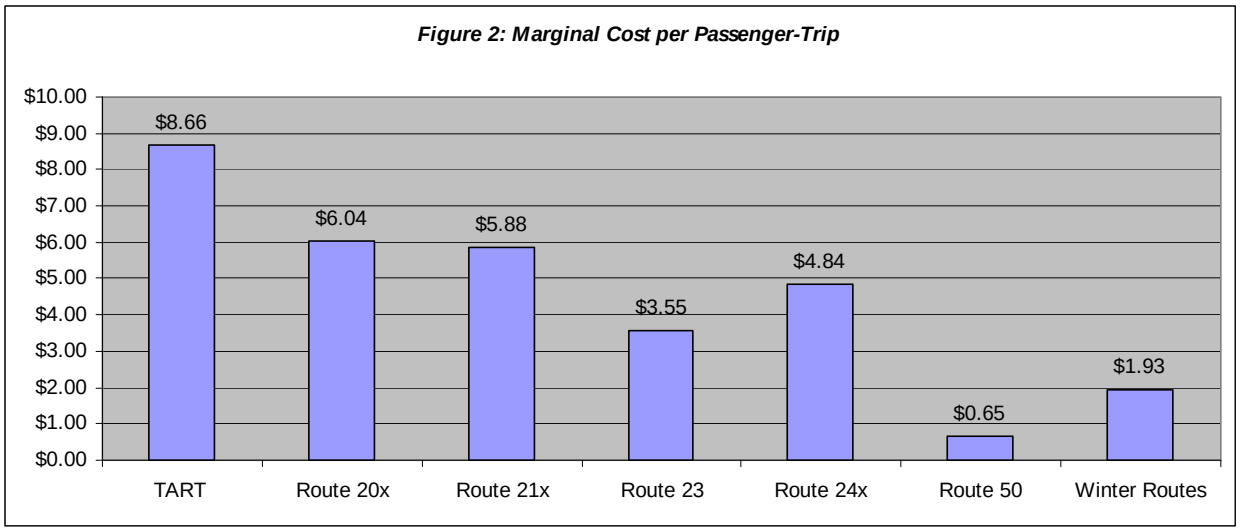
Source: TART, 2011; LSC Transportation Consultants, Inc., 2011

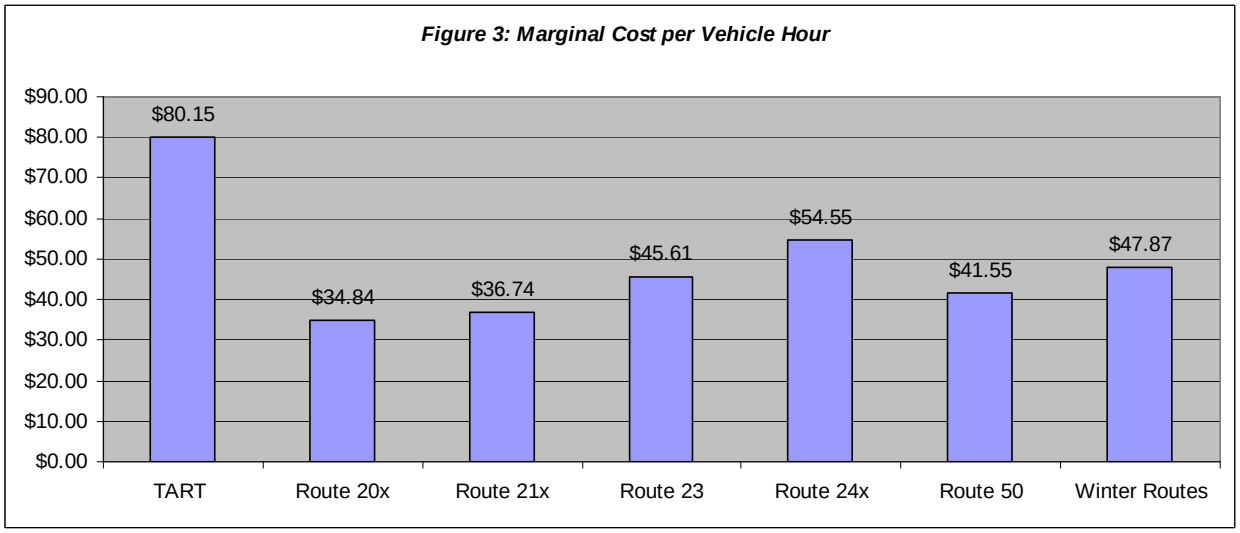
Marginal Cost per Passenger-Trip

As shown in Table 2 and Figure 2, TART services in Nevada incur a marginal cost of $8.66 per passenger-trip. The BlueGO services have considerably lower marginal cost per passenger-trip, with an estimated overall $2.67 in marginal costs per passenger-trip in Fiscal Year 2011-2012. This lower figure can be attributed to the low costs associated with Nevada portions of Route 50 and the Winter routes, as well as the higher density of ridership. Depending on the route, this cost ranges from $0.65 per passenger-trip on Route 50 to $6.04 on Route 20x.

Marginal Cost per Vehicle-Hour

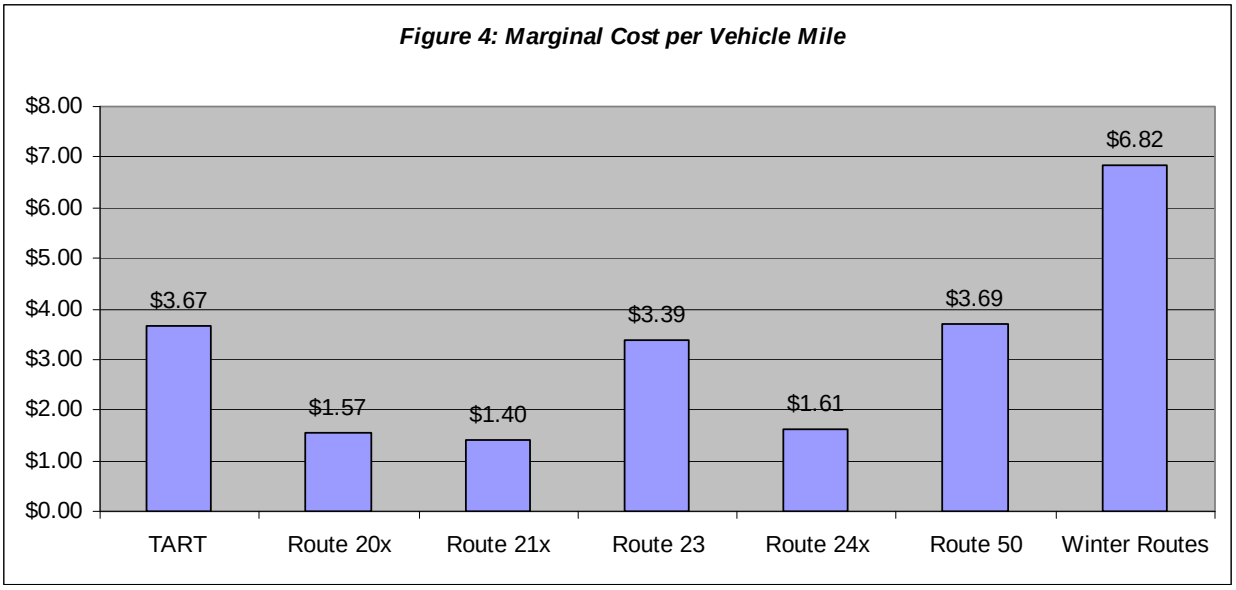
The marginal costs incurred per vehicle-hour of service for the TART Mainline service in Nevada is substantially higher than the BlueGO services, as shown in Table 2 and Figure 3, with a total cost per vehicle-hour of $80.15. Comparatively, BlueGO routes result in marginal costs per vehicle-hour of $42.59 for all Nevada routes. Individually, these range between $34.84 per vehicle-hour on Route 20x to $54.55 per vehicle-hour on Route 24x.





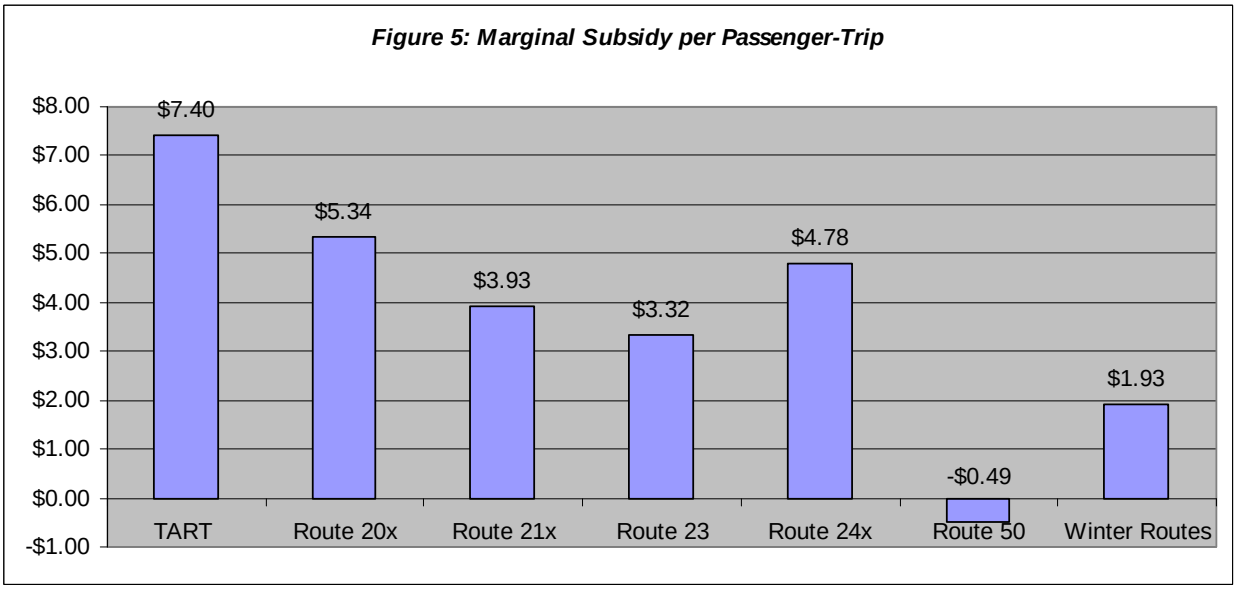
Marginal Cost per Vehicle-Mile

Cost per vehicle-mile is another important financial indicator. As indicated in Table 2 and Figure 4, BlueGO services had the lowest marginal cost per vehicle-mile, at $2.72 per vehicle-mile for all Nevada services. The Winter BlueGO routes resulted in $6.82 per vehicle-mile, the highest within the BlueGO system. TART Mainline service resulted in a reasonable cost, requiring $3.67 per vehicle-mile.



Marginal Subsidy per Passenger-Trip

Service efficiency is measured by the operating subsidy per one-way passenger-trip. As shown in Table 2 and Figure 5, marginal operating subsidy per passenger-trip on the BlueGO and TART services in Nevada ranged from a low of -$0.49 per passenger-trip (Route 50) to a high of $7.40 per passenger-trip (TART). The negative figure for Route 50 in Nevada indicates that passenger revenues on this short portion of Route 50 exceed the marginal operating costs.



The BlueGO Nevada routes are estimated to result in a marginal subsidy per passenger-trip of $2.22 for Fiscal Year 2011-2012. Looking more closely at the BlueGO routes, the Winter routes are the most efficient after Route 50, with $1.93 per passenger-trip. This is followed by Route 23 and Route 21x, with $3.32 per passenger-trip and $3.93 per passenger-trip, respectively. Route 24x is slightly higher, at $4.78 per passenger-trip, and Route 20x the least efficient at $5.34 per passenger-trip.

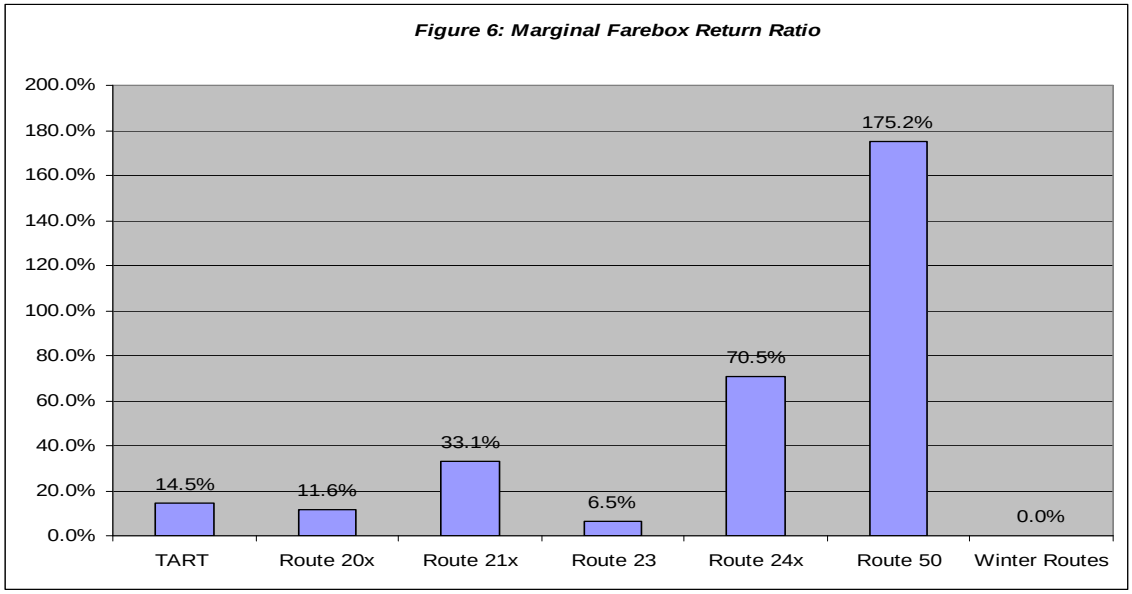
On Route 50, roughly 31 percent of passenger revenues are collected within the Nevada portions of the route (as 31 percent of boardings occur here as well), however with vehicle-miles and vehicle-hours only comprising 14.5 percent of the route's total, revenues exceed operating costs; this results in a highly efficient route. It is important to note here that the most passenger's trips are substantially longer once they cross into California in order to reach their destination and as such, the subsidy (and costs) per trip increase. Therefore, when looking at service changes or route evaluation, it is important to consider the route as a whole.

Farebox Return Ratio

A standard measure of transit cost efficiency is the "farebox return ratio". This is the amount of fare revenue collected divided by the operating cost expended. Minimum farebox return ratios are set as a condition of California state and funding, and are determined on a systemwide level. For services, BlueGO has a minimum systemwide return ratio requirement of 10 percent. Per the Transportation Development Act (TDA), TART is considered an older operator, as service originally began in 1974. As such, TART is eligible for TDA Local Transportation Funds (LTF), regardless of the farebox ratio, as long as TART does not claim more than 50 percent of the amount required to meet total operating and capital expenses after a deduction of federal and State Transit Assistant (STA) grants. TART could increase its eligibility for LTF funds to greater than the maximum LTF allocation allowed under the 50 percent expenditure rule, if TART maintained a farebox ratio of 25 percent (which TART maintained in FY 1978-79).

A review of the marginal farebox return ratios of the Nevada portions of the services provides further insight into the cost efficiency of the routes. As shown in Table 2 and Figure 6, Nevada TART services had a farebox return ratio of 14.5 percent for Fiscal Year 2009-2010. For all Nevada BlueGO routes, the farebox return ratio is expected to total 16.7 percent for Fiscal Year 2011-2012. On an individual basis, BlueGO Route 50 (Nevada portions) is estimated to have the highest ratio with 175 percent. Route 21x followed with 33 percent, while Route 20x had 11.6 percent. Route 24x had a farebox return ratio of over 70 percent due to the private funds collected for the operation of this route that are considered revenues rather than subsidies. Since the Winter routes do not require a fare, this measure is not applied.

Figure 6: Marginal Farebox Return Ratio



Section IV
Existing Plans

A key step in any physical planning process is the careful consideration of other ongoing planning processes in the area. This section presents a review of recent and concurrent planning studies and considers how each impacts the potential for future transit services. The plans include both local (Tahoe Basin, Reno and Carson Valley) and statewide studies. The summaries below focus on the transit-related policies, goals or improvements discussed in each of the documents.

MOBILITY 2030: LAKE TAHOE REGIONAL TRANSPORTATION PLAN

The most recent update of the Lake Tahoe Regional Transportation Plan (RTP) was conducted in 2009. An RTP is a state mandated planning document which provides a 20 year vision of the region's transportation needs, goals, transportation projects to meet the community's goals and financial strategies. Transportation facilities discussed in an RTP include roads, public transit, bicycle/pedestrian facilities and aviation. Below lists the Lake Tahoe RTP goals and policies for mass transit:

Goal

Actively encourage the development and implementation of services and programs to expand the operation and use of environmentally conscious public transit in the Lake Tahoe region.

Policies

A. Public or private mass transit services shall be given preference in mitigating traffic and transportation related impacts for new projects or redevelopment areas.

B. Improvements to existing transit systems such as increases in frequency, expansion of service area, or extension of service hours will be encouraged and supported, as appropriate.

C. Transit facilities shall be provided that encourage transit usage and pedestrian and bicycle use through their designs.

D. Where existing parking lots may facilitate additional transit ridership, "Park and Ride" facilities should be pursued.

E. New transit vehicles shall seek to maximize bicycle carrying capacity using best available technology.

F. Fare options such as free fares, deeply discounted passes, or other fare alternatives will be investigated and implemented, where appropriate.

G. Transit service shall be provided to major summer and winter recreational areas.

H. The expansion of private and public transit excursion services shall be encouraged in the region.

I. Dedicated transit rights-of-way shall be acquired where feasible.

J. Public transit fleets shall utilize alternative fuels to the maximum extent feasible to reduce emissions.

K. Public transit services shall be operated efficiently and effectively.

Strategies and Actions

RTPs list regionally important transportation capital improvement projects for the various types of transportation.

- One potential future project which would have an affect on public transit in the Lake Tahoe Basin is Lake Tahoe Waterborne Transit. Visionary plans call for a year-round water shuttle between Tahoe City and Ski Run Marina with season water taxi connections between Zephyr Cove, Lakeside Marina and Ski Run Marina on the Nevada side. The goal of the project would be to provide an alternative form of transportation which uses the Basin's greatest asset and connects with other forms of transportation.

- Included in the RTP is also the purchase of passenger facilities for both of the public transit services around the lake (TART and BlueGO).

- Under inter-intra regional transit enhancement strategies, the RTP identifies re-instating the Lake Lapper bus route as another method of connecting the south and north shores of Lake Tahoe.

TAHOE AREA REGIONAL TRANSIT MASTER PLAN

The TART Systems Plan was adopted by the Placer County Board of Supervisors in April of 2005. It sets forth a service, capital and financial plan for a five year period. The Plan indicated the potential to attract more visitors to use public transit service and the need for enhanced passenger facilities. The following service plan elements will affect public transit in the Nevada portion of the Lake Tahoe Basin:

- Although half-hourly service is available on the Nevada side of the TART Mainline, greater connections to the California side of the Basin will be possible when year-round half-hour service on the Mainline (Tahoe City to Crystal Bay) is implemented.

- Another plan element which will improve mobility for Nevada residents is the service extension to the Reynolds Center on food distribution days.

The Institutional Plan outlines adopted transit goals, objectives, and performance measures to guide the improvement in regional transit services.

Planning and Management Goal: To evaluate strategies that help management maximize productivity while meeting the transit needs of the community and to develop a transit program that supports environmental and economic goals in the service area.

- Planning Standard – The Short-Range Transit Plan shall be updated at a minimum of every five years. This will be a joint effort between TRPA, PCTPA and Placer County.

- Service Monitoring Standard – Monitoring reports on the effectiveness and efficiency of transit service will be collected and reviewed monthly. These reports will include information on ridership, operating costs, status of bus stop amenities, capital programs.

- Land Use Planning Standard – Placer County transit staff will review development proposals within eastern Placer County to identify the effects of development on transit service, and to ensure site plans and amenities are compatible with the transit program.

Service Effectiveness Goal: To maximize the ridership potential of regional transit services.

- Fixed-Route Effectiveness Standard – On an average annual basis for TART and Trolley services, serve a minimum of 8 one-way passenger-trips per vehicle service hour on each route segment for services that have been in place for three or more years. In the first two years of a new service, 70 percent of this figure (or 5.6 one-way passenger-trips per vehicle service hour) shall be achieved.

- Marketing Standard – Conduct marketing efforts to ensure that all service area residents are aware of area transit services. Conduct targeted marketing efforts for high-potential groups, including visitors, and elderly, disabled, students, low-income, and transit-dependent residents. Provide a schedule and marketing poster in Spanish. Marketing costs should be equivalent to 3 percent of the total TART annual budget.

- Regional Connectivity Standard – Continuing efforts shall be made to provide convenient connections to other public transit services in the region providing connecting services to the TART service area, as well as to work with private transportation services to and within the TART service area.

Financial Effectiveness Goal: To make effective use of financial resources.

- Farebox Ratio Standards – TART shall work to attain or maintain 15 percent farebox return ratio on an average annual basis on all routes and services, but shall attain a minimum of 10 percent farebox return ratio, excepting ADA service and service in Nevada. So long as marginal costs of Trolley Service are fully covered by non-TDA sources, no standard is applied to Trolley Services.

Service Quality Goal: To provide safe, reliable, and convenient public transit services.

- On-Time Performance Standard – 90 percent of all fixed-route trips should be operated "on-time," except when travel is unduly impeded by traffic or weather conditions. On-time is defined as not early, and not more than five minutes late.

- Complementary Paratransit Service Denial Standard – No pattern of ADA-eligible trip denials (as defined in the Americans with Disabilities Act of 1990) due to capacity constraints.

- Passenger Amenity Standard – Shelter should be considered at all bus stops serving 20 or more passenger boardings per day. Seating should be considered at all bus stops serving 10 or more passenger boardings per day. Benches and shelters will only be installed on existing State or County right-of-way, except where written confirmation from the property owner can be obtained to install a bench or shelter on private property. On an annual basis, the Senior Transportation System Supervisor will identify potential sites and prepare an installation priority list.

- Passenger Load Standard – For passenger safety and comfort, vehicles should be sized and the transit service operated to require standees on no more than 20 percent of the runs for any route, and to avoid any recurring loads of more than 150 percent of the seated capacity on any run.

- Accident Standard – Maintain a minimum of 100,000 miles traveled between preventable collision accidents.

- Maintenance Standard – Maintain a minimum of 40,000 miles between road calls. Road calls are defined as any time passenger service is interrupted more than five minutes due to a mechanical failure (except for flat tires).

- Vehicle Cleanliness Standard – The exterior of each vehicle used in service will be washed twice weekly, and the interior will be swept daily and detailed at least weekly. Vehicle detailing includes mopping the floor, washing the windows, and removing any minor stains that may have accumulated on the passenger seats. A vehicle that experiences a major stain will be removed from service as soon as possible and cleaned/repaired before reentering service.

- Minimum Service Frequency Standard – Along the West Shore and North Shore, service shall be provided no less than hourly. Between Tahoe City and Truckee and along SR 267, service shall be provided no less than every two hours.

- Span of Service Standard – Provide service along major corridors that allows persons with work shifts beginning and 8:00 AM and ending at 5:30 PM to use transit to and from work in Tahoe City, Kings Beach, Incline Village/Crystal Bay, Squaw Valley, Truckee, and Northstar.

- Vehicle Accessibility Standard – Maintain a fully accessible transit fleet (as defined by the Americans with Disabilities Act of 1990).

- Vehicle Spare Ratio Standard – Maintain sufficient fleet spare ratios to ensure adequate capacity for regularly-scheduled and tripper services. At a minimum, two spare vehicles should be available that can operate each respective service category.

- Training Standard – All services shall be provided by trained, courteous, respectful employees, who appreciate the needs of the passengers. Each driver shall have a minimum of 8 hours annually of ongoing driver training.

TAHOE INTRAREGIONAL / INTERREGIONAL TRANSIT STUDY

This five year plan was prepared for the TRPA in 2006 in an effort to improve public transit connections between the North and South Shores of Lake Tahoe as well as expand the public transportation network connecting the Tahoe Region (including the Tahoe Basin, the Squaw Valley, Alpine Meadows, Martis Valley, and Truckee areas) to nearby urban areas.

The following goal was established:

"It is the goal of the Regional Transit Program to establish a safe, efficient, and integrated transportation system which reduces reliance on the private automobile by providing transit services that serve the basic interregional and intraregional transportation needs of the citizens and visitors of the Tahoe Region, support the economic base of the Region in the movement of goods and people, and minimize adverse impacts on people and the environment."

Objectives:

- Through provision of new services, increase the proportion of Tahoe Region visitors that arrive without a car.

- Establish high-quality passenger rail service to the greater Tahoe/Truckee region from the Bay Area.

- Encourage the establishment of high-quality door-to-door service between the Reno/Tahoe International Airport and both the North and South Shores.

- Provide transit services for commuters along key commute corridors: Reno - North Shore, Carson City - North Shore, and Minden/Gardnerville - South Shore.

- Provide high-quality public transit service to the Tahoe Region from Sacramento.

- Provide year-round transit connections between North Shore and South Shore.

- Implement waterborne transit service between North Shore and South Shore, at a minimum in the summer tourist season.

