

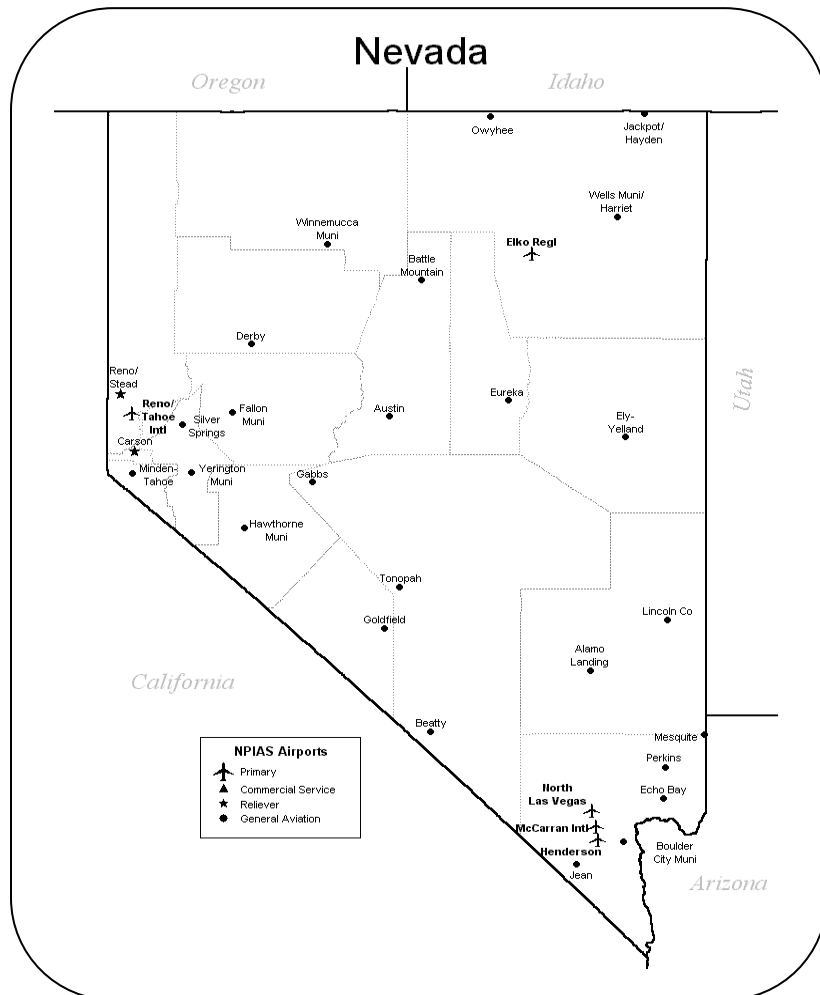
Chapter III – MULTIMODAL/ INTERMODAL SYSTEMS

AVIATION

The United States Department of Transportation (USDOT) recognizes that airports contribute to air transportation and economic needs at varying levels, have varying roles in the system, and needs for facilities and services differ by location. Factors such as coverage, accessibility, based aircraft, facilities, services and expansion capabilities should be considered.

Nevada is ranked the seventh largest state in the nation, in terms of square miles, and as a result our population centers are spread across many miles. Aviation is critical in bridging vast distances between communities. In addition, Las Vegas is one of the worlds most popular destinations with 39 million visitors every year; 47% arrive by aircraft.

Nevada has 52 public use airports of which 37 are publically owned and 15 are privately owned. Public use airports operate in 16 of our 17 counties. Storey County does not have a publicly owned airport. We have more than 135 privately owned airports and landing strips. While helicopters can typically land anywhere, there are 30 heliports in Nevada that are recognized by the FAA.



Nevada’s public-use airports include two international, three commercial-service, and 47 general-aviation facilities. McCarran International Airport is Nevada’s busiest airport and it is currently at capacity. In 2007 it ranked 14th in the world with 47.7 million total passengers. Reno-Tahoe International is Nevada’s second busiest airport, with 5 million total passengers.

A new commercial airport 30 miles southwest of Las Vegas (Ivanpah Valley) is currently being planned on 6,000 acres of land just east of Interstate 15. Phase I of the Ivanpah Valley Airport is expected to be open in 2017 and will initially serve 6 million passengers annually. When Ivanpah airport is completed it will serve 35 million passengers with a 14-gate terminal and two parallel runways for concurrent takeoff and landings. The environmental planning work for the airport is currently underway.

There are 5 General Aviation airports currently being planned for development in Nevada: Mesquite, Pahrump, Goldfield, Alamo and Owyhee.

Twenty-five airports in Nevada have paved runways that are more than 5,000 feet in length. This is the minimum length typically needed for a corporate/business jet to operate safely at general aviation airports.

Nevada has about 4,300 registered aircraft and 6,800 Nevadans were registered as pilots. Approximately 375,000 scheduled and 1.1 million non-scheduled aircraft flights takeoff or land in our state annually.

