



# LAKE TAHOE REGIONAL TRANSPORTATION PLAN

FINAL  
August 27, 2008



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Design and layout: Underhill Design • [www.underhilldesign.com](http://www.underhilldesign.com)

# CHAPTER 1: INTRODUCTION AND TREND ANALYSIS

## Overview

This Regional Transportation Plan (RTP) is being presented at a critical point in the long-range effort to shape the future of the Lake Tahoe Region. The communities of the Lake Tahoe Region span five counties, two states and one incorporated city. Cohesiveness and cooperation are needed for the region to evolve in a manner that is sustainable and consistent with environmental goals, yet also promising an economically vibrant future. At the same time, however, each community requires its own unique sense of place, a vision and identity distinguishable from its neighbors that is connected through an efficient and sustainable transportation network. As such, the Tahoe Regional Planning Agency (TRPA), acting as the Regional Transportation Planning Agency (RTPA) in California, and the Tahoe Metropolitan Planning Organization (TMPO) are jointly updating their 23-year Regional Transportation Plan. Reflected in this update are the policies and strategies that will help shape the Tahoe Region's transportation network so that environmental goals are met in such a way that community vision is respected, captured and encouraged to flourish.

To this end, the TRPA/TMPO engaged the public in a collaborative visioning process that included place-based planning workshops in local communities, a planning forum made up of community members and agency partners, and extensive civic outreach to gather public input about the aspirations for the future of the Lake Tahoe region.

Paramount among the desired conditions identified by those who participated are a future of individual communities anchored by pleasant, walkable, mixed-use town centers functioning as public gathering places and served by reliable and convenient public transit. To emphasize revitalization of town centers and discourage new development on the fringes of built areas, the updated plan will require consistent transportation policies complementing this land use practice, reducing the reliance on the private automobile, and facilitating and promoting other modes of transportation including public transit, bicycling and walking.



This Regional Transportation Plan includes policies, project implementation plans, and funding strategies to meet community goals. While the RTP functions as a stand-alone document, it is also consistent with the Lake Tahoe Regional Plan. We expect the inclusion of RTP policies into the TRPA Regional Plan update in late 2008. The policies and strategies contained in this plan do not represent TRPA land use and regulatory authority provided through the TRPA Compact, but rather provide TMPO and TRPA, acting as the RTPA in California, the means to make funding allocations and other policy decisions. The policies and strategies of the RTP will be utilized to inform the TRPA Regional Plan update and provide considerations for regulatory policy and potential environmental analysis and mitigation measures related to the TRPA Regional Plan package.

## Enabling Authority and History

On January 1, 1999, TRPA was designated the Metropolitan Planning Organization (MPO) for the Lake Tahoe Region by U.S. Congress through special legislation. The designation brought new federal planning responsibilities and requirements under 23 USC 134(b) (6) and CFR 450.322, which includes the adoption of a long range, 23-year transportation plan. The preparation of the RTP must also be consistent with Section 172 of the Federal Clean Air Act as amended August 1977 (42 U.S.C. 1857 et seq.), the California Clean Air Act (Chapter 15568, Statutes of 1988), and the California State Government Code (Section 65080 (b)). The content of the RTP has been developed to be consistent with all TRPA, federal, and state of California RTP requirements.

Funding for the preparation of the 2008 RTP is supported, in part by the States of California and Nevada, Federal highway Administration (FHWA) planning funding, Public Lands Highway (PLH) funding, the California Transportation Development Act (TDA), Regional Surface Transportation Program (RSTP) funding, and TRPA General Funds provided by the States of Nevada and California.

## Background

In 1980, California and Nevada amended the Tahoe Regional Planning Compact, which, after ratification by the U. S. Congress and approval by the President, became law on December 19, 1980. The amended Compact called for the adoption, by TRPA, of a set of Environmental Threshold Carrying Capacities (thresholds) to protect the ecological integrity of the Region. The environmental thresholds were adopted on August 26, 1982, by TRPA Resolution 82-11. The thresholds covered various environmental components of the Tahoe Region, including air and water quality standards that are linked to transportation. On July 9, 1984, the State of California designated TRPA as the Regional Transportation Planning Agency for the California portion of the Tahoe Region.

The Tahoe Regional Planning Compact directs the TRPA toward objectives outlined in Article V. With respect to goals, the Compact states:

“The goal of transportation planning shall be:

- (A) To reduce dependency on the automobile by making more effective use of existing transportation modes and of public transit to move people and goods within the region; and
- (B) To reduce to the extent feasible, air pollution that is caused by motor vehicles.

Where increases in capacity are required, the agency shall give preference to providing such capacity through public transportation and public programs and projects related to transportation. The plan shall provide for an appropriate transit system for the region.

The plan shall give consideration to:

- (A) Completion of the Loop Road in the States of Nevada and California;
- (B) Utilization of a light rail mass transit system in the South Shore area; and
- (C) Utilization of a transit center in the Kingsbury Grade area.”

In addition to the above, Article I (b) of the Compact established TRPA's responsibility to establish environmental threshold carrying capacities. These are defined as “an environmental standard necessary to maintain a significant scenic, recreational, educational, scientific or natural value of the region or to maintain public health and safety within the region.” Air quality is one of the threshold categories that include both air quality and transportation standards.



Article IX of the Compact also established the Tahoe Transportation District (TTD) as an entity that may own and operate a public transportation system, acquire existing public transportation systems, hire public transportation employees, fix rates and charges for transit services, issue revenue bonds, and, by resolution, determine and propose a tax for the purposes of obtaining services of the district. In 1997, Article IX was amended to establish three private sector voting seats on the TTD board. The private sector plays a pivotal role in project development and implementation, in partnership with the public sector. TTD is a leader in transportation project support and implementation in the region, while TRPA is the transportation planning agency.

## Federal and State Requirements

Over the past fifteen years, Congress and the President have authorized funding for transportation and planning through various legislations. Previous spending bills included ISTEA, TEA-21, and most recently the Safe Accountable, Flexible, Efficient, Transportation Equity Act; a Legacy for Users (SAFETEA-LU). This bill authorized funding allowing Metropolitan Planning Organizations (MPOs) to respond to transportation needs. The legislation also promoted more comprehensive planning and public participation, improved connections between nodes, meeting the needs of travelers and shippers, flexibility in targeting funds for transportation improvements, strengthening federal, state and public-private partnerships, encouraging the use of new technology, and promoting more cost-effective management of the transportation system.

SAFETEA-LU also added new requirements for MPOs to include:

- Private transportation providers, and where appropriate city officials;
- Provide for the involvement of local, state and federal environmental, resource and permit agencies as appropriate;
- A proactive public involvement process;
- Consistency with Title VI of the Civil Rights Act of 1964;
- The identification of actions necessary to comply with the Americans with Disabilities Act of 1990;

- The involvement of traffic, ridesharing, parking, transportation safety and enforcement agencies, commuter rail operators, airport and port authorities.

The RTP must also comply with the California Transportation Commission Regional Transportation Plan Checklist. The purpose of the Checklist is to ensure that Federal and State requirements are addressed within the RTP. Summarized as follows, the Checklist includes:

- General
- Consultation/ Cooperation
- Modal Discussion
- Programming/ Operations
- Financial
- Environmental



## Consultation and Cooperation: TMPO Partners

Many public agencies and private organizations have both legal responsibility and interest in Basin transportation issues. A number of private organizations also have an interest in transportation in the Basin. These groups work closely with the TMPO in a collaborative partnership to identify issues, gather and disseminate information, engage in transportation planning and programming, and secure public and private funds for transportation projects and programs.

During the course of the RTP development, each section was reviewed, discussed and revised in collaboration with the TMPO partners. On the following page is a description of each partner and the required SAFETEA-LU consultation procedure documents as required by CFR 450.210 and CFR 450.316.

## TRANSPORTATION PARTNERS

**TAHOE REGIONAL PLANNING AGENCY** – Through the Compact, TRPA is responsible for short and long-range transportation planning in the Tahoe Region. In California, TRPA is the Regional Transportation Planning Agency (RTPA) for the Basin portions of El Dorado and Placer Counties.

**TAHOE METROPOLITAN PLANNING ORGANIZATION (TMPO)** –The TMPO Board of Directors is comprised of the fourteen voting members of the TRPA Board, but adds an additional voting member from the United States Forest Service, Lake Tahoe Basin Management Unit (USFS) in recognition of the federal lands component of the Tahoe Region. TRPA acts as the TMPO and is charged with implementing a “continuing, comprehensive and cooperative transportation planning process among states and local communities.”

**TAHOE TRANSPORTATION DISTRICT** – Established under Article IX of the TRPA Compact, the TTD has the authority to own and operate public transportation systems and to issue transportation bonds to pay for transit services in the Basin.

**TAHOE TRANSPORTATION COMMISSION** – To assure additional public input, the TRPA and TMPO established the TTC to review and discuss transportation plans, programs and projects prior to making recommendations to the policy boards.

**NORTH LAKE TAHOE RESORT ASSOCIATION (NLTRA)** –The NLTRA serves as a forum for local input and recommendations on the planning and development of tourism and community related infrastructure and transportation projects, including transit services, for which the Association is a funding partner. The source of NLTRA funding is a percentage of the Transient Occupancy Tax (TOT) funds generated in the North Lake Tahoe area of eastern Placer County. The Placer County Board of Supervisors grants these funds to the NLTRA on an annual basis.

**SOUTH SHORE TRANSPORTATION MANAGEMENT ASSOCIATION (SSTMA)** – Founded in 1994, the South Shore TMA is a non-profit community forum advocating transportation and mobility solutions.

**TRUCKEE-NORTH TAHOE TRANSPORTATION MANAGEMENT ASSOCIATION (TNT-TMA)** – Founded in 1990, “the Truckee-North Tahoe Transportation Management Association is a public-private partnership dedicated to solving traffic congestion and air quality problems in the greater Truckee-North Tahoe-Incline Village Resort Triangle.” The TNT/TMA is also a non-profit, community-based organization.

**LAKE TAHOE TRANSPORTATION & WATER QUALITY COALITION** – Originally founded in 1989 as the Tahoe Transportation Coalition, the Coalition is a private sector organization. Coalition members include the leaders of Tahoe’s business and tourism organizations, including its gaming and ski industries and chambers of commerce, and the League to Save Lake Tahoe, the Basin’s largest environmental organization. Among other activities, working with the TRPA and other partners, the Coalition coordinates the development and advocacy of Lake Tahoe’s annual Federal Legislative Agenda.

**SOUTH TAHOE AREA TRANSIT AUTHORITY** – STATA plans, programs and administers fixed route and demand response transit service on the South Shore of the Tahoe Region.

**CALIFORNIA TAHOE CONSERVANCY** – The CTC is a California State agency with responsibility for planning, programming, and coordinating state funded land restoration public recreation, and lake access in the Basin.

**PLACER COUNTY TRANSPORTATION PLANNING AGENCY** – PCTPA works in conjunction with TRPA to coordinate unmet transit needs, transportation planning over the I-80 corridor, and coordinates transit service to Squaw Valley and Alpine Meadows along S.R. 89 between Tahoe City and the Town of Truckee. The PCTPA is the sister RTPA in Placer County.

**WASHOE COUNTY** - Washoe County maintains local roadways, and implements transportation projects in the Incline/Crystal Bay portion of Lake Tahoe.

**DOUGLAS COUNTY** – Douglas County maintains local roadways, and provides public transit through participation in STATA.

**PLACER COUNTY** – Placer County maintains local roadways, implements transportation improvements, and operates TART, a public transit service along the North Shore of Lake Tahoe.

**EL DORADO COUNTY** – El Dorado County maintains local roadways, implements bicycle facility projects, and provides demand response transit service for unincorporated areas outside of the City of South Lake Tahoe.

**CITY OF SOUTH LAKE TAHOE** - CSLT maintains local roadways, implements transportation infrastructure projects, and provides public transit service through participation in STATA.

**WASHOE COUNTY REGIONAL TRANSPORTATION COMMISSION (RTC)** – Within the Basin, RTC contracts with Placer County to fund Tahoe Area Regional Transit (TART) operations in Incline Village and Crystal Bay.

**TAHOE DOUGLAS TRANSPORTATION DISTRICT** – The TDTD coordinates development of the Douglas County five-year Transportation Improvement Plan and approves expenditures of county Transient Occupancy Tax (hotel tax), revenues for transportation purposes at Lake Tahoe.

**FHWA-FTA-USFS-CALTRANS-NDOT** – These Federal and State agencies play active and vital roles in all TMPO activities including planning, programming and facilitation of all TMPO activities.

**WASHOE TRIBE OF NEVADA AND CALIFORNIA** – As a voting member of the Tahoe Transportation Commission the Washoe Tribe provides input to the TMPO on Tribal issues.