- Coordinate intraregional and interregional public transit, including coordination of service times, stop locations, fares, and marketing efforts.

The plan lists the following service elements which pertain to public transportation in the Nevada Lake Tahoe Basin and have not yet been implemented:

- South Shore Vanpool – This vanpool program would serve residents of the Minden/Gardnerville area commuting to jobs in the South Shore. It is estimated that this program would ultimately consist of approximately 17 vans. Operations of the vanpools should be provided through a third-party commercial vanpool operator, and managed by the Tahoe Transportation District.

- Reno – Truckee – North Tahoe Bus Service – The plan calls for a year-round public bus service between Reno, Truckee, and Tahoe City. The service should consist of one bus operating year-round along the I-80 and SR 89 corridors between Reno, Truckee and Tahoe City, with connecting winter service between Truckee and Northstar. Year-round, five runs per day would operate from downtown Reno CitiCenter to the Truckee Train Station, with two runs extending to Tahoe City. Program management could be provided by the Tahoe Transportation District or the Placer County Department of Public Works.

- Summer Round-the-Lake Service – A round-the-lake summer-only transit program is another plan element. This program would have a variety of benefits to the Tahoe

Region, including reduction in the current auto traffic-making recreational trips around the lake, provide a strong public transit connection between the North Shore and South Shore, and help to address the seasonal parking problems both along the East Shore and in the Emerald Bay area. Summer service should be provided seven days a week from June 15 through Labor Day, consisting of two buses operating in opposite directions around the lake on three-hour headways. It was recommended that this service be provided as an extension of the BlueGO program.

TRPA REGIONAL PLAN

The *Regional Plan* for the Tahoe Basin was adopted in 1987. The purpose of the regional plan is to develop goals, policies and implementation strategies which are consistent with the Tahoe Regional Compact. A comprehensive update to the plan is currently in the environmental phase. To date, draft versions of the various elements have been prepared which explore different alternatives. For the transportation element four alternatives are being reviewed.

- Alternative 1: This is the Status Quo alternative and would require no changes to the Regional Plan other than reconciling the Regional Plan to be consistent with the RTP. Areas of inconsistencies include pedestrian oriented development,

- Alternative 2: The strategies in this alternative are designed to provide visitors and residents more transportation mode choices. The goal would be to develop walkable neighborhoods, convenient public transit and a well-connected bicycle network in an effort to attract people out of their vehicle. This could be accomplished through mixed-mode streets, frequent transit service, additional bike lanes and changes to the parking standards.

- Alternative 3: This alternative would continue to implement the current system of transportation regulations in the Basin. Although there would be some increase in transit and bicycle/pedestrian funding allocations in order to be consistent with state and national trends, it would not be the focus.

- Alternative 4: This alternative is the most aggressive in attempting to reduce environmental impacts of motor vehicles. Additional incentives and regulation would be implemented to attract people out of their cars. Examples include external intercept lots coupled with road user fees on Basin roadways, parking space limitations for property owners and emission standards for transit systems.

WASHOE COUNTY REGIONAL TRANSPORTATION PLAN

The Washoe County Regional Transportation Commission (Washoe RTC) adopted a 2008 to 2030 Regional Transportation Plan in November 2008. The document outlines the RTC's long-range plans with respect to all modes of transportation, including

bicycle, pedestrian, transit and automobiles throughout Reno, Sparks and other areas of Washoe County.

As part of the document, various goals, policies and objectives were developed. The following lists those pertinent to public transportation within, or connected to, the Lake Tahoe Basin:

Regional Transportation Plan Goals

- Provide for and sustain a mix of transportation modes that can meet the continuing needs for personal mobility and for the movement of goods consistent with regional goals and values.

- Comprehensively plan for all regionally significant modes of transportation and insure their interconnection. Coordinate with all other jurisdictions that either influence or are affected by regional transportation planning efforts.

- Manage the transportation system to provide an optimum level of mobility for the greatest number of persons while insuring mobility for the transportation disadvantaged.

Public Transportation Policies

Provision of Service

- Fixed-route service should be expanded, if feasible and cost-effective, to include outlying areas with an average density of at least 7 units per gross acre.

- Park-and-ride facilities in outlying areas will be developed and serviced by commuter express bus service, where warranted and feasible.

- RTC will consider demand-responsive service in low-density areas (less than 7 units per acre) in lieu of fixed-route bus service. Demand-responsive service will only be implemented if fares are high enough to ensure the net cost per passenger is less than or equal to the RTC RIDE average in two years. Demand-responsive service will be effectively interfaced with fixed-route service.

- Intercity or vanpool service should be considered, if feasible and cost-effective, to destinations outside the Truckee Meadows such as Lake Tahoe, Pyramid Lake, Carson City, Douglas County, Truckee or Fallon. RTC will coordinate with adjacent counties, MPOs, the State of Nevada and the State of California.

Within the Public Transportation Element of the plan, commuter service to the Lake Tahoe area is discussed. Specifically, the plan notes that in addition to the Reno-Carson

City commuter service, studies should be performed analyzing links from Reno to 1) Truckee and North Lake Tahoe, 2) Zephyr Cove and South Lake Tahoe, and 3) Incline Village, Crystal Bay and Kings Beach. Further, it is noted that service to the South Lake Tahoe area is advantageous in that it "*could combine with the Carson City line to provide higher frequency on the segment linking downtown Reno, the Reno/Tahoe International Airport, Meadowood Mall and the Galena/Geiger Grade area."* Doing so could help generate a greater market for park-and-ride facilities, particularly in the winter months. It would also provide additional options for the Lake Tahoe resort employees, many of which cannot afford to live within the Lake Tahoe Basin, as well as options for tourists.

CAMPO 2030 REGIONAL TRANSPORTATION PLAN

The Carson Area Metropolitan Planning Organization (CAMPO) adopted the 2030 Regional Transportation Plan in August 2008. The purpose is to provide long-term plans for establishing safe and efficient transportation systems to meet the needs and estimated future demand for the region.

Goals and objectives identified in the document related to transportation in the Lake Tahoe area include:

- *Goal 1:* Support the economic vitality of the CAMPO planning area by improving an investing in the transportation infrastructure, and promote consistency with planned growth and economic development patterns.

  - *Objective b:* Support and/or coordinate with state and local government corridor studies, expansion of transit services, and other projects that have the potential to improve efficient accessibility to the CAMPO planning area from areas with the greater Reno-Tahoe region; and support increased connectivity to the local, state, national and international transportation network.

- *Goal 4:* Increase accessibility and mobility of people and freight.

  - *Objective a:* Support state and local land use policies that address smart growth measures, transit oriented development, mixed use or planned development, and pedestrian and bicycle-friendly communities.

  - *Objective c:* Coordinate with state and local government to identify areas within the CAMPO planning area that may be underserved by transit or lacking adequate infrastructure and prioritize projects accordingly. Provide local transit within a half mile of business and residential areas within the urbanized area.

- *Objective d:* Coordinate with state and local government to identify facilities within the CAMPO planning area that lack compliance with the Americans with Disabilities Act (ADA), and make improvements when practical and financially feasible.

The RTP identifies heightened interest in establishing transit service to the larger Tahoe region, increasing connectivity between it and the Carson Valley, as a result of the recent and anticipated growth. Within the RTP, potential transit routes are outlined, including service from Carson City to Lake Tahoe's south shore via Spooner Junction (U.S. Hwy 50), which is estimated to potentially remove 3,200 daily one-way trips from the roadway.

NEVADA STATEWIDE TRANSPORTATION PLAN – MOVING NEVADA THROUGH 2028

Adopted in September 2008, the Nevada Statewide Transportation Plan is a long-range policy document that provides direction and strategies for NDOT over a 20-year time period, through 2028. NDOT has established guiding principles that represent the goals, core values and standards of the organization. The following list provides each guiding principle, as well as specific strategies (where applicable) identified by NDOT that may pertain to transportation in and around the Lake Tahoe Basin.

- Safety: Improve safety for all modes of our transportation system

- Customer Service: Improve internal and external customer service and satisfaction.
  - Improve customer/outreach satisfaction
  - Designate an individual in each District/Division to be responsible for planning outreach activities.

- Fiscal Responsibility: Secure the highest amount of funding possible for our state and ensure that it is invested responsibly and properly.
  - Through the Pioneer Program, continue to explore and develop new and creative ways to finance and deliver transportation improvements.
  - Ensure that adequate financial resources are available when needed.
  - Ensure that no federal obligation authority is lost and no federal apportions or grants lapse.
  - Secure the highest amount of federal and state funding possible for the Department and ensure the optimum use of those funds.

- Asset Management: Protect the public's investment in our transportation system

- Mobility/Accessibility: Provide a statewide, multimodal, interconnected, efficient transportation system that enhances Nevada's Economic Competitiveness.
  - Provide a consistent and effective operation of NDOT's roadway network to provide a safe and reliable trip to the traveling public.

- Increase levels of bicycling for transportation throughout Nevada, doubling the number of trips made by bicycles by the year 2010 (with additional increases achieved by 2020)
- Cooperate and coordinate with Federal government, regional transportation planning agencies, local governments, other appropriate political subdivisions, the public, the air carrier and general aviation industries, and the private sector in carrying out the aviation responsibilities.

- Freight Movement: Improve the safety and mobility of freight movers.

- Environmental Stewardship: Ensure the human and natural environments are considered when developing the transportation system.
  - Preserve and enhance Nevada's transportation system while fostering relationships with the public and regulatory agencies.

Specific to transit services, the plan points out that from 1999 to 2008, the rural transit program in Nevada grew from $1 million in annual federal funding to over $10 million, and that the state is on track to be a $20 million program over the next few years. In general, the RTP identifies that rural transit needs are increasing, as well as elderly, disabled and tribal persons.

DOUGLAS COUNTY TRANSIT NEEDS ASSESSMENT STUDY

The most recent transit study conducted in Douglas County was performed in 1998 by LSC Transportation Consultants, Inc. for the Nevada Department of Transportation. The study interviewed community leaders and representatives of social service organizations to gain insight into the County's public transportation needs, collected data regarding the demographics and service providers, conducted a survey of area residents, and developed a set of alternatives to meet the needs.

The perceived transportation needs identified in the report included:

- Expanded services to seniors
- Transportation for children in the Head Start program
- Work-related transportation
- Medical trips to Reno
- Improved vehicle maintenance for vehicles in the Tahoe Basin
- Additional wheelchair transportation in the Carson Valley

Results from the telephone surveys also indicated increased interest in transit services. Roughly 44 percent indicated that they would use public transit if it was available to work or school, and 53 percent would use transit if it were provided to nearby cities. Among this 53 percent, Tahoe Basin residents had a stronger tendency towards the desire to use public transit. Likewise, in response to the question if transit should be

funded by Douglas County, 51 percent felt it should, and of these, Tahoe Basin residents felt most strongly.

To address these needs, the Transit Plan element identified four service alternatives:

- The first was to expand Douglas County Senior Services transit program by operating an additional wheelchair accessible van in the Carson Valley. This was designed to provide a similar level of service found in nearby areas, as well as to generally increase the mobility of this population sector.

- The second alternative was to initiate a two-day-a-week transit service to Topaz Ranch Estates/Holbrook Junction, an area that (at the time) is largely dependent upon the Minden/Gardnerville area for commercial, medical and other services.

- A third alternative proposed to participate in the Coordinated Transit System (CTS), which would provide scheduled and demand-response services between Stateline, the top of Kingsbury Grade and Skyland as part of a comprehensive, computerized transit system in the Tahoe Basin's south shore. Doing so would make Douglas County services more cost efficient, would allow them to tap existing capital funds for CTS, reduce transit fares and provide a marketing advantage with respect to the casinos.

- The fourth alternative proposed implementing a Carson Valley – Stateline Commuter vanpool program in order to serve the numerous persons that commute from Douglas County to the South Lake Tahoe area. The plan noted that this element would be the single most cost-effective means of improving public transportation in Douglas County.

Given that this plan was developed 13 years ago and is quite outdated, a new study would be beneficial in reassessing the needs of Douglas County. With vast changes in the economy, development and population of the area, it is likely that the new conditions have resulted in very different demand. This is somewhat supported by the implementation of the new fixed route, to be operated by DART sometime in 2011.

BLUEGO SHORT RANGE TRANSIT PLAN

In 2008, LSC Transportation Consultants, Inc. was retained by the Tahoe Regional Planning Agency to prepare a short range transit plan for the BlueGO system. The process resulted in two updates to the original plan between 2008 and 2010, as well as numerous "Sustainability Plans", aimed at reducing operating costs due to significant losses in revenues.

The most current plan has resulted in the services described earlier in the study – two local routes within the City of South Lake Tahoe (Routes 50 and 53) and four regional

routes into Carson City and/or Minden Gardnerville (Routes 20x, 21x, 23 and 24x). The SRTP and subsequent sustainability plans also addressed the demand response service, reducing the number of hours operated as well as the area served (i.e. eliminating poor performing areas such as Meyers).

For 2011, more updates have been incorporated, including the Triangle Plan. This plan is an effort in concert with CAMPO to improve connectivity and improve efficiency of services. As proposed and planned, the triangle routes revise existing BlueGO Routes 20x and 21x to operate 5 runs per day (a reduction from the previous eight runs), and would coordinate schedules with JAC and DART services to allow timely connections.

CONNECTING NEVADA PLAN

Connecting Nevada (formerly known as the 50-Year Transportation Plan) is a statewide planning effort with a goal of improving communication and coordination, with an end result of developing a unified and consistent vision regarding transportation throughout the state. Currently, Connecting Nevada is midway through the study process, and has completed an Interim Report that provides information regarding the process and how the project will be moving forward. The Plan intends to draft a set of multi-modal transportation goals that integrate those from various studies, areas and plans in Nevada. As noted in the Interim Report, the main purpose of the study is "to identify and preserve priority right-of-way corridors throughout the state", in addition to "integrate short and mid-range projects and studies into a long range vision and to ensure that the basis for long range operational goals and objectives for corridors are intact".

The planning process involved a multitude of agencies in northern and southern Nevada, including members from CAMPO, Washoe County RTC, TRPA, and the Northern Nevada Transit Coalition, that are involved in the Nevada Statewide Transportation Technical Advisory Committee (STTAC). To date, the project has consisted of several STTAC meetings, however the development of policies related to Nevada transportation corridors has not begun. The Interim Report notes that the next step will be to hold a working charrette in order to garner support from the various participating agencies.

Appendix B
Technical Memorandum 2

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Section I
Introduction

Transit needs are defined as the number of people in a given geographic area likely to require passenger transportation service. As the incremental cost of a trip using a car is lower for persons that have access to and the ability to use a car, the difference between the number of trips made by those with a personal vehicle available and by those lacking such an amenity is used as the primary indicator for determining unmet transportation needs. However, it is common that not all unmet needs can be, or will be, provided by public transit service. Many people that lack the ability to drive or that do not have access to a vehicle receive transportation from friends, relatives, volunteer driver programs and social service agencies, in addition to existing public transit services.

Population segments for transportation demand are typically elderly persons (65 years of age or older), youth (15 years of age or younger), persons with disabilities that limit mobility, low income persons, and members of households with no vehicle available to them. Employment and commute data is also examined to determine potential needs associated with both local and regional commutes. For this study, data was obtained from the 2005 – 2009 American Community Survey conducted by the U.S. Census Bureau in order to indentify the most recent trends and statistics. Additional information to further support the data from the Census was obtained from social service agencies and local employers.

The following study sections provide an in-depth review of various demographic characteristics, which are then used as the basis for determining needs for three main categories: commute-related needs, visitor / recreation needs, and social service / general public needs.

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Section II
Demographic and Economic Data

Demographic Characteristics

The discussion below presents demographic data for the Lake Tahoe Basin area, with a focus on the communities within Nevada. In addition to total population, more detailed characteristics related to potential transit use are discussed.

Total Population

Table 1 provides general population information, with information from both the 2000 and 2010 U.S. Census. As shown, the total Basin-wide population was 55,607 persons in 2010, indicating a 9.4 percent decline in population from 2000 (61,403 persons). As discussed below, these figures are consistent with those observed in the various communities within the Basin.

Study Area Population and Trends

In 2010, the total population for the study area (Nevada areas of Lake Tahoe) was 14,431 persons. This represents roughly a 9 percent decline from the 2000 Census, with an average annual decline of 1 percent. Of the 2010 population, 9,087 persons resided in Incline Village and Crystal Bay, while the remaining 5,344 persons were located in various East Shore communities such as Stateline, Kingsbury, Zephyr Cove and Roundhill.

Between 2000 and 2010, the greatest decline in population was observed in the East Shore area of Lake Tahoe, with an overall population decrease of 16.6 percent. Within this area, Census Tract 17 (Stateline and Roundhill) experienced the most significant decline, with a 26.2 percent reduction in population. The Incline Village / Crystal Bay community had a much lower decrease in population between 2000 and 2010, roughly 4 percent. In fact, of the five Census Tracts in the area, only two saw a reduction in their population – Census Tracts 33.06 with a 14.9 percent loss and 3309 with a 15 percent loss. Census Tract 33.05 had a 2 percent increase, 33.07 experienced a 6.6 percent increase, and 33.08 had an increase of 5.9 percent.

Population and Trends in Tahoe Areas Outside the Study Area

Table 1 also shows California communities within the Lake Tahoe Basin, but outside the study area. Similar to the study area, these locations in total experienced a decrease in population of roughly 9.5 percent between 2000 and 2010, decreasing from 45,510 persons in 2000 to 41,176 persons in 2010. The greatest decline occurred in the Meeks

TABLE 1: Total Tahoe Basin Population

Data provided by Census Tract, 2010 Census

	2010	2000	% Change 2000 to 2010	Avg. Annual Change
Communities Within Study Area				
Stateline / Kingsbury / Zephyr Cove / Roundhill				
16	1,591	1,857	-16.7%	-1.5%
17	1,601	2,020	-26.2%	-2.3%
18	2,152	2,533	-17.7%	-1.6%
Subtotal	*5,344*	*6,410*	*-16.6%*	*-1.8%*
Incline Village / Crystal Bay				
33.05	1,247	1,222	2.0%	0.2%
33.06	1,730	1,988	-14.9%	-1.4%
33.07	1,231	1,150	6.6%	0.7%
33.08	2,333	2,195	5.9%	0.6%
33.09	2,546	2,928	-15.0%	-1.4%
Subtotal	*9,087*	*9,483*	*-4.2%*	*-0.4%*
Total Within Study Area	*14,431*	*15,893*	*-9.2%*	*-1.0%*
Communities Outside Study Area				
South Lake Tahoe / Meyers				
302	4,773	5,055	-5.9%	-0.6%
303.01	2,469	2,659	-7.7%	-0.7%
303.02	2,867	3,108	-8.4%	-0.8%
304.01	3,498	4,124	-17.9%	-1.6%
304.02	3,723	4,110	-10.4%	-1.0%
305.02	2,641	2,990	-13.2%	-1.2%
305.04	2,912	3,273	-12.4%	-1.2%
305.05	2,704	2,842	-5.1%	-0.5%
316	4,126	4,357	-5.6%	-0.5%
Subtotal	*29,713*	*32,518*	*-8.6%*	*-0.9%*
Kings Beach / Tahoe Vista / Carnelian Bay / Dollar Point				
201.07	3,510	3,756	-7.0%	-0.7%
20.106	1,719	1,908	-11.0%	-1.0%
201.05	1,352	1,625	-20.2%	-1.8%
20.104	1,288	1,658	-28.7%	-2.5%
Subtotal	*7,869*	*8,947*	*-12.0%*	*-1.3%*
Tahoe City / Sunnyside / Homewood				
222	909	1,037	-14.1%	-1.3%
221	961	1,072	-11.6%	-1.1%
223	709	796	-12.3%	-1.2%
Subtotal	*2,579*	*2,906*	*-11.2%*	*-1.2%*
Meeks Bay / Rubicon Bay				
32	1,015	1,140	-12.3%	-1.2%
Total Outside Study Area	*41,176*	*45,510*	*-9.5%*	*-1.0%*
Total Tahoe Basin Population	*55,607*	*61,403*	*-9.4%*	*-1.0%*

Source: New York Times http://projects.nytimes.com/census/2010/map

Bay and Rubicon Bay area, with a loss of 12.3 percent, however this area is not as populated as other nearby areas. Taking a look at communities with greater population concentrations, substantial population decreases occurred in the North Shore communities, including Kings Beach, Tahoe Vista, Carnelian Bay and Dollar Point (total population decrease of 12 percent for all communities). Of these, Census Tract 20.104 (mostly the Dollar Point area) had the greatest loss, with 28.7 percent fewer persons in 2010 than in 2000. The population of the Tahoe City, Sunnyside and Homewood areas decreased roughly 11 percent, while that of the South Lake Tahoe and Meyers communities decreased 8.6 percent.

Population by Census Tract for Transit Dependent Categories

Nationwide, transit system ridership is drawn largely from various groups of persons who make up what is often called the "transit dependent" population. This category includes youths, elderly persons, persons with disabilities, low-income persons, and members of households with no available vehicle. Table 2 present the potential transit dependent population by census tract, while Figures 1 through 5 graphically depict this data. The data is drawn from the most recent American Community Survey (2005 to 2009 estimates), with the exception of the disabled population data; the totals included on the table were derived from the 2000 U.S. Census. Unfortunately, detailed 2010 Census data (at the Census Tract level) is not yet available beyond total population and age groups (discussed in following section). According to the 2007 – 2009 American Community Survey, total population in the Tahoe Basin was 54,248 persons, including 13,142 persons in the Study Area (Nevada communities).

Youth Population (ages 5 to 16 years)

Youths represent a transportation-dependent population, as those under 16 years of age are unable to drive and may not have a parent available to transport them. In particular, transit ridership is generated by junior high school students who are independent enough to attend after-school activities but are unable to drive. The best available U.S. Census data groups youth by ages, and includes a group between 10 and 17 years of age. As a result, the study defines the youth group as ages 5 to 17 years.

As shown in the table and Figure 1, the youth population within the study area totaled 2,245 persons, comprising 17.1 percent of the total area population. The greatest number of youths are in the Incline Village / Crystal Bay area, with 1,605 persons; the East Shore communities had a total of only 640 youths combined.