NDOT is prohibited from owning or operating any of Nevada’s airports per Nevada Revises Statutes (NRS) 408.233. However, all state DOT’s are involved in airport system planning – looking at the State’s needs and

opportunities for air travel (passenger and freight) to ensure that we have the best balance and an effective system of airports. Airports are more effective as they connect to both highways and other modes of transportation. NDOT has responsibility to be sure the infrastructure is in place and to pursue funding from the federal government for our airports as best we can. Every one of our public use airports in Nevada has access to the nation’s airport system.

Air travel provides important support to Nevada’s economic health. The total direct impact of General Aviation in Nevada is over \$114,000,000 annually and the industry employs some 1,300 workers. The economic impact of the Clark County Airport System amounts to \$63.5 billion annually and in Northern Nevada it is approximately \$3.2 billion annually. These impacts are not only for airport employees, they affect the local communities and trickle through segments of the economy. Additionally, airports can be more effective as they connect to both highways and other modes of transportation.

The Statewide Analysis, Nevada General Aviation Airport Economic Impact Study, was recently completed by the University of Nevada as shown in the following table.

General Aviation Airport Economic Impact

Over \$1 million	\$300,000 to \$1 million	\$100,000 to \$300,000	under \$100,000
Boulder City	Battle Mountain	Beatty	Alamo
Carson City	Ely	Overton	Austin
Fallon	Hawthorne	Silver Springs	Eureka
Jean	Jackpot	Tonopah	Lovelock
Mesquite	Winnemucca	Wells	Owyhee
Minden-Tahoe			Panaca
Reno-Stead			
Yerington			

Air Freight

Air cargo is the mode of choice for freight commodities that are time-sensitive, high-value, lightweight, and traveling more than 350 miles. In 2007 over 300 million pounds of cargo passed through McCarran International and Reno Tahoe International airports. Most of the freight shipments to and from an airport travel there by motor vehicle so roadway connectivity and proximity to an interstate or major highway is vital.

Air freight typically is not constrained by airside congestion since flights operate at off-peak periods. However, air freight is limited by the ability of air cargo hubs to maintain warehouse space (since airports are located in congested areas where land is limited), the ability of trucks to access the airports, competing land uses and environmental issues. In addition, air cargo carriers require runway lengths ranging from 7,500 feet to a more desirable 9,000-10,000 feet, with a width of at least 150 feet.

Military Operations

Military operations in Nevada are centered in three areas: Las Vegas at the Nellis and Creech Air Force Bases, the Tonopah Test and Training Range, and the Fallon Naval Air Station. These facilities are vital to the continued technological and strategic growth of the military.

The Nellis facility allows for the varied military services that engage in aeronautical warfare to interact, perfect, and advance programs and test programs in real air combat conditions. Users from all over the world come to take part in these simulated combat tests.

The Creech facility, formally known as the Indian Springs facility, will soon become the home of the Unmanned Aerial Vehicle test and certification program for the US Air Force.



The Nevada Test and Training Range in Tonopah, is where combat conditions are recreated to allow pilots and weapons operators to use military procedures to deliver weapons, perfect intelligence and surveillance techniques and test ground readiness procedures in anticipation of live combat conditions. It is also where the military designs, and puts into operation, some of the most technologically advanced programs in the military.

The Fallon Naval Air station is the home of the U.S. Navy's famous Top Gun program where fighter combat tactics are perfected.

The military controls approximately 40% of the airspace within the state boundaries. The restrictions imposed by Restricted Areas, Alert Areas, Military Training Routes, and Special Use Airspace does not pose a great inconvenience to the scheduled airlines because of routes and altitudes they fly, but do occasionally pose limitations on arriving and departing scheduled aircraft from the McCarran International Airport. However, military airspace does limit the efficiency of most general aviation flying.

Major military construction projects in Nevada according to the National Defense Authorization Act for Fiscal Year 2007 include; almost \$50 million for Creech Air Force Base, \$7.7 million for range upgrades at NAS Fallon, \$4.8 million for an Airfield Rescue Fire Station at Nellis AFB and \$5 million for the replacement of the Nevada Air National Guard vehicle maintenance complex in Reno.

The Future of Aviation

In 2004 an airfield capacity analysis was completed as part of Nevada’s Airport System Plan. That analysis indicated that capacity exceeds the demand for the year 2020 at virtually every airport in Nevada. As stated previously, McCarran International Airport in Las Vegas is currently planning an additional airfield at Ivanpah. Reno/Tahoe International Airport will not require planning for additional airfield capacity until the year 2028.

Air carrier activity in Nevada has increased considerably and is expected to continue to grow significantly during the next 20 years. A 38% passenger growth is anticipated through 2020. Much of this growth is anticipated at McCarran International Airport in Las Vegas that expects growth of about 19.4 million enplanements by 2020.

Because of a trend to use aircraft with larger seating capacities, air carrier and air taxi operations are only expected to increase 73%, to 986,00 by 2020.

General aviation activity is expected to grow at a much slower pace during the next several years. Following the national trends, Nevada general aviation aircraft recreational flying is declining while business or corporate activity is growing slowly. Growth will reflect an increasing percentage of multi-engine and jet

aircraft of the total fleet mix. General aviation aircraft operations are anticipated to grow by about 50% during the 20-year planning period.