**CARSON AREA METROPOLITAN PLANNING ORGANIZATION (CAMPO)** – Designated as the MPO for the Carson Urbanized Area CAMPO provides inter-regional input on transportation issues.

**RESORT TRIANGLE TRANSPORTATION PLANNING COALITION (RTTPC)** - A multi-agency coalition whose function is to coordinate, plan, program, monitor and implement capital and operational projects in the North Lake Tahoe-Truckee “Resort Triangle.” Members include Placer County, Placer County Transportation Planning Agency, Town of Truckee, Nevada County Transportation Commission, and the Tahoe Regional Planning Agency.



**Pathway** – In collaboration with key State and Federal agencies at Lake Tahoe, TRPA is updating a 20-year Regional Plan. This regional planning effort is called Pathway. The Tahoe Regional Planning Compact calls for the TRPA to adopt and enforce a regional plan and implement ordinances that will achieve and maintain Environmental Threshold Carrying Capacities while still allowing orderly

growth and development. The Pathway Forum was developed to provide an opportunity for the public and partner agencies to help shape desired conditions for the Lake Tahoe Region. From May to July of 2006, 16 Place-Based Planning Workshops were held, letting community members envision the future. Local vision summaries evolved from these workshops. Transportation emerged as a major theme, and as an outcome of the public process, the transportation vision reads as follows:

*In 2030, the Tahoe Basin will have a diversity of transportation options that enhance the travel experience and lower environmental impacts. The highways transform into pedestrian-friendly main streets connecting vibrant communities and neighborhoods. Residents and visitors chose a variety of travel modes from walking, biking, alternative fuel buses/shuttles and regular ferry service.*

**Transportation Roundtables** – In March 2008, more than 85 people attended two Transportation Roundtables and discussed draft elements of the Regional Transportation Plan update and provided input. Major priorities included improving the pedestrian and bicycling facilities, improving and adding sidewalks and bike paths, providing better trail connections and maintaining access to these facilities in the winter. Additionally, relocation of transit facilities and services and overall enhancements to the transit system were identified as priorities.

**Lake Tahoe Total Maximum Daily Load (TMDL)** – The Lake Tahoe TMDL focuses on reducing the loading of nitrogen, phosphorus, and fine sediment particles to the lake. Roads and motor vehicles are recognized sources of particulate matter and nitrogen. The first part of

the Lake Tahoe TMDL is projected to be implemented in a similar 20 year planning horizon as the RTP, and the TMPO, TRPA and other agencies responsible for water quality must work together to meet TMDL objectives.

**Public Participation Plan** – SAFETEA-LU requires the TMPO to produce a Public Participation Plan (PPP). The plan, adopted by TMPO May 28, 2008, defines how citizens, affected public agencies, and other interested parties can be involved in the metropolitan transportation planning process. This RTP was developed in accordance with the adopted PPP and is included as Technical Appendix F.

**Coordinated Human Services Transportation Plan (CHSTP)** – SAFETEA-LU also requires a CHSTP, which requires projects receiving Job Access Reverse Commute (JARC) (5316), New Freedom (5317) and Formula Program for Elderly Individuals and Individuals with Disabilities (5310) be developed through a CHSTP. The CHSTP, adopted by TMPO on May, 28, 2008, is a “unified, comprehensive strategy for public transportation service delivery that identifies the transportation needs of individuals with disabilities, older adults, and individuals with limited income, laying out strategies for meeting these needs, and prioritizing services,” that is developed through a public process.

**Inter-agency Air-Quality Conformity Consultation** – The Transportation Conformity Rule appears in 40 CFR Parts 51 and 93 and applies to transportation plans developed pursuant to 23 CFR part 450 or 49 CFR part 613 by a Metropolitan Planning Organization. The Transportation Conformity Rule requires all jurisdictions in non-attainment areas or who are under federally approved maintenance plans, to submit a conformity analysis if the planning or programming documents identify projects considered non-exempt. The previous conformity determination was made on September 9, 2005. In accordance with the Consultation Procedures, the TMPO requested consultation on the modeling and analytical assumptions being developed for the Conformity Analysis in conjunction with the 2008 Regional Transportation Plan update.

## Demographic and Economic Shift at the Lake

Since 1987 the overall population of the Tahoe Region has shown an increasing trend, although between 2000 and 2005 the year-round population decreased by 7,662. A variety of sources suggest that this population decline is in large part attributable to a dramatic increase in residential home prices starting in 2001. This shift in year-round residents has had a profound impact on travel and traffic volumes in the Tahoe Region, as illustrated on page 14.

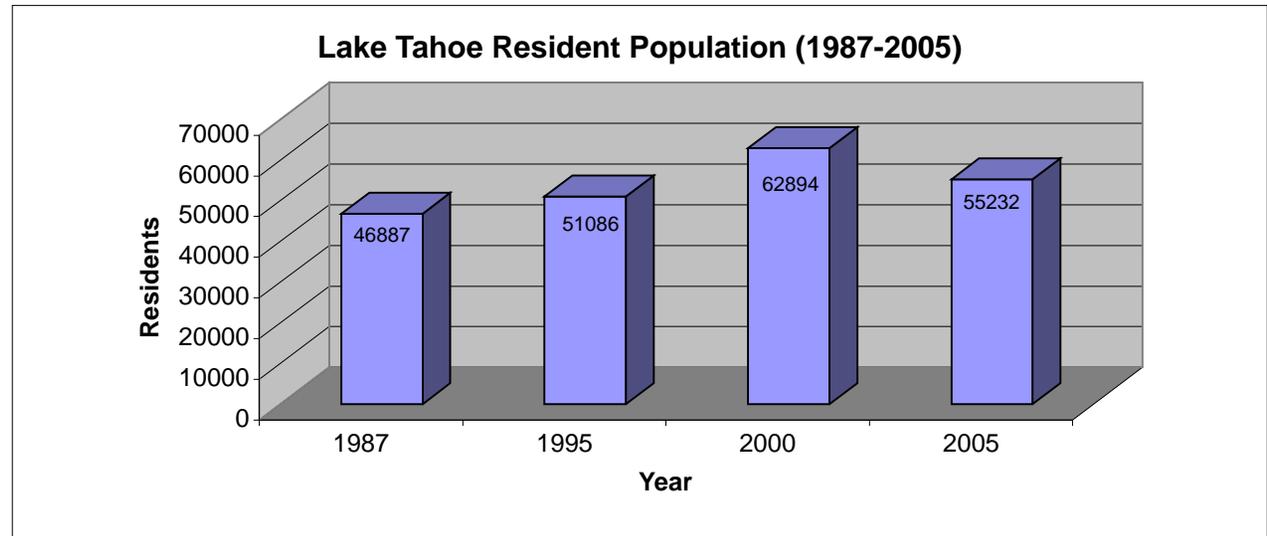


Figure 1.1, Source: US Census; TRPA Transportation Model

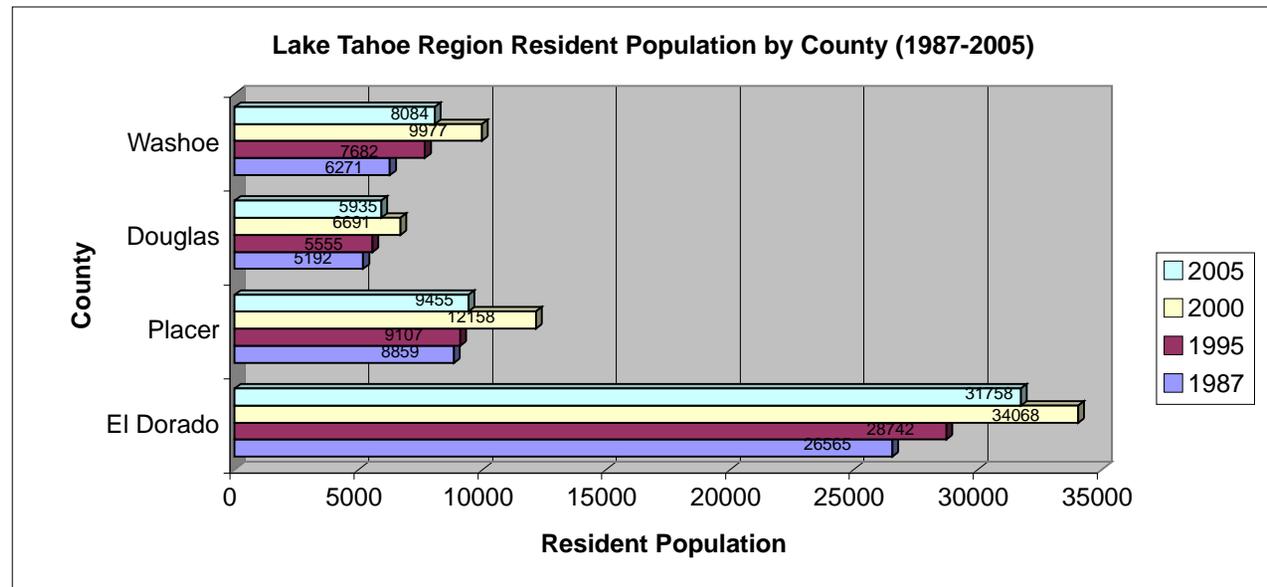
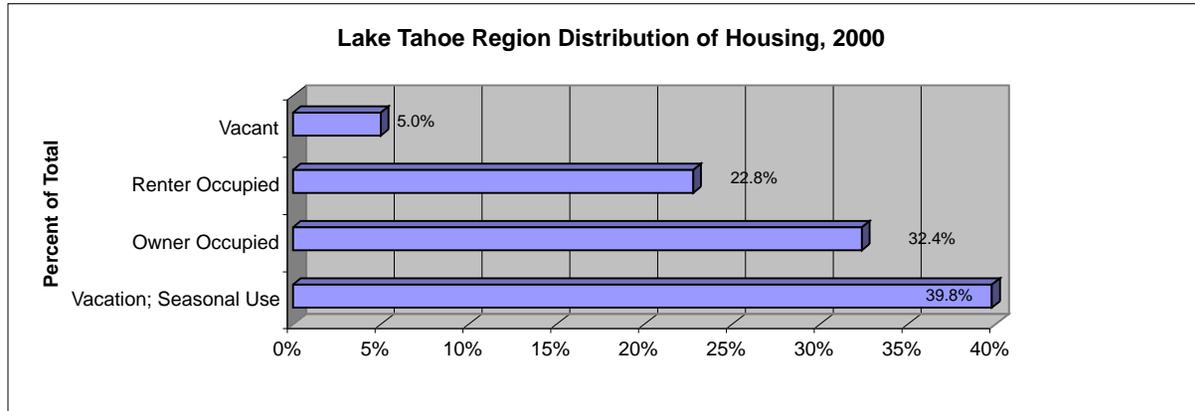


Figure 1.2, Source: US Census; TRPA Transportation Model

## Distribution of Housing

The U.S. Census Bureau collected demographic information at the census tract level in 2000 including housing occupancy date. TRPA also maintains data on second home ownership by parcel.

All Lake Tahoe counties have a relatively high percentage of housing that is used seasonally, as well as high rates of second home ownership. Placer County is estimated to have the greatest percentage (69 percent) of second-home ownership in the Region.



Source: Dean Runyan Associates and U.S. Census Bureau

	2000 Census-Seasonal		Vacant Housing Including Seasonal		Total Housing		Percent Seasonal
	Owner Occupied	Renter Occupied	Seasonal	Total	Seasonal Housing	Total Housing	
Douglas County	3,426	2,113	3,336	8,875	2,802	8,875	31.6%
Washoe County	2,843	1,333	3,488	7,664	2,957	7,664	38.6%
Placer County	2,840	1,992	6,649	11,481	6,271	11,481	54.6%
El Dorado County	7,332	6,153	8,530	22,015	7,432	22,015	33.8%
Region Total	16,441	11,591	22,003	50,035	19,462	50,035	38.9%

Source: U.S. Census Bureau

### TRPA Parcel Database

	Primary Residence	Secondary Residence
Douglas County	50.60%	49.30%
Washoe County	44.90%	55%
Placer County	30.70%	69.20%
El Dorado County	44.10%	55.80%
Region Total	41.70%	58.20%

Source: 2003 TRPA Parcel Database

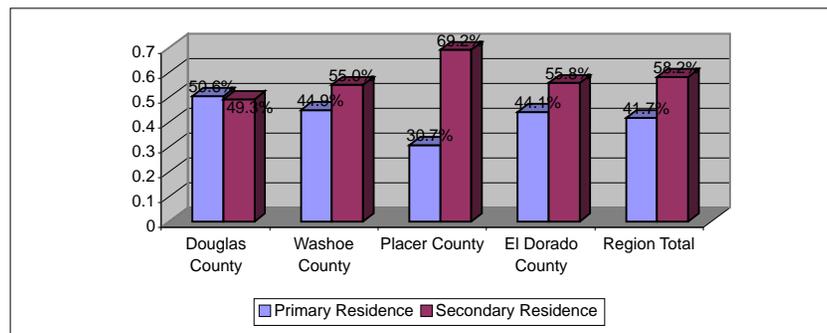


Figure 1.3

## School Enrollment

School Enrollment indicates that primary school enrollment has declined by 22 percent since 2000 in the Tahoe Region resulting in the recent closure of two elementary schools and one middle school on the South Shore.