Approximately 21.2 percent of the total population for the Lake Tahoe locations outside the study area was considered youths, amounting to 8,732 persons. Not surprisingly, the greatest concentration was found in the South Lake Tahoe and Meyers areas, with 6,741 youths. This was followed by the North Shore Communities (Kings Beach, Tahoe

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TABLE 2: Tahoe Basin Population Characteristics, 2005 - 2009

County	Tract	Subarea	Total Population	Youth (ages 5 -16)		Elderly (65+)		Low Income		Total # of Housing Units	Zero Vehicle Households		2000 Census Population	Mobility Disability[1]	
			#	#	% of Total	#	% of Total	#	% of Total		#	% of Total		#	% of Total
Communities Within Study Area															
East Shore (Nevada)															
Douglas	3.01	Zephyr Cove / Glenbrook	925	20	2.2%	401	43.4%	53	5.7%	503	22	4.4%	1,909	66	3.5%
Douglas	3.02	Stateline/ Round Hill	1,723	278	16.1%	302	17.5%	125	7.3%	744	0	0.0%	2,169	49	2.3%
Douglas	4	Kingsbury	1,775	342	19.3%	227	12.8%	126	7.1%	827	17	2.1%	2,613	119	4.6%
Subtotal: East Shore			*4,423*	*640*	*14.5%*	*930*	*21.0%*	*304*	*6.9%*	*2,074*	*39*	*1.9%*	*6,691*	*234*	*3.5%*
Incline Village / Crystal Bay (Nevada)															
Washoe	33.02	Incline Village, Crystal Bay	4,323	1,005	23.2%	399	9.2%	144	3.3%	1,784	0	0.0%	4,409	156	3.5%
Washoe	33.04	Incline Village	4,396	600	13.6%	865	19.7%	233	5.3%	1,779	45	2.5%	5,543	139	2.5%
Subtotal: Incline Village / Crystal Bay			*8,719*	*1,605*	*18.4%*	*1,264*	*14.5%*	*377*	*4.3%*	*3,563*	*45*	*1.3%*	*9,952*	*295*	*3.0%*
Total Study Area			***13,142***	***2,245***	***17.1%***	***2,194***	***16.7%***	***681***	***5.2%***	***5,637***	***84***	***1.5%***	***16,643***	***529***	***3.2%***
Communities Outside Study Area															
South Lake Tahoe / Meyers (California)															
El Dorado	301.01	City of South Lake Tahoe	357	52	14.6%	18	5.0%	112	31.4%	193	88	45.6%	266	30	11.3%
El Dorado	301.02	City of South Lake Tahoe	3,808	744	19.5%	126	3.3%	1,088	28.6%	1,424	269	18.9%	4,105	498	12.1%
El Dorado	302	City of South Lake Tahoe	5,279	1,285	24.3%	467	8.8%	1,631	30.9%	1,753	92	5.2%	5,072	425	8.4%
El Dorado	303	City of South Lake Tahoe	6,162	1,312	21.3%	453	7.4%	466	7.6%	2,391	193	8.1%	5,805	378	6.5%
El Dorado	304.01	City of South Lake Tahoe	4,131	670	16.2%	413	10.0%	348	8.4%	1,768	20	1.1%	4,260	239	5.6%
El Dorado	304.02	City of South Lake Tahoe	3,785	714	18.9%	407	10.8%	501	13.2%	1,829	224	12.2%	4,155	245	5.9%
El Dorado	305.01	Meyers East of 50	4,928	1,392	28.2%	286	5.8%	290	5.9%	1,947	21	1.1%	6,174	159	2.6%
El Dorado	305.02	Meyers West of US 50	2,532	466	18.4%	225	8.9%	218	8.6%	1,007	9	0.9%	3,047	95	3.1%
El Dorado	305.03	Unincorporated South Tahoe	757	106	14.0%	120	15.9%	120	15.9%	322	0	0.0%	1,158	36	3.1%
Subtotal: South Lake Tahoe			*31,739*	*6,741*	*21.2%*	*2,515*	*7.9%*	*4,774*	*15.0%*	*12,634*	*916*	*7.3%*	*34,042*	*2,105*	*6.2%*
Kings Beach / Tahoe Vista / Carnelian Bay / Dollar Hill (California)															
Placer	201.07	Kings Beach	3,374	881	26.1%	51	1.5%	648	19.2%	1,044	60	5.7%	3,774	175	4.6%
Placer	201.06	Tahoe Vista	1,804	417	23.1%	100	5.5%	93	5.2%	694	0	0.0%	1,931	113	5.9%
Placer	201.05	Carnelian Bay	839	133	15.9%	139	16.6%	28	3.3%	416	10	2.4%	1,694	83	4.9%
Placer	201.04	Dollar Hill	1,273	222	17.4%	248	19.5%	112	8.8%	525	0	0.0%	1,806	31	1.7%
Subtotal: Kings Beach / Tahoe Vista / Carnelian Bay / Dollar Point			*7,290*	*1,653*	*22.7%*	*538*	*7.4%*	*881*	*12.1%*	*2,679*	*70*	*2.6%*	*9,205*	*402*	*4.4%*
Tahoe City / Sunnyside / Homewood / Tahoma (California)															
Placer	201.03	Tahoe City	710	140	19.7%	185	26.1%	69	9.7%	352	10	2.8%	1,058	0	0.0%
Placer	201.02	Sunnyside, Homewood	747	82	11.0%	47	6.3%	37	5.0%	413	0	0.0%	1,087	17	1.6%
Placer	201.01	Meeks Bay, Rubicon Bay	620	116	18.7%	98	15.8%	65	10.5%	300	9	3.0%	808	19	2.4%
Subtotal: Tahoe City / Sunnyside / Homewood / Tahoma			*2,077*	*338*	*16.3%*	*330*	*15.9%*	*171*	*8.2%*	*1,065*	*19*	*1.8%*	*2,953*	*36*	*1.2%*
Total Outside Study Area			***41,106***	***8,732***	***21.2%***	***3,383***	***8.2%***	***5,826***	***14.2%***	***16,378***	***1,005***	***6.1%***	***46,200***	***2,543***	***6.2%***
Total Tahoe Basin Characteristics			***54,248***	***10,977***	***20.2%***	***5,577***	***10.3%***	***6,507***	***12.0%***	***22,015***	***1,089***	***4.9%***	***62,843***	***3,072***	***5.7%***

Note 1: Mobility Disability includes "Go outside the home" disabilities for persons age 16 - 64; Data is most recent available, from 2000 US Census

Source: U.S. Census, 2011

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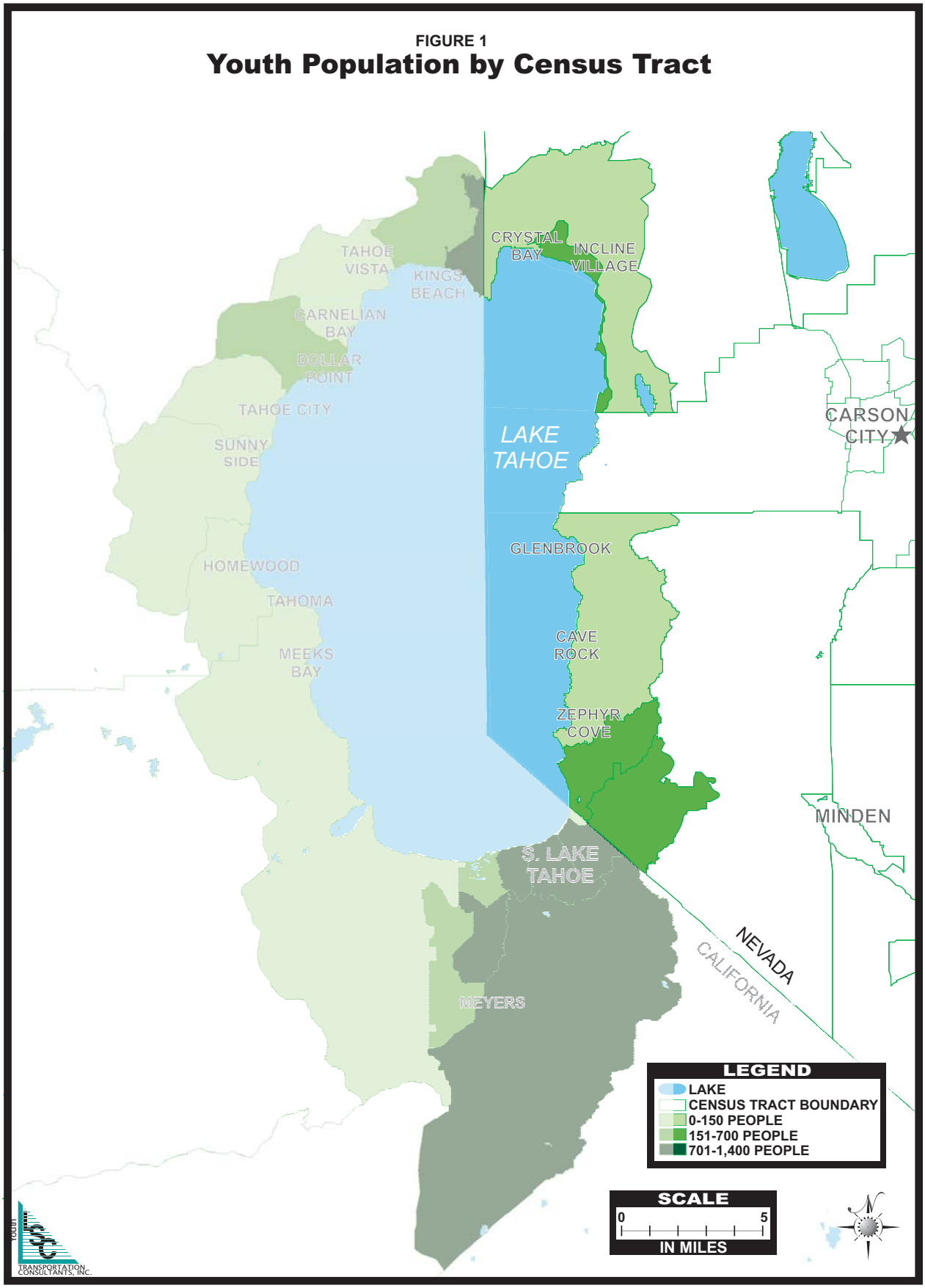
FIGURE 1

Youth Population by Census Tract



Vista, Carnelian Bay and Dollar Hill) with 1,653 youths and the Tahoe City / West Shore area with 338 youths.

Elderly Population (65 years of age and older)

Another important group that is considered transit-dependent is the elderly population, where many choose not to drive yet must travel to various programs and activities. As presented in the tables and Figure 2, residents over the age of 65 comprised 10.3 percent of the total Lake Tahoe basin population.

Within the study area, elderly residents totaled 16.7 percent of the population, with a total of 2,194 persons. Incline Village (Census Tract 33.04) had the greatest number of elderly residents with 865 persons, followed by Zephyr Cove / Glenbrook (Census Tract 3.01) with 401 persons and Census Tract 33.02 (western Incline Village and Crystal Bay) with 399 persons.

Outside the study area within the Tahoe Basin, there were 3,383 elderly persons, according to the American Community Survey data. This amounts to roughly 8.2 percent of the total area population. Neighborhoods within the City of South Lake Tahoe had the highest number of elderly persons – Census Tract 302 (467 persons), Census Tract 303 (453 persons), Census Tract 304.01 (413 persons) and Census Tract 304.02 (407 persons). Locations such as Kings Beach, Sunnyside / Homewood and Meeks Bay / Rubicon Bay all had elderly populations of less than 100 persons.

It is not surprising that the Zephyr Cove and Incline Village / Crystal Bay areas had substantially higher elderly populations than many other areas within and outside of the study area. Many of the residents of these communities are retirees, which have chosen to relocate to Nevada.

Low Income Population

Low-income persons are another likely market for transit services, as measured by the number of persons living below the poverty level. This information is presented in the Table 2 and in Figure 3. An estimated 12 percent of the total Tahoe Basin population is considered low income. Within the study area, roughly 5.2 percent (681 persons) fall within this category. In terms of concentration, Douglas County areas had the highest percentage (based on low income population as a percent of total area population) at 6.9 percent, however the greatest number of low income persons in a single location was found in Incline Village (Census Tract 33.04 with 233 persons).

Outside the study area, the South Lake Tahoe / Meyers communities had the highest number of low income persons, with a total of 4,774 person (or 15 percent of the area population). This as followed by Kings Beach and other North Shore communities with

FIGURE 2

Elderly Population by Census Tract

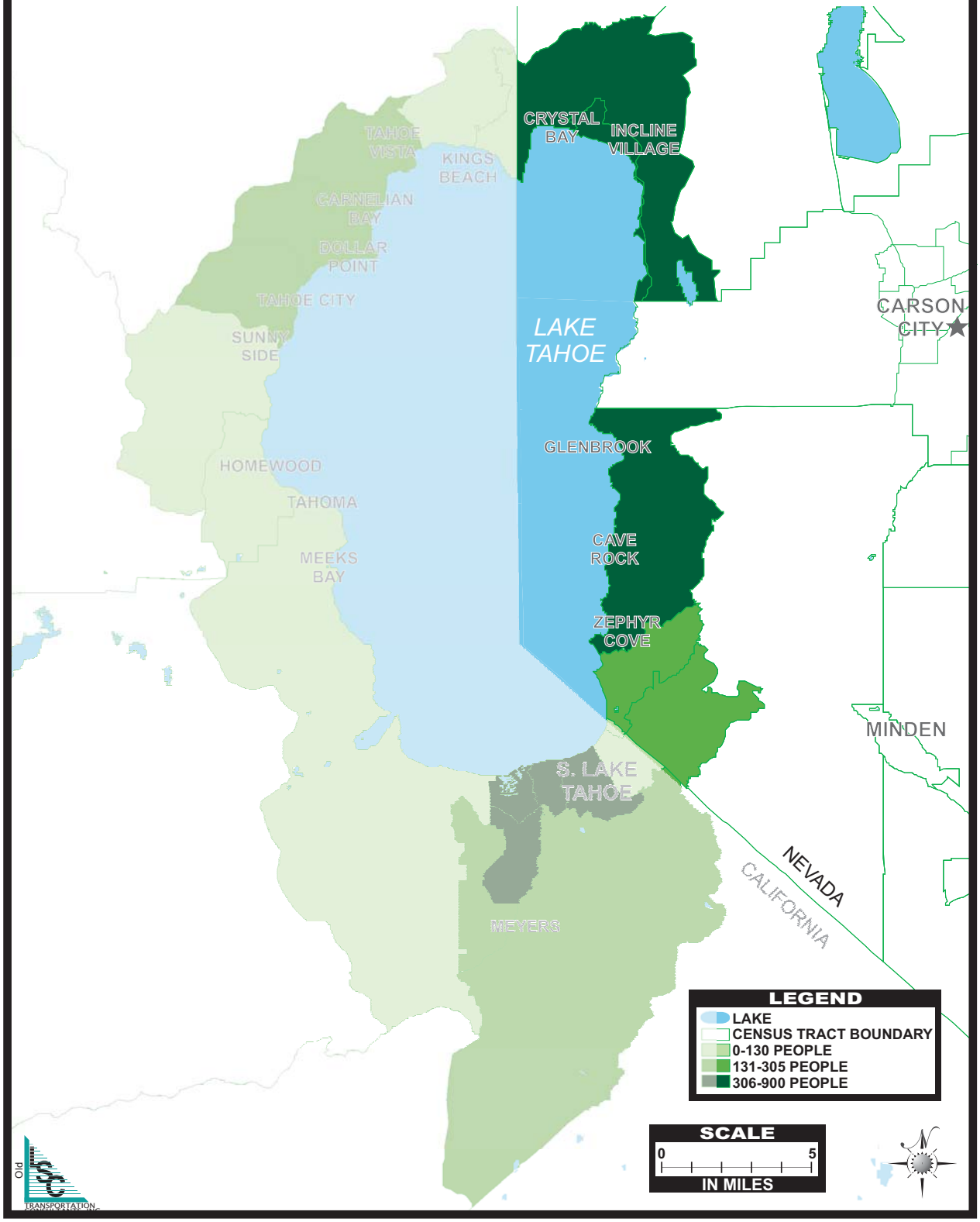
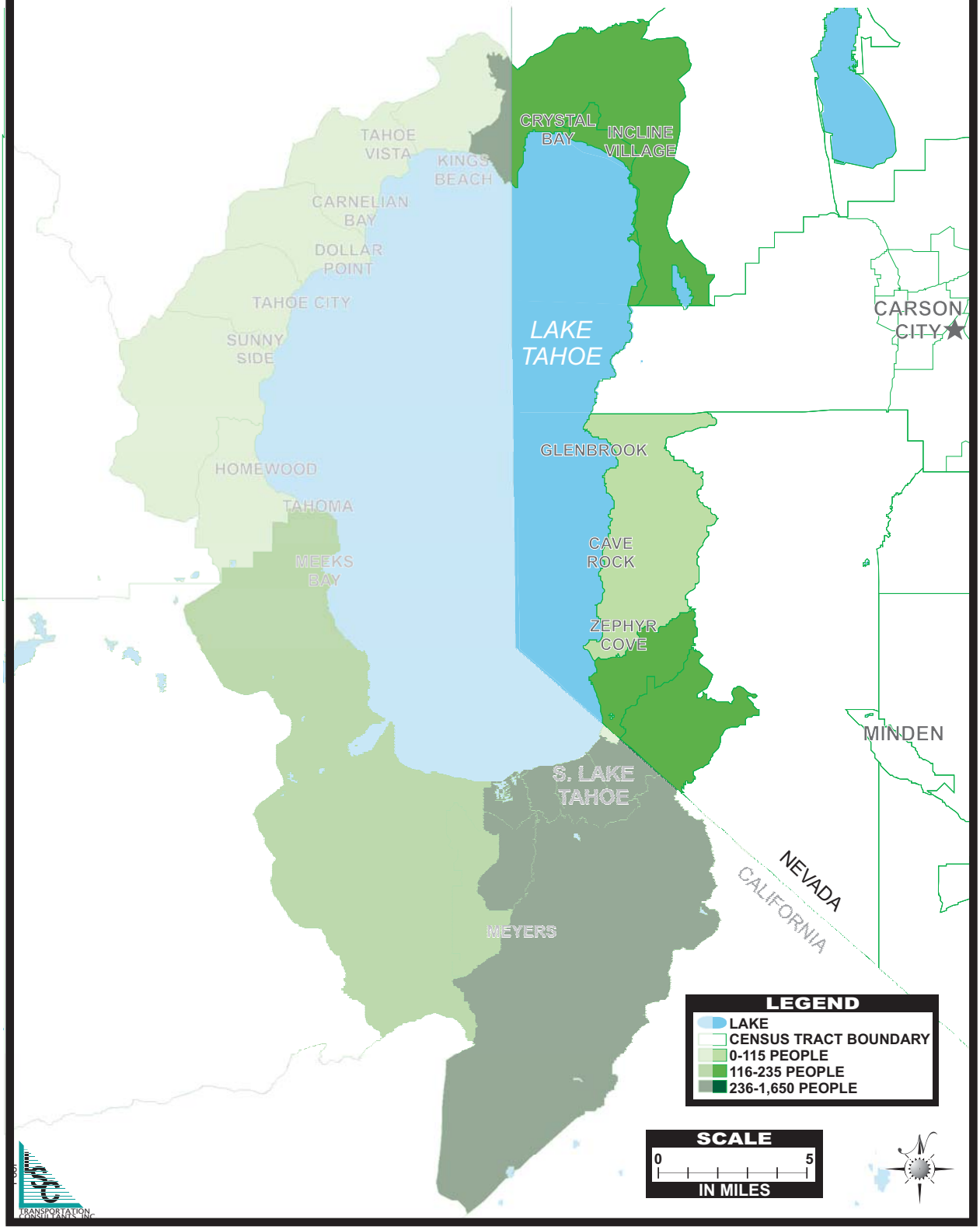


FIGURE 3

Below Poverty Level Population by Census Tract



881 persons (12.1 percent) and Tahoe City and the West Shore with 171 persons (8.2 percent).

Zero Vehicle Households

The number of households without a vehicle available is perhaps one of the strongest indicators of a transit-dependent household. As shown in Table 2 and Figure 4, only 1.5 percent of the study area households were without a vehicle, in comparison to 6.4 percent outside the study area and 4.9 percent in the entire Tahoe Basin.

Within the study area, the Incline Village / Crystal Bay area had the greatest number of zero vehicle households, with a total of 45 households, or 1.3 percent. The East Shore had a higher concentration, at 1.9 percent, however the actual number of households without a vehicle was slightly lower, with a total of 39 households.

Outside the study area, the South Lake Tahoe and Meyers communities had the greatest number of zero vehicle households, with a total of 916 households. This was followed by the Kings Beach and other North Shore communities (70 households) and Tahoe City and remaining West Shore communities (19 households).

Mobility Limited

The US Census Bureau defines “mobility limited” as persons having a health condition lasting more than six months that makes it difficult to go outside the home alone. The information presented in Table 1 includes only persons with “go outside the home” disability status. Figure 5 depicts this information graphically.

It is important to note that mobility limited information on a detailed level (Census Tract) was not included as part of the American Community Survey, and as with other data, has not yet been released for the 2010 Census. As such, this information presented in the table is from the 2000 Census, which is considered the most recent data available.

Within the Tahoe Basin, approximately 5.7 percent of the population is considered mobility limited, including 3.2 percent in the study area and 6.2 percent outside the study area.

For communities within the study area, the Incline Village / Crystal Bay area had the greatest population of mobility limited persons, with 295 persons, however the East Shore was not far behind with 234 persons. Census Tract 33.02 had the highest number (156 persons), followed by Census Tract 33.04 (139 persons) and Census Tract 4.0 (119 persons.

FIGURE 4

Zero Vehicle Households by Census Tract

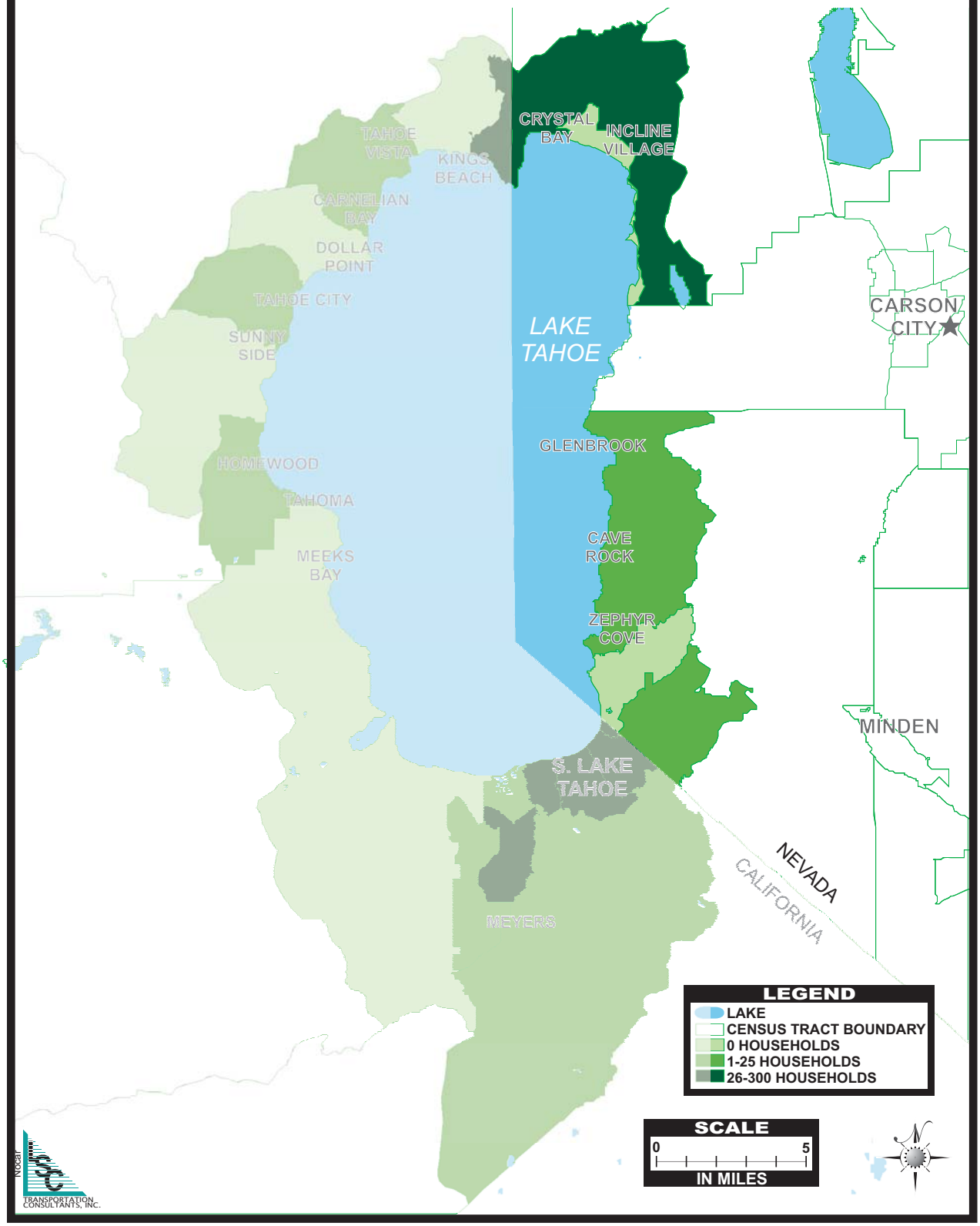
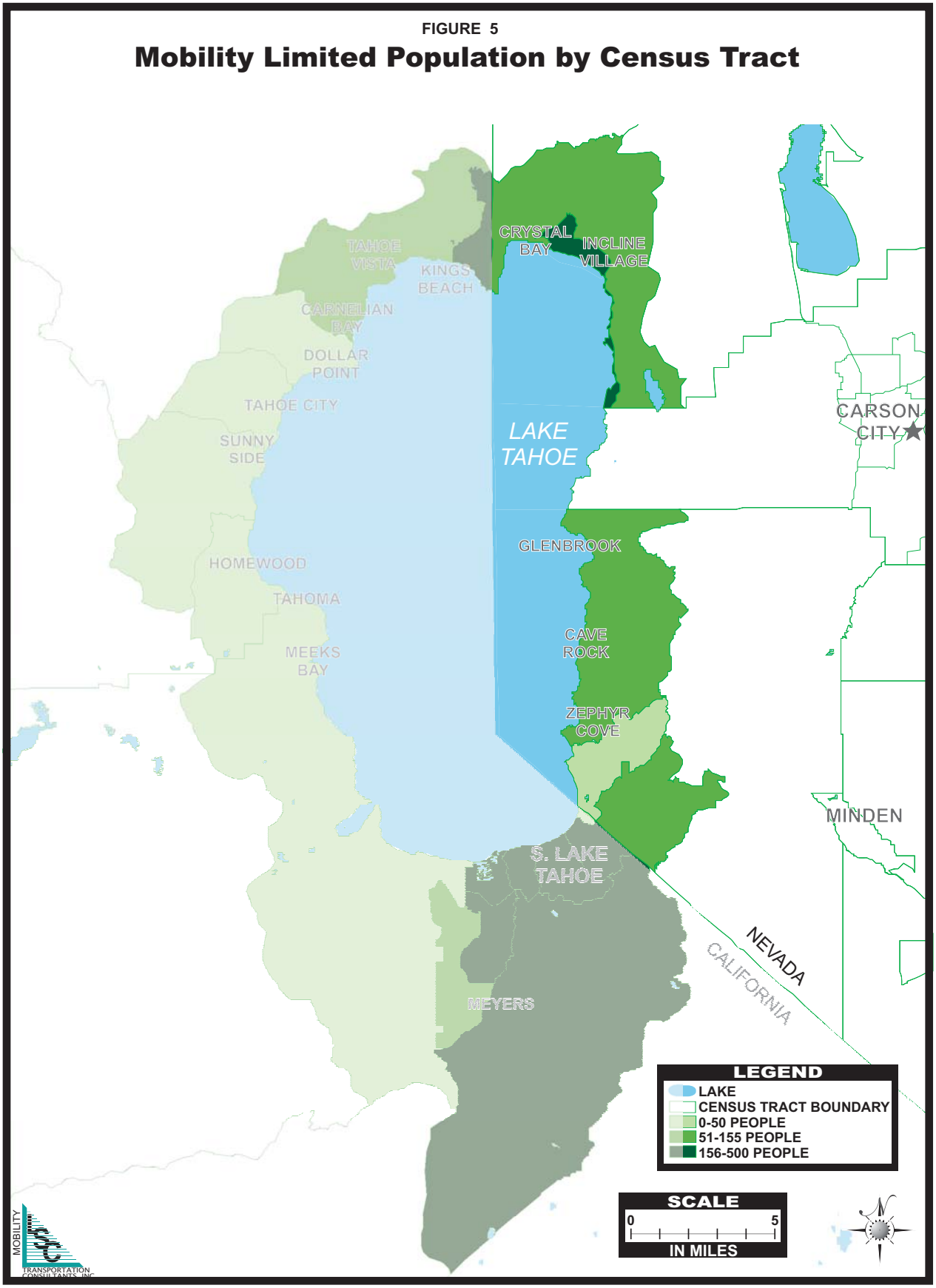


FIGURE 5

Mobility Limited Population by Census Tract



Outside the study area, the South Lake Tahoe area had the greatest number of mobility limited persons, with 2,105 persons (or 6.2 percent of the population). This is not surprising considering it is the largest community within the Basin. The North Shore communities, including Kings Beach, had a total of 402 mobility limited persons, while Tahoe City and the West Shore had only 35 mobility limited persons.