Nevada’s Airport System Plan has estimated that capital improvement program costs for our state’s airports over the next 20-years will be approximately \$1.4 billion. An additional \$1.5 billion will be needed for the development of three new airports in the State, including Ivanpah, Mesquite and Pahrump.



The development cost requirements for the primary airports, including the Elko Region, McCarran International, North Las Vegas and Reno/Tahoe International Airports total \$1.2 billion or 88 percent of the total program requirement. The development costs requirement for the non-primary airports total \$161 million or 11 percent of the total program requirements. The development costs requirement for the other airports in the State system that are not included in the NPIAS and are not eligible for FAA Airport Improvement Program funds, total \$1 million and account for 1 percent of the total program requirements.

In 2005 the Nevada Legislature approved the allocation of \$500,000 to fund the Nevada Aviation Trust Fund to provide matching funds to local governments in rural Nevada to fund FAA grants. NDOT is continuing to explore new sustainable funding sources for Nevada’s rural airports.

One of the fastest growing elements of the aviation industry is the shipment of air cargo. The two Nevada metropolitan areas of Las Vegas and Reno have demonstrated the same historic air cargo trends as the nation and have the potential to exceed the national rate of air cargo growth. Existing forecasts indicate both the Las Vegas and Reno areas expect their cargo activity to exceed the FAA's national projections. Air cargo at the McCarran International Airport is projected to increase by 613 percent from 2000 to 2020. At the Reno/Tahoe International Airport air cargo is projected to increase 343 percent during that same period.

NDOT's strategy to support air transportation includes:

- Support for a dedicated funding source for airport improvements. One source of funding could include reinvesting a portion of the tax revenue generated by the airports back into projects to promote airport safety and system maintenance.
- Work with FAA to conduct and complete a statewide planning study of Nevada's airports and implement the study recommendations.
- Support and advance intermodal connections such as public transit and highway projects serving passenger and cargo airports.
- Make needed improvements to address airport safety issues.
- Support NASA's Small Aircraft Transportation Study (SATS), as follows:
 - Inform small airports of SATS requirements for instrument approaches, runway lengths, navigational aids, and landside facilities (e.g., terminals, ground transportation, and meeting facilities).

- Establish standards for SATS (e.g., lower approach minimums).
- Work with the entitlement airports to identify roadway and intermodal projects that provide economic benefit to Nevada.



BICYCLE AND PEDESTRIAN

Nevada's bicycle and pedestrian facilities provide the public with opportunities to bicycle or walk between destinations, appreciate the state's scenic areas, and increase opportunities for physical activity. In general, these facilities include various bikeways such as: shared roadways with paved shoulders, rails with trails, designated bicycle lanes, shared roadways, designated bicycle routes, and shared-use paths.

Bicyclists & Bicycle Facilities

Although a relatively small number of Nevada's adults regularly commute by bicycle, many use their bicycles for a number of other types of trips. Nevada's remarkable growth in the past few years is leading to the development of more populous, urban communities – places with greater social and transportation need for improved access to transit systems, greater numbers of citizens who do not have access to a private automobile, or more people who live within bicycling distance of a desired destination.

NDOT plans, designs, constructs, and maintains bicycle facilities on the state-owned roadway system. NDOT's policies and decisions govern bicycle facilities on this system.

The state-supported system includes connecting highways and other locally-owned roadways where there is state and federal investment in local government (county, town, city, general interest district) projects. NDOT collaborates in the decision making process for projects on these routes, and thus influences the planning and design decisions made for those improvements.

The local system includes local streets and county and town roads. Most bicycle travel occurs on this system and its connectivity to the other systems is of major importance. NDOT has an interest in ensuring that bicycle systems are interconnected and that this system serves both the mobility and access needs of bicyclists. Unlike the other two systems, NDOT has indirect oversight responsibilities for the planning and design of this system.

Most of the state highway system in developed areas now have wider travel surfaces that give bicyclists access to at least narrow (three foot) paved shoulders, making it easier for bicyclists and motorists to share the roadway. But most arterial streets with their high volumes of traffic do not permit the creation of bike lanes or provide wide curb lanes for side-by-side bicycle and motor vehicle road-sharing in that lane.

In Nevada's rapidly growing urban areas, road construction is occurring at such a rate that bicycle facility development can occur throughout the region if the design standards governing road design require the inclusion of bike lanes and other similar facilities. In spite of this opportunity, Nevada has very few miles of bike lanes, most of which are found in Carson City, Reno, and the greater Las Vegas area. However, 98% of the roadways in the Las Vegas area are considered bike compatible, because the curb lane is at least 14 feet wide, ample for shared use travel with vehicles.

Most transit systems across Nevada have now equipped their buses with equipment to accommodate bikes. The Citizens Area Transit system in Las Vegas carries an average of 55,000 bike trips every month and demand continues to increase. To accommodate this growing demand, the RTC is in the process of replacing existing 2-unit bike racks with 3-unit bike racks.

“I have been attempting to make better use of my bike in conjunction with the bus. It’s great that most busses have bike racks in the front.”