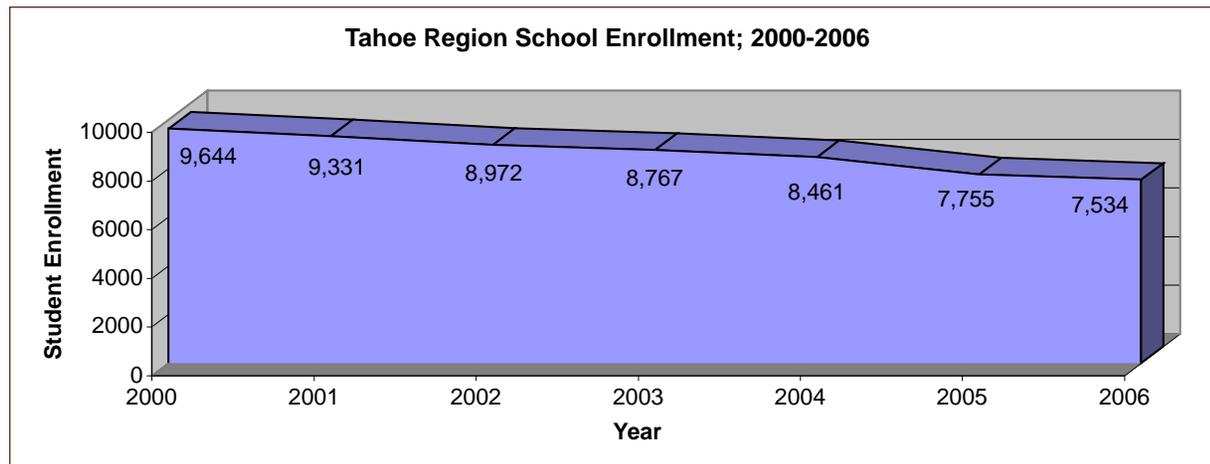


Figure 1.4, Source: Lake Tahoe Unified School District; Tahoe Truckee Unified School District.



# The Gaming Economy

Gaming provides a significant, but declining portion of the employment in the region. According to the Nevada Gaming Control Board, gaming employment has declined by 27 percent since 2001 on the South Shore. Additional information indicates that regional gaming revenue has declined by 19 percent (adjusted for inflation) since FY 1999-2000, as California Indian gaming has matured into viable competition.

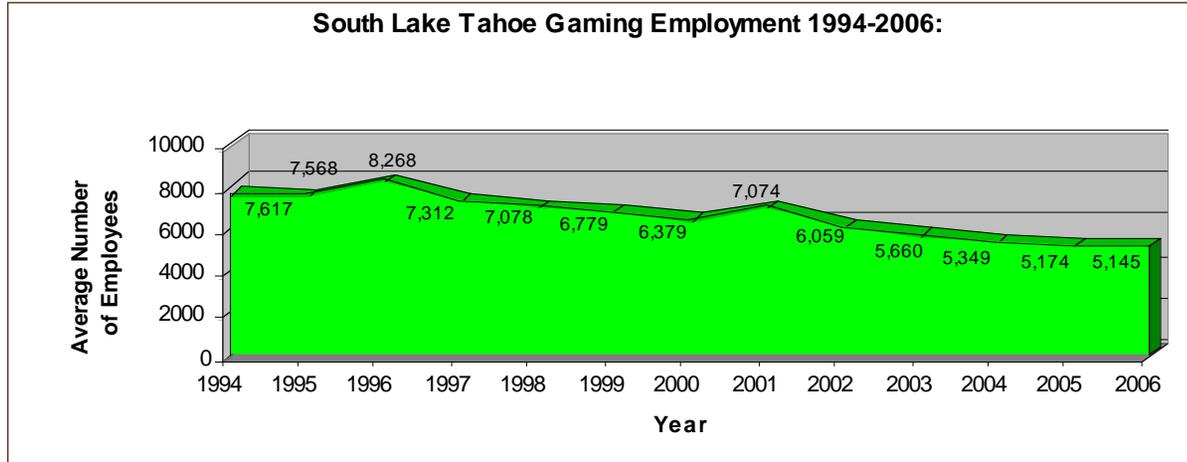


Figure 1.5

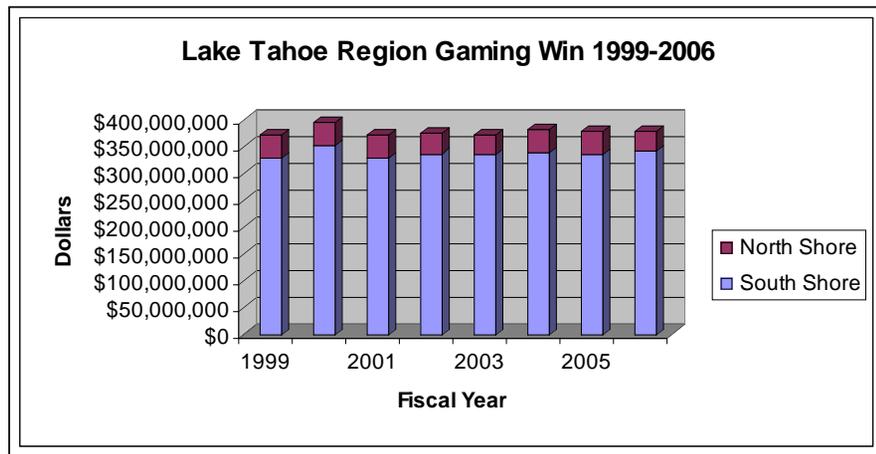


Figure 1.6

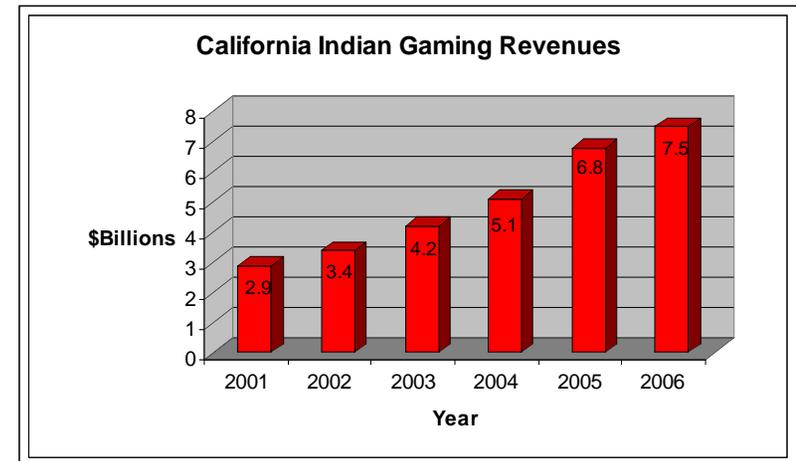


Figure 1.7

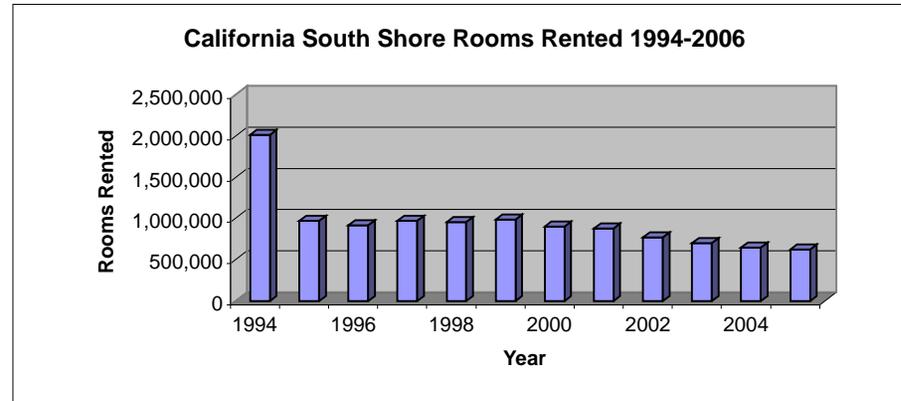
## Visitor Overnight Occupancies

Temporary lodging facilities have seen high vacancies on the South Shore with occupied hotel room and vacation rentals falling to 28.8 percent and 10.9 percent respectively over a five year period between 2001 and 2006. The number of rooms occupied in 2006 at Stateline casinos was the lowest figure since 1998. Visitor overnight occupancies for the North Shore are not available, however the following page shows North Lake Tahoe sales taxes over time.

### California South Shore, Number of Rooms Rented

Fiscal Year	Number of Rooms Rented	Variance Previous FY
1994-1995	2,014,257	
1995-1996	975,541	-51.50%
1996-1997	920,297	-5.66%
1997-1998	970,046	5.41%
1998-1999	954,650	-1.59%
1999-2000	987,193	3.41%
2000-2001	899,884	-8.84%
2001-2002	881,434	-2.05%
2002-2003	771,274	-12.50%
2003-2004	703,245	-8.82%
2004-2005	646,386	-8.09%
2005-2006	623,456	-3.55%

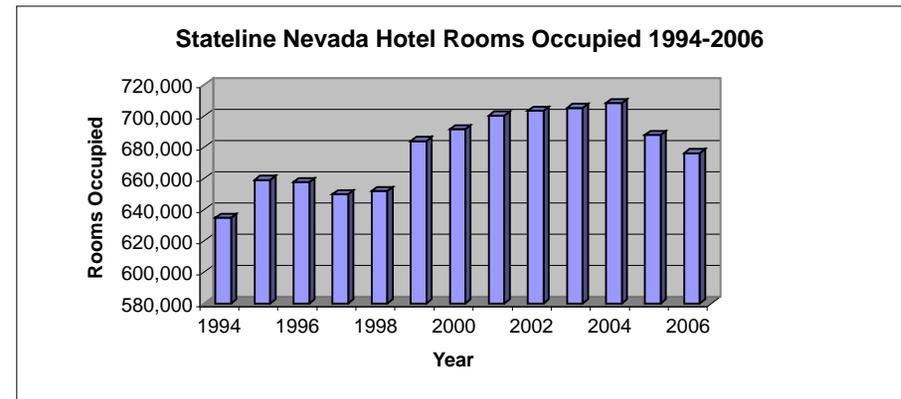
Source: Nevada Commission on Tourism



### South Shore Stateline, Nevada Hotel Rooms Nights Occupancy 1994-2006

Fiscal Year	Rooms Occupied	% of Occupancy
1994	634,983	74.3%
1995	659,222	76.6%
1996	657,873	76.7%
1997	649,948	76.1%
1998	652,066	75.3%
1999	684,084	79.0%
2000	691,627	80.9%
2001	700,388	81.8%
2002	703,511	81.6%
2003	705,250	81.8%
2004	708,402	82.0%
2005	687,928	80.6%
2006	676,387	78.3%