2010 Census Age Group Data

The section above presented detailed information regarding the transit dependent population, including youth age groups (persons under the age of 16 years) and elderly age groups (persons over the age of 65 years). While not all detailed data is available from the 2010 Census, population by age has been released at the Census Data Place (CDP) level. This information is presented in Table 3, and can provide insight into demographic trends in the study area.

TABLE 3: Study Area Youth and Elderly Population, 2010 Census

Data for Census Data Places within Study Area

		Youth		Elderly	
	Total Population	**Total**	**% of Total**	**Total**	**% of Total**
East Shore					
Stateline CDP	842	136	16.2%	66	7.8%
Roundhill Village CDP	759	72	9.5%	188	24.8%
Zephyr Cove CDP	565	55	9.7%	125	22.1%
Glenbrook CDP	215	9	4.2%	100	46.5%
Kingsbury CDP	2,152	271	12.6%	285	13.2%
Subtotal	*4,533*	*543*	*12.0%*	*764*	*16.9%*
Incline Village / Crystal Bay					
Incline Village CDP	8,777	1299	14.8%	1552	17.7%
Crystal Bay CDP	305	17	5.6%	88	28.9%
Subtotal	*9,082*	*1,316*	*14.5%*	*1,640*	*18.1%*
Total Study Area	***13,615***	***1,859***	***13.7%***	***2,404***	***17.7%***

Source: U.S. Census Bureau, 2010 Census

The data shown in Table 3 varies slightly from the 2010 Census data provided in Table 1; this is due to the difference in geography between the CDP data presented in Table 3 and the Census Tract data presented in Table 1. As the Census Tracts encompass a larger geographic area than the CDPs alone, they have slightly more population than the CDPs.

The table shows that in 2010, the youth population in the study area totaled 1,859 persons, or 13.7 percent of the total population. This represents a slight decline from the American Community Survey data (17.1 percent youth population), which provides estimates from data obtain between 2005 and 2009. Not surprisingly, the greatest

number of youths, 1,299 persons, is located in the Incline Village CDP, which is the largest community in the study area. The lowest number was found in the Glenbrook CDP, with a total of 9 youths.

Similarly, the elderly population also indicates a decline since the American Community Survey data shown in Table 2, though this decline is not as significant. In 2010, the elderly age group comprised 17.7 percent of the study area population, with a total of 2,404 persons (compared to 16.7 percent for the 2005 – 2009 estimates). The Incline Village CDP had the greatest number of elderly persons, with 1,552 persons, while the Stateline CDP had the fewest (66 persons).

These trends are consistent with the overall population decline observed between 2000 and 2010, as shown in Table 1. It is a likely assumption that data for the other transit dependent population characteristics will show similar declines, particularly considering the correlation between age and income or mobility limitations.

Employment Data

The Study Area has a very tourist-oriented employment focus, reflecting the nature of the Lake Tahoe area. Activities are abundant for tourists in all seasons of the year, but particularly summer and winter. As such, the Tahoe Basin experiences a fluctuation in employment during these seasons due to increased demand. Locations such as Stateline and Incline Village / Crystal Bay are home to some of the Tahoe Basin's largest tourism-based employers, including Harrah's / Harvey's Lake Tahoe, MontBleu Resort Casino and Spa, and the Hyatt Lake Tahoe. Other major employers include Barton Memorial Hospital (City of South Lake Tahoe), Tahoe Forest Hospital (Incline Village), the Incline Village General Improvement District (IVGID), Heavenly Ski Resort, and the Lake Tahoe Unified School District (City of South Lake Tahoe).

Employment is directly related to the general economy of an area; with tourism being affected by the recent recession, employment has also been impacted. Table 4 presents employment data from the 2005 – 2009 American Community Survey, as well as the 2000 Census. As shown, approximately 5.7 percent of the resident labor force within the Tahoe Basin was unemployed during this period, representing no change from the 2000 Census. A detailed look at the various areas within the Basin provides more information and trend data.

Employment within Nevada Areas of the Tahoe Basin

The top portion of Table 4 shows data for the Nevada counties that are location in the Tahoe Basin. As shown, the area had a total unemployment rate of 3.6 percent in 2009, a decline in unemployment since 2000, when it had a 5.2 percent unemployment rate.

TABLE 4: Historical Employment in Lake Tahoe Basin

	2000		2009	
	Total	**%**	**Total**	**%**
Within the Study Area				
Douglas County				
In Labor Force	3,745		2,444	
Employed	3,491		2,322	
Unemployed	254	6.8%	122	5.0%
Not In Labor Force	1,899		1,377	
Washoe County				
In Labor Force	5,320		4,937	
Employed	5,061		4,794	
Unemployed	219	4.1%	143	2.9%
Not In Labor Force	2,808		2,319	
Total Study Area				
In Labor Force	*9,065*		*7,381*	
Employed	*8,552*		*7,116*	
Unemployed	*473*	*5.2%*	*265*	*3.6%*
Not In Labor Force	*4,707*		*3,696*	
Outside the Study Area				
City of South Lake Tahoe / Meyers				
In Labor Force	18,869		19,330	
Employed	17,692		18,095	
Unemployed	1,169	6.2%	1,195	6.2%
Not In Labor Force	7,650		6,424	
Placer County				
In Labor Force	7,269		5,787	
Employed	6,921		5,341	
Unemployed	348	4.8%	386	6.7%
Not In Labor Force	2,617		1,974	
Total Outside Study Area				
In Labor Force	*26,138*		*25,117*	
Employed	*24,613*		*23,436*	
Unemployed	*1,517*	*5.8%*	*1,581*	*6.3%*
Not In Labor Force	*10,267*		*8,398*	
Total Tahoe Basin Employment				
In Labor Force	*35,203*		*32,498*	
Employed	*33,165*		*30,552*	
Unemployed	*1,990*	*5.7%*	*1,846*	*5.7%*
Not In Labor Force	*14,974*		*12,094*	

Note: Data is for associated Census Tracts within the Tahoe Basin

Source: US Census Bureau American Community Survey 2005-2009 and 2000 Census

The data for Washoe County (Incline Village / Crystal Bay) reveals a significantly low unemployment rate at 2.9 percent when compared to Douglas County, other areas in the Tahoe Basin, the State of Nevada, and nationwide. This can likely be attributed to a few factors:

- The Incline Village / Crystal Bay area has a rather high cost of living, with a median home price of $847,500 in 2009, according to the US Census Bureau. As such, most persons able to afford a home in the area are likely either employed full-time, or are retired (not in labor force).

- The 2009 median household income, per the US Census Bureau's American Community Survey, was $83,004, while the median family income was $94,712. One can assume that these number correlate to dual income households, or households/families with one high-wage earner.

- According to the 2005 – 2009 American Community Survey, approximately 82 percent of households received earnings, and 13 percent received retirement income that was not Social Security.

Note that retired persons, students and homemakers are considered to not be in the labor force, and therefore do not impact the unemployment rate.

Douglas County also had a low unemployment rate, at 5.0 percent, when compared to the other areas shown in the table. Areas included in this data are Stateline, Zephyr Cove, Roundhill, Kingsbury and Glenbrook.

Employment within California Areas of the Tahoe Basin

Areas within the Tahoe Basin but not in the defined study area are shown in the lower portion of Table 4. In total, this area had an unemployment rate of 6.3 percent, an increase since 2000 (5.8 percent rate). The largest rate is found in Placer County, which includes Kings Beach, Tahoe City, Tahoma, among others. This area also had the greatest increase since 2000, at which time there was an unemployment rate under 5.0 percent. The City of South Lake Tahoe and the adjacent community Meyers had a combined unemployment rate of 6.2 percent, a figure unchanged since 2000.

Key Transit Generators

Activity centers are an important factor to consider, as they can increase the demand or need for transit services. These generally include social services, educational facilities, medical facilities and recreational opportunities, to name a few. The discussion below provides a brief summary of the activity centers located within the study area, as well as the other portions of the Lake Tahoe Basin.

Within the Study Area

Activity centers that generate particular need for public transit service on the Nevada side of the Lake Tahoe Basin include the following:

Activity Centers for Seniors, Persons with Disabilities, Low-Income Persons and Youth

- Tahoe Douglas Senior Center
- Project Mana
- Parasol Foundation
- WIC office

Medical Facilities

- Tahoe Forest Hospital
- Nevada Health Centers, Inc.
- Incline Village Urgent Care

Government / Recreational

- Tahoe Regional Planning Agency
- Incline Village General Improvement District
- Zephyr Cove Marina
- Incline Village Community Beaches
- Other Nevada State / USFS Beaches
- Incline Village Library
- Incline Village Justice Court
- Diamond Peak Ski Resort
- Incline Village Recreation Center
- Sand Harbor State Park

Educational

- Kingsbury Middle School
- Sierra Nevada College
- Incline High School
- Incline Elementary School
- Incline Middle School
- Lake Tahoe School

In addition to the above, there are a number of casino resort/hotels that are located within the Nevada portions of the Lake Tahoe Basin. These include:

Stateline, Nevada

- Harrah's
- Harveys Lake Tahoe
- Montbleu Resort Casino and Spa
- Lakeside Casino

Incline Village and Crystal Bay, Nevada

- Crystal Bay Club
- Tahoe Biltmore

- Cal Neva Resort and Casino
- Jim Kelley's Nugget
- Hyatt Lake Tahoe Incline Village

Outside the Study Area in Lake Tahoe Basin

The California side of the Lake Tahoe Basin, and particularly the South Shore area, has a larger number of social services, medical services, recreation areas and employment centers which draw both residents of Nevada and California:

Activity Centers for Seniors, Persons with Disabilities, Low-Income Persons and Youth

- South Lake Tahoe Senior Center
- Tahoe Senior Plaza
- Elder Options
- Sky Forest Acres
- Tahoe Women's Services
- South Lake Tahoe Women's Center
- Tahoe Youth and Family Services
- Boys and Girls Club Lake Tahoe
- North Tahoe Family Resource Center

Medical Facilities

- Barton Memorial Hospital
- Tahoe Truckee Medical Group
- Sierra Recovery Center

Government / Recreational

- USDA Forest Service
- South Lake Tahoe Library
- Lake Tahoe Airport
- Tahoe City Library
- Tahoe Vista Regional Park
- Granlibakken Lake Tahoe Conference Center and Lodge
- Heavenly Mountain Resort / Heavenly Village
- Ski Run Marina
- Tahoe City Marina
- Homewood Ski Resort
- Squaw Valley Ski Resort
- Alpine Meadows Ski Resort

Educational

- Lake Tahoe Community College
- South Tahoe Middle School
- Tahoe Valley Elementary School
- Bijou Elementary School
- Mt. Tallac High School
- Sierra House Elementary School
- Lake Tahoe Educational Foundation
- Tahoe Community School

In addition, key commercial centers are found at Ski Run, Bijou / Al Tahoe, and the South Y area in South Lake Tahoe; the Kings Beach commercial core; and the Tahoe City commercial core.

Section III
Commuter Transit Needs Assessment

Commute Patterns

The US Census Longitudinal Employer-Household Dynamics 2008 (LEHD) contains a wealth of information on commute patterns in and around the Lake Tahoe Basin. Table 5 displays regional commute patterns for workers residing in Lake Tahoe and surrounding areas. As shown, roughly 2,505 persons residing in the California portions of Lake Tahoe commute to Nevada areas of the basin; conversely, 244 residents in the Nevada portions of Lake Tahoe commute to the California areas. Additionally, 1,938 persons that reside in the Nevada portion of Lake Tahoe commute within the same area. Roughly 2,006 persons commute into the study area from the greater Carson City area, while 1,455 persons commute from the greater Reno area. Only 753 persons commute from other California area outside Lake Tahoe (such as Truckee, other Placer County areas and unincorporated El Dorado County) to the study area.

Overall, the majority of persons in and around Lake Tahoe commute outside the study area. The highest percentage of commuters into the Nevada Lake Tahoe Basin was generated from the same area, with approximately 34 percent of the total commuters.

Table 6 summarizes US Census Longitudinal Employer-Household Dynamics data by commuter route travelled. On SR 431, Mt. Rose Highway, the predominant commute direction is westbound from the greater Reno area to Incline Village and other Lake Tahoe North Shore communities with just over of 1,004 workers commuting this direction. Only 312 workers travel eastbound on SR 431 from Incline Village to Reno.

Similarly, a greater number of workers commute “up the hill” from Carson City to Lake Tahoe on US 50 than “down the hill”. Approximately 1,092 Carson City residents commute westbound on US 50 to work in Incline Village, South Lake Tahoe and as far north as Tahoe City and Truckee. The most popular employer location for these Carson City residents is the South Lake Tahoe and Stateline area (643 workers), followed by the North Shore, West Shore and Truckee (449 workers). Only 128 workers make the eastbound commute via US 50 to the Carson City or Gardnerville area. Most of these employees live in Incline Village and work in Carson City, Minden / Gardnerville or rural Douglas County.

Roughly 1,255 workers commute westward on SR 207 over Daggett Pass to South Lake Tahoe, East Shore and Meyers from Douglas County (Minden / Gardnerville, Indian Valley and Genoa). The most predominant travel pattern within this group is from rural Douglas County (Genoa, Indian Valley) with 637 workers. Only 46 persons commute eastward on SR 207.

TABLE 5: Origin and Destination of Workers Residing in the Lake Tahoe, Reno and Carson City Areas

		EMPLOYER LOCATION								
		Nevada Lake Tahoe Basin	California Lake Tahoe Basin	California (outside Lake Tahoe)	Greater Reno Area	Greater Carson City Area	Other Areas	Total Employed Persons	Percent Employed Persons Commuting Outside Study Area	Percent Employed Persons Commuting To/Within Study Area
RESIDENT LOCATION	California Lake Tahoe Basin	2,505	3,468	499	9	28	6,509	13,018	80.8%	19.2%
	Nevada Lake Tahoe Basin	1,938	244	136	387	148	2,853	5,706	66.0%	34.0%
	California outside Lake Tahoe (Squaw, Alpine, Northstar, Meyers)	753	2,216	4,212	335	18	7,534	15,068	95.0%	5.0%
	Greater Reno Area	1,455	161	1,473	148,207	6,073	157,369	314,738	99.5%	0.5%
	Greater Carson City Area	2,006	553	87	6,578	18,690	27,914	55,828	96.4%	3.6%
	Living Outside the Reno and Tahoe Areas	2,348	4,976	3,780	33,227	11,172				

Note: "Nevada Lake Tahoe Basin" is considered the Study Area

Source: US Census Longitudinal Employer Household Dynamics data set, 2010.

TABLE 6: Summary of Commuters by Route

Location	Direction	Resident Location	Work Location	Number of Persons
Highway 431 Mt. Rose Summit	Eastbound	Kings Beach	Reno, South Reno, Washoe Lake, Sparks, North of Reno/Sparks	0
		Tahoe Vista	Reno, South Reno, Washoe Lake, Sparks, North of Reno/Sparks	3
		West Shore	Reno, South Reno, Washoe Lake, Sparks, North of Reno/Sparks	0
		Incline Village	Reno, South Reno, Washoe Lake, Sparks, North of Reno/Sparks	312
			Total	315
	Westbound	Reno	Kings Beach, Tahoe Vista, Tahoe City, West Shore, Incline Village	344
		South Reno	Kings Beach, Tahoe Vista, Tahoe City, West Shore, Incline Village	272
		Washoe Lake	Kings Beach, Tahoe Vista, Tahoe City, West Shore, Incline Village	98
		Sparks	Kings Beach, Tahoe Vista, Tahoe City, West Shore, Incline Village	144
		North of Reno/Sparks	Kings Beach, Tahoe Vista, Tahoe City, West Shore, Incline Village	146
			Total	1,004
US 50 Spooner Summit	Eastbound	Town of Truckee	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville, Carson City	14
		Placer County	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville, Carson City	0
		Kings Beach	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville, Carson City	0
		Tahoe Vista	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville, Carson City	4
		Tahoe City	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville, Carson City	3
		West Shore	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville, Carson City	0
		Incline Village	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville, Carson City	87
		SLT - Other	Carson City, Washoe Lake	0
		SLT - Border Area	Carson City, Washoe Lake	1
		Stateline	Carson City, Washoe Lake	6
		East Shore	Carson City, Washoe Lake	13
			Total	128
	Westbound	Carson City	Truckee, Placer County, Kings Beach, Tahoe Vista, West Shore, Tahoe City, Incline Village	449
		Carson City	SLT - Other, SLT - Border Area, Stateline, East Shore,	643
		Washoe Lake	SLT - Other, SLT - Border Area, Stateline, East Shore	43
		Rural Douglas Co.	Truckee, Placer County, Kings Beach, Tahoe Vista, Tahoe City, West Shore, Incline Village	191
		Gardnerville Ranchos	Truckee, Placer County, Kings Beach, Tahoe Vista, Tahoe City, West Shore, Incline Village	43
		Minden/Gardnerville	Truckee, Placer County, Kings Beach, Tahoe Vista, Tahoe City, West Shore, Incline Village	32
			Total	1,401
Highway 207 Daggett Pass	Eastbound	West Shore	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville	0
		SLT - Other	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville	18
		SLT - Border Area	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville	2
		Meyers	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville	4
		Kingsbury	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville	15
		East Shore	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville	7
		Stateline	Rural Douglas Co., Gardnerville Ranchos, Minden/Gardnerville	2
			Total	46
	Westbound	Rural Douglas Co.	West Shore, SLT - Other, Meyers, SLT - Border Area, Kingsbury, East Shore, Stateline	637
		Gardnerville Ranchos	West Shore, SLT - Other, Meyers, SLT - Border Area, Kingsbury, East Shore, Stateline	413
		Minden/Gardnerville	West Shore, SLT - Other, Meyers, SLT - Border Area, Kingsbury, East Shore, Stateline	205
			Total	1,255
Interstate 80 Nevada/California State Line	Eastbound	Town of Truckee	Reno, South Reno, Washoe Lake, Verdi, Sparks, North of Reno/Sparks	332
		Placer County	Reno, South Reno, Washoe Lake, Verdi, Sparks, North of Reno/Sparks	3
		Tahoe City	Reno, South Reno, Washoe Lake, Verdi, Sparks, North of Reno/Sparks	6
			Total	341
	Westbound	Reno	Truckee, Placer County, Tahoe City	832
		South Reno	Truckee, Placer County	88
		Washoe Lake	Truckee, Placer County	10
		Verdi	Truckee, Placer County, Tahoe City, Incline Village	356
		Sparks	Truckee, Placer County, Tahoe City	179
		North of Reno/Sparks	Truckee, Placer County	212
			Total	1,677
Highway 267 Brockway Summit	Northbound	Kings Beach	Truckee, Placer County	38
		Tahoe Vista	Truckee, Placer County	52
		Incline Village	Truckee, Placer County	131
			Total	221
	Southbound	Town of Truckee	Kings Beach, Tahoe Vista, Incline Village	250
		Placer County	Kings Beach, Tahoe Vista, Incline Village	23
			Total	273
Highway 89 South of Alpine Meadow Road	Northbound	Tahoe City	Truckee, Placer County	172
		West Shore	Truckee, Placer County	29
			Total	201
	Southbound	Town of Truckee	Tahoe City, West Shore	431
		Placer County	Tahoe City, West Shore	74
			Total	505

Source: US Census Longitudinal Employer Household Dynamics data set, 2010.

The westbound Interstate 80 (I-80) corridor sees the largest number of commuters. Roughly 1,677 workers travel between residences from Washoe Lake, Reno, Sparks and Verdi to Truckee, Squaw Valley, Alpine Meadows, Tahoe City and Incline Village. The majority of these commuters (832 workers) live in central Reno.

SR 267 and SR 89 are the highways travelled for persons commuting between the Lake Tahoe Basin and Truckee or Squaw Valley. Significantly fewer commuters use these highways as their primary travel route. A total of 494 persons commute over SR 267 and just over 700 total workers commute via SR 89. With respect to Nevada transit needs, approximately 131 persons commute via SR 267 between Incline Village and Truckee / Placer County and an additional 273 persons commute the opposite direction. This commute is currently served by TART.

Table 7 demonstrates that fewer persons commute between the north and south shores of the Lake Tahoe Basin than between Reno or Carson City and the Lake Tahoe Basin. Approximately 444 persons commute between the North Shore of Lake Tahoe (including Squaw Valley, Truckee) and the South Shore of Lake Tahoe (including Meyers). The largest number of north - south commuters travel between South Lake Tahoe and the West Shore via SR 89 (50 employees), followed by South Lake Tahoe and Truckee (46 employees). Very few Nevada Tahoe Basin residents commute between the North Shore and the South Shore of the lake. Roughly 15 Incline Village residents commute to Stateline on the south shore while another 14 residents commute to other South Lake Tahoe employment locations. In total, of those commuting between North Shore and South Shore, 59 percent have a commute that makes the West Shore a more convenient travel route (at least when the highway is open) while 41 percent have a commute that makes the East Shore more convenient.

Overall the I-80 corridor has the greatest number of commuters in one direction (1,677 workers westbound), followed by the US 50 corridor (1,412 westbound).

Commuter Mode Split

The proportion of travel by a specific travel mode is defined as the “mode split”. The American Community Survey 2005 – 2009 provides data on travel modes to work in the study area. Table 8 presents commuter mode splits by census tract for the Lake Tahoe Basin. The most common commuter mode split is driving alone. Nearly 68 percent of Lake Tahoe Basin employees drive alone to work, 14.4 percent carpool, 5.9 percent work at home, 5.2 percent walk, 2.7 percent bike, 2.0 percent take public transit, 1.5 percent travel via other means, 0.2 percent take a taxi and 0.1 percent ride a motorcycle. On the Nevada side of Lake Tahoe, a larger proportion of employees drive alone (70.4 percent) to work as compared to the Tahoe Basin as a whole (67.9 percent), fewer employees ride public transit (1.2 percent vs. 2.0 percent) and more employees work at home (8.8 percent vs. 5.9 percent). At the census tract level, the census tract with the highest public transit commuter mode split in the Lake Tahoe

TABLE 7: Persons Commuting North Shore -- South Shore of Lake Tahoe

	Total
Northbound - East Shore	99
Northbound - West Shore	220
Southbound - East Shore	85
Southbound - West Shore	40

EMPLOYER LOCATION

RESIDENT LOCATION	Kings Beach	Tahoe Vista	Tahoe City	West Shore	Incline Village	Town of Truckee	Placer County	SLT - Other	SLT - Border Area	Stateline	East Shore (US50)	Kingsbury Area	Meyers	**Total**
Kings Beach	-	-	-	-	-	-	-	2	0	0	0	0	0	**2**
Tahoe Vista	-	-	-	-	-	-	-	2	0	3	6	0	0	**11**
Tahoe City	-	-	-	-	-	-	-	0	0	10	3	5	0	**18**
West Shore	-	-	-	-	-	-	-	4	0	4	5	0	1	**14**
Incline Village	-	-	-	-	-	-	-	14	0	15	11	2	0	**42**
Town of Truckee	-	-	-	-	-	-	-	10	8	0	0	0	5	**23**
Placer County	-	-	-	-	-	-	-	11	0	0	0	4	0	**15**
SLT - Other	25	21	27	50	9	46	0	-	-	-	-	-	-	**178**
SLT - Border Area	0	0	2	1	1	3	0	-	-	-	-	-	-	**7**
Stateline	0	0	2	1	3	0	0	-	-	-	-	-	-	**6**
East Shore (US50)	0	0	2	1	0	5	0	-	-	-	-	-	-	**8**
Kingsbury Area	0	0	3	0	5	0	0	-	-	-	-	-	-	**8**
Meyers	10	11	25	25	8	29	4	-	-	-	-	-	-	**112**
Total	**35**	**32**	**61**	**78**	**26**	**83**	**4**	**43**	**8**	**32**	**25**	**11**	**6**	**444**

Source: US Census Longitudinal Employer Household Dynamics data set, 2010.