-anonymous survey comment

Safety is often cited as a principal reason why people do not bicycle more often. From 2005 through 2007 there were a total of 1179 cyclists crashes. Of those crashes, there were a total of 16 reported fatalities: one in 2005, ten in 2006, and five in 2007. There were 12 reported fatalities in Clark County, representing 75% of all fatalities in the state. Bicycle crash data is limited because a great many bicyclists-motorists crashes go unreported or are unreportable because they do not result in injury (even though the bicycle itself may have been totaled in a crash with a motor vehicle).

Several states have passed legislation requiring helmets for bicyclists under the age of 18, however the use of bicycle helmets in Nevada is currently voluntary.

Nevada’s Bicycle Plan provides a blueprint for improving conditions for bicycling, clarifies NDOT’s role in bicycle transportation, and establishes policies for further integrating bicycling into the current transportation system.

The vision established for Nevada’s Bicycle Transportation Plan is:

To provide Nevada’s residents and visitors the choice of traveling to their destinations by bicycle by providing new and improved and well-maintained transportation facilities that conveniently and efficiently accommodate bicyclists in a suitable environment.

The state Bicycle Plan has two primary goals:

- Increase levels of bicycling throughout Nevada, doubling the number of trips made by bicycles by the year 2010 with additional increases achieved by 2020.
- Reduce crashes involving bicyclists and motor vehicles by at least 10% by the year 2010 with additional increases achieved by 2020

Ensuring a seamless or inter-connected bicycle transportation network across jurisdictional boundaries and at different functional levels of highway/street systems is vitally important to the success of the Bicycle Plan.

In 1991, the Nevada Legislature created the Nevada Bicycle Advisory Board (NBAB). Their primary purpose is to identify and address the needs of the bicycling community, promote programs and facilities for the safe and effective use of bicycles, and advise appropriate organizations of the state on policies, programs and facilities for the safe use of bicycles. The Board consists of 14 members appointed by the Governor, seven from the public and seven from specified State Agencies.

The Department cooperates with the NBAB regarding matters pertinent to the development of bicycle programs and facilities. In addition, the Department works cooperatively with the NBAB’s recommendations regarding bicycle policy, planning, design and intermodal

operations in development of the statewide bicycle system.

NDOT, the MPO’s, and various municipalities have been increasing their efforts to acquire funds to provide bicycle and pedestrian facilities in these areas. In fact public agencies in Las Vegas have plans to add over 1800 miles of bicycle lanes, routes and shared use paths in the next 12 years, at a cost of \$50 million.



Pedestrians & Pedestrian Facilities

In much of the United States, cities, towns, and the public infrastructure systems that serve them, have been designed with the automobile in mind. This often occurs to the detriment of other modes. The design of our communities often seems to discourage pedestrian travel.

Government is responsible for developing a cohesive and uniform approach to pedestrian safety, mobility, security and comfort. Different levels of government become involved in different ways. At the federal level, participation is mostly in the areas of programming and policy, as well as enabling implementation plans through a variety of funding programs. Local and regional agencies—cities, counties, and MPO’s—usually view their pedestrian concerns from a more parochial standpoint, focusing on specific sidewalk, path

or traffic signal projects that meet the needs of specific constituencies.

State government is uniquely positioned to provide guidance in planning and designing uniform applications of treatments and devices. Section 2.2.1.4.4 of the NDOT Design Manual requires construction of sidewalks where current or anticipated pedestrian traffic presents a potential conflict. When NDOT reconstructs or resurfaces public roadways, the correction of sidewalk deficiencies is reviewed in the scope of work.

NDOT prepared the Nevada Pedestrian Plan that sets forth a foundation for pedestrian facilities planning and design throughout the State. It is intended to provide a cohesive and uniform approach to pedestrian safety, mobility, security and comfort. It presents facts, current practices and recommended design features to ensure that walking Nevadans and visitors are afforded the best of all possible environments. Wheelchair-bound (non-ambulatory) individuals are considered in the Plan, as are individuals with other impairments such as loss of vision and hearing. The Plan stresses the need for system continuity across all components of a given pedestrian system. Finally, the Plan addresses the notion of pedestrian friendliness and its importance in setting the tone for a community or region.

One of Nevada’s statewide safety goals as proposed in the Strategic Highway Safety Plan (SHSP) is to reduce the annual pedestrian fatalities from 55 per year to 37 per year. It is unlikely that pedestrian education alone could achieve such a goal for pedestrian crashes, therefore, our strategies are part of a more comprehensive approach to address fatalities (i.e., such as coupled with enforcement campaigns or engineering improvements).

Ideally, all programs would be implemented statewide; however, 90% of pedestrian fatalities occur in Clark County (72%) and Washoe County (18%). A responsive approach for deploying our strategies is to target only high risk population groups or high risk areas, such as Clark and Washoe Counties.

While many of the strategies proposed in Nevada’s Strategic Highway Safety Plan (SHSP) are intended to improve pedestrian safety, the following strategies are specifically directed towards reducing pedestrian fatalities:

- Provide pedestrian safety education for pedestrians and motorists.
- Enforce pedestrian laws at high crash locations (judicial follow-thru).
- Increase pedestrian safety by constructing sidewalks, refuge islands, and upgrading signals.
- Develop criteria to identify high pedestrian crash locations and placement, design and implementation guidelines for pedestrian amenities.