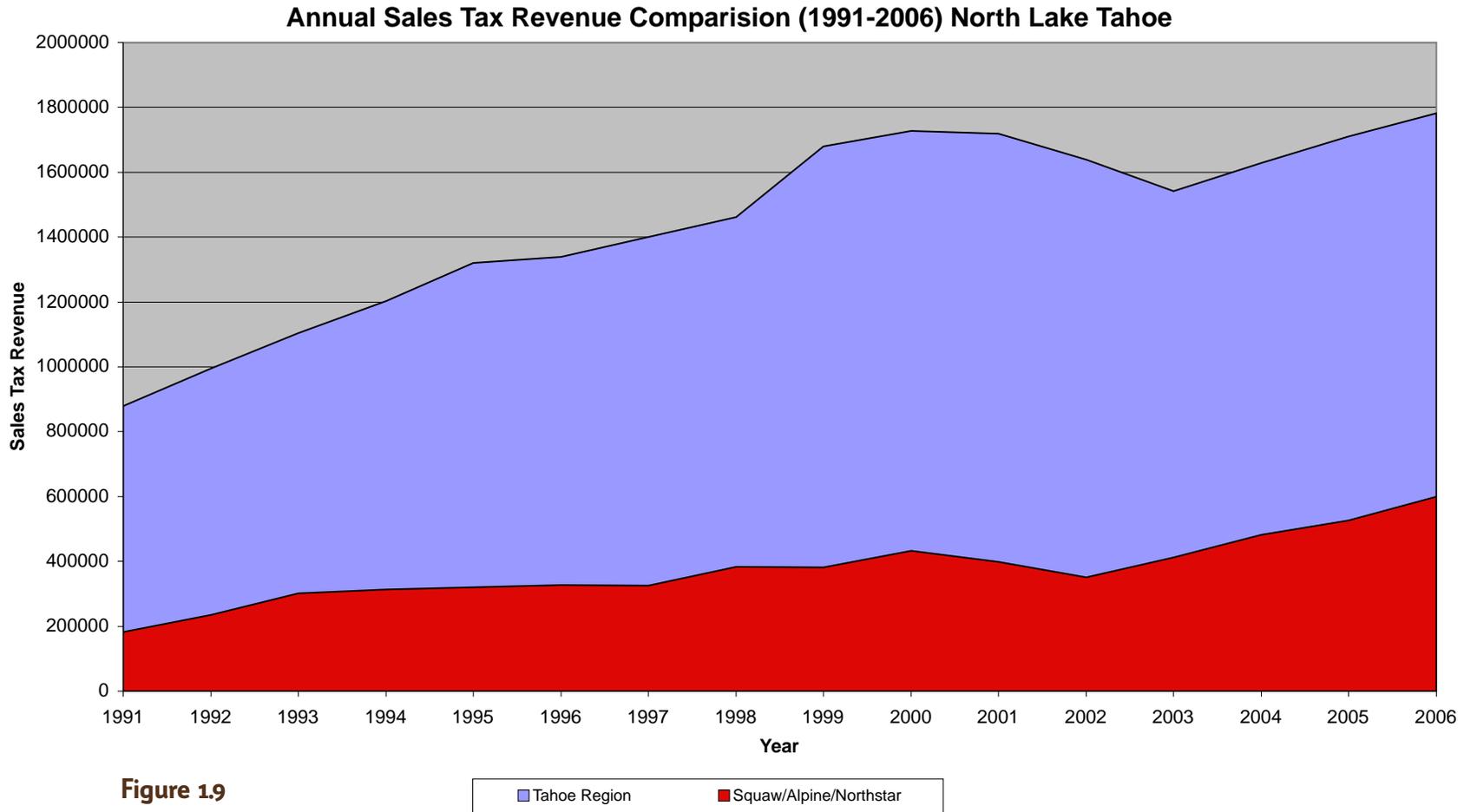
Source: Nevada Gaming Abstracts



**Figure 1.8**

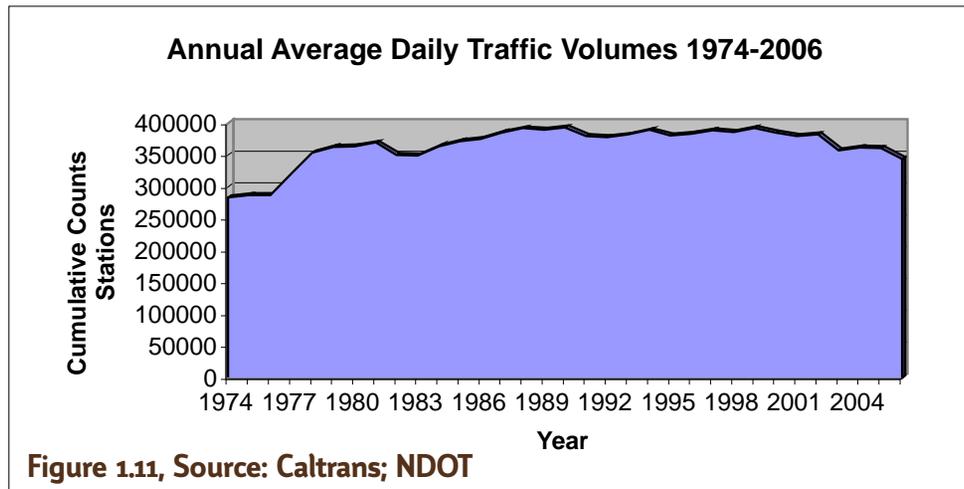
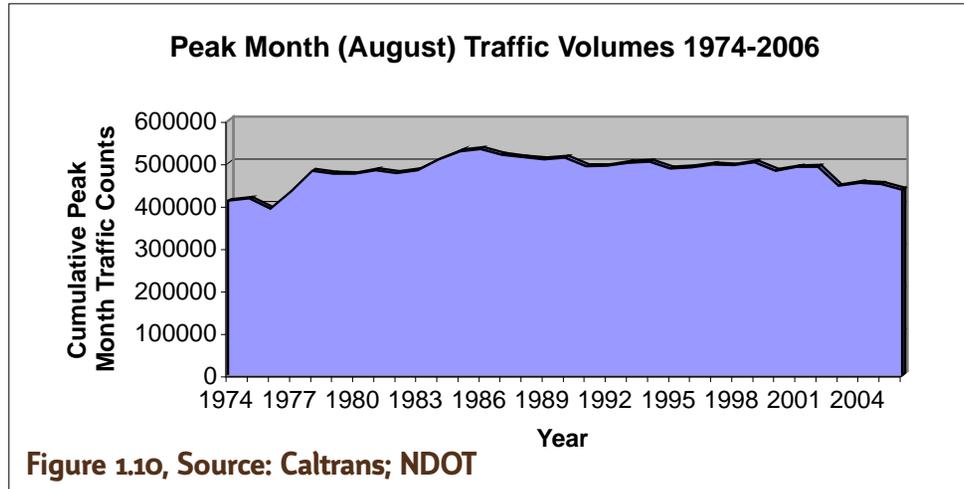
## Sales Tax Revenues (North Lake Tahoe)

North Lake Tahoe Sales Tax while experiencing a dip in 2003 has increased by 13.4 percent.



## Traffic Volumes

Demographic and economic changes have caused a dramatic shift in Traffic Volumes. As shown, 2005 Peak Month Traffic Volumes (August) within the Tahoe Region have fallen 14.6 percent from the highest reported levels recorded in 1986. In 2005, the Average Annual Daily Traffic (AADT) volume decreased 4.1 percent from the highest reported levels recorded in 1991. The data presented in Figures 1.9-1.12 represent data from 27 count stations located around the Lake Tahoe Region and at Basin entry points.



## South Shore Traffic Volumes

Based on Caltrans and NDOT traffic counts, South Shore August traffic volumes have decreased by 20 percent from the recorded high in 1988 with AADT declining by 23 percent from the recorded high in 1988.

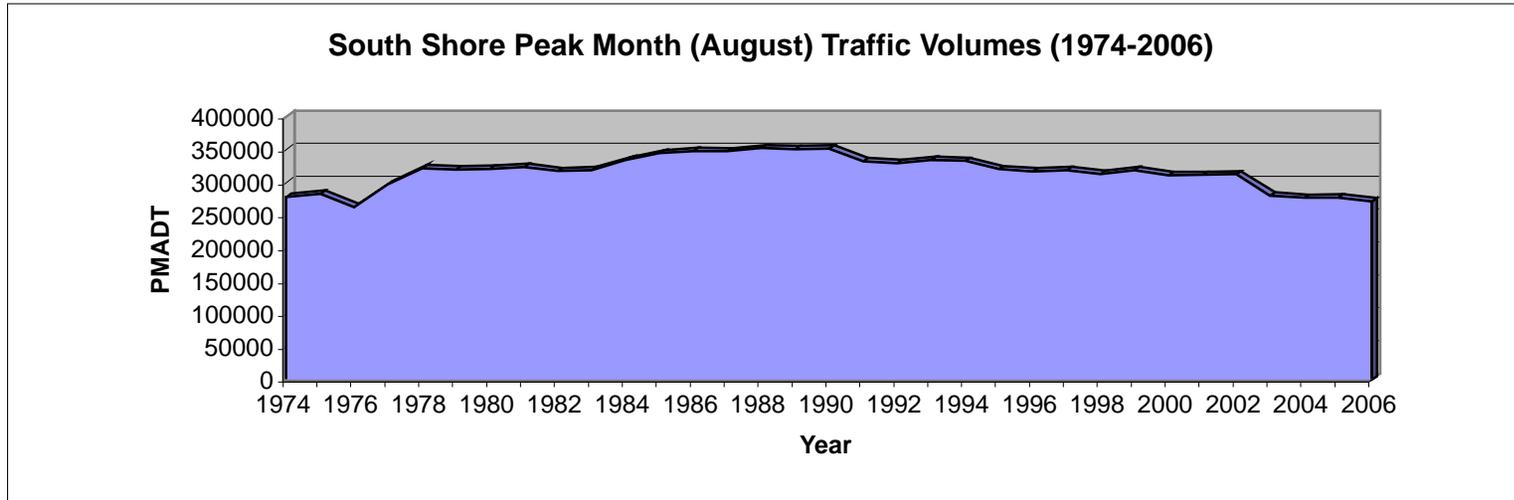


Figure 1.12

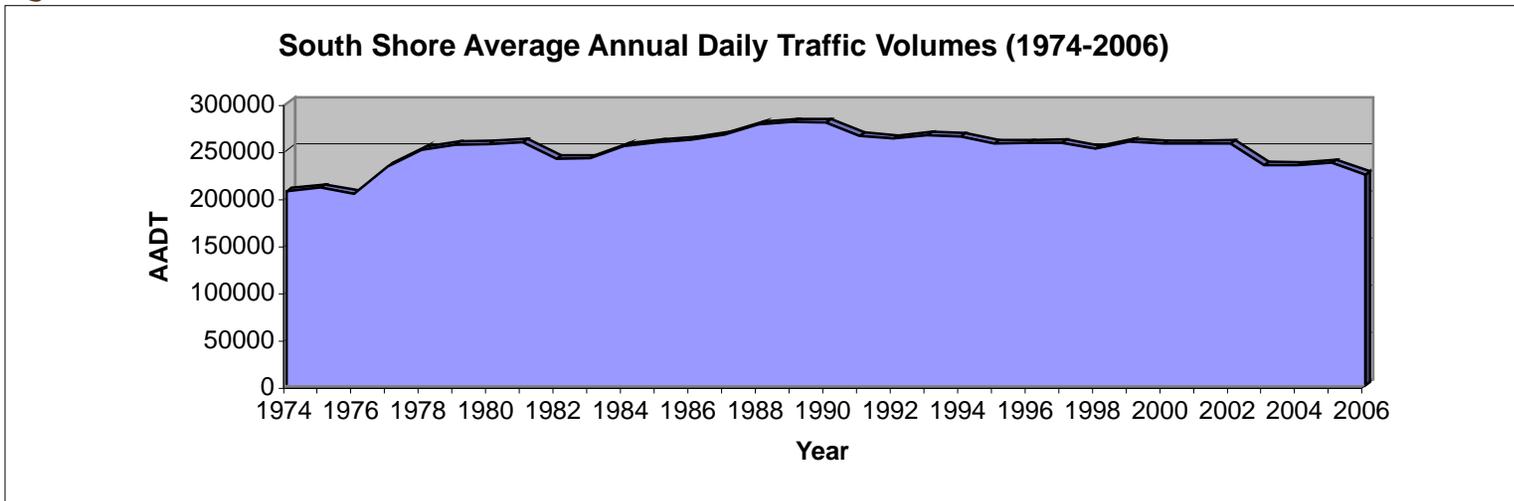


Figure 1.13

## North Shore Traffic Volumes

Based on Caltrans and NDOT traffic counts, North Shore August traffic volumes have decreased by 18 percent from the recorded high in 1986 with AADT declining by 12.6 percent from the recorded high in 1990.