TABLE 8: Lake Tahoe Basin Commuter Mode Split

			Travel Mode to Work																
			Drove Alone		Carpool		Motorcycle		Taxi		Public Transit		Bicycle		Walk		Other Means		Work at Home		
County	Census Tract	Description	#	%	#	%	#	%	#	%	#	%	%		%		%		%		Total
Placer	Tract 201.01	Homewood	239	69.1%	48	13.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	59	17.1%	**346**
Placer	Tract 201.02	Tahoe Pines / Sunnyside	390	65.3%	101	16.9%	36	6.0%	0	0.0%	0	0.0%	0	0.0%	12	2.0%	0	0.0%	58	9.7%	**597**
Placer	Tract 201.03	Tahoe City	250	72.3%	56	16.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	40	11.6%	0	0.0%	0	0.0%	**346**
Placer	Tract 201.04	Lake Forest / Dollar Hill	343	64.1%	65	12.1%	0	0.0%	0	0.0%	0	0.0%	31	5.8%	0	0.0%	11	2.1%	85	15.9%	**535**
Placer	Tract 201.05	Carnelian Bay	354	87.6%	18	4.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	20	5.0%	12	3.0%	**404**
Placer	Tract 201.06	Tahoe Vista	831	73.7%	96	8.5%	0	0.0%	0	0.0%	17	1.5%	0	0.0%	29	2.6%	0	0.0%	154	13.7%	**1,127**
Placer	Tract 201.07	Kings Beach / Brockway	900	46.5%	729	37.7%	0	0.0%	0	0.0%	109	5.6%	15	0.8%	89	4.6%	0	0.0%	94	4.9%	**1,936**
Washoe	Tract 33.02	Central Incline Village	1,763	69.6%	222	8.8%	0	0.0%	28	1.1%	0	0.0%	5	0.2%	236	9.3%	139	5.5%	141	5.6%	**2,534**
Washoe	Tract 33.04	Crystal Bay/Outlying Incline Village	1,341	61.5%	151	6.9%	0	0.0%	0	0.0%	84	3.9%	31	1.4%	149	6.8%	103	4.7%	322	14.8%	**2,181**
El Dorado	Tract 301.01	City of South Lake Tahoe	9	4.5%	19	9.4%	0	0.0%	0	0.0%	24	11.9%	23	11.4%	100	49.5%	0	0.0%	27	13.4%	**202**
El Dorado	Tract 301.02	City of South Lake Tahoe	1,135	51.7%	221	10.1%	0	0.0%	37	1.7%	83	3.8%	165	7.5%	487	22.2%	40	1.8%	27	1.2%	**2,195**
El Dorado	Tract 302.02	City of South Lake Tahoe	1,813	69.3%	493	18.8%	0	0.0%	0	0.0%	47	1.8%	60	2.3%	134	5.1%	21	0.8%	49	1.9%	**2,617**
El Dorado	Tract 303	City of South Lake Tahoe	2,515	71.2%	742	21.0%	0	0.0%	0	0.0%	21	0.6%	96	2.7%	43	1.2%	26	0.7%	87	2.5%	**3,530**
El Dorado	Tract 304.01	City of South Lake Tahoe	1,673	72.7%	243	10.6%	0	0.0%	0	0.0%	0	0.0%	123	5.3%	52	2.3%	45	2.0%	164	7.1%	**2,300**
El Dorado	Tract 304.02	City of South Lake Tahoe	1,222	62.0%	268	13.6%	0	0.0%	0	0.0%	210	10.6%	88	4.5%	128	6.5%	39	2.0%	17	0.9%	**1,972**
El Dorado	Tract 305.01	Meyers East of 50	2,149	80.3%	245	9.2%	0	0.0%	0	0.0%	0	0.0%	98	3.7%	0	0.0%	13	0.5%	172	6.4%	**2,677**
El Dorado	Tract 305.02	Meyers West of US 50	862	71.5%	241	20.0%	0	0.0%	0	0.0%	6	0.5%	0	0.0%	19	1.6%	17	1.4%	61	5.1%	**1,206**
El Dorado	Tract 305.03	Tahoma / Meeks Bay	329	76.0%	57	13.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	23	5.3%	0	0.0%	24	5.5%	**433**
Douglas	Tract 3.01	Zephyr Cove/ East Shore	190	70.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	78	29.1%	**268**
Douglas	Tract 3.02	Stateline/ Round Hill	563	61.3%	158	17.2%	0	0.0%	0	0.0%	0	0.0%	57	6.2%	70	7.6%	3	0.3%	68	7.4%	**919**
Douglas	Tract 4	Kingsbury	714	82.4%	88	10.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	65	7.5%	**867**
Carson City	Tract 3	Tahoe Basin Portion of Carson City Rural Area	1,402	81.6%	175	10.2%	0	0.0%	0	0.0%	16	0.9%	43	2.5%	11	0.6%	0	0.0%	72	4.2%	**1,719**
Total: Lake Tahoe Basin			**20,987**	**67.9%**	**4,436**	**14.4%**	**36**	**0.1%**	**65**	**0.2%**	**617**	**2.0%**	**835**	**2.7%**	**1,622**	**5.2%**	**477**	**1.5%**	**1,836**	**5.9%**	**30,911**
Total: Nevada			**5,973**	**70.4%**	**794**	**9.4%**	**0**	**0.0%**	**28**	**0.3%**	**100**	**1.2%**	**136**	**1.6%**	**466**	**5.5%**	**245**	**2.9%**	**746**	**8.8%**	**8,488**

Source: US Census American Community Survey 2005 - 2009

Basin is Tract 301.01 in South Lake Tahoe, CA which is located at Stateline adjacent to the casinos. In Nevada, the Crystal Bay / Outlying Incline Village census tract had the highest public transit mode split (3.9 percent). Portions of the Nevada Lake Tahoe Basin where there is little to no public transit service available, such as Zephyr Cove / East Shore and Round Hill, no workers commute via public transit.

Commuter Demand and Needs

As discussed above, the number of persons commuting from the Lake Tahoe Basin to the Reno or Carson City areas is very limited – 387 persons from the Nevada portions of the basin commute to Reno / Sparks, and 148 persons commute to the Carson City area. As such, it is not likely that there is sufficient demand to warrant new services. Existing vanpools and carpools would be the most useful tool for commuters.

Data for commuters into the Lake Tahoe basin, however, indicates there may be a greater demand. More than likely this is due to the presence of casinos, hotels and ski resorts that draw employees from outlying communities. Casinos and other major employers in the South Lake Tahoe and Stateline areas do not pose a particular concern regarding transit needs, as the Triangle Route operated jointly by BlueGO, JAC and DART provides service between Minden / Gardnerville, Carson City and Stateline. Additionally, connections to this service can be made by RTC through the Intercity service.

Service to Incline Village / Crystal Bay warrants a closer look, however, based on the data obtained from the LEHD analysis. Roughly 1,455 persons commute to the Nevada Lake Tahoe Basin, of which 1,056 are traveling to Incline Village / Crystal Bay. While not as significant, roughly 635 of the 2,006 commuters from Carson City and Minden / Gardnerville to the Nevada basin areas are traveling to Incline Village / Crystal Bay.

Because the Hyatt Lake Tahoe is the largest employer on the North Shore of the study area, employee residence location data (by zip code) was obtained and reviewed[1]. Of the 466 employees of the hotel, 59 percent commute from Incline Village / Crystal Bay and 11.8 percent commute from the areas of the North Shore in California. These results show that there is need for continual and future funding for the TART bus service, which serves the Hyatt area as well as the other casinos and hotels in the area. Another 10.5 percent of employees commute from Carson City and 10.3 from Reno / Sparks. While not extremely substantial, there may be a need present for a shuttle for employees, or the opportunity for a vanpool or carpool program.

Based on the commute pattern data, it is possible to estimate potential commute transit ridership for each of the key travel corridors connecting Tahoe with areas to the west. . The TCRP B-36 study, *Methods for Forecasting Demand and Quantifying Need for Rural*

[1] Note that similar data for employees of the casino, which is operated by a separate entity, was not available.

Passenger Transportation, includes methods for determining commute between rural areas (Lake Tahoe Basin) and more urbanized areas (Reno or Carson City). The methodology assumes that roughly 1.2 percent of the total number of commuters from a rural area to an urban area will utilize public transit. A higher proportion of transit travel mode typically occurs for trips to larger employers in a rural area, reflecting that employment centers are more concentrated in a rural/resort setting (such as at the Stateline area); a 3.0 percent transit mode split is applied for commuters who travel to the Tahoe employment sites. Table 9 shows the commute demand for workers traveling into and out of the Tahoe Basin. As shown, there is a much higher demand for commuters coming into the Lake Tahoe Basin. The Minden / Gardnerville to South Lake Tahoe route generates the most demand, with 38 potential one-way passenger-trips. This is followed by persons traveling from Reno / Sparks to the North Shore of Lake Tahoe, with 30 potential one-way passenger-trips. The opposite direction, from the Basin to urbanized areas, shows very little demand, with a maximum of 4 one-way passenger-trips from the North Shore to Reno / Sparks. Moreover, the actual potential ridership would be lower than these overall demand estimates, given that specific transit schedules could not match all possible commute times. While it bears noting that these estimates do not reflect additional demand associated with seasonal workers (not captured in the Census data), overall these estimates indicate that commuters would be better served by expansion of vanpool / carpool programs rather than additional fixed-route transit service.

TABLE 9: Commuter Demand

		# Persons Commuting			**Potential Demand (One-Way Pass. Trips)**		
Tahoe Location	**Other Location**	From Tahoe	To Tahoe	Total	From Tahoe	To Tahoe	Total
North Shore Lake Tahoe	Reno / Sparks	315	1,004	1,319	4	30	34
North Shore Lake Tahoe	Carson City	108	449	557	1	13	15
South / East Shore Lake Tahoe	Carson City	20	643	663	0	19	20
South / East Shore Lake Tahoe	Minden / Gardnerville	46	1,255	1,301	1	38	38

Source: TCRP B-36 Study; US Census Bureau. Excludes seasonal workers not reflected in Census data.

Section IV
Recreational Transit Needs Assessment

This chapter first presents a review of visitor characteristics and trends in visitor activity. Next, a "peer review" of existing transit services in similar recreational mountain settings is presented. Finally, this information is used as the basis of an evaluation of transit needs for recreational / visitor travel.

Visitor Characteristics

One of the objectives of this study is to determine the transit needs, if any, for visitors to the area. As a tourist oriented community, there is the potential for significant visitor transit demand. However, there are many second home owners and out of town visitors that tend to arrive by private automobile and are thus less likely to use transit services. The following sections provide detailed discussions regarding visitor characteristics and potential needs and demands.

Lodging Trends

One indicator of transit demand is the hotel room data, as presented in Chapter 2. Given the decline in hotel room nights rented and room tax collections over the past 5 years, it is likely that transit demand generated from visitors has proportionately declined, as there are fewer visitors in the South Tahoe area. This is further supported by the decline in gaming revenues, which is a significant indicator of visitor activity.

Hotel room rental statistics are not only an economic indicator, but also an indicator of potential transit ridership. Table 10 shows the number of hotel room nights rented in South Lake Tahoe and Stateline, Nevada between Fiscal Years (FY) 2005-06 to 2009-10. Unfortunately, detailed lodging data is not available for the North Lake Tahoe areas. As shown, hotels in South Lake Tahoe have seen a 23.7 percent decline in room rentals during the five-year period, while Stateline has experienced a slightly lower drop, with a reduction of roughly 21.1 percent. In total, this represents a comprehensive decline in room rentals of 22.4 percent.

TABLE 10: Hotel Room Nights Rented in the South Lake Tahoe Area
Fiscal Year 2005-2006 to Fiscal Year 2009-2010

	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	% Change from FY 05-06 to FY 09-10	Average Annual Change
City of South Lake Tahoe	623,486	574,002	549,026	484,582	475,477	-23.7%	-5.3%
Stateline Casinos	676,387	660,295	646,921	594,114	533,562	-21.1%	-4.6%
Total	**1,299,873**	**1,234,297**	**1,195,947**	**1,078,696**	**1,009,039**	-22.4%	-4.9%

Source: City of South Lake Tahoe, Nevada Gaming Commission Annual Abstracts

Another measure of lodging activity is room tax collections. A tax is applied to all types of transient lodging activity (called TOT, or Transient Occupancy Tax), including hotels and vacation rentals, in the Lake Tahoe region. Patterns in these tax receipts can provide indications of visitation and economic trends. Table 11 presents room tax collections for the Lake Tahoe Basin area for a five year period from Fiscal Year (FY) 2005-06 to 2009-10.

TABLE 11: Room Tax Collections for the Lake Tahoe Area

Fiscal Year 2005-2006 through 2009-2010

	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	% Change from FY 05-06 to FY 09-10	Average Annual Change
City of South Lake Tahoe	$ 11,683,049	$ 9,838,032	$ 9,827,855	$ 8,019,107	$ 8,200,466	-29.8%	-6.8%
Stateline Casinos	$ 262,498	$ 256,471	$ 240,031	$ 185,035	$ 182,279	-30.6%	-7.0%
Incline Village / Crystal Bay	$ 2,212,590	$ 2,228,553	$ 2,290,267	$ 1,926,894	$ 1,794,847	-18.9%	-4.1%
Total	**$ 14,158,137**	**$ 12,323,056**	**$ 12,358,153**	**$ 10,131,036**	**$ 10,177,592**	-28.1%	-6.4%

Source: City of South Lake Tahoe and the Nevada Commission of Tourism

- The most recent financial data shows that in FY 2009-10, South Lake Tahoe collected roughly $8.2 million, which was approximately 28.6 percent less than the TOT collected five years prior in FY 2004-05. This was, however, slightly (2.3 percent) more tax collected than in the previous Fiscal Year 2008-09. This drop over the 5-year period can partially be linked to the end of Measure Z, which had previously provided additional revenue through Fiscal Year 2006-07.

- The Stateline area has experienced the greatest loss over the 5-year period, with a 30.6 percent reduction in TOT. It is important to note that the Douglas County data includes the Carson Valley, however the majority of hotel units are located in Stateline. Unlike South Lake Tahoe, the most recent Fiscal Year did not result in an increase, however the reduction from the previous year was only 1.5 percent, indicating that perhaps the coming Fiscal Years will show recovery.

- The Incline Village / Crystal Bay area has very few lodging locations, with the primary facility being the Hyatt Lake Tahoe in Incline Village. Other locations are the Tahoe Biltmore, Cal Neva Resort and Casino and the Parkside Inn. As shown in the table, this area saw the lowest reduction in tax collections, dropping 18.9 percent over the 5-year period, with a total of nearly $1.8 million during Fiscal Year 2009-10. The largest drop in TOT was observed between Fiscal Year 2007-08 and 2008-09, where roughly 16 percent less TOT was collected. In the most recent year, TOT collections dropped roughly 6.8 percent.

On average, the Incline Village / Crystal Bay lodging facilities have experienced an average annual decline in room tax collections of 4.1 percent, while the South Lake

Tahoe and Stateline areas have seen slightly larger drops, at -6.8 percent and -7.0 percent, respectively.

In total, the Stateline, South Lake Tahoe and Incline Village / Crystal Bay areas collected a total of $10,177,592 in room tax, representing a 28.1 percent decline over the 5-years. Due to the increase in taxes collected in South Lake Tahoe during the last Fiscal Year, these areas cumulatively observed an increase between Fiscal Year 2008-09 and 2009-10, however this increase was a nominal 0.5 percent.

Given the decline in hotel room nights rented and room tax collections over the past 5 years, it is likely that transit demand generated from visitors has proportionately declined, as there are fewer visitors in the area.

Additionally, the *Tahoe Interregional / Intraregional Transit Study* presented information regarding secondary home usage. The study showed that roughly 26.8 percent of visitors of the North Shore stayed in their second homes, compared to 25.9 percent in hotels and 25.9 in vacation rentals. Further, 15.7 percent stayed at a friend's second home or full time residence on the North Shore. Note that this data is for the North Shore as a whole, including California, however it does provide a general understanding of visitor patterns in the area.

Gaming Trends

Casino gaming is a major attraction in the South Tahoe and Incline Village / Crystal Bay areas, and therefore another good economic indicator for the areas. Table 12 presents gaming revenues for the last five years (2006 through 2010). As shown, gaming revenues for the Stateline area casinos has declined roughly 36.6 percent, representing an annual average decline of 7.3 percent. The North Shore fared slightly better, with a cumulative drop of 34.2 percent, and an average annual decline of 6.7 percent. The South Shore area saw the greatest decline in gaming revenues between 2008 and 2009, with a 25.8 percent reduction; the North Shore's greatest reduction occurred in the prior year, between 2007 and 2008, with 19.4 percent fewer gaming revenues collected.

These trends are consistent with the recent economic downturn nationally, as well as the data presented earlier regarding the decline in South Tahoe lodging. However, as with some of the TOT figures discussed earlier, the most recent year showed signs of improvement, with only 6.3 percent fewer revenues collected at South Shore casinos, and 2.3 percent fewer revenues from the North Shore establishments.

Peer System Ridership

While no two areas are exactly alike, it is useful to review public transportation services provided by similar resort communities around the nation for examples of programs

TABLE 12: Lake Tahoe Area Gaming Revenues

Year	South Shore Casinos	North Shore Casinos
2006	$ 333,725,000	$ 42,370,000
2007	$ 326,822,000	$ 42,302,000
2008	$ 304,439,000	$ 34,095,000
2009	$ 226,017,000	$ 28,560,000
2010	$ 211,693,000	$ 27,900,000
% Change from 2006 to 2010	-36.6%	-34.2%
Average Annual Change	-7.3%	-6.7%

Source: Nevada State Gaming Control Board

that may be useful models for future improvements in the Tahoe Region. Although characteristics of the Tahoe region are unique, there are also similarities when compared to other resort areas with similar travel corridors to nearby urban areas. The peer communities that were identified, based upon general characteristics such as resort areas or parks within close proximity to an urban area, consist of the following:

- Big Bear Mountain Resort, California
- Yosemite National Park, California
- Snowbird, Alta, Cottonwood Canyon Ski Resorts, Utah

The information presented will be used in conjunction with existing visitation data (presented above) to determine potential visitor transit demand.

Big Bear Mountain Resort, California

Mountain Area Regional Transit Authority (MARTA), the public transit provider located in Big Bear and Crestline, California, offers transportation to the Big Bear Valley, Crestline, Running Springs, Blue Jay, Lake Arrowhead and San Bernardino. MARTA operates fixed-route, demand response and commuter services. The fixed-route system runs a total of four routes, two of which operate in Big Bear and two of which operate in Arrowhead / Crestline.

The Bear Valley "Off The Mountain" (OTM) Route is a commuter service which operates a route from San Bernardino to Big Bear Lake (a distance of 42 miles). The OTM Route operates six trips between San Bernardino to Big Bear Lake from 6:30 AM to 7:00 PM

six days per week, Monday through Saturday, year-round. The one-way trip takes approximately one and a half hours. Trips from Big Bear Valley originate at the Interlaken Shopping Center and stop at Fawnskin, Snow Valley, Arrowbear, Running Springs, and six stops in San Bernardino. Departures "down the hill" are at 6:30 AM, 11:00 AM and 3:30 PM. Similarly, return trips from San Bernardino start at the Transit Mall and include the same stops mentioned above, including the on-request stop at Highland and Waterman. Three daily departures are served at 8:30 AM, 1:00 PM and 5:30 PM.

The Bear Valley Fixed Route service provides daily service through two routes – Route 1 between Boulder Bay and Erwin Lake, and Route 1A between Mountain Meadows and Gold Mountain. Route 1 offers service seven days per week between 6:15 AM and 6:30 PM, with major stops including The Village, the hospital, Interlaken Shopping Center, Stater Brothers, K-Mart, Circle K, Bear Mountain and Sugarloaf. Route 1A operates Monday through Friday between 10:00 AM and 4:00 PM with stops at the hospital, The Village, Interlaken Shopping Center, Stater Brothers and the Senior Center. Both routes are operated on hourly headways.

MARTA is a Joint Powers Authority (JPA) formed by the City of Big Bear Lake and the County of San Bernardino. MARTA provides connections to other transportation services, including the Metrolink and Greyhound bus services in San Bernardino.

Annual Ridership

In Fiscal Year 2010-2011, MARTA had a total of 99,373 passenger-trips on the Big Bear Valley services. This includes 11,143 passenger-trips on Route 1A (the express service), 77,509 passenger-trips on Route 1, and 10,721 passenger-trips on the OTM service. Ridership patterns vary between the services – Route 1 had the highest ridership in January (6,544 passenger-trips), Route 1A had the most ridership in May (1,087 passenger-trips), and the OTM service generated the most ridership in March (967 passenger-trips).

Operating Costs

The total operating costs during the last fiscal year was $1,092,292 for the Big Bear Valley services. Of this total, Route 1 comprises nearly two-thirds of the cost ($692,810), while the OTM service requires roughly one-quarter of the total costs ($281,386) and Route 1A express the remainder ($118,096).

Annual Vehicle-Hours and Vehicle-Miles of Service

Total annual vehicle-revenue hours for the Big Bear Valley services totaled 13,083 hours during Fiscal Year 2010-2011. This includes 8,540 hours for Route 1, 3,031 hours for the OTM route, and 1,512 hours for Route 1A. These services also generated a total of

277,823 vehicle-revenue miles during the same fiscal year. Again, Route 1 had the greatest number of miles (162,754 miles), followed by the OTM route (93,932 miles) and Route 1A (21,137 miles). Based on the operating cost noted above, the cost per vehicle-revenue hour is $83.49 and the cost per vehicle-revenue mile is $3.93.

Passenger Fare Revenue

Passenger fares for the three services totaled $179,112 during Fiscal Year 2010-2011. Based on the operating costs, this results in a farebox recovery ratio of approximately 16 percent. Looking at the OTM route on its own reveals that this service, during the last fiscal year, had a farebox recovery ratio of approximately 27 percent; total operating costs were $250,731 while passenger revenues totaled $67,997.

Yosemite Area Regional Transportation System

The Yosemite Area Regional Transportation System (YARTS) operates daily rear-round bus service between Merced and Yosemite National Park, with extended service in summer consisting of a route that operates from Mammoth Lakes to the Yosemite National Park.

YARTS is a Joint Powers Authority (JPA) formed between the counties of Mariposa, Merced and Mono. YARTS service was first initiated when the National Park Service was faced with limited access, severe automobile congestion, and air pollution issues in the Yosemite Valley. A partnership was formed with the surrounding counties, the National Park Service, United States Forest Service, Chambers of Commerce, Visitors Bureaus, Regional Transportation Planning Agencies, and other stakeholders who decided to explore various alternatives to resolve these issues. After developing short- and long-range transportation studies and conducting environmental analyses, the JPA was organized and service implemented. Prior to YARTS' formation, VIA (a division of Grayline) provided service between Merced and Yosemite National Park.

YARTS provides service to and from Yosemite National Park through two main routes – the Highway 140 route (year-round) and the Highway 120 East / US 395 route (summer only). The Highway 140 connects Yosemite Valley to Merced through the outlying communities of Merced Catheys Valley, Mariposa, Midpines and El Portal, and takes approximately 2 ½ hours from Merced to Yosemite. Major stops include the Merced Airport, University of California at Merced, the Amtrak station, various lodging properties, and other community transit generators. The route provides six runs daily in each direction, with general service hours from 5:45 AM to 8:27 PM.

The summer route that operates from Mammoth to Yosemite along Highway 120 East / US 395 runs only on Saturday and Sundays in June and September, and daily in July and August. In total, this route runs approximately four months from June to September (and when Tioga Pass is open). The trip from Mammoth Lakes to Yosemite

takes approximately 3 ½ hours. Major stops are located in June Lake, Lee Vining, Tuolumne Meadows, White Wolf and Crane Flat, and include lodging properties, Mammoth Lakes Park and Ride, various trail head and ski parking lots, a visitor center, and major gas stations. There are two runs per day of operation, with one departure towards Yosemite leaving at 8:00 AM and one departure towards Mammoth Lakes at 5:00 PM.

Annual Ridership

Annual ridership was 85,934 one-way passenger-trips on the SR 140 route from Merced to Yosemite during Fiscal Year 2010-2011, including 74,497 one-way passenger-trips generated from visitors and 11,437 one-way passenger-trips from the Amtrak Thruway service operated in conjunction with the route. Not surprisingly, the greatest ridership was observed in July and August, with roughly 10,977 and 10,821 passenger-trips, respectively. According to the *YARTS Short Range Transit Plan* (Transit Resource Center, March 2011), the Highway 120 service had 3,764 one-way passenger-trips during the 2010 summer season.

Annual Operating Cost

The total operating cost for providing YARTS service in Fiscal Year 2010-2011 was $1,579,356. This is based on the service contract through VIA Adventures, Inc. The total includes both the Hwy 120 and Hwy 140 services.

Annual Vehicle-Hours and Vehicle-Miles of Service

Annual vehicle-hours and vehicle-miles are available for the Highway 140 service. In Fiscal Year 2010-2011, the route operated a total of 359,920 vehicle-miles and 12,303 vehicle-hours. While data for the 2010-2011 Fiscal Year is not available for the Highway 120 service, the information for the prior year is still valuable since the route does not vary year to year. The *YARTS Short Range Transit Plan* indicates that in Fiscal Year 2009-2010 the Highway 120 service operated 609 vehicle-hours, however vehicle-miles were not available. Given the operating cost discussed above and the available vehicle-hours for the two routes, the cost per vehicle-hour for YARTS to operate is roughly $122.31 per vehicle service hour.

Passenger Fares Collected

Total farebox revenue for the YARTS services was $436,936 during Fiscal Year 2010-2011. The represents a 27 percent farebox recovery ratio for the two YARTS services.