Clark County includes the famous Las Vegas Strip and many other locations with high pedestrian traffic in its jurisdiction. Many of the roadways in these areas are six lanes and the intersections of the arterial roadways are very wide, creating dangerous conditions where pedestrians mix with vehicles.

The past decade in Las Vegas has seen considerable changes in the pedestrian environment. Public and private investments have enhanced pedestrian movements. At several major intersections pedestrian bridges have been built linking large casino properties on all four corners of the intersection at the second floor level, and prohibiting at-grade pedestrian crossings. New landscaped medians have been provided along the strip, enhancing

mid-block crossing in some locations, but restricting pedestrian crossings at others. This methodology has been used in Las Vegas to improve the design of pedestrian facilities at all the new mega-resort casinos.



Also, the concept has been used to establish a public safety perspective to support an Obstructive Use ordinance that establishes a specific threshold standard for sidewalk pedestrian traffic flow and regulates and prohibits mobile activities, such as solicitation of handbills and t-shirt vendor tables on segments of sidewalks that cannot adequately support those activities.

While there are few communities in Nevada with the same roadway and pedestrian environment as the Las Vegas Strip, many communities have transit stations, busy urban streets, and suburban growth corridors with high pedestrian volumes and many pedestrian-vehicle conflicts. These areas can benefit from an analytical approach to determining the appropriate facilities for pedestrians. The tools developed for the high traffic pedestrian intersections in Las Vegas can be used to improve the safety and comfort of pedestrians in other communities.



RAILWAY SYSTEM & FREIGHT

Railroads have contributed in a major way to the economic well-being of Nevada since the first railroad track entered the state near Reno in 1867, as part of the first transcontinental rail link. The intervening years have seen great changes in railroading in the United States in general, and Nevada in particular.

Compared to other modes, rail transport is low cost, energy efficient, safe, and environmentally friendly. For long distances, it is clearly the mode of choice for transport of bulk commodities such as coal, chemicals, and minerals. Over distances of about 500-700 miles, railroad is the preferred means of transporting cargo in containers and trailers, and has for some time been the preferred means of transporting new automobiles.

Nevada's railroads remain an important component of the state's transportation infrastructure. Today, millions of tons of coal, chemicals, minerals, stone and other commodities are moved into and out of Nevada by rail. Annually, almost 200,000 passengers travel across Nevada.

Nevada's rail network is currently composed of approximately 1,250 miles of

mainlines and 200 miles of branchlines. Union Pacific (UP) is the major railroad in Nevada with two main lines crossing the state and close to 1,200 miles of track. UP's possession of its main line across northern Nevada resulted from its merger with Western Pacific in 1982 and another merger in 1996, with the Southern Pacific Transportation Company (SP).

Nevada has 330 at grade crossings, 300 private crossings, and about 120 grade-separated crossings. Annually there are approximately three fatalities at crossings, three trespass fatalities, and approximately 14 injury accidents in Nevada. In Southern Nevada the Regional Transportation Commission and local entities are working with Union Pacific Railroad (UPRR) to eliminate all the remaining at grade crossing along the main line through the Las Vegas Valley. The Reno Retrac 33 foot-deep train trench project recently opened providing a 2.3 mile railway transportation corridor through downtown Reno eliminating 13 at grade crossings.

Amtrak operates the only intercity rail passenger service across Nevada via the California Zephyr. This train operates daily between Oakland, California and Chicago, IL with stops in Nevada at Reno, Sparks, Winnemucca, and Elko. Annually about 70,000 passengers use Amtrak for Nevada based origins and destinations. An additional 80,000 passengers enjoy traveling to Nevada on rail excursion trips. Amtrak ceased service across southern Nevada, including Las Vegas, in 1996.

Nevada is home to the newest monorail in the nation built along a 4-mile stretch of the Las Vegas Strip. This phase was privately built and financed. The second phase is proposed to continue to the airport.

Nevada recently received \$45 million through the SAFETEA-LU Technical

Corrections Bill to continue environmental work on the proposed 300-mph magnetically levitated train from Anaheim, California to Las Vegas, Nevada. In addition, environmental work for a high-speed diesel-electric passenger train between Las Vegas and Victorville, CA is being done by a private company.



NDOT is responsible for state rail planning, the periodic updating of the State Rail Plan and for administering of Local Rail Freight Assistance (LRFA) funding when available. State rail planning is coordinated with the Statewide Transportation Technical Advisory Committee (STTAC), Regional Transportation Commissions, local governments, Indian tribal governments, California Department of Transportation, as well as the railroads, rail customers and the public. NDOT is prohibited from owning or operating any of Nevada’s railroads per Nevada Revises Statutes (NRS) 408.233.

The Future Rail System

The Nevada Department of Transportation’s rail mission is:

“To satisfy the present and future transportation needs of the state for adequate, safe, and efficient movement of people and freight at a reasonable cost to the taxpayer.”