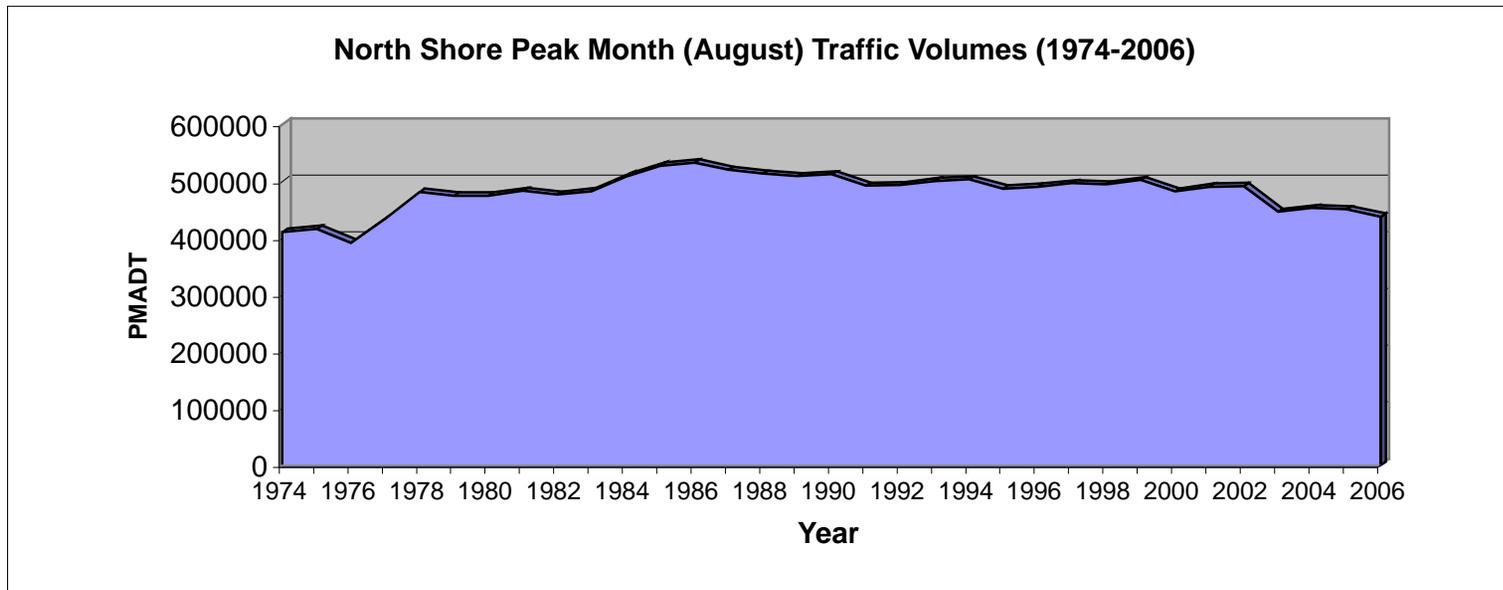


Figure 1.14

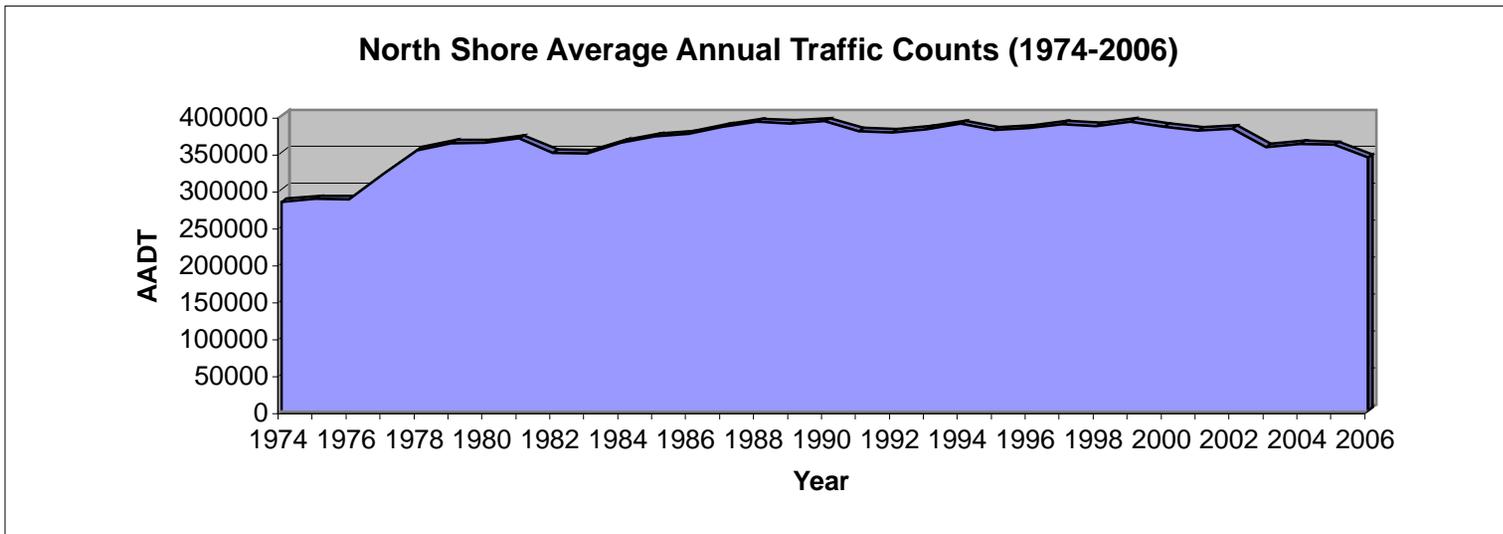


Figure 1.15

## Basin Entry Points Traffic Volumes

Traffic volumes at the Basin seven entry points have illustrated a steady increase with hourly commute times increasing at a greater rate than non-commute hours.

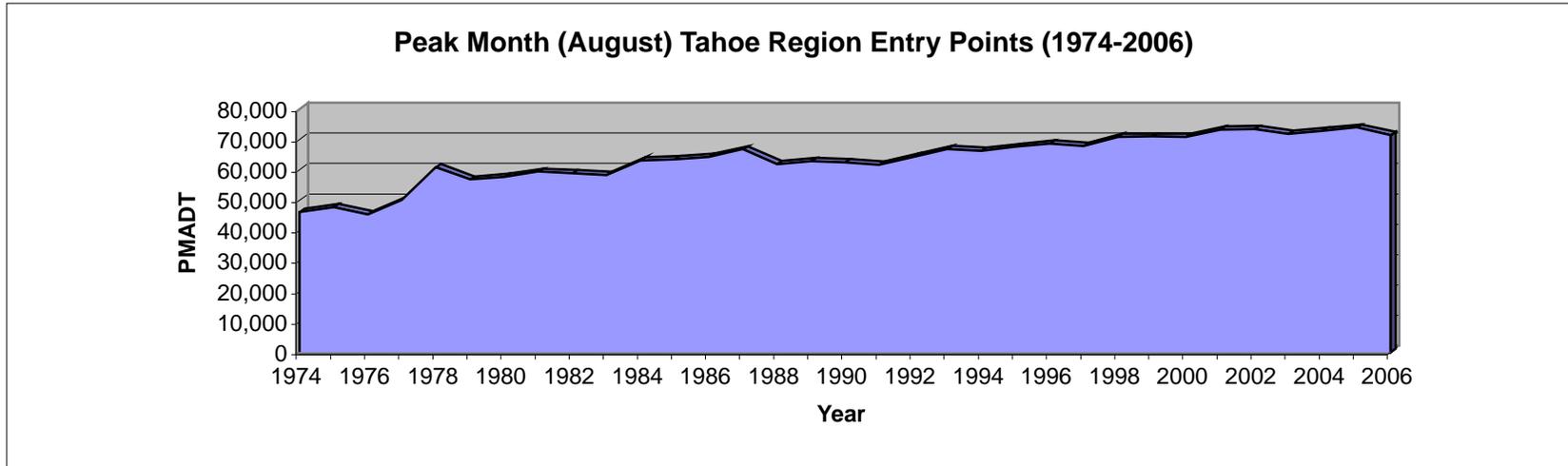


Figure 1.16

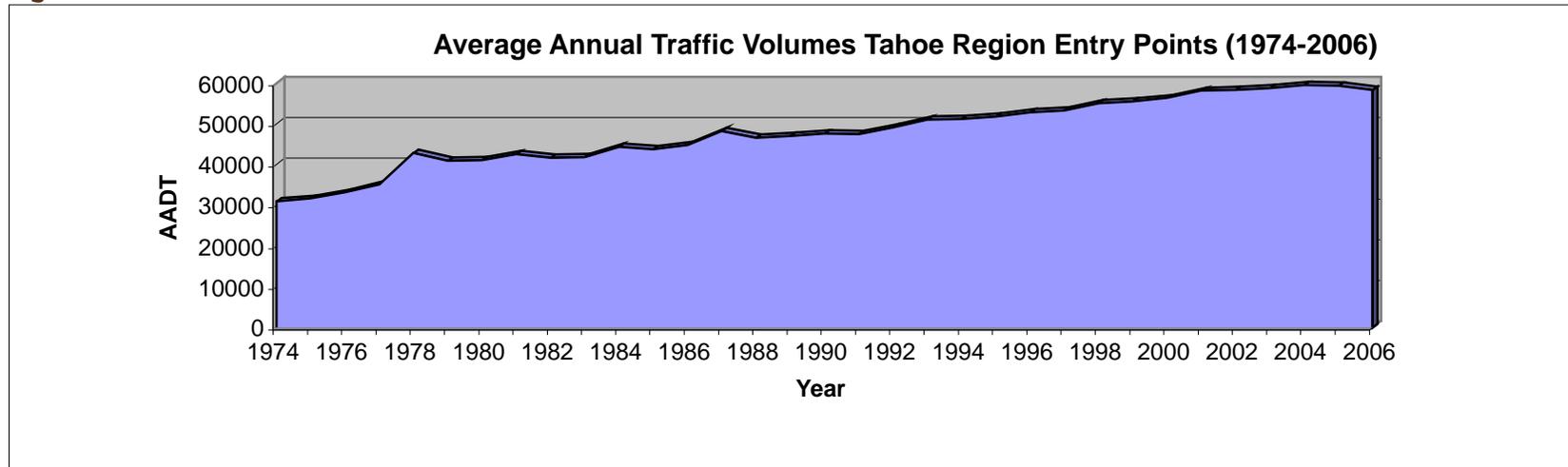


Figure 1.17

## Tahoe Region Traffic Volume Seasonal and Daily Variation

Seasonal and Daily Variation in traffic volumes reflects the elastic nature of the Tahoe Region's tourist economy. As shown, July and August represent the busiest travel months with Friday and Sunday representing the busiest days of the week.

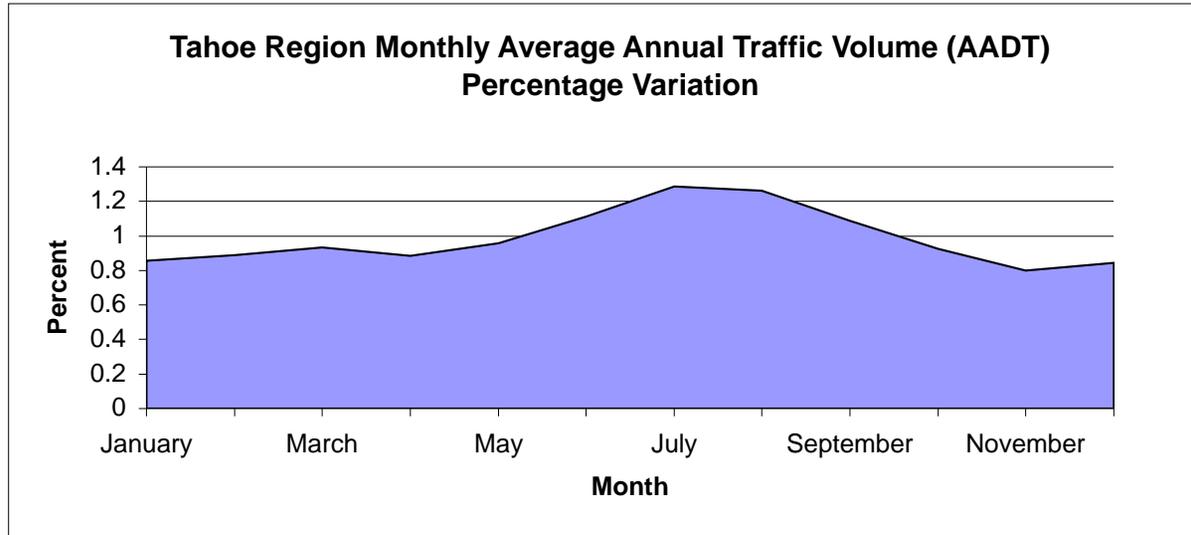


Figure 1.18, Source: Caltrans; NDOT

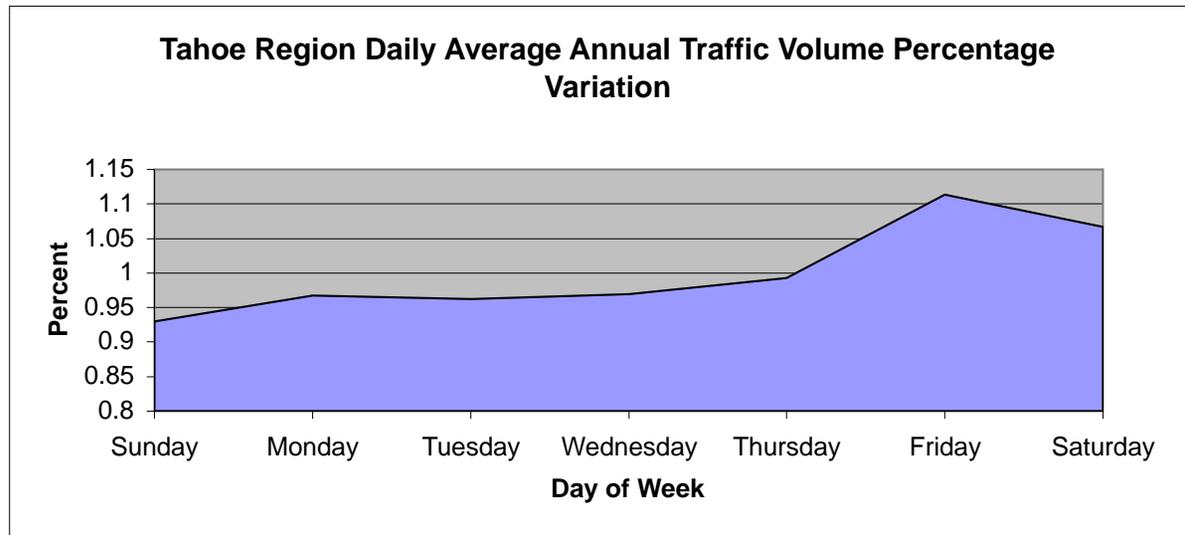


Figure 1.19, Source: Caltrans; NDOT

## Vehicle Miles Traveled (VMT)

As a result of the decrease in traffic volumes, Vehicle Miles Traveled (VMT) has been estimated to have decreased, with the current VMT total estimated at 1,594,400. This figure comes from updating the old TRPA Transportation Model using traffic counts. The new TRPA Transportation Model is not directly comparable with previous estimates because of upgrades to the model.