Visitor Needs and Demand

Day Visitors

Lake Tahoe sees two types of visitors – day visitors and overnight visitors. Data from the *Tahoe Interregional / Intraregional Transit Study* has shown that 9 percent of winter visitors and 20 percent of summer visitors came to the South Shore for just the day, while 4 percent of summer visitors and 6 percent of visitors on the North Shore were day visitors. The study also revealed patterns in terms of residence location. Approximately 52.8 percent of summer visitors and 26.8 percent of winter visitors on the North Shore were from Nevada. In comparison, 35 percent of summer visitors and 69 percent of winter visitors were from California. For the South Shore, 29 percent of summer visitors and 9 percent of winter visitors were from Nevada. Approximately 56 percent of summer day visitors and 70 percent of winter visitors were from California.

With respect to travel mode on the North Shore, over 86 percent of day visitors in summer and 65 percent of day visitors in winter travel to Lake Tahoe in private vehicles. Only winter day visitors traveled via tour bus (32 percent). Roughly 9.5 percent of day summer respondents claimed to arrive by air / rental car. It can be assumed from this that many visitors to other close-by regions (such as Reno) use a rental car for a day trip to Tahoe.

The South Shore results show that 43 percent of day winter visitors travel to South Shore by private auto, 37 percent took a tour bus, 18 percent traveled by air / rental car, and 1.7 percent used an airport shuttle. Day summer visitors had the largest proportion of visitors traveling by auto (84.1 percent) and an additional 9.5 percent arrived by air / rental car, for a total of 93.6 percent arriving with a car.

Overnight Visitors

One of the challenges in providing effective transit service in Lake Tahoe, and particularly the North Shore, is that some residential areas lie a fair distance away from the main highway, which acts as the existing public transit service route. These types of neighborhoods tend to include single family homes used as full-time residences, second homes and vacation rentals. For the whole of the North Shore, the *Tahoe Interregional / Intraregional Transit Study* revealed that roughly 68 percent of the area visitors stay at overnight accommodations in these difficult-to-serve neighborhoods. While this data is for the whole of the North Shore, it is important to understand that, in Incline Village and Crystal Bay, the transit system does not serve the vast majority of single-family houses since it travels primarily along Highway 28. The bus does serve the neighborhoods to the south of Highway 28, and can be accessed by a large number of condominium developments, as well as the Hyatt Lake Tahoe. Data for the South Shore suggests that there is a lower proportion of visitors that stay in vacation rentals than in the North Shore, most likely a result of more lodging opportunities in the Stateline and

South Lake Tahoe areas. As such, there is a smaller proportion of visitors that are staying in areas that are more difficult to access with public transit.

The study also observed visitor travel patterns collected from a number of surveys and found that for the North Shore 40 percent of summer overnight visitors originated in the California Bay Area, 12 percent from Southern California, 9 percent from Central California and 4 percent from Nevada. Another 28 percent stated they in other states besides California and Nevada, 5 percent were international visitors, and another 3 percent sated they lived in the Greater Tahoe Sierra. In winter, 46 percent of North Shore visitors were from the Bay Area, 9 percent from both Southern California and Central California and 3.7 percent travel from Nevada. Additionally, 24 percent travel from other states, 6 percent travel from abroad, and 3 percent travel from other parts of the Tahoe Sierra.

Data shows that the South Shore of Lake Tahoe tends to attract visitors from the various geographic locations in a more even fashion than the North Shore. Only 21.8 percent of summer visitors state that they lived in the Bay Area, while 19.8 percent lived in Southern California, 15.4 percent in Central California, 7 percent in Nevada, and 28.7 percent in other states. Winter data suggests that the majority of winter visitors live in either the Bay Area (32.5 percent) or other states (37.3 percent). Only 11 percent lived somewhere in Central California, 8.3 percent in Southern California, 1.6 percent in Nevada, 1.1 percent in other parts of the Tahoe Sierras, and 6.7 percent were international visitors.

Visitor travel mode for overnight visitors did not differ much from those of day visitors. For the North Shore, 72 percent of winter visitors and 68 percent of summer visitors arrived by private car, while 25 percent of winter and 31 percent of summer arrived by air / rental car. This indicates that 97 percent of winter overnight visitors arrive by automobile, and 99 percent of summer visitors arrive by automobile. In winter, only 8 percent of overnight visitors arrived by shuttle bus. The South Shore numbers are similar, however fewer overnight visitors arrived by personal car. In winter, 49 percent of overnight visitors to the South Shore arrive by private car, and 43 percent arrived by air / rental car – in total 92 percent of overnight winter visitors arrived by automobile. In summer, 65 percent of overnight visitors arrive by personal car and 29 percent arrived by air / rental car, for a total of 94 percent coming to Lake Tahoe by automobile.

Recreational Visitors

Not surprisingly, ski resorts generate the greatest number of recreational visitors in the winter. In the summer, beach activities are typically the most popular activity, followed by walking and hiking. As with the previous discussions, the majority of recreational visitors / users originate from California for both the summer and winter seasons, however a larger proportion of summer recreation users are from Nevada than winter

recreation users. Conversely, international visitors make up a slightly larger proportion of recreation users during winter than during the summer.

Surveys conducted by the TRPA, as discussed in the *Tahoe Interregional / Intraregional Transit Study*, showed that the vast majority of both summer (67 percent) and winter (78.8 percent) recreational visitors traveled to the Basin from California. A larger proportion of summer recreation users (16 percent) are from Nevada than winter users (5 percent). International visitors make up a slightly larger proportion of winter recreation users (2.3 percent) than during the summer (1.8 percent).

The TRPA survey also asked respondents about travel mode for activities in summer and winter. During the winter, only 18.1 percent of residents, 21.1 percent of repeat visitors, and 43.6 percent of first-time visitors stated they would use a form other than private vehicle for transportation. A large number of respondents indicated they would use a resort shuttle (75 percent – residents, 62.6 percent – repeat visitor, 51 percent – first time visitor). Public transit, in both the South Shore and North Shore, was also mentioned, with residents being more responsive to this mode (50 percent – residents, 8.8 percent – repeat visitor, 29.4 percent first time visitor). In the summer, fewer respondents stated they would use transit – only 1.6 percent of respondents identified this as a potential mode of travel – however 6.7 percent would use a trolley. In total, only 12.6 percent of visitors stated they would use other forms of transportation than a private vehicle.

In summer 2011, the consulting firm of AECOM conducted a survey of users at Sand Harbor State Beach as part of an ongoing capacity study for the park. One of the questions asked respondents to identify the zip code of their residence. Of the 647 responses, 377 respondents (58 percent) were from Nevada and 199 (31 percent) were from California. Looking at the Nevada and California responses in more detail reveals that 372 of Nevada respondents (98.6 percent) were located in nearby communities (Reno, Sparks, Minden / Gardnerville and surrounding areas) and 29 California respondents (14.5 percent) were from local communities in Placer or El Dorado Counties. This data suggests that over one-half of the visitors originate from a location in Nevada that is within a driving distance of Sand Harbor. This is strengthened by the fact that, according to the survey, 95 percent of all respondents arrived by personal automobile.

Given the high number of persons visiting Sand Harbor beach, there is indication that transit service may be a viable option for day visitors that may wish to visit Lake Tahoe without taking their cars during the summer season. This would not only result in fewer cars, but would also ease parking issues experienced along SR 28 along the North Shore, as well as other areas along the North and East Shores of the lake.

With respect to other recreational needs, the data presented does not indicate that there is a high demand for other transit services, such as a winter ski shuttle from the

Reno or Carson City areas into the Nevada portions of the Lake Tahoe Basin. Most persons in the winter are traveling from nearby areas, where private vehicle use is a more convenient option. Additionally, there is only one ski resort fully within the boundaries of the study area, Diamond Peak in Incline Village. This ski mountain is rather small and does not generate as many day skiers as more popular destinations such as Heavenly, Northstar, Squaw Valley or Alpine Meadows. This indicates that a shuttle from Reno and/or Carson City to California ski resorts may have higher demand than one to Diamond Peak. A winter ski shuttle that provides access simply to the Lake Tahoe Basin would likely not be utilized to the full extent, as skiers would be required to either transfer to TART or a shuttle operated by the ski resort in order to get to their destination.

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Section V
Social Service, Medical and General Public Needs Assessment

A key step in developing and evaluating transit is a careful analysis of the mobility needs of various segments of the population and the potential ridership of transit services. The discussion below summarizes relevant data collected and reviews the potential transit demand which stems from the following categories:

- Social Service and Medical Transportation Needs
- Senior Transit Needs
- General Public Transit Needs (not addressed in other categories)

Social Service and Medical Transportation Needs

According to the Nevada Department of Health and Human Services, the state of Nevada leads the nation in the growth of the senior population. This is a result of an out-migration of younger people in rural areas, an in-migration of retirees and aging of the existing population. In contrast, funding for senior services has remained stagnant at the state level. Transportation to appointments and services is a critical need for Nevada seniors.

The provision of non-emergency medical transportation for Lake Tahoe residents to nearby urban areas has been identified in multiple studies as an important transit need. Specialized medical services such as dialysis and chemotherapy are not available in the Tahoe Basin. The closest dialysis clinics are located in Gardnerville, Carson City, and Reno. Tahoe Forest Hospital in Truckee provides chemotherapy treatment for cancer patients, and is currently developing a new cancer center. While transportation to the hospital is limited to TART service, the hospital is looking to implement a volunteer driver program through the American Cancer Society that would provide service to the North Shore of Lake Tahoe. As transit service is available from the South Shore of Lake Tahoe to Carson City and Gardnerville through the BlueGO Triangle Route, as well as connections to Reno on RTC Intercity, the most likely unmet demand is for North Shore residents.

The majority of Washoe County social and health services are located in Reno. Staff for the Adult Services program for Washoe County Social Services indicated that only a few Incline Village residents a year travel to the office in Reno to meet with a case worker or receive treatment at the Health Center. As there is no public transit over SR 431, these clients must provide their own transportation. Women, Infants, and Children (WIC) services are available in Incline Village two days a month from 9:00 AM to 2:30 PM, otherwise Incline Village residents must travel to Reno or Kings Beach (in

California) for services (TART public transit service is available from Incline Village to Kings Beach).

In Douglas County, all county social services are located in Gardnerville. Social Services Department staff indicated that a few clients travel at least monthly from the Zephyr Cove area to Gardnerville for various reasons, including utility bill assistance and food vouchers. The newly implemented Triangle Routes (20X, 21X, 23) do provide service from the South Shore to Douglas County. While there are no transit services from Incline Village or Crystal Bay to this area, it is likely that most patients travel to Reno or Carson City rather than to Douglas County.

The Nevada Coordinated Human Services Transportation Plan includes a discussion on transit gaps and needs for the elderly, disabled and low income residents of the region. As part of this effort, 23 transportation providers in Nevada were surveyed. Transportation provider representatives for DART, BlueGO and TRPA provided the following input:

- Douglas County is large and it is difficult to serve everyone using limited funding.
- Better communication with different agencies and transportation providers is needed.
- There is a need for BlueGO to have better connectivity.
- TRPA indicated a need for increased service in outlying areas.
- The community indicated a need for intra-regional service– South Lake Tahoe to Incline Village, Tahoe City, etc. and South Lake Tahoe to Sacramento and Carson City.

The Tahoe Regional Planning Agency developed a Coordinated Human Services Transportation Plan for the entire Lake Tahoe Basin in 2008. Transit needs identified in the study which are pertinent to this plan include:

- Non-Emergency Medical Transportation – Transportation to medical appointments in Reno, Carson City and Minden / Gardnerville is an important need for Lake Tahoe Basin residents.

- Volunteer Programs – In order to supplement existing transit service in the Tahoe Basin with minimal funding, residents and stakeholders recommend establishing volunteer driver programs. This will improve mobility for seniors and disabled who rely on transit.

Senior Transit Needs

According to the 2010 U.S. Census, the senior population in the study area comprises roughly 17.7 percent of the total population. Roughly 17 percent of the East Shore population is 65 years of age, while 18 percent of the Incline Village / Crystal Bay

population is considered elderly. The distribution has shifted since the 2000 Census, at which time the majority of elderly persons were located on the East Shore, however the percentage and distribution amongst the areas have stayed relatively flat.

In addition to medical needs, the seniors tend to have increased transit needs for other activities, such as social events at senior centers. The Lake Tahoe Basin has senior centers in Douglas County (East Shore) and Incline Village (North Shore). Current BlueGO transit routes serve the Douglas County center, and the senior center also has a vehicle that is used for transportation to special events (such as the weekly luncheon on the South Shore.

The Incline Village Recreation Center holds many senior activities, and essentially serves as the North Shore's senior center. Currently, no transit is provided to the Incline Village Recreation Center (where the Incline Village senior services are located). There is TART service nearby, but the nearest stop is not located within a realistic walking distance from the recreation center. One of the activities held at the center is the Conversation Café, during which local seniors discuss issues in the community. The consultant team attended an event and spoke with seniors about transportation in the area. Not surprisingly, there were few perceived transit needs from the group, and in fact, the group noted that the low density of the North Shore is inadequate to support increased fixed-route service and that transportation should be more focused on local employees and tourists. Additionally, it was noted that the needs that may exist from the senior community are generally met through the volunteer driver program offered through the Veteran's Club in Incline Village.

General Public Transit Needs

In addition to social service participants, persons with medical needs, disabled and senior persons, as well as youths, transit demand for the general public is also assessed. Currently, public transit service is offered within the Study Area by TART (North Shore areas) and BlueGO (East Shore areas). While regional connections to shopping destinations and other activity centers outside the Tahoe area are possible through the BlueGO Routes 20X, 21X and 23, there is a lack of service from the North Shore to other Nevada areas. The following section includes methodology used to determine general public transit demand, as well as a discussion regarding previous services for general public.

Mobility Gap Methodology – Zero Vehicle Households

The mobility gap methodology is used to identify what amount of service is required to provide an equal amount of service to households that have access to vehicles and those that do not. The National Personal Transportation Survey (NPTS) provides data that allow for calculations to be made relating to trip rates.

Trip rates for zero-vehicle households in rural areas of the western mountain region of the nation (including Nevada) were determined to be 5.2 daily one-way trips. For rural households with at least one vehicle, the trip rate was 6.4 daily one-way trips. The mobility gap is calculated by subtracting the daily trip rate of zero-vehicle households from the daily trip rate of households with at least one vehicle. Thus, the mobility gap is calculated at 1.2 household one-way trips per day for this region.

To calculate the transit need for each subarea of the study area, the number of zero-vehicle households is multiplied by the mobility gap number. Table 13 shows this information broken out for the Census Tracts in the study area.

TABLE 13: Mobility Gap Methodology for Transit Needs

Census Tract	2009 Population	2009 Households	No Vehicle	One Plus Vehicle	Mobility Gap	Transit Need
Douglas County						
3.01	925	503	22	481	1.2	**26**
3.02	1,723	744	0	744	1.2	**0**
4	1,775	827	17	810	1.2	**20**
Incline Village / Crystal Bay						
33.02	4,323	1,784	0	1,784	1.2	**0**
33.04	4,396	1,779	45	1,734	1.2	**54**

Sources: TCRP Web-Only Document 49: Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation; U.S. Census Bureau American Community Survey 2005-2009

In general, this approach establishes a level of transit need. As shown, due to the overall lack in zero-vehicle households, a very low level of transit need is identified for the study area. In total, 100 daily one-way person-trips need to be provided via transit to make up for the gap in mobility. Census Tract 33.04 in Incline Village has the greatest need, with 54 one-way daily trips; the other Census Tract in Incline Village (33.02) does not generate need as there are no zero-vehicle households. In Douglas County, Census Tract 3.01 generates a need of 26 one-way daily trips, while Census Tract 4 generates 20 one-way daily trips.

Additionally, because transit service is available through TART, some of the transit needs identified through the above methodology may already be served. Further, the above outputs are indicative of general demand and may not actually be associated with the need for trips to outlying areas such as Reno or Carson City.

Other General Public Needs

General public transit needs tend to be associated with shopping-related trips. Both the TART and BlueGO systems provide service to major shopping destinations in their respective service areas.

Between 2007 and 2009, the North Tahoe TMA provided a service through the North Lake Tahoe Express between Incline Village / Crystal Bay and the Summit Shopping Center in Reno, located at the base of Mount Rose Highway (SR 431). Seven trips to the shopping center, and six return trips to Lake Tahoe, were offered. These included three morning trips and four afternoon / evening trips, with general service offered between 3:35 AM and 11:15 PM, depending on pick-up location (Tahoe Biltmore, Parkside Inn, Incline Village Recreation Center, and Hyatt Lake Tahoe). The service was designed to offer not only residents service to the shopping center, but also for employees at both the shopping center and the North Lake Tahoe service area.

Low participation resulted in cancellation of the service, as of the end of 2009. Ridership totals were as follows: 49 passenger-trips in 2007, 129 passenger-trips in 2008, and 36 passenger-trips in 2009. While potentially addressing a transit need, the service may have generated such low ridership for a number of reasons:

- The North Shore service area does not have a high level of zero-vehicle households, and therefore it would not be capturing a significant sector of the transit-dependent population. Persons requiring the use of public transit would most likely not use this service, as arrival times from the TART service may not have coincided with the departure times of the Summit Shopping Center shuttle service. And, in general, transfers between services tend to reduce potential ridership, particularly for those who may have other mode options.

- The service did not provide connections to RTC routes in Reno, as the RTC buses do not serve the shopping center. As such, the service could be used solely for the purposes of accessing the Summit Shopping Center. General inflexibility in service destinations could have played a large role. From an employment or commuter standpoint, many potential users may not have had the ability to get to the shuttle service from the Reno side without connections from RTC.

- The highly seasonal nature of Incline Village's population may not have supported a year-round service.

The failure of this service may be indicative of a lack of transit demand to outlying areas of Nevada by the general public. In addition to the above points, the higher than average secondary homeownership levels in the Incline Village and Crystal Bay areas further reduce general public demand, as these households are more likely to use a private vehicle for their trips rather than scheduled public transit.

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Section VI
Summary of Transit Needs

There are numerous methods for quantifying transit needs, including those outlined in the TCRP B-36 study, *Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation*. Included are methods for program and non-program related trips, and in most cases, are useful. Unfortunately, the population of the study area is quite small, and thus applying these methods were not feasible for all categories. Similar issues were present when reviewing potential program and non-program methods. As a result, much of the analysis relied on qualitative review rather than quantitative analysis.

The analyses performed as part of this report showed that, in general, there is little perceived need for new or expanded transit services from the Lake Tahoe Basin to and from the Reno, Carson City and Minden / Gardnerville. Existing transit services, particularly in the South Shore, appear to meet the reasonable needs of the residents. The North Shore area has slightly more limited transportation options, in that the fixed route does not travel far into many of the neighborhoods of Incline Village and Crystal Bay, and there are no regional services similar to the BlueGO routes between Minden/Gardnerville and Carson City serving the South Shore. However, despite the lack of extensive service, there does not appear to be substantial transit needs that are not being met. Given the very low number of households without access to a vehicle throughout the study area, general transit demand is not associated with the lack of personal transportation options. Further, social service-related transit needs are not as prevalent in the Basin as may be expected – current transit services, volunteer driver programs and general availability of automobiles suggests that any needs are very limited to a small population. As such, any needs are tied to commuters traveling into the Basin, overnight visitors that do not arrive in personal vehicles or rental cars, and day visitors from the greater Reno and Carson City areas.

The two groups that have more increased needs for transportation options on the North Shore are the employee and visitor groups. While employee transit needs are met through the provision of BlueGO fixed route service on the South Shore, employees traveling from Carson City or Reno do not have alternative modes of transportation available to them. The only option is a vanpool rideshare program through Washoe RTC that currently has no participants in either direction between Incline Village and Reno. Despite this potential need, the number of persons that commute between the North Shore of the lake and the Reno or Carson City areas is rather limited, and does not warrant new fixed route transit services. Rather, employers may benefit from working on carpool or vanpool programs internally for employees that are commuting from the same areas.

Tourism is the major economic generator in the study area due to the presence of year-round recreational activities. The analysis revealed that the vast majority of overnight visitors arrive to the area in private automobile, most likely the result of visitors originating from locations that are a reasonable driving distance, such as the San Francisco Bay Area and Sacramento. In addition, there are currently successful shuttle services between Reno and both the North Shore and the South Shore areas (North Lake Tahoe Express and South Tahoe Express, respectively.) Day visitor data showed that most persons visiting are also originating from nearby locations, such as communities near Reno or Carson City, thereby having access to a private automobile for day trips. Due to parking and traffic issues during summer months near the beaches along the North and East Shores, a need may be present for seasonal shuttles to these attractions that are designed for day visitors. In general, tourism data suggests that with the economic downturn that Lake Tahoe has experienced, visitation has declined over the past few years. While this will not always be the case, it is not likely that significant demand will arise in the near future strictly from tourist-based visitors. A possible exception may be coordinated transit/parking strategies that could generate additional transit demand, such as for access to Sand Harbor.

Appendix C
Stakeholder Engagement

INTRODUCTION

A transit needs assessment study relies not only on quantitative information gathered from different sources, but from qualitative information discerned from multiple conversations about transit. Often these conversations in different contexts identify transit needs in a compelling manner. The Lake Tahoe Basin Transit Needs Assessment embraced the opportunities to identify needs through multiple conversation types meant to engage the multiple groups of transit stakeholders. This appendix describes the results of these efforts.

There were four broad and sometimes overlapping groups from which different aspects of transit needs could be identified. The first group was existing transit users. These individuals use transit based upon their individual needs and can readily convey their experiences. The second broad group was potential traditional transit users that are not currently using transit. Discussions with these individuals would likely identify needs associated with perceived gaps in transit service. The third broad group was the potential nontraditional transit users or individuals who could choose between modes of travel. The fourth group was the transit professionals and advocates. These individuals offered personal and professional perspectives on transit needs and resources. While each group brings a unique perspective on transit in and around the Tahoe basin, engaging them in different types of conversations revealed their capacity to empathize with perspectives of the other groups.

Five different strategies were used to engage stakeholders in conversations about transit needs:

1. A steering committee was formed to engage transit professionals and advocates in conversations about their interests and ideas for transit in and around the Tahoe basin.
2. Specialty working groups were formed to discuss social services, employee travel, and recreational and tourist transit use. These three specific areas of transit use were initially considered the driving force behind transit use.
3. Existing discussion groups were identified for which transit use/needs became a discussion topic.
4. Semi-formal interviews were conducted with existing transit users.
5. Tahoe transit needs were introduced as a discussion topic within Tahoe Transportation District's (TTD) ongoing series of open houses.

By discussing transit needs in different formats with multiple types of conversations, the information gathered provided for the identification of user needs as well as the means to verify and validate those needs.

Get the Word Out

Universally, in every conversation about Tahoe transit needs, the sense that the broader community was unaware of transit opportunities was identified. The TTD's open houses provided the greatest insight into this realization. These open houses were attended by the general public interested in transportation. Many topics were covered. Attendees nearly unanimously asked for a summary about Tahoe transit because of their minimal awareness of the operations. The lack of broad awareness was confirmed with conversations with existing discussion forum such as the Incline Village Conversation Cafe. Participants in the conversation were aware of multiple opportunities for shuttle buses and provided ideas for improving transit overall. However, the general sense among the group was overall lack of awareness of available services.

Participants in the specialty working groups provided additional confirmation about the general lack of public awareness about transit opportunities. One specific example provided was teen and preteen populations who want to access recreation centers, middle schools, BMX facilities, and the Boys and Girls Clubs without understanding transit opportunities. This sense of the broader public's lack of

understanding transit opportunities was reinforced in steering committee conversations and even among actual transit users interviewed.

Integrate Transit with the Region's Vision

While discussing regional transit needs in many different situations, inevitably some reference was made to another planning, visioning, or similar activity in which transit was being discussed. This realization became apparent during conversations with specialty working group members. These individuals are actively involved with multiple aspects within the communities throughout the region. For example, many are engaged in dialogues about community health and livability. Each of these conversations, and others, identified transit in some capacity. Transit is often seen as essential for providing quality of life for aging individuals. Similarly, transit is seen by steering committee members as being integral to future recreational activities related to accessing trailheads by providing connectivity for pedestrians and bicyclists to outdoor activities.

Individuals attending the TTD open houses indicated that transit was central to their future planning. Specifically, one individual had experience operating a not-for-profit enterprise that provided challenged individuals access to recreational and entertainment activities. Much of this access was accomplished through transit. The individual was contemplating an expanded future not-for-profit enterprise that would enhance the quality of life for challenged individuals. Transit operations were central to this planning effort. These examples give a sense of role that transit operations can play in the planning and visioning efforts being undertaken by many diverse initiatives.

Support and Leverage Existing Operations

Discussions with transit stakeholders indicated a high satisfaction with existing operations. Of course, critiques were offered as ideas to further enhance individual experiences. Overall, there was great support for BlueGo operations between Minden/Gardnerville, Carson City, and South Tahoe. Additionally, there was support for the Tahoe area regional transit operations in Incline Village/Crystal Bay and connections to California portions of the North Shore. One persistent critique was the lack of additional evening services. Interviews with transit users and carpoolers highlighted the challenges of not having adequate evening services that would allow individuals flexibility in planning daily activities, including work. This notion was echoed with the observation that individuals prefer to engage in recreational and entertainment activities after typical work hours or in the evening. It would be prudent to evaluate existing operations for opportunities to leverage resources to address these late evening service critiques.