NDOT’s railroad program meets this mission by:

- Supporting the reintroduction of the Federal Railroad Administration (FRA) Local Rail Freight Assistance (LRFA) program.
- Supporting efforts for the continuation of Amtrak passenger rail service.
- Supporting the continuation of rail services essential to state and local needs.
- Assisting shippers and railroads as much as possible for continued uninterrupted service.
- Providing a balanced multimodal transportation system in cooperation with other state programs for safe and efficient transport of people and goods while minimizing environmental consequences.
- Helping maintain the railroad as an available mode within the free enterprise system recognizing competition with other forms of transportation.
- Supporting rail service retention through a partnership between the private sector and state and local government to minimize rail line abandonments.
- Supporting federal policy initially established by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and subsequent reauthorization acts regarding the movement of people and goods in a unified, interconnected, and economically efficient manner, to reduce energy consumption and air pollution while promoting economic development.

Since 1970, railroads in Nevada have abandoned more than 300 miles of track. However, business growth centered around the Reno/Sparks area, Las Vegas/North Las Vegas and Henderson areas suggests there is the opportunity for potential expansion of rail service in the future.

Union Pacific’s intermodal business has grown considerably in Northern Nevada, along

with the development of super distribution warehouses. The Tahoe Reno Industrial Center, located in Storey County approximately seven miles east of Reno-Sparks on the I-80 freeway, is proposed to be the largest park in the world. Rail services run through the middle of the park so businesses can utilize Union Pacific or Burlington Northern Santa Fe Railway or choose a private carrier.

In addition, the City of Fernley, located on I-80 approximately 32 miles east of Reno-Sparks, and at the intersection of US Highways 50A and 95A, established their first business park in the 1980's. Fernley also has rail (freight) access. Northern and Central California markets are reached overnight, while Los Angeles, San Francisco, Portland, Salt Lake City and Las Vegas are all within a 500 mile radius.

In the Ely area, there have been several proposals over the last few years for the rail line between Shafter/Cobre, such as hauling land fill from the Bay area to a site in White Pine County, transporting power generating products, and as a possible route to Yucca Mountain. The rail line has been studied and would need considerable work to be brought up to UP mainline standards for use again.

About 100 miles northwest of Las Vegas, Yucca Mountain is slated to be the primary depository for U.S. nuclear waste. Both nationally and in the state of Nevada, rail transportation will be the mode used for the shipment of 70,000 metric tons of nuclear waste to Yucca Mountain. The State of Nevada has filed a suit challenging DOE's final Yucca Mountain Environmental Impact Statement (FEIS). The State contends the DOE should have fully and adequately addressed transportation of spent nuclear fuel and high-level radio waste to Yucca Mountain in the FEIS, and that the transportation analysis

contained in the FEIS is legally and substantively deficient and entirely inadequate.

NDOT believes the following will shape Nevada's rail transportation future:

- Pacific Rim trade and the North American Free Trade Agreement (NAFTA) will cause the state to become a more attractive world resort destination and a major trade corridor.
- Significant impacts on transportation may occur with new technology.
- Environmental concerns will significantly affect transportation options.



Most of the freight and passenger traffic on Nevada's rail lines is moved through Nevada rather than from or to Nevada, yet the goods and people transported from or to Nevada over these lines benefit significantly from the economies of scale and frequency of service made possible by high volume through traffic. Strategically, therefore, the continued competitive viability of UP's transcontinental routes is highly beneficial to Nevada's economy. Likewise, the business and communities served by the light density lines connecting with the UP mainlines benefit from the continued viability of light density lines.

Continued population and gaming industry growth in Nevada suggest the importance and potential of the Reno/Sparks-Tahoe-Bay Area and Las Vegas-Southern

California passenger rail corridors. Nevada has encouraged development and implementation of both rail corridors in transporting visitors to the popular tourist/convention areas at Lake Tahoe, Reno/Sparks, and Las Vegas. Increasing congestion on I-80 and snow in Donner Pass in the winter both add to the importance of the Reno/Sparks- Truckee-Tahoe-San Francisco Bay Area corridor. However, given the precarious prognosis for Amtrak and the funding uncertainties at the federal government level, Nevada cannot count on Amtrak or federal funding support to improve passenger rail service in these two regional corridors.

During the last ten years, NDOT has participated with Caltrans in studying the applicability of adding an additional passenger train each day between Sacramento and Reno/Sparks. To date, this study has not resulted in additional train service. Recent history supports the ridership demand when added cars to the California Zephyr between the San Francisco Bay Area and Reno support more than 100,000 additional annual riders in this corridor.

The rail component of Nevada's intermodal/multimodal planning focuses on projects and areas considered to be most important to the state and its transportation and rail planning objectives. Following are specific strategies for the future:

- Monitor freight traffic density, and maintain contact with state's railroads regarding their plans.
- Seek opportunities for federal funding/public private partnerships where these would advance state objectives.
- Seek opportunities to facilitate intermodal transportation, which may contribute to industrial development in the growing Reno/Sparks, Las Vegas/North and Las Vegas/Henderson areas.
- Review other states' policies to determine

whether Nevada can provide incentives to would-be rail users. Solicit regular meetings with the railroads and neighboring states to exchange information and search for mutually beneficial solutions to problems.