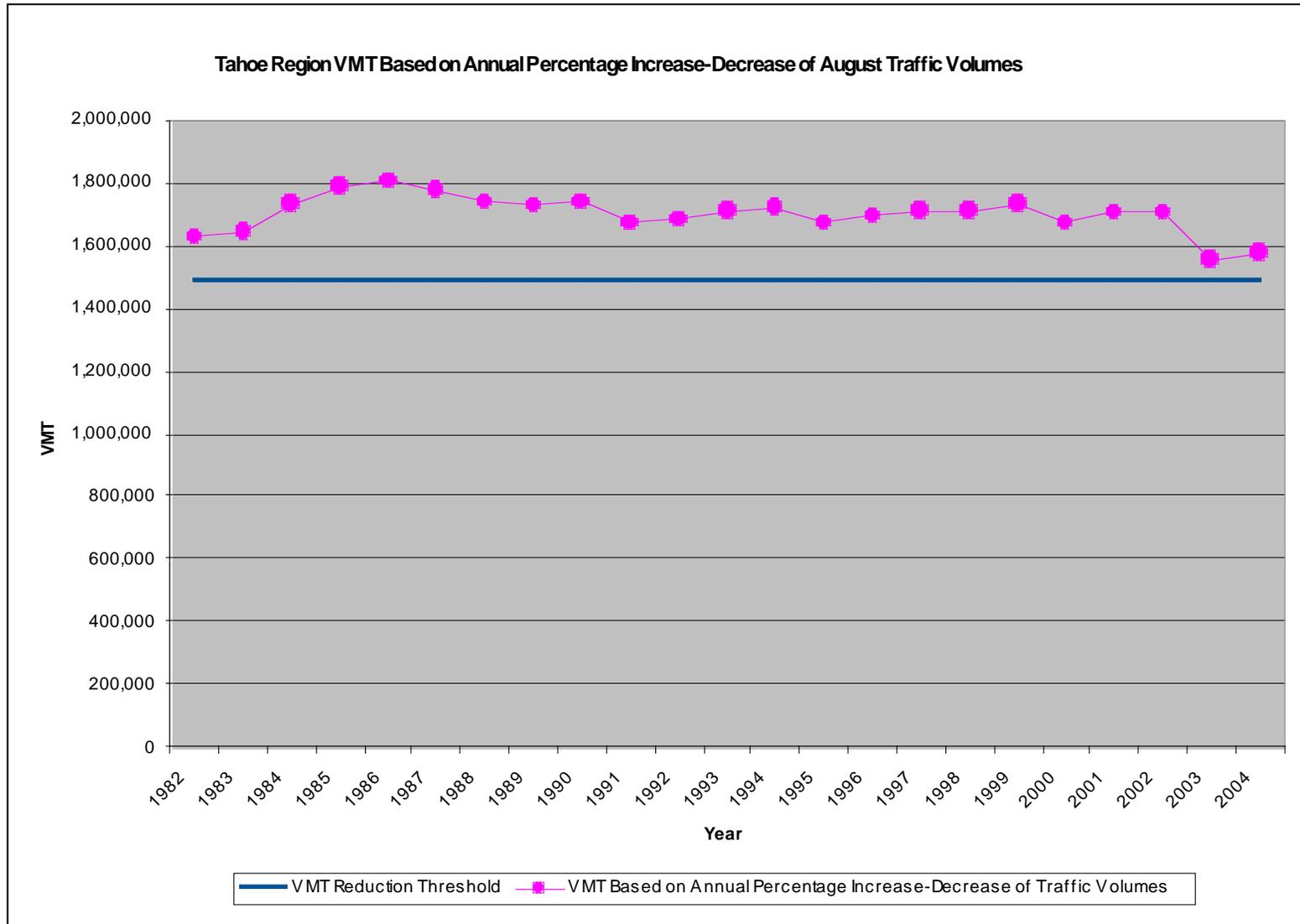


Figure 1.20

## Transit Ridership

Consistent with the region's economic and demographic profiles, transit ridership slipped in 2003, but began a rebound in 2005 with TART experiencing a 13 percent increase in ridership over the last two years. Operating characteristics concerning the region's seasonal winter shuttle programs and the historical ridership of BlueGO are shown on the following tables.

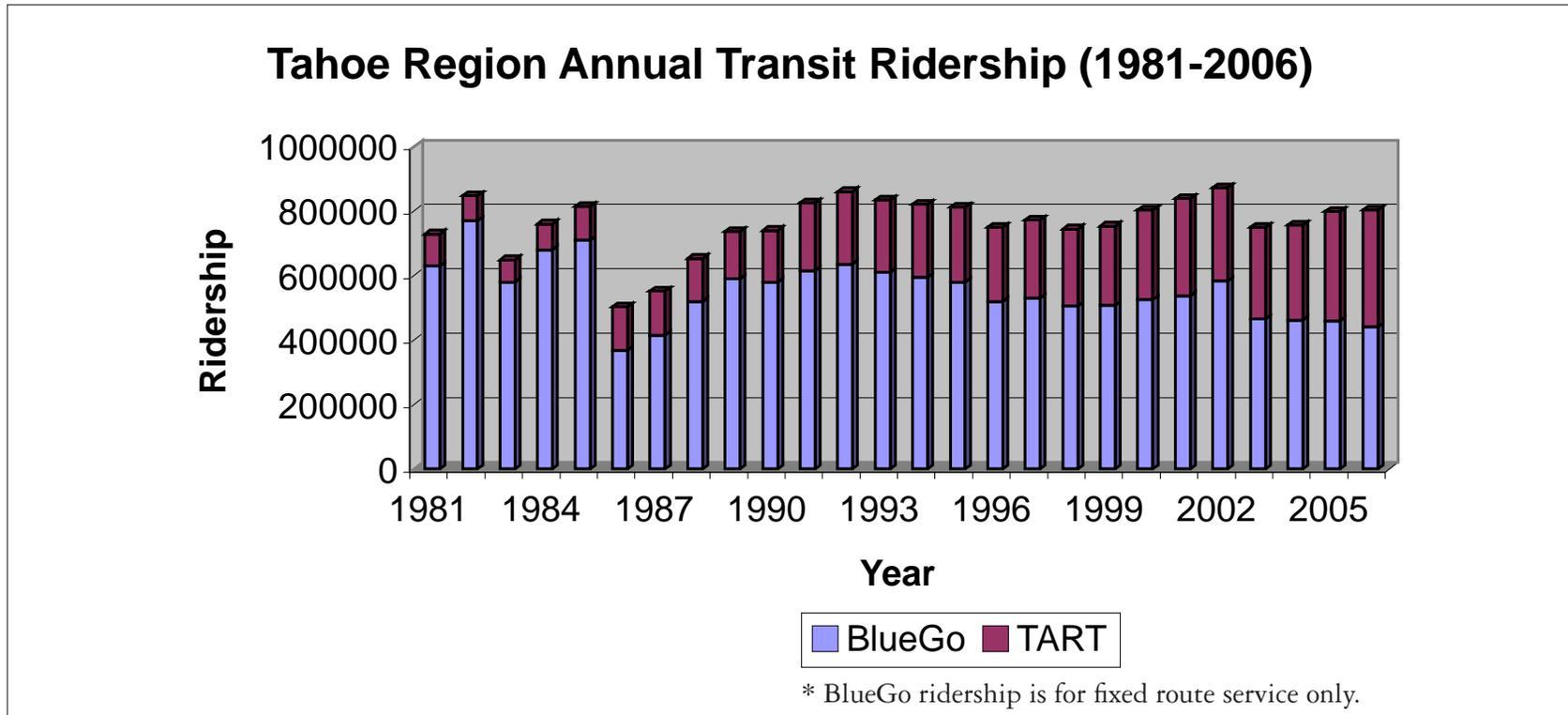


Figure 1.21

<b>Tahoe Region Transit Services Operating Characteristics</b>				
	<b>Ridership</b>	<b>VSH / Frequency</b>	<b>Fleet Size</b>	<b>Operating Costs</b>
<b>Local Public Transit Services (FY 06-07)</b>				
TART/ Trolleys	363,372/year	19,289	14	\$ 1,700,000
Truckee Transit	76,491/year	4824	9	\$ 364,744
Truckee DAR	N/A	N/A	N/A	\$ 204,076
*BlueGo	831,384/year	82,207	42	\$ 3,400,000
Squaw Creek Valley Shuttle	N/A	Depends on Season	4	N/A
<b>Skier Shuttles</b>				
Alpine	3,403/year	15 runs/day	3	\$35/ hour
Diamond Peak	110 /day in season	N/A	N/A	N/A
Homewood	N/A	N/A	N/A	N/A
Northstar Reno/South Shore Skier Shuttle	N/A	1 roundtrip/day	3	N/A
Sierra-at-Tahoe	N/A	4-5 runs/day	N/A	N/A
<b>Squaw Valley</b>				
South Shore	3,964	2 runs/day	1	N/A
Reno	5,600	2 runs/day	1	N/A
North/West Shore	19,122	4 runs/day	1	N/A
<b>Sugar Bowl</b>	3,102	hourly headways		\$35/ hour
<b>Employee Shuttles</b>				
Northstar/Alpine/Squaw - Reno Shuttle	326	1 round-trip/day	1	\$52/hour
Resort at Squaw Creek Reno Shuttle	15-20 pax/day	2 runs/day	2	\$43/hour
Sugar Bowl	N/A	4 runs/day	3	N/A
<b>Waterborne Transit</b>				
Tahoe Queen Winter Ski Shuttle	2,900/season	3 days/week	1	\$25/passenger
South Shore Water Shuttle	N/A	6 round-trips/day	N/A	N/A
<b>Airport Shuttles</b>				
Resort at Squaw Creek	N/A	10 runs/year	varies	N/A
No Stress Express	2-5 pax/day	N/A	N/A	N/A
South Tahoe Express	N/A	14 round-trips/day	N/A	N/A
Tahoe Casino Express	283 pax/day	N/A	N/A	N/A

Source: Transit Agencies and Resorts; Access to Jobs Transit Service Implementation Plan: Reno-Truckee-North Tahoe (LSC, 2004)  
 • BlueGo ridership includes fixed-route, trolleys, Heavenly shuttles, casino shuttles, flex-route and door-to-door services.

**Figure 1.22**



\*Note: There are other North Shore Transit services available which are not captured in Figures 1.23 and 1.24.