The remainder of this appendix includes specific documentation of stakeholder engagement for the Lake Tahoe Basin Transit Needs Assessment:

1. NDOT Kickoff Meeting, February 14, 2011
2. Tahoe Transportation District Meeting, February 15, 2011
3. Initial Steering Committee Meeting, April 26, 2011
4. Open Houses, May-June 2011
5. Specialty Working Groups Kickoff Meeting, August 16, 2011
6. Storefront and Transit Center Interviews, October 2011
7. Park-and-Ride Interviews, October 6, 2011
8. Zephyr Cove Senior Center Interviews, October 11, 2011
9. Conversation Cafe Discussions, October 18, 2011
10. Steering Committee Meeting 2, October 18, 2011
11. Solicitation of Stakeholder Feedback, October 2011 – March 2012

1. NDOT KICKOFF MEETING

FEBRUARY 14, 2011

February 14, 2011

Susan Martinovich, P.E., Director
Attn: Trish Giomi, Transit coordinator
Nevada Department of Transportation
Division: Transportation Multimodal Planning
1263 South Stewart Street
Carson City, NV 89712

RE: Lake Tahoe Basin Needs Assessment and Coordination Plan Agreement Number P194-10-802 Summary of NDOT Kickoff Meeting on 1/11/11

Dear Ms. Giomi:

On January 11 we held a kickoff meeting with your team at NDOT headquarters in Carson City. During that meeting our team gained an understanding that NDOT's chief expectation from the project is that you want to clearly identify how your transit dollars can best be allocated in the future. In order for you to do so, we need to develop consensus for a coordinated plan we will develop collaboratively with your partners within the Lake Tahoe Basin and the communities that serve it. This plan will identify both existing and unmet needs and provide approximate costs for proposed strategies intended to improve service.

We also agreed on a final list of the organizations we hope will participate on the Steering committee, and a draft of how the focus groups will be organized. Additionally we identified the existing studies and ongoing efforts that need to be included in our work and we asked for your input on other studies and reports that may be useful.

We agreed that the next steps would be for our team to continue work on task A (the System Analysis) while at the same time we would contact individual organizations we had identified as important partners and solicit their participation on the steering committee. I also advised you I would attend the public meetings sponsored by TTD to be held the following week to determine opportunities to build on existing public outreach efforts in the Lake Tahoe Basin.

My next report will identify activities that have occurred since our kickoff meeting.

Sincerely,

Michael W. Lawson
Project Manager

2. TAHOE TRANSPORTATION DISTRICT MEETING
FEBRUARY 15, 2011

February 15, 2011

Susan Martinovich, P.E., Director
Attn: Trish Giomi, Transit coordinator
Nevada Department of Transportation
Division: Transportation Multimodal Planning
1263 South Stewart Street
Carson City, NV 89712

RE: Lake Tahoe Basin Needs Assessment and Coordination Plan Agreement Number P194-10-802 Summary of TTD Meeting on 1/20/11

Dear Ms. Giomi:

On January 20 Gordon Shaw and I met with Carl Hasty, District Manager for the Tahoe Transportation District (TTD), at Mr. Shaw's offices at Lake Tahoe. During that meeting I provided an overview of NDOT's project to conduct a Lake Tahoe Basin Transportation need assessment and develop a coordinated plan. As we discussed at our kickoff meeting at NDOT, I assured Mr. Hasty the needs assessment was merely an effort to understand how to best allocate future NDOT funding and that Lake Tahoe was not being "singled out" for "evaluation". I went on to explain the "Transit situation" in Elko County in general terms and the increased emphasis NDOT is placing on doing more with less. Mr. Hasty appeared comforted by my explanation of your intent for the study and seemed excited about the opportunity to participate in the needs assessment and development of a coordinated plan.

We next discussed the public meeting we had both attended the previous evening at the community college in south shore. This event was an opportunity for the general public to meet with a multitude of local agencies to discuss the ongoing transportation projects in the Tahoe Basin. Staff members from Caltrans, TTD, USFS, TRPA, and TMPO were stationed in front of displays that depicted a variety of environmental and transportation improvement projects. This well attended event gave me an idea of the interest that can be generated if meetings are properly planned and advertised.

Mr. Hasty and our team then discussed the ongoing efforts by TTD to solicit both public and private sector support for public transportation within the Tahoe basin in addition to the issues that exist with public transportation options to and from the communities outside of the basin. Mr. Hasty provided insight to many of the ongoing challenges inherent with managing BlueGo and seemed to welcome any opportunity for us to work together to create and implement a unified vision for public transportation in the basin. We assured Mr. Hasty that we would involve his organization in the steering committee we were establishing and that our next steps would be to contact other agencies to solicit their participation on the steering committee.

My next report will identify activities that have occurred since our meeting with TTD.

Sincerely,

Michael W. Lawson, Project Manager

3. INITIAL STEERING COMMITTEE MEETING
APRIL 26, 2011

April 26, 2011

Susan Martinovich, P.E., Director
Attn: Trish Giomi, Transit coordinator
Nevada Department of Transportation
Division: Transportation Multimodal Planning
1263 South Stewart Street
Carson City, NV 89712

RE: Lake Tahoe Basin Needs Assessment and Coordination Plan Agreement Number P194-10-802 Summary of Initial Steering Committee Meeting

Dear Ms. Giomi:

The initial meeting of the Steering committee was conducted on March 14, 2011 at Lake Tahoe. The meeting agenda is provided as an attachment. Gordon Shaw of LSC provided a brief overview of ongoing technical work and informed the committee that the demographic technical memo (Technical Memorandum # 1) will include commuting patterns and visitor patterns among other pertinent data. Gordon next addressed the services technical memo (Technical memorandum # 2), which will include existing documents along with the agency goals and policies in addition to all other information gathered from the relevant agencies.

I then provided a brief overview of the study expectations including that the steering committee would convene at specific milestones, that the study was to focus on the Nevada side, and that it would need to consider other efforts including California. Steering Committee Opening Statements by participating agencies are summarized as follows:

The Tahoe Transportation District (TTD) highlighted:
- Working with projects with NDOT with shifting issues
- Increased Carson City demand
- The Nevada State Park carrying study capacity due in June
- Provide transit service on state Route 28 to incline Village
- Coordinate projects, operation, and traveler information
- Identify issues for future study and development
- Leveraged funding
- SR 28 multipurpose park-and-ride
- Messaging multimedia

Carson City's focus is:
- Assisting in implementation of the Triangle Plan

Tahoe MPO is currently engaged in:
- Coordinating short-range transit plans
- Developing an interregional and intra-regional plan
- Their focus is three-pronged; within, region, and beyond
- Intermodal planning
- Identifying potential additional services

Douglas County continues:
- Assisting with the Triangle Plan implementation
- Coordinating with bike and pedestrian efforts

United States Forest Service is concentrating on:
- Focus on SR 28 safety
- Coordinate with state Park carrying capacity
- Identify funding sources
- Ensure sustainability
- IT systems (get information out)
- Consider Mount Rose
- Investigate parking options

TMA has interest in and discussed:
- Pilot program for safety on the north shore
- Safety, jam up, parking
- Crystal Bay Carson City
- Flume Trail shuttle
- Boulder Bay interest

Placer County noted that:
- 20% of TART service to Nevada
- Focus on systems

NDOT summarized the study saying:
- Make best use of funds
- NDOT does not run services
- SR 28 safety
- Bike and pedestrian coordination
- IT services
- Park-and-ride

The following items were identified in a group conversation of ongoing activities, issues, and opportunities.
- New funding at the federal level - shifting to grant funding requiring collaborative plans
- Study will ID capital projects
- Study will focus on transit
- Study should include livability principles
- Connection with community
- Technical short-range FTA
- Document audience-NDOT
- Unique community
- Not off the road
- RTP update
- Higher-level look and integrated
- TTD will hold three or four more open houses outside the basin (June)
- Three user groups: commuter; social services; and recreational
- Incline Village's business Association
- State parks general management plan

- Beach capacity study
- Bike Trail feasibility including parking
- Road safety audit SR 28
- Other funds available beyond 5311
- Grant opportunities
- Skyland parking-safety-NDOT-subgroup-policy-enforcement
- Focus group composition and agendas

During the Next Steps discussion the following items were identified:

- The remaining data needs include RTC and Douglas ridership for DART, which will be collected by LSC
- The need to map out the public engagement effort will be accomplished in cooperation between NDOT (via Atkins) and TTD
- A preliminary list of potential members of the "Stakeholder specialty working groups" will be developed, provided to NDOT for review and approval, and then distributed to the Steering committee for feedback.

The following is a list of potential members for each of the "Stakeholder specialty working groups."

Employee Travel committee:

Organization	Representative
IVGID	TBD (to be determined)
Incline Village Hyatt	TBD
Crystal Bay Club	TBD
Boulder Bay	Brian Helm
The Tahoe Ridge	Dan Garrison
Lakeside Casino	Mike Bradford
Harrah's/Harvey's	Matt Krystofiak
Montbleu	Jerry Higginson
Washoe County School District	TBD
Douglas County School District	TBD

Recreation and Tourism Committee:

Organization	Representative
IVGID	TBD
Nevada State Parks	TBD
USFS	Anjanette Hoefer
Douglas County Chamber of Commerce	TBD
TRPA (Recreation Planner)	TBD
North Lake Tahoe Resort Association/Chamber	Ron Treabess
Lake Tahoe South Shore Chamber of Commerce	B. Gorman
Sustainable Community Advocates	Steve Teshara

Social Service Committee:

Organization	Representative
Washoe County Social Service Agency	TBD
Carson City Social Service Agency	TBD
Douglas County Social Service Agency	TBD
Parasol Group/Project Mana	TBD
Tahoe Forest Community Hospital	TBD
Barton Hospital	TBD
La Communidad Unitas	TBD
IVGID	Sheila Leijon

Please let me know if you want additions, deletions, or other changes to the potential membership in each group. Once I receive your feedback I intend to circulate the list to the steering committee for their feedback. Once I get that I will send a revised list for your approval, identify specific representatives, and schedule a kickoff meeting for each group.

Finally, contingent upon your approval I would like to "copy" this summary report to the Steering committee members. My next report will detail results of the "public outreach coordination meeting" held on Thursday April 7, 2001 in Reno. Please let me know if you require clarification or additional information regarding this report. Regards,

Michael W. Lawson
Project Manger
Atkins, North America Inc.

4. OPEN HOUSES
MAY-JUNE 2011

An important part of identifying transit needs is to have genuine conversations with transit users. Through the Tahoe Transportation District's (TTD) series of open house events in Carson City (May 2011) and Gardnerville (June 2011), those conversations were created. The open houses included all aspects of transportation, and communities with transit services garnered a significant amount of interest from attendees. Many different types of transit users shared their stories, suggestions, and concerns, which are summarized below.

Transit users in western Nevada and the Lake Tahoe basin have several qualities in common. They are fiercely independent and embrace the spirit of the West. They share compassion for their fellow Sierra Nevadans and they love where they live. These qualities helped shape the need for transit services—in the region and for a broad range of transit users.

Transit services not only help people with the challenges of moving from one city to another, they help people transition through the phases of their lives. When driving and walking become a challenge, transit allows people to remain fully engaged with their communities. Unfortunately, because many individuals have not used transit services prior to the time when life changes necessitate their use, they lack the confidence. Issues can arise that individuals do not anticipate. For example, one woman revealed, "I'm too young for senior services," and she had problems physically accessing transit. In another conversation, a woman observed, "My doctor refused to authorize service," so she could not get dial-a-ride service. These anecdotal comments reveal that aging citizens and newcomers to the area could benefit from efforts to better explain the existing transit system to those unfamiliar with available services.

For some users, transit is more of a choice. One choice rider recognized that "I am a fair weather rider," using transit when it was convenient. Another conversation revealed that "the suit thing and the bike thing are not necessarily compatible" when combining bicycle travel with transit travel. Fortunately, even transit users who have travel choices recognize the benefits of transit services. As one conversation revealed, "I live up at the lake and anything we can do to increase transit is a good thing." This sentiment was echoed by an individual who stated, "I ride the 21...and the only thing I would like to see is more routes...more frequency." While transit patrons with other travel options recognize the benefits of transit, they may not truly understand its importance in the quality of life for other users. Transit users of all types could benefit from a deeper understanding of the essential nature of transit services, now and into the future.

Transit services are essential for the quality of life in the communities in which they operate. Numerous examples of transit services enhancing community quality of life exist. In a conversation at the Carson City open house, a particularly poignant conversation took place with a leader from a nonprofit program that connects challenged individuals with the community. The program shows individuals how to use transit to access activities such as bowling and other recreational opportunities. Such efforts are critical for these individuals. As the director explained, "When I talk about recreation, this program stops isolation, depression, helps people get back to work...and what's really amazing is it creates wonderful friendships and positive peer pressure."

Imagine the powerful impact the ability to access recreational opportunities has on these individuals' life experiences. Unfortunately, as the director noted, "Most people work during the day and they want to have recreation after work." The director pointed out that "the problem we come up against all the time is that we can't get anyone out after 6 p.m." Transit services trail off after the work day,

thus reducing opportunities for the individuals this program seeks to help. This is just one example of the important role transit services play in the community, and it captures the essence of the independent spirit of Sierra Nevadans. Non-transit users need to understand the benefits beyond mobility that transit services provide. These services generate the quality of life that makes communities desirable and vital.

This description of conversations about transit service reveals that transit user needs go beyond merely wanting more. The conversations conveyed a sense that transit users wanted the community to understand the importance of transit services for providing and promoting the spirit of independence they share with their fellow Sierra Nevadans. Essentially, transit is a value-added community service that benefits the entire community, often in subtle ways. Transit users need assistance in helping non-users understand the value and numerous benefits of transit services.

5. SPECIALTY WORKING GROUPS KICKOFF MEETING

AUGUST 16, 2011

LAKE TAHOE PUBLIC TRANSPORTATION NEEDS ASSESSMENT
SPECIALTY WORKING GROUPS KICKOFF MEETING

As part of the NDOT study of public transportation issues in the Lake Tahoe Basin and adjacent communities, three specific groups of stakeholders were identified and invited to participate at a kickoff meeting held at the TRPA offices in South Lake Tahoe on August 16, 2001.

The meeting was convened with Atkins project manager Michael Lawson giving an overview of the NDOT project purpose to the assembled members of all three groups. That was followed by a project status report given by LSC senior planner Kristina Svensk. After the general information was presented to the collective group, each of the three individual groups adjourned to separate rooms to discuss group specific issues. A summary of each of those individual group discussions follows.

Social Services Working Group

This meeting was facilitated by Atkins senior planner Perry Gross and attended by Kristina Svensk of LSC, Curtis Garner of TTD, NDOT project manager Melisa Kunter, and stakeholder participant Maia Schneider, from Tahoe Forest Community Hospital.

There are two main facilities in the Tahoe Forest Community Hospital system – Incline Village and Truckee.

Ms. Schneider's comments included:

- We have two constituents that we have transportation issues with – patients and employees.
- There are critical access issues between the Incline and Truckee facilities, which will worsen when the new cancer center is opened in Truckee.
- Biggest challenge from Incline to Truckee is for cancer patients.
  - We have volunteer drivers from the American Cancer Society, but there are jurisdictional challenges with this – a CA/NV boundary issue with transport, so clients cannot get between the two facilities.
  - Most cancer patients needing transportation are ambulatory – some are alone and some are traveling with a companion.
- Preparing the Community Health Needs Assessment – now preparing implementation plan
  - The issue found is the lack of available transportation in the lower economic strata to access healthcare facilities.
  - One example is that the mental health provider in Tahoe is located in Tahoe City, but TART no longer goes to this facility – must walk from Hwy 28.
  - Shows a gap in community needs and transit.
  - For passengers traveling from Kings Beach to Truckee on TART it can take 2.5 hrs – employees not using because takes too long.
- Hospital is not affiliated with services in Reno or Carson City, but many patients need transportation to those area for diagnostics, like MRIs and lab work.
  - Some patients go to the Carson Tahoe Cancer Center
  - Reno is where dialysis patients from Incline go
- There are disconnects of medical transportation between Incline Village and Truckee, Reno, and Carson City.
- Hospital board's goal is to have no disparities in health outcomes based on ethnicity – this includes financial and transportation disparities.

Ideas discussed after working groups:

- 511 type service for the Tahoe Basin social services – coordinate all services to provide a one-stop shop for potential needs
- Reuse of school vehicles during day time or holiday/summer periods when not in use

Employee Travel Working Group

This meeting was facilitated by Atkins project manager Michael Lawson.

Rick Harris representing the Washoe County School District participated by telephone and offered that many school district employees reside outside the Lake Tahoe Basin and some currently car pool to work at the Lake. He volunteered to survey all school system employees at Lake Tahoe to ascertain how many of them do reside outside the basin and currently car pool or have an interest in some sort of transit alternative to commute including but not limited to van pooling and potential fixed routes services.

Sheila Hogan representing the Lakeside Casino/Resort participated in person and communicated transit concerns expressed to her by employees of her organization that use the existing Transit services:

- There are concerns that the frequency of buses is inadequate to serve the shift workers.
- The reliability of fixed route service is poor and can jeopardize employment due to repeated tardiness from having to wait for a late bus.
- During the winter months the reliability of fixed route service is even worse than in the summer.
- Fares continue to increase while service is decreasing impacting those that are least able to afford it

This group suggested the transit riders be interviewed to solicit their views on unmet public transportation needs.

This group suggested that interviews be conducted at Park & Rides to capture employees traveling to/from the basin utilizing car pools to solicit their views on unmet public transportation needs.

This group suggested we contact TRPA and obtain their email list of the human resource managers in the Lake Tahoe Basin to solicit their participation in the study.

Ron Christino representing the Douglas County School District and Melissa Patton representing Montbleu provided email notification of their inability to attend due to conflicts but expressed a desire to stay involved.

Recreation and Tourism Working Group

This meeting was facilitated by Atkins senior planner Kyle Kubovchik and attended by Sheila Hogan representing the Lakeside Casino/Resort, and Trish Giomi and Melisa Kunter, representing NDOT Transit planning.

The following elements are considered critical for transit service:

- Shuttles need to be reliable.
- Service must have connectivity to the Tahoe Bikeway.
  - Bicyclenv.org can assist with this effort.
- Service must consider the underserved pre-teen and teen population
  - Recreational Centers
  - Middle Schools
  - BMX facilities
  - Boys and girls club
- There are challenges with perceptions of the "old" and "new" Tahoe.
- There is an influx of winter and summer weekend tourists with a summer peak.
- Heavenly Village parking charges with towing that involves Raley's supermarket.

End of Meeting Summaries

As promised in my email invitation, Mike Lawson will make follow-up calls to all invitees who were unable to participate so we may include whatever input they have to offer and determine their interest in future meetings. Thank you to all who participated in person or via call-in.

6. STOREFRONT AND TRANSIT STOP INTERVIEWS

OCTOBER 2011

The following questions were asked of citizens at the open houses, senior centers, park-and-rides, transit centers, and storefronts during the course of the study. Whenever the conversations allowed, follow-up questions were asked and other relevant feedback was recorded.

1) What types of activities do you engage in at Lake Tahoe in the summer months (e.g., work, gaming, shows, beach)?
2) What types of activities do you engage in at Lake Tahoe in the winter months (e.g., work, gaming, shows, ski)?
3) What improvements would be necessary for you to consider using transit for any of the activities you currently engage in within the Lake Tahoe Basin?
4) Is the existing transit connectivity between Reno, Carson City, Minden/Gardnerville and Lake Tahoe adequate? Yes ___ No ___
5) What improvements would be necessary for you to consider using transit for any of the activities you currently engage in between Reno, Carson City, Minden/Gardnerville and Lake Tahoe?
6) Does the exiting transit network in the region serve your needs? Yes ___ No ___
7) Any other comments about Transit service in the region?

Lake Tahoe Storefront Interviews

Storefront interviews were conducted at two locations in the Lake Tahoe Basin on October 20, 2011. The first storefront interviews were conducted at the Raley's shopping center in Incline Village beginning at 1 p.m. Shoppers were approached as they entered the store and were asked if they would participate in a brief survey that would allow local governmental entities to better understand the needs of the citizens to improve the public transportation system. Forty-eight shoppers were solicited during the 2-hour interview period, resulting in fourteen completed interviews. Twelve of the people interviewed were residents of Incline Village and all of them expressed satisfaction with the existing level of public transportation provided. None offered suggestions for improvement to existing services. Two people interviewed were visitors from the Bay area and neither was aware of transit services in the Tahoe Basin and as such could offer no suggestions for improvement.

A second round of interviews was conducted at the Raley's shopping center at Stateline beginning at 4 p.m. Again, shoppers were approached as they entered the store and were asked if they would participate in a brief survey. Fifty-three shoppers were solicited during the 2-hour interview period, resulting in seventeen completed interviews. Eleven of the people interviewed were Incline Village residents, and all of them expressed satisfaction with the existing level of public transportation provided. None offered suggestions for improvement to existing services. Six of those interviewed were visitors to the area and either indicated they had no need for public transportation because they had arrived by automobile, or were able to access their destination using hotel shuttle services. None offered suggestions for improvement to existing services.

While the number of interviews does not allow for a quantifiable assessment of the utility of public transportation in the region, it was apparent from the interviews that the local citizens generally believed the service to be adequate and that visitor needs were being met with existing services.

Lake Tahoe Transit Center Interviews

Interviews were conducted at the Kingsbury center and the Stateline transfer center at the morning, noon, and afternoon peak periods during the week of October 17, 2011. There were a few complaints about buses sometimes being late, but generally the frequency and reliability of service was said to be good. Several passengers interviewed at the Stateline center commented that an increase in the frequency of service on the "50 route" would make it easier for them to commute to and from work. Two passengers also commented that the recent fare increase hurt those least able to afford it. When asked what improvements they would like to see, the most frequent response was a request for more "covered" stops that would better protect riders during inclement weather. A large majority of passengers interviewed commented that they were generally satisfied with existing services; beyond the aforementioned suggestions, no other comments for improvement to services were offered.

Carson City Transit Center Interviews

Interviews were conducted at the Carson City downtown transfer center during the week of October 24, 2011. The focus of these interviews was to determine whether there was adequate connectivity between Carson City, Reno, Minden/Gardnerville, and Lake Tahoe. None of the passengers interviewed indicated a "need" to travel to Lake Tahoe because their work, shopping, medical, and school trips were all located in Reno or Carson City. All those interviewed considered trips to Lake Tahoe to be recreational in nature and public transportation was not seen as useful for that purpose.

Most of those interviewed had little desire to travel to Minden/Gardnerville, but those that did said the existing service was adequate. One hundred percent of those commenting on the intercity service operated by Washoe RTC between Reno and Carson City said the service was fairly priced and reliable. Several passengers offered unsolicited testimony that the local JAC service was reliable, had friendly drivers, and was reasonably priced.

7. PARK-AND-RIDE INTERVIEWS

OCTOBER 6, 2011

On October 6, 2011, Atkins staff conducted roadside interviews from 6 a.m. until 8 a.m. with motorists using the park-and-ride on US 50 immediately west of the US 395 junction in Carson City.

Fourteen individuals were interviewed prior to the 6:45 a.m. arrival/departure of the route 21x bus. Of these, two were Caucasian female passengers using the bus to go to high school at Zephyr Cove and two were Caucasian mothers who had dropped students off. One mother expressed concern that beginning this winter BluGo will require the students to walk down Warrior Way to catch the return bus in the afternoon. This mother accurately pointed out that Warrior Way is a steep and narrow road often covered by snow during the winter and that requiring the students to walk down the hill from the High School to catch the bus would be dangerous. When asked about potential improvements to the transit service, one of the students commented that the heater on the bus was inadequate.

Of the remaining 10 people interviewed prior to 6:45, six were Hispanic male construction workers who said public transportation was not a viable alternative because their schedules and work locations varied too much for them to rely on a bus schedule with limited stops. Each of these six was subsequently picked up by another construction worker and "carpooled" to locations in Truckee. One Caucasian male casino worker was interviewed and said he uses the bus when his shift allows it, but that a later evening run would help a lot. This person also said the JAC stop at Costco had been eliminated and caused him problems trying to cross the street to catch the bus. The final three people interviewed before 6:45 were white-collar Caucasian males; each said carpooling was not only more convenient than taking the bus, but ultimately cheaper.

Eighteen more individuals were interviewed between 6:45 and the next route 21x pickup at 7:45 a.m. The first two interviewed were Hispanic male construction workers carpooling to north shore. They said they would use a bus if one went to north shore and their schedules allowed it. Two more Hispanic male construction workers were interviewed next and were carpooling to the east shore but said there was no way they would use transit because their work locations and schedule varied too much. The next four interviewed were also Hispanic male construction workers carpooling to Truckee. They said they would not use transit because they needed their tools and carpooling was more convenient and cheaper. The next two people interviewed were Hispanic female casino workers who said the return schedule for the 21x did not run late enough for them to use the service, so they carpooled. The next two interviewed were Caucasian male construction workers traveling to the south shore who said they would use the bus if there were later return runs but that they could not risk catching the last bus on the return trip because if they missed it they would be stranded at the lake. The two Caucasian male construction workers interviewed next said they carpooled because they needed their tools on the job site. The next two people interviewed were Caucasian male casino workers who said they would use the bus if there was a later return run in the evening. The final two interviewed were Caucasian male construction workers who said they carpooled because they needed their tools on the job site.