- Considering the possibility of no additional LRFA funding, review strategies to supplement/replace limited federal funding.
- Continue to encourage development and implementation of San Francisco Bay Area-Truckee-Tahoe-Reno passenger rail service and seek ways to improve passenger rail service in the Las Vegas-Southern California rail corridor.
- Continue the environmental work for the high speed rail projects.
- Meet annually with UP, Amtrak and California Department of Transportation to discuss rail issues and related rail/freight topics.

TRANSIT PROGRAMS

Public transportation in Nevada is a critical element used to move our tourists and workforce particularly in the urban areas of our state. But it is also becoming an essential mode of transportation in rural Nevada. From 1999 to 2008, our rural transit program grew from \$1M in annual federal funding to over \$10M, and we are on track to become a \$20M program in the next few years. Since 1975, over 400 vehicles have been acquired that operate in 45 areas throughout our state. Buses in rural Nevada travel over 5,000,000 miles per year and there has been no severe crashes and no fatalities in over 25 years.

Many of our elderly, disabled, tribal reservations, and the general public in rural areas depend on our transit services. Each year over one million rides are given on vehicles provided through NDOT with Federal Transit Administration funding. These rides contribute to the quality of life and independence for many of our rural residents by providing access to employment, medical, shopping, and government services.

Nevada is home to four urbanized transit systems (Carson City, Las Vegas, Reno, and Lake Tahoe) and eight rural transit systems (BlueGo, Ely Bus, North Eastern Area Transit, Silver Rider-Laughlin, Silver Rider-Mesquite, Churchill Area Regional Transportation, Douglas Area Regional Transportation, and Lincoln County Transportation). There are approximately 50 nonprofit agencies providing transportation services to the elderly and persons with disabilities in the rural and small urban areas of the state. Rural transit buses operate on almost all of the 24 Native American Reservations and colonies in Nevada.

In Clark County the Citizens Area Transit (CAT), Metropolitan Area Express

(MAX), RTC ADA Para-transit and Silver STAR systems operate. In Washoe County the RTC Ride, RTC Access, RTC Sierra Spirit, RTC Intercity and Tahoe Area Regional Transit (TART) systems operate. The metropolitan area of Carson City, added Jump-Around-Carson (JAC), a fixed route service in October 2005, to their existing demand-response service. The Tahoe Metropolitan Planning Organization (TMPO) offers a coordinated transit system (BlueGO) that combines fixed-route, demand-response, and flex-route (shuttle) service to the residents in South Lake Tahoe on both the California and Nevada sides of the state line. On the North shore of Lake Tahoe, Placer County, CA operates the Tahoe Regional Transit Service (TART).



In response to the increasing demand for faster service along the Las Vegas Valley’s busiest roads, the RTC of Southern Nevada is currently working on building a rapid transit system, called ACE. The ACE rapid transit system will be the showcase transportation initiative for the Las Vegas Valley. The sleek bullet-shaped vehicles will travel in dedicated lanes where possible with less frequent stops than fixed-route transit, enabling the service to change routes based on traffic patterns and move passengers longer distances in a shorter time period than fixed-route bus service.

The RTC of Washoe County is in the process of developing Bus Rapid Transit (BRT) for the Reno area. They expect to have many of their BRT features in place or under development by 2011. These features will include service that is more frequent, wider station spacing, transit signal priority, and improved reliability.

In Lake Tahoe, BlueGO is undertaking a route restructuring plan which will involve an express route along US Highway 50 between the South Y Transit Station in California and the Kingsbury Transit Center at Stateline NV.

Demographic data was collected from 15 counties (excluding Clark and Washoe Counties) to document population characteristics in these areas that may require specific transit services. Ten out of fifteen counties have a population over age 65 at or above the national average of 12.4%. Twelve out of fifteen counties have a disabled population of over the national average of 19.3%. Five counties have a population below the poverty level that is above the national average of 12.4%.

As in most areas of the U.S. the majority of Nevada’s population drives alone to work. According to the 2000 Census, Humboldt County has the highest percentage of travelers on public transit and Esmeralda County has the highest percentage of walkers.



The FTA is responsible for the implementation of the Urban Transit Program and is the federal funding source for large and small urbanized areas. NDOT administers the rural program and passes federal dollars through the State to designated eligible recipients including counties, cities, regional transit authorities and private nonprofit organizations. Specific FTA funding categories are:

- Section 5303
Program funds are available to urban areas with populations greater than 50,000 for the development of transit plans and programs.
- Section 5307
Provides discretionary funds to assist state and local public bodies in capital acquisition, eligible costs include; procurement of land and capital equipment, and construction and reconstruction expenditures to build or improve existing facilities. Funding is discretionary and is allocated on a national basis, rather than a formula distribution to the state.
- Section 5309
Provides discretionary capital assistance funds for three primary activities: new and replacement buses and facilities, modernization of existing rail systems, and new fixed guideway systems (new starts).
- Section 5310
Authorizes capital assistance for the purchase of rolling stock to be used for the operation of transportation services for the elderly and persons with disabilities. These funds can also be used to purchase contracted services to operate transportation for the elderly and persons with disabilities.
- Section 5311
Provides capital, administrative and operating assistance to state agencies, local

governments, Indian Tribes and Colonies, non-profit organizations and private operators for public transportation services. All projects must benefit residents in non-urbanized areas of the state. These funds cannot be used for transportation services in urbanized areas.