	North Shore	West Shore	Truckee	Nevada	Trolley CA	Trolley NV	TOTAL
July 06	16,170	3,481	3,532	6,102	9,932	1,467	40,684
August	16,418	3,490	4,142	5,863	10,211	1,268	41,392
September	12,494	2,429	3,703	4,797	1,167	111	24,701
October	10,814	1,929	3,453	3,981	0	0	20,177
November	9,049	1,760	3,306	3,327	0	0	17,442
December	13,927	4,390	9,887	3,746	0	0	31,950
January 07	17,173	6,505	13,040	4,479	0	0	41,197
February	15,385	5,192	10,785	3,754	0	0	35,116
March	16,344	4,844	10,711	4,199	0	0	36,098
April	11,703	2,464	5,366	3,686	0	0	23,219
May	12,392	2,283	4,214	4,421	0	0	23,310
June 07	14,807	2,830	4,352	5,240	706	151	28,086
Total	166,676	41,597	76,491	53,595	22,016	2,997	363,372

Figure 1.23\*

Fiscal Year	North Shore	West Shore	Truckee	Nevada	Trolley CA	Trolley NV	TOTAL
1999-2000	133,549	35,077	33,020	37,290	6,468	1,357	246,761
2000-2001	143,823	33,431	40,267	44,485	14,397	1,110	277,513
2001-2002	156,720	31,180	48,139	47,013	17,039	1,305	301,396
2003-2004	145,807	35,396	46,477	42,719	17,029	1,680	289,108
2004-2005	147,474	30,428	47,279	41,750	17,115	1,735	285,781
2005-2006	148,567	33,351	49,172	41,965	16,711	3,049	292,815
2006-2007	166,676	41,597	76,491	53,595	22,016	2,997	363,372

Figure 1.24\*

Year	Fixed Route			Demand Response				Total
	South Lake Tahoe		Trolley Heavenly	South Lake Tahoe	El Dorado County	Douglas County	Casino Shuttles	
	Tahoe	Trolleys		Tahoe	County	County	Shuttles	
2003	465,663	30,167	487,415	17,977	27,113	9,579	184,634	1,222,548
2004	462,455	30,167	400,454	17,769	27,741	10,232	175,007	1,123,825
2005	460,225	21,634	449,630	18,310	29,328	14,761	166,278	1,160,166
2006	440,685	28,315	446,324	14,896	25,575	18,971	74,140	1,048,906
2007	365,456	42,003	325,159	11,393	21,477	19,002	46,894	831,384

Figure 1.25

# CHAPTER 2: GOALS AND POLICIES

The Objectives, Goals and Policies presented will assist in guiding TMPO and TRPA (acting solely as the RTPA in California) policy and funding actions. These goals and policies have been developed through technical and public working groups and represent a comprehensive package that will result in attaining the regional transportation vision and desired conditions. The Goals and Policies presented represent the guidance of the Tahoe Regional Planning Compact, and federal and state of California transportation planning requirements.

## Primary Objectives of the Regional Transportation Plan

- Fulfill the requirements of the Tahoe Regional Planning Compact (Public Law 96-551)
- Attain and maintain the Environmental Threshold Carrying Capacities, federal, state, and local transportation standards
- Design and invest in community mixed-mode facilities, providing walkable and transit-friendly opportunities
- Establish a safe, secure, efficient and integrated transportation system that reduces reliance on the private automobile, by investing in alternative modes that serve the basic transportation needs of the citizens of the Tahoe Region
- Support the economic vitality of the region by building and maintaining an efficient system allowing the movement of goods and people while minimizing adverse impacts on the environment
- Organizational structures and processes relevant to transportation and transit operations and governance shall be designed to facilitate the implementation of the Regional Transportation Plan, the goals of the Compact and the integration of the transportation system with land uses
- It is the goal of the Regional Transportation Plan to research, plan, and coordinate potential mitigation activities and funding sources with the Environmental Improvement Program (EIP)



## The Compact

According to the Tahoe Regional Planning Compact (Public Law 96-551), the goal of transportation planning shall be to reduce dependency on the automobile, and to give preference to providing increases in capacity on the Region's transportation system through public transportation projects and programs. The Compact also requires a transportation plan for the region that provides for the integrated development of a regional transportation system.

Under the latest federal transportation bill, SAFETEA-LU, the TMPO "shall provide a continuous, cooperative, and comprehensive transportation planning process and provide for the consideration and implementation of projects, strategies and services that will address the following planning factors:"

- Support economic vitality of the area, especially enabling global competitiveness, productivity and efficiency;
- Increase the safety and security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility options available to people and freight;
- Protect and enhance the environment, promote energy conservation and improve quality of life;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system.

The plan must also reflect the ideals and visions expressed by the public through the place-based workshops, the technical working group, the pathway forum, and other stakeholder input. The seven primary objectives and twelve goals of the RTP are consistent with SAFETEA-LU, statewide planning factors, the Compact, place-based planning workshops, and the forum. The goals and policies of the RTP are presented on the following pages.

## Performance Indicators

Consistent with Title 23, CFR 450.322, Regional Transportation Plans must incorporate performance measures to gauge the performance and fulfillment of the RTP and its Goals. As part of the Pathway and Regional Transportation Plan update, the following performance indicators were developed to directly support the two desired condition statements concerning general mobility, socio-economic vitality and the environmental impacts of the transportation system:

### Desired Condition 1: Mobility/Socio-Economic Vitality

A multi-modal transportation system that promotes viable alternatives for mobility needs, encourages alternative mode use, and decreases dependency on the automobile.

### Mobility/Socio-Economic Performance Indicators

#### Usage

1. Travel mode to recreation sites.
2. Travel mode to commercial core areas.
3. Travel mode within and into the Lake Tahoe Region.

#### Access

1. Transit, bicycle and pedestrian access to recreation facilities.
2. Commercial core areas meeting Transit-Orientated Development (TOD) standards.
3. Overnight population (resident and visitor) served by transit, bicycle and pedestrian facilities.

### Desired Condition 2: Environmental Impacts

The transportation system is integrated with environmental goals in conjunction with the TRPA threshold areas as part of the TRPA Regional Plan. TMPO will coordinate with TRPA resource managers to provide feedback and assist with monitoring and analyzing data collected involving the transportation system.

### Environmental Performance Indicators

1. Vehicle Miles Traveled (VMT).
2. Traffic Volumes.



# Pedestrian and Transit-Oriented Development (PTOD)

## Goal

Plan for and promote land use changes and development patterns consistent with the Regional Plan, encouraging walkable, mixed-use centers and supporting transportation enhancements and environmental improvements that improve the viability of transit systems.

## Policies

- A. Mixed-use development strategies are encouraged to be required at key locations around existing and planned transit stops in redevelopment areas.
- B. Promote redevelopment that encourages walking, bicycling and easy access to transit stops.
- C. Redevelopment is encouraged to employ shared (bundled) parking and other parking management strategies for mixed-use centers where shared parking is managed at a district scale and not site-by-site. There may be a combination of both off-street and on-street parking reinforcing the pedestrian nature of mixed-use centers.
- D. Provide economic incentives to redevelopment areas encouraging mixed-use development, transit and parking incentives, walking and bicycling facilities. These incentives include, but are not limited to: minimum and maximum parking standards, and grants to help pay for transit, sidewalk and bicycle facility construction.
- E. Site planning and design will seek to emphasize transit, walkability and pedestrian-friendly features and respond to a variety of site conditions and context.
- F. Creation of a “park once” environment is encouraged allowing access to local services thus reducing trip generation for errands and other activities and encouraging residents and visitors to use transit for trips within the basin.
- G. Redevelopment is encouraged to make use of existing transportation facilities. At priority locations, facilities should be expanded and encouraged with appropriate economic incentives.
- H. PTOD sites are recommended to be designed with sensitivity to the local context and honoring the difference in scale between the North Shore and South Shore.





### Existing

- Discontinuous or non-existent sidewalks
- Lack of marked bicycle lanes
- Lack of on-street parking for pedestrian safety
- No dedicated transit lanes
- Extensive non-shared parking
- Single-use buildings
- Lack of mid-block crosswalks or bus stops
- No curb extensions or bulb-outs
- No continuous building walls or retail edge, creating dead space
- Lack of screening for parking



### Desired

- Shared parking
- Redeveloped mixed-use structures
- Increased housing density within walking distance of commercial services
- Diversity of housing types including rental and owner-occupied units
- Community - neighborhood services building
- Mixed-use structures with ground-floor retail/office with residential units above
- Additional street trees in curb cuts and bulb-outs
- Parking screened from streets (behind structures)
- Structured vehicle parking within building below grade
- On-street parking where appropriate
- Pedestrian friendly side-streets
- Transit stops
- Pedestrian walkways and bike lanes
- Ground-floor retail with residential above

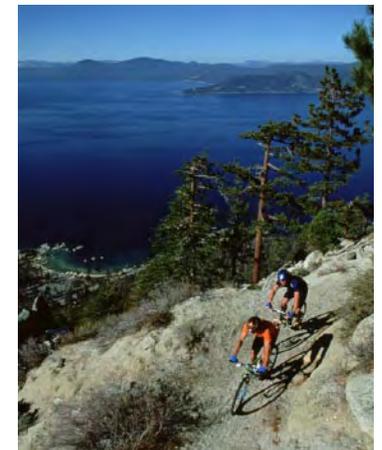
# Pedestrian & Bicycle Friendly Communities

## Goal

Design an atmosphere that encourages bicycle and pedestrian usage as a viable and significant mode of transportation at Lake Tahoe.

## Policies

- A. The RTP and Lake Tahoe Region Bicycle and Pedestrian Master Plan (Bike/Ped Plan) shall contain a list of existing and proposed bicycle and pedestrian facilities and policies for the development of any new bicycle/pedestrian facilities in the Lake Tahoe Region.
- B. Pedestrian and bicycle facilities consistent with the RTP and Bike/Ped Plan shall be constructed, upgraded and maintained.
- C. There shall be a high priority on constructing pedestrian and bicycle facilities in urbanized areas and in areas that increase connectivity of the bicycle network.
- D. Commercial and residential development and redevelopment shall promote pedestrian and bicycle access equal to or greater than private vehicle access.
- E. Bicycle storage capacity shall be increased at commercial and recreational areas, transit centers, lodging properties and government buildings.
- F. Intersections and driveways shall be designed and sited to minimize impacts on public transportation, adjacent roadways and intersections, and conflicts with bicycle and pedestrian facilities.
- G. Projects funded all or in part with TMPO administered funding shall include the accommodation of bicycle and pedestrian facilities in the earliest stages of project development. The TMPO shall not release funds for projects that do not show accommodation of bicycle and pedestrian needs.
- H. Bicycle and pedestrian linkages shall be provided between residential and non-residential areas.
- I. Maintenance policies for bicycle and pedestrian facilities should reflect usage and consider maintaining routes to allow for year-round use of the facilities where appropriate.
- J. Promote the incorporation of programs and policies of the Bike/Ped Plan into regional and local land use plans and regulatory processes.
- K. Safety awareness signage, road markings and educational programs, as well as programs that encourage bicycling and walking, shall be implemented where appropriate.

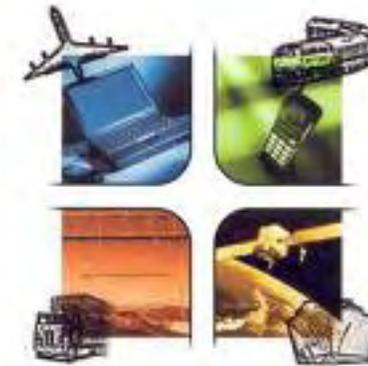


## Goal

The utilization of Intelligent Transportation Systems (ITS) technology shall be considered and implemented, and technology should be used to increase usage of alternative modes.

## Policies

- A. Develop and maintain real-time information services available on changeable message signs, via the internet and over the telephone for road conditions, transit services, and bicycle routes.
- B. Electronic and automated payment systems shall be investigated and implemented for transit systems and parking areas.
- C. Consider implementation measures consistent with the Tahoe Basin ITS Strategic Plan, including Traffic Management, Traveler Information Services and Emergency Management Techniques.



## What is ITS?

*ITS improves transportation safety and mobility and enhances productivity through the use of advanced communications technologies.*

Intelligent transportation systems (ITS) encompass a broad range of wireless and wire line communications-based information and electronic technologies. When integrated into transportation system infrastructure, and included in vehicles themselves, these technologies can help monitor and manage traffic flow, reduce congestion, direct road users to alternate routes when necessary, enhancing productivity, saving lives, time and money. The Lake Tahoe Region is uniquely positioned for the utilization of ITS technologies to better manage the existing transportation network while not increasing roadway capacity.

For an overview of ITS applications, please visit:  
<http://www.itsoverview.its.dot.gov>.

## ITS Newsletter

The graphic features a map of the Tahoe Basin on the left, a 'STOP ONE WAY' sign at the top center, and two text sections on the right. The first section, 'ITS Benefits and Successes', lists: 'Reductions in vehicle emissions and fuel consumption', 'Time savings', 'Accident reduction', 'Improved transit customer services and', and 'Enhanced roadway capacity'. The second section, 'How Was the Plan Developed?', lists four phases: '1. GATHER INFORMATION TO DEVELOP AN UNDERSTANDING OF EXISTING TRANSPORTATION CONDITIONS, DEFICIENCIES, AND OPPORTUNITIES.', '2. DEFINE THE OVERALL ITS VISION, AS WELL AS THE TYPE OF ITS APPLICATIONS THAT MAY BE APPROPRIATE FOR THE TAHOE BASIN.', '3. FURTHER DEFINE SPECIFIC ITS STRATEGIES, AS WELL AS THE FRAMEWORK OR "ARCHITECTURE" THAT WILL ENSURE INTEGRATION AND COORDINATION OF THESE APPLICATIONS.', and '4. PREPARE THE STRATEGIC PLAN DOCUMENTATION AND A FORMAL OUTREACH PROGRAM, INCLUDING PRESENTATIONS TO INTEREST GROUPS, PUBLIC WORKSHOPS AND A PROJECT WEBSITE.' The background of the right side is a light blue circle.