Summary: 4 Caucasian females, 2 Hispanic females, 14 Hispanic males, and 12 Caucasian males were interviewed. Of the 32 people interviewed, 4 boarded the bus. Of the 28 not using the bus, 2 were dropping off passengers. Of the 26 remaining interviewees not using the bus, 5 out of 7 indicated they would use the bus if a later return run was available from south shore in the evening. Two others said they would use the bus if a direct service to north shore was available. Nineteen others said they did not and would not use the bus because carpooling was more convenient and cheaper and/or they needed to transport their tools to the job site.

8. ZEPHYR COVE SENIOR CENTER INTERVIEWS

OCTOBER 11, 2011

A total of 16 senior citizens were interviewed on October 11, 2011, at the Zephyr Cove Senior Center. All of those interviewed had used fixed-route service and/or the door-to-door service in the past 12 months. Generally, they all believed the existing service was adequate but they agreed there was room for improvement. A list of their specific concerns:

1. Recent Fare increases have hurt those who can afford it the least.
2. There are occasions when the door to door service has been unavailable.
3. One Senior complained that she had been picked up by the door-to-door service but the van was not equipped with a "lift" and so she could not board (Curtis Garner later informed me all BluGo door to door vehicles are "lift" equipped).
4. The one-day advance notice required for door-to-door service can be problematic for seniors who injure themselves and need more immediate (but not emergency) service.
5. Reliability is critical to our most vulnerable citizens, especially after dark and during inclement weather.
6. The California senior center in Stateline needs lights in the parking lot.
7. The transfer policy is confusing especially when traveling across the state line.
8. Slick polished seats on the Trolley are dangerous to senior citizens who slide on them and can be injured when the trolley accelerates, decelerates, or makes sudden turns.
9. A lot of seniors mentioned they relied on family to transport them into and out of the Basin and many were not familiar with existing services connecting Lake Tahoe/Minden/Carson City/ Reno.
10. The Zephyr senior center has their own bus for special events such as their weekly luncheon at South shore.
11. Many of the fixed-route stops have no shelter (Lakeside Inn stop was specifically referenced).
12. The frequency of fixed-route service was a problem.
13. The information available on fixed-route services is hard to find and confusing to seniors.

9. CONVERSATION CAFE DISCUSSIONS

OCTOBER 18, 2011

A total of 17 senior citizens (8 female and 9 male) were engaged in a roundtable discussion on Lake Tahoe public transportation at the Conversation Cafe in Incline Village on October 18, 2011. An unedited summary of the highlights of that conversation follows.

1. TART to Truckee takes several hours and is not suitable to senior lifestyle.
2. BluGo at South Shore works well because of the density and the employee usage but North Shore is different.
3. Some like the idea of renting bikes at a transit hub and dropping it off at a destination like the College or the Raley's shopping center (etc.) like they do in Europe, but others felt that sharing the roads with cars is unsafe.
4. Boulder Bay has a transportation plan that would use "Zip cars" which are short term in basin rentals. There is currently no rental car operation in the Basin.
5. NHP is working on safety solutions on SR 28 and the delay at Sand Harbor is unacceptable as is the illegal parking.
6. Ski area shuttles work well in the winter and even in the summer some of the resorts are operating shuttles. Interchangeable tickets allow for Inter-resort usage.
7. The Veterans club at IVGID has volunteer drivers.
8. Residents in the higher locations would like service to the lower locations and there was some discussion about using the larger IVGID bus to operate a fixed route service on the school bus routes.
9. The residential density on the north shore is inadequate to support fixed route service and the transportation focus should be on getting employees to work and accommodating tourists.
10. The roundabout is fantastic.
11. TRPA alienated a lot of local residents by suggesting paid parking would solve the SR 28 problem.
12. A former shuttle service on Mt. Rose was operated in summer months but failed due to a lack of reliability and frequency of busses.
13. Illegal parking is a safety issue on the entire east shore.
14. Bus service at the Park and Ride on Spooner only serves the south shore and if service to the north shore were available more people would use it.
15. Bicycles sharing the roads with cars are dangerous but TTD is working on a solution for off road trails.
16. Car pooling would work better if there was somewhere you could call to contact others with similar interest and destinations. You could post the number on billboards or otherwise advertise.
17. People are generally unaware of available services so more education and advertising is necessary.

10. STEERING COMMITTEE MEETING 2

OCTOBER 18, 2011

Tahoe Lake Tahoe Public Transportation Needs Assessment and Coordinated Plan
Steering Committee Meeting 2, October 18, 2011

The second meeting of the Steering Committee was convened at 1 p.m. on October 18, 2011, at NDOT Headquarters in Carson City. Attending in person were Melisa Kunter (NDOT Project Manager), Jay Howard (State Parks), Ed Park (Washoe RTC), Derek Kirkland (TTD), Ken Smithson (Carson City), Perry Gross (Atkins), Gordon Shaw (LSC), Kristina Svensk (LSC), and Michael Lawson (Atkins). Attending via telephone were Curtis Garner (TTD), Will Garner (Placer County), and Jan Colyer (TNTTMA).

Members were provided an opportunity to comment and suggest revisions to Technical Memorandum 1. Will Garner observed that the heading at the bottom of page 35 should be changed from "Master" plan to "System" plan, which is both accurate and consistent with the narrative that follows. This change will be made in the final report. Ed Park observed that the number of intercity trips being made between Carson City and Reno in the morning is three rather than two. This change will be made in the final report. No other changes were recommended by members participating.

The composition and feedback received from the specialty working groups at the August 16, 2011, meeting was discussed. A summary was distributed to each of the specialty working groups and is being provided to the Steering Committee as an attachment to the email that transmits this report.

Feedback received to date from the general public was discussed next and a summary of the interviews conducted at the Park-and-Ride on US 50 near the junction of US 395 in Carson City is being provided to the Steering Committee as an attachment to the email that transmits this report. Other feedback has been solicited and received at "Open Houses" in Carson City and Minden/Gardnerville, from citizens at the Zephyr Cove Senior Center, at the Conversation Cafe in Incline Village, and at the Raley's store in Incline Village. Summaries from those interviews and future interviews will be provided to the Steering Committee via email at a later date.

An update on the status of Technical Memorandum 2 was presented by Kristina Svensk. Kristina discussed the quantifiable information collected by LSC relevant to employees, social services, and recreational activity in the Basin. She also mentioned that we are continuing to solicit feedback from specialty working group members who were unable to attend the August meeting, and are continuing to conduct interviews at select locations to obtain additional input from the public.

The project schedule was discussed and is being provided to the Steering Committee as an attachment to the email that transmits this report. With no further business, the meeting adjourned at 2:00 p.m.

11. SOLICITATION OF STAKEHOLDER FEEDBACK

OCTOBER 2011 – MARCH 2012

Two technical memorandums and a coordinated plan served as benchmarks for the study. Stakeholder feedback was solicited as each of these documents was prepared in draft form. The following is documentation in chronological order of the emails sent to the various working groups to solicit that feedback.

Feedback Requested for Technical Memorandum 1

From: Lawson, Michael W
Sent: Monday, October 03, 2011 3:38 PM
To: Lawson, Michael W; mkunter@dot.state.nv.us; chasty@tahoetransportation.org; cgarner@tahoetransportation.org; ppittenger@carson.org; ksmithson@carson.org; nhaven@trpa.org; jfoltz@co.douglas.nv.us; tlee@co.douglas.nv.us; tnttma@sbcglobal.net; wgarner@placer.ca.gov; ahoefer@fs.fed.us; pmaholland@parks.nv.gov; gordonshaw@lsctahoe.com; jhoward21@hughes.net; astrain@vailresorts.com; epark@rtcwashoe.com; Gross, Perry; dkirkland@tahoetransportation.org
Cc: pgiomi@dot.state.nv.us; Kristina Svensk; Dodson, Jim; Kubovchik, Emily
Subject: Steering Committee meeting
When: Tuesday, October 18, 2011 1:00 PM-3:00 PM (GMT-08:00) Pacific Time (US & Canada).
Where: NDOT Carson City HQ - 3rd floor conference room

Dear Steering Committee member,
I apologize for the delay in scheduling the second Steering committee meeting, but issues with the specialty working groups required us to re-evaluate our outreach component. However, we are now refocused and ready to provide you a project status update. Consequently, I request your participation either in person or via telephone on the 18th of this month to discuss the following agenda:

1. Technical memorandum # 1
2. The composition of the specialty working groups and feedback received from them on the 16th
3. Feedback we have received from the general public
4. Update you on the status of the needs assessment and technical memorandum 2
5. Anticipated dates for future events and project delivery milestones
6. Next steps.

If you are able to participate in person, the meeting will be held at NDOT headquarters (1263 south Stewart street in Carson city) in the 3rd floor conference room. If you are unable to attend but have time to phone in the call in number is shown below. Thank you for your continued participation.
Dial In Number 877-873-8017
Access Code 8552559

Regards,
Michael W. Lawson

Feedback to Technical memorandum 1 was solicited in advance and discussed at the second Steering Committee meeting on 10/18/11. The email that transmitted the minutes of that meeting is shown below while a summary of that meeting is included in this Appendix C document of the final report.

From: Lawson, Michael W
Sent: Tuesday, October 25, 2011 12:28 PM
To: mkunter@dot.state.nv.us; chasty@tahoetransportation.org; ppittenger@carson.org; nhaven@trpa.org; ksmithson@carson.org; jfoltz@co.douglas.nv.us; tlee@co.douglas.nv.us; tnttma@sbcglobal.net; wgarner@placer.ca.gov; Hoefer, Anjanette; gordonshaw@lsctahoe.com; David Jickling; epark@rtcwashoe.com; Jay Howard; astrain@vailresorts.com; dkirkland@tahoetransportation.org
Cc: pgiomi@dot.state.nv.us; Gross, Perry; Kubovchik, Emily; Dodson, Jim; Kristina Svensk; Gardner, Michelle M
Subject: Lake Tahoe Public Transportation Needs Assessment Steering committee meeting on 10/18/11

Steering Committee Members,
I have attached a summary of the second steering committee meeting, the project schedule we discussed at that meeting, the summary of the park and ride interviews, and a summary of the specialty working group meetings held on August 16. Please contact me if you have additional comments, observations, or suggestions. Regards,

Michael W. Lawson

Feedback Requested for Technical Memorandum 2

From: Lawson, Michael W
Sent: Thursday, December 29, 2011 3:59 PM
To: 'mkunter@dot.state.nv.us'; 'chasty@tahoetransportation.org'; 'ppittenger@carson.org'; 'nhaven@trpa.org'; 'ksmithson@carson.org'; 'jfoltz@co.douglas.nv.us'; 'tlee@co.douglas.nv.us'; 'tnttma@sbcglobal.net'; 'wgarner@placer.ca.gov'; 'Hoefer, Anjanette'; 'gordonshaw@lsctahoe.com'; 'David Jickling'; 'epark@rtcwashoe.com'; 'Jay Howard'; 'astrain@vailresorts.com'; 'dkirkland@tahoetransportation.org'; cgarner@tahoetransportation.org
Cc: 'pgiomi@dot.state.nv.us'; Gross, Perry; Kubovchik, Emily; Dodson, Jim; 'Kristina Svensk'; 'Gardner, Michelle M'
Subject: Lake Tahoe Public Transportation Needs Assessment Technical Memorandum # 2

Steering Committee Members,
I have attached Technical Memorandum # 2 which has been reviewed by NDOT and approved for dissemination to the Steering committee. I ask that you review the document and provide comments by "replying to all" on this email. While I will be contacting many of you personally after the first of the year for input into the coordinated plan, I also ask that you all take this opportunity to send me whatever ideas you may have for improvement to services that you would like to see addressed in the plan.

I will facilitate a meeting of the Steering committee near the end of January to discuss comments and recommended changes to Technical memorandum # 2 as well as the draft of the coordinated plan. Wishing you and yours a healthy, happy, and prosperous New Year,

Michael W. Lawson

From: Lawson, Michael W
Sent: Monday, January 09, 2012 2:24 PM
To: 'mkunter@dot.state.nv.us'; 'cgarner@tahoetransportation.org'; 'Derek Kirkland'; 'gordonshaw@lsctahoe.com'; 'fearlessforemaster@earthlink.com'; 'lskaggs@co.douglas.nv.us'; 'allisone@parasol.org'; 'mschneider@tfhd.com'; 'atanaka@bartonhealth.org'; 'Kristina Svensk'
Cc: 'pgiomi@dot.state.nv.us'; Dodson, Jim; Kubovchik, Emily; Gross, Perry
Subject: Lake Tahoe Public Transportation Needs Assessment - Technical Memorandum 2

Hello Social Services group Members,
I have attached Technical Memorandum # 2 which has been reviewed by NDOT and approved for dissemination to your group for comments. I ask that you review the document and provide comments by replying to me on this email. While I will be contacting some of you personally for input into the coordinated plan, I also ask that you all take this opportunity to send me whatever ideas you may have for improvement to services that you would like to see addressed in the plan.

I will facilitate a meeting of the Steering committee near the end of January to discuss comments and recommended changes to Technical memorandum # 2 as well as the draft of the coordinated plan. After that meeting I will provide the group with an update. Wishing you and yours a healthy, happy, and prosperous New Year,

Michael W. Lawson

From: Lawson, Michael W
Sent: Monday, January 09, 2012 2:24 PM
To: 'mkunter@dot.state.nv.us'; 'dkirkland@tahoetransportation.org'; 'susan_johnson@IVGID.org'; 'rosa.hardesty@hyatt.com'; 'bwood@cbc-nv.com'; 'bhelm@boulderbayresort.com'; 'slightfoot@ridge-resorts.com'; 'personnel@lakesideinn.com'; 'Melissa.patton@montbleuresort.com'; 'rjharris@washoeschools.net'; 'rchristino@dcsd.k12.nv.us'; 'gordonshaw@lsctahoe.com'; 'cgarner@tahoetransportation.org'
Cc: 'pgiomi@dot.state.nv.us'; Dodson, Jim; Kubovchik, Emily; Gross, Perry; 'Kristina Svensk'
Subject: Lake Tahoe Public Transportation Needs Assessment - Technical Memorandum 2

Hello Employment Travel group Members,
I have attached Technical Memorandum # 2 which has been reviewed by NDOT and approved for dissemination to your group for comments. I ask that you review the document and provide comments by replying to me on this email. While I will be contacting some of you personally for input into the coordinated plan, I also ask that you all take this opportunity to send me whatever ideas you may have for improvement to services that you would like to see addressed in the plan.

I will facilitate a meeting of the Steering committee near the end of January to discuss comments and recommended changes to Technical memorandum # 2 as well as the draft of the coordinated plan. After that meeting I will provide the group with an update. Wishing you and yours a healthy, happy, and prosperous New Year,

Michael W. Lawson

From: Lawson, Michael W
Sent: Monday, January 09, 2012 2:25 PM
To: 'mkunter@dot.state.nv.us'; 'dkirkland@tahoetransportation.org'; 'gordonshaw@lsctahoe.com'; 'susan_johnson@ivgid.org'; 'jhoward21@hughes.net'; 'ahoefer@fs.fed.us'; 'ron@puretahoenorth.com'; 'cgarner@tahoetransportation.org'; 'info@keeptahoeblue.org'; 'Tina@TahoeChamber.org'
Cc: 'pgiomi@dot.state.nv.us'; Dodson, Jim; Kubovchik, Emily; Gross, Perry; Kubovchik, Kyle; 'Kristina Svensk'
Subject: Lake Tahoe Public Transportation Needs Assessment - Technical Memorandum 2

Hello Recreational/Tourism Travel group Members,
I have attached Technical Memorandum # 2 which has been reviewed by NDOT and approved for dissemination to your group for comments. I ask that you review the document and provide comments by replying to me on this email. While I will be contacting some of you personally for input into the coordinated plan, I also ask that you all take this opportunity to send me whatever ideas you may have for improvement to services that you would like to see addressed in the plan.

I will facilitate a meeting of the Steering committee near the end of January to discuss comments and recommended changes to Technical memorandum # 2 as well as the draft of the coordinated plan. After that meeting I will provide the group with an update. Wishing you and yours a healthy, happy, and prosperous New Year,

Michael W. Lawson

Feedback Requested for the Draft Coordinated Plan

From: Lawson, Michael W
Sent: Friday, March 02, 2012 10:23 AM
To: 'mkunter@dot.state.nv.us'; 'chasty@tahoetransportation.org'; 'ppittenger@carson.org'; 'nhaven@trpa.org'; 'ksmithson@carson.org'; 'jfoltz@co.douglas.nv.us'; 'tlee@co.douglas.nv.us'; 'tnttma@sbcglobal.net'; 'wgarner@placer.ca.gov'; 'Hoefer, Anjanette'; 'gordonshaw@lsctahoe.com'; 'David Jickling'; 'epark@rtcwashoe.com'; 'Jay Howard'; 'astrain@vailresorts.com'; 'dkirkland@tahoetransportation.org'; 'cgarner@tahoetransportation.org'
Cc: 'pgiomi@dot.state.nv.us'; Gross, Perry; Kubovchik, Emily; Dodson, Jim; 'Kristina Svensk'; 'Gardner, Michelle M'; Kubovchik, Kyle
Subject: Lake Tahoe Public Transportation "Draft" Coordinated Plan
Steering Committee Members,

I have attached the Lake Tahoe Public Transportation "Draft" Coordinated Plan which has been reviewed by NDOT and approved for dissemination to the Steering committee. I ask that you review the document and provide comments by "replying" to this email. Our goal is to receive feedback from all of you and incorporate your comments either into the plan or note them in the chapter we are preparing on Stakeholder participation. We intend to finalize the plan by March 19th and incorporate it into the final report we are preparing for NDOT by the end of the month.

You will all receive an electronic copy of the final report which will include an Executive summary, the "final" NDOT coordinated plan, Technical Memorandum # 1, Technical Memorandum # 2, a summary of Stakeholder/Public Engagement, and a separate "narrative" on the "potential impact" of a successful 2022 Winter Olympics bid. Please provide any feedback you have at your earliest opportunity and no later than March 16th. Thank you all for your invaluable assistance in developing the coordinated plan and final report.

Regards,

Michael W. Lawson

Appendix D
2022 Winter Olympics

POTENTIAL IMPACTS OF THE 2022 WINTER OLYMPICS

Introduction

Regional partners from the Reno-Tahoe area are discussing the possibility of submitting a bid for the 2022 Winter Olympics. This would mark the second time that the region has hosted the Olympics, the first when the 1960 Winter Olympic Games were held at Squaw Valley. Bringing the Olympics again to the Reno-Tahoe area would focus the spotlight on the incredible recreational and sporting amenities offered by the region, showcasing its ability to host premier sporting events. Preparation for the Olympics, with its multi-media, multi-venue format, could provide the opportunity to not only bring needed infrastructure improvements and jobs to the region in a relatively short time-frame, but also to create a long-lasting image that can serve the area for years to come.

Having an efficient and flexible transportation system with sufficient capacity in place in time for the Olympic Games will be critical to the Games' success. Although regional partners have been laying the groundwork for an Olympic bid for many years, intensive preparation for the Olympics will occur after official host site selection by the International Olympic Committee (IOC) in 2015. At that time, transportation improvements that have been vetted and studied by regional, national, and international Olympic Games Committees could be included in Regional Transportation Plan updates. The timing of the TMPO's RTP update, which will happen in 2016, will coincide well with the Olympic timeline. However, as planning and design of new services will likely begin before the next RTP, as much information as possible about transportation infrastructure and service expansions should be included in *Mobility 2035*.

Coordination with Other Agencies

A successful Olympic bid will require careful and long-term coordination between the many agencies that serve the Reno-Tahoe region. An organization called the Reno-Tahoe Winter Games Coalition has formed and is working with the Regional Transportation Commission of Washoe County, Carson Area Metropolitan Planning Organization, the TMPO, Nevada and California Departments of Transportation, and other local entities to begin planning critical steps.

To move forward in the international selection process, the Reno-Tahoe area must first be selected by the United States Olympic Committee (USOC) as the U.S. city it wants to put forth for the winter games. In preparation, regional partners can use a set of detailed questions from the IOC's application process to help Reno-Tahoe prepare to host the games. The questions relate to the region's vision, environment, security, accommodations, public support, and transport, among other topics. The transport-related requirements include:

- Description of existing and planned transport infrastructure
- Maps of infrastructure
- Construction timelines and costs
- Transport challenges
- Addressing the transport needs of all Olympic clientele
- Distances and travel times between all Olympic venues

The RTP project list can provide the initial basis for answering many of these questions as related to the Lake Tahoe region. The permanent transportation improvements necessary to host the Winter Olympic Games are necessary in the region regardless of whether the games come to the Reno-Tahoe region. The only additional consideration would be the necessary temporary transit service levels proposed in the RTP.

Table D-1 shows a list of projects that are currently on the Tier 1 or Tier 2 *Mobility 2035* project list. In addition, with a successful Olympic bid, temporary transit service enhancement projects would be enacted.

Table D-1. Mobility 2035 Tier 1 & Tier 2 Projects that would need to be Accelerated with Successful Olympic Bid

Corridor Revitalization	Cost (millions)
State Route 89/Fanny Bridge Community Revitalization Project (if not already completed)	$18.4
US 50 South Shore Community Revitalization Project (if not already completed)	$71.8
Transit	
Lake Tahoe Waterborne Transit Project (if not already operating)	$14.8
BlueGO Service Operational and Capital Enhancements	$31.3
TART Service Operational and Capital Enhancements	$21.4
East Shore Service Operational and Capital Enhancements	$19.3
Inter-Regional Service Operational and Transit Capital Enhancement	$18.9
Lake Lapper Operational and Capital	$4.7
Intercept Parking Lots with Shuttles to Town Centers (temporary)	$3.5
Transportation System Management and ITS	
US 50 Signal Synchronization ("Y" to Stateline) (if not already completed)	$1
East Shore Parking Improvements	$2.3

Additional coordination with surrounding regions is necessary to provide the project and funding partnerships to deliver the transportation improvements to host the Olympic Games. This coordination would help create a legacy of communication and cooperation among a "Trans-Sierra Transportation Coalition" to realize mutual benefits across participating communities. The Trans-Sierra Transportation Coalition would provide a venue to bring together regional, local, and private partners in northern Nevada, the California Sierra foothills, and Lake Tahoe region to identify and leverage common interests in projects, funding, and implementation.

Winter Games Bid Schedule

The potential timeline for the 2022 Olympic Winter Games bid is as follows:

2012

The United States Olympic Committee (USOC) will determine whether they will take part in the 2022 bid cycle and if so, will invite interested cities/regions to submit a bid.

Monthly meetings of the Reno Tahoe Winter Games Coalition (RTWGC) Venues Committee and Transportation Committee are ongoing. Committee participants include staff from the Nevada Department of Transportation, Regional Transportation Commission of Washoe County, Tahoe Regional Planning Agency, Tahoe Transportation District, City of Reno, City of Sparks, Washoe County, Carson Area MPO, University of Nevada Reno, RTWGC, a wide range of volunteer consultant staff, and other interested stakeholders. The Transportation Committee hosted a planning summit in December 2011.

2013
The International Olympic Committee (IOC) deadline for countries to submit a single city candidate for the international bid competition. The deadline will most likely be in the Fall of 2013.

2015
The IOC will choose the Host City for the 2022 Olympic Winter Games, most likely during the Summer of 2013.

Transportation Needs Identified for Washoe County

The focus of transportation planning efforts for the Winter Games bid process is on maximizing existing and currently planned transportation infrastructure capacity. It is anticipated that the Winter Games process may allow the acceleration of projects already included in the Regional Transportation Plan. The RTC of Washoe County and RTWGC Transportation Committee have highlighted the following transportation needs in the Reno-Sparks area for the Winter Games bid. These projects are either in the current plan or are expected to be included in the 2035 Regional Transportation Plan that is under development.

Projects Underway
1. Construction of I-580 from Reno to Carson City
2. Reconstruction of I-80 from Keystone to Vista
3. Improvements to US 395 at Meadowood Mall and I-80
4. Construction of RAPID stations on Virginia Street
5. Regional Traffic Operations Program
6. Southeast Connector
7. Pyramid/McCarran Intersection Improvements

Projects in Current Regional Transportation Plan
1. Pyramid/US 395 Connector
2. US 395 at I-80 (interchange reconstruction)
3. I-80 at Garson Road (interchange improvements)

Other Needs Under Review in the 2035 Regional Transportation Plan
1. Expanded freight capacity between Sacramento and Reno.
2. Expanded commuter transit capacity between Truckee and Reno.
3. Pedestrian amenities/ADA accessibility improvements in Transit Oriented Development Districts such as Virginia Street and 4th Street/Prater Way.
4. Regional Complete Streets improvements to improve walkability and alternative mode use.
5. Regional RAPID improvements.
    a. Extension of RAPID from TMCC Redfield Campus to UNR, on 4th Street/Prater Way from Downtown Reno to Legends, and from Reno-Tahoe International Airport to Downtown Reno/Virginia Street.
    b. Additional RAPID stations and transfer facility on Virginia Street.
6. Regional park-and-ride facilities.
7. Transit maintenance facility upgrades.
8. Enhanced airport capacity, amenities and transit connectivity, as indicated by Reno-Tahoe International Airport plans.

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