- Section 5313
Provides funds to the state to be used for transit planning in the small urban and rural areas of the state. Funds can be used by the state or passed through to the local entities.
- Section 5316 Job Access Reverse Commute (JARC)
Provides funds to address the unique transportation challenges faced by welfare recipients and low-income persons seeking to get and keep jobs. This funding is formula based.
- Section 5317
Formula funds aim to provide additional tools to overcome existing barriers facing Americans with disabilities seeking integration into the work force and full participation in society. These funds are to support new public transportation services and public transportation alternatives beyond those required by the Americans with Disabilities Act (ADA) of 1990.

Local funding for transit projects is derived from a variety of sources, such as non-federal grants, local government funds, user fees, cash donations, in-kind services, and advertising revenue.

Matching funds are a major concern for rural transportation organizations in Nevada. Most Federal and State grants require a 10% to 50% match. As a result, in 2007 NDOT and the Advisory Committee for Transit (ACT) testified before the State Legislature in support of

Assembly Bill 629. The bill was passed and provided a one-time allocation of \$250,000 from the General Fund to NDOT for rural transit operations for the elderly and persons with disabilities program.

“Put in better forms of public transportation, i.e., more efficient buses, monorail, better bike lanes. If they were better, I would use them more.”

-anonymous survey comment

Transit Programs and the Future

In 2005, NDOT commissioned Nevada’s Long Range Mass Transit Plan. This study looked at existing transportation delivery throughout the State and considered and contrasted various transportation modes and options for application to and integration with the rural areas of Nevada. Key findings of the study were:

- Continuation of existing levels of service is very important to the rural transportation agencies and serves as the life line for many seniors and handicapped residents.
- The lack of basic services such as groceries, post office, and banking facilities require individuals without cars to travel long distance by public transit to conduct personal business.
- No rural transportation providers routinely offer weekend service. The actual demand for weekend service should be evaluated relative to the cost to provide.
- The lack of taxi service in the majority of locations has added to the number of patrons requesting transportation services from senior centers
- There were no instances identified during the survey where transfers between different

agencies occurred. A semi-annual meeting of transportation providers would help them identify and discuss important issues in service delivery and increase the coordination possibilities between providers.

- The majority of agencies that do not operate under contract indicated capital and operating funds were not adequate. Funding sources for capital and operating expenses should be continually updated and reviewed. Where possible, joint applications between two or more providers should be explored. In addition, the possibility of demonstration projects through Federal and/or State funding sources should be explored.
- Providing rural transportation services by other modes such as local bus transit, intercity bus, bus rapid transit, light rail transit, Maglev, monorail, and personal rapid transit is not feasible due to high costs. In addition, Federal subsidies are essential for these types of service and securing grants to fund “new starts” is very competitive. The ridership demand and population base in rural Nevada would not compete with urban areas for limited Federal dollars.

Nevada’s Long Range Mass Transit Plan proposed the following recommendations for our program:

- Further study should be done on assisting rural providers with securing matching funds for Federal and State grants. The study should identify opportunities for public/private partnerships.
- Further study should be undertaken to identify specific ITS architecture and applications to monitor changing roadway conditions and to alert private drivers and public providers about potential hazards and road conditions.

- The implementation of a statewide ridesharing and matching service should be explored.
- The use of private companies to provide emergency medical services in rural areas should be studied.
- At a minimum, the existing funding levels for rural transportation providers need to continue.

Transit Security

Within the rural areas of the state, NDOT’s State Management Plan describes specific security transit measures. Many busses in rural areas have installed security cameras and NDOT is requesting cameras for new busses. In addition, some busses have installed lights on top of their vehicles that alert police if they are in distress. Within the urban areas of the state, the MPO’s are responsible for developing their own regional transit security strategies.

The RTC of Southern Nevada has adopted a Regional Transit Security Strategy that provides an optimal all-hazard approach, to preparedness, prevention, response, and recovery programs. The transit agencies in Southern Nevada focus their efforts on the prevention of an attack on the transit system.

The RTC of Washoe County considers security of the transportation system an important factor in the development of the objectives and policies for all modes of travel. RTC’s safety and security administrator regularly coordinates with the department of Homeland Security and other emergency preparedness and law enforcement agencies to manage security issues in the region, and to help prevent major disasters from occurring. They have a policy in place that states they will work with local, state, and nationwide law

enforcement agencies to enhance the security of public transportation. They also have an extremely active security update program including the installation of surveillance cameras on buses, an automatic vehicle locator (AVL) program on all agency vehicles.

The Carson Area Metropolitan Planning Organization (CAMPO) has a goal to increase the security of all modes of the transportation system. They hope to install surveillance cameras and Global Positioning Systems on all of their transit busses. In general, CAMPO encourages the use of all technologies, tools, and strategies that have the potential to improve the security of the residents in the region and visitors.

In the Lake Tahoe Basin, all of BlueGO's vehicles are equipped with automated GPS vehicle location (AVL), mobile data terminals (MDT), and radio data and voice communication equipment. BlueGO's electronic systems team with the Intelligent Transportation System (ITS) is being implemented in the Basin.