# 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.



## Mobility

Mobility was an important regional planning theme that emerged from both the local community and public lands workshops. Participants stressed a need for flexible transportation systems with choices for residents, visitors, and employees during both peak and off-peak seasons; providing an opportunity to generate significant environmental improvements. On a regional scale, several elements must be considered to make improved mobility a reality.

- Improve the convenience and frequency of transit services
- Provide transit services to recreation sites, trailheads and bike trails
- Improve Washoe Tribe access/mobility options

# Inter-Intra Regional Transportation

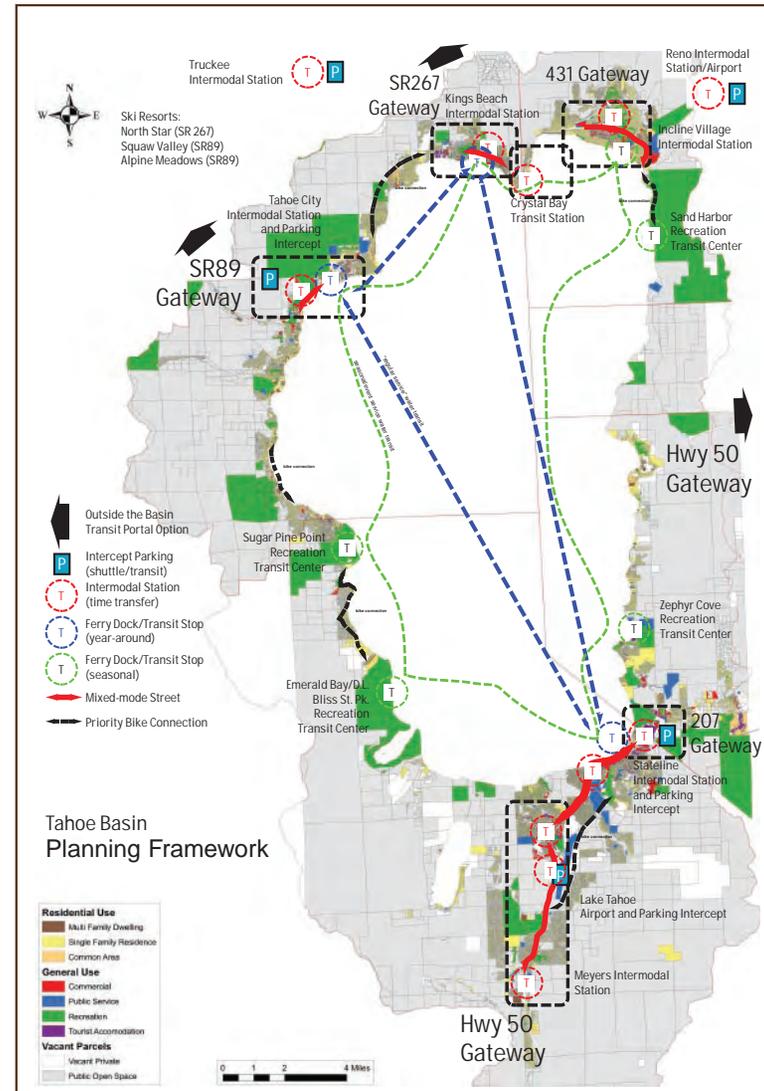
## Goal

Strengthen inter- and intra-regional transportation options into the Lake Tahoe Region that reduce dependency on the automobile.

## Policies

- A. Participate in state and local transportation planning efforts to ensure coordination and consistency in the transportation system, and to strengthen linkages of both inter and intra-regional transportation.
- B. Transit service shall be expanded to cities, towns, and recreational areas outside of the Tahoe Region, and be coordinated with other transportation modes.
- C. Work with appropriate public entities, tribal governments, and private interest groups in the region to ensure coordination and consistency in transportation planning efforts.
- D. Implement the recommendations of the Interregional-Intraregional Transit Study, including the South Shore and Incline Vanpool Program, North Shore Shuttle Service, Summer Lake Lapper and South Shore –Sacramento Bus Service.
- E. Actively support Transportation Management Associations (TMAs) in the Tahoe Region.
- F. Work with organizations (including the Lake Tahoe Transportation and Water Quality Coalition) that advocate and facilitate public-private partnerships, new sources of funding, and seek coordination among various transit operators and providers for the benefit of improved transportation in the Lake Tahoe Region.
- G. Encourage clean waterborne transportation systems as an alternative to automobile travel within the Region. Coordinate waterborne services with, and provide access to, other public and private transportation systems.

- H. Actively encourage the proposed extension of the Capital Corridor intercity rail service between Auburn, Truckee-North Lake Tahoe and Reno and other intercity rail or high capacity transit services, including such services along the Highway 50 corridor between Sacramento and South Lake Tahoe.



Note: The graphic on page 43 shows waterborne routes proposed in the 2007 Waterborne Transit Site Selection Study.

# Economic Vitality

## Goal

Support the economic vitality of the region by preserving and enabling an efficient system to move people and goods.

## Policies

- A. Develop and track measures of economic vitality related to transportation i.e. traffic and pedestrian counts, employment, hotel-motel occupancies, and other visitation trends.
- B. Develop a fully-integrated, multi-modal transportation system to serve as a catalyst for attracting business and employment opportunities for both current and future residents of the Tahoe Region.
- C. Influence land-use policies to improve access to jobs, services and housing by using market forces and the regulatory process.
- D. Enhance the economic vitality of the Tahoe Region by efficiently connecting people to jobs, goods, services and other communities.
- E. Support public-private partnerships and business improvement districts for planning, financing, and implementation of transportation and air quality programs and projects.



# Parking

## Goal

Develop parking management strategies for the Lake Tahoe Region.

## Policies

- A. Encourage parking management programs that provide incentives to fund improvements benefiting transit users, pedestrians, and bicyclists.
- B. Encourage parking management that recognize: minimum and maximum parking standards, payment in-lieu strategies, shared parking between uses, on-street parking, parking along major regional travel routes, handicapped-disabled parking, bicycle parking and the implementation of localized parking management programs that focus on transit, bicycle, and pedestrian improvements.
- C. Coordinate with business community and key stakeholders in the development and implementation of any parking management strategy or other potential sources of basin-wide local funding.



# Transportation Demand Management

## Goal

Manage (and respond to) transportation demand through traffic management plans.

## Policies

- A. Encourage employers to implement vehicle trip reduction programs, including but not limited to: carpool and vanpool matching programs, employee shuttles, on-site secure bicycle storage and shower facilities, flexible work hours, parking and transit use incentives.
- B. The TMPO shall facilitate the TMA's coordination of Chapter 97 (Employer-Based Trip Reduction Program) of the TRPA Code of Ordinances.
- C. The TMPO working with the TRPA shall require the development of traffic management plans consistent with temporary seasonal activities. These management plans shall account for the coordination and timing of other activities that may occur simultaneously.



# Regional Roadways

## Goal

Upgrade regional roadways as necessary to meet environmental requirements and objectives, improve safety, address community design objectives, and provide for a more efficient, integrated transportation system.

## Policies

- A. Roadway projects designed to correct hazardous roadway conditions shall be encouraged, provided such projects are restricted to needed safety improvements.
- B. Transportation system management (TSM) measures (such as dedicated turn lanes, intersection improvements, signal synchronization, etc.) shall be used to improve the efficiency and safety of the existing transportation system.
- C. Intersection improvements required to upgrade existing levels of service including lane re-striping, turn lanes, roundabouts and signal synchronization shall be implemented when warranted.
- D. View turn-outs should be provided along scenic highways to maintain traffic flow and improve safety.
- E. Traffic conflicts shall be reduced by limiting or controlling access to major regional travel routes and major local roadways. Driveways shall be designed and sited to minimize impacts to regional traffic flow and safety.



# Transit-Dependent Groups

## Goal

Improve the mobility of the elderly, handicapped, traditionally under-represented and under-served populations and other transit-dependent groups.

## Policies

- A. Provide specialized public transportation services with subsidized fare programs for transit, taxi, demand response and accessible van services.
- B. Ensure that transit and pedestrian facilities, including transit shelters, vehicles, sidewalks and shared-use paths, as well as all new public developments are consistent with the TMPO Coordinated Human Services Transportation Plan.

### Goal

Air service will be encouraged and maintained to the extent that it increases mobility and public safety and security without compromising environmental thresholds.

### Policies

- A. The Airport Master Plan/Settlement Agreement shall be updated.
- B. Aviation facilities within the Tahoe Region shall be limited to existing facilities.
- C. Expansion of aviation facilities shall be limited to service levels identified in an updated TRPA approved Airport Master Plan.

### Goal

Develop on-going sources of regional revenue to fund the local share of transit, bicycle, and pedestrian and other non-auto-transportation improvements, operations, and maintenance.

### Policies

- A. Research and pursue sources of regional revenue such as parking fees, and other sources of local or regional revenue.
- B. Recognize that the success or failure of many transportation systems is linked to local/regional funding sources, particularly for transit operating subsidies.
- C. Acknowledge that appropriate local/regional funding mechanisms are bound by legislative and legal constraints that are solved at the local jurisdictional level.



# CHAPTER 3: STRATEGIES & ACTIONS



Mobility 2030 is based on project and program implementation. Previous planning efforts have included a laundry list of projects that diluted the importance of planning efforts versus actual achievements. An important characteristic of Mobility 2030 is the evolving nature of the Tahoe Region's demographics and economics. A significant change has taken place in the proportion of year-round residents and visitors due to economic forces. Shrinking

federal, state, and local budgets, have forced the Tahoe Region to channel funding into projects and programs that have been discussed, planned, and analyzed for many years.

A strategy development scheme was developed and is illustrated in Figure 3.1 on Page 36. The strategy development scheme is based on the goals and policies of Mobility 2030, guided largely by SAFETEA-LU requirements (Title 23 CFR 450.322(b)) for developing both short and long-range strategies. Mobility 2030 has identified six regionally significant projects as defined in 23 CFR 450.104, that in many cases have had significant review in terms of preliminary planning, public review, environmental documentation, preliminary design, and programmed funding. The TMPO intends to focus its short-term energies into bringing these projects to fruition. See pages 38-43 for project descriptions.

The programmatic strategies are anticipated as long-term and on-going mechanisms that will mature as project planning, environmental clearance, design, and funding become available.



It should be noted that no cost estimates were developed for the land use/redevelopment programmatic strategy-action element. The discussion of this document is provided to help establish standards for future development and redevelopment efforts and to build a relationship with transportation development.

Cost estimates, project objectives, geographic locations and the anticipated completion dates for all of the Mobility 2030 Strategies can be found in Figure 3.7 on pages 54 -55.

## Tahoe Metropolitan Planning Organization - Mobility 2030 Strategy - Action Development Framework

### RTP Project Strategies (Short-term)

U.S. 50 Bicycle & Pedestrian Improvements Project  
 U.S. 50 Stateline Corridor Project  
 Fanny Bridge / SR 89 Realignment Road Improvement Project  
 SR 28 / Kings Beach Commercial Core Improvement Project  
 Tahoe City Transit Center  
 Lake Tahoe Waterborne Transit

### RTP Programmatic Strategies (Long-term, Ongoing)

#### TRANSIT ENHANCEMENTS

BlueGO  
 TART  
 Inter-Intra  
 Aviation

#### BICYCLE/PEDESTRIAN CONNECTIONS

Bike Facilities  
 Pedestrian Facilities

#### COMPLETE STREETS

Multi-Modal Facilities  
 Parking  
 Operations & Maintenance  
 ITS

#### ENVIRONMENTAL STORMWATER

Roadways-  
 Erosion Control

#### LAND USE REDEVELOPMENT

PTOD  
 Economic

Figure 3.1

## Tahoe Metropolitan Planning Organization - Mobility 2030 Strategy Development Costs

RTP Project Strategies - Actions	Project Costs
U.S. 50 Pedestrian & Bicycle Improvement Project	\$48,000,000
U.S. Highway 50 Stateline Corridor Project	\$65,000,000
Fanny Bridge / SR 89 Realignment Road Improvement Project	\$50,000,000
SR 28 / Kings Beach Commercial Core Improvement Project	\$50,000,000
Tahoe City Transit Center	\$7,000,000
Lake Tahoe Waterborne Transit	\$14,000,000
<b>Total Costs</b>	<b>\$234,000,000</b>

RTP Programmatic Strategies - Actions		BIKE/PED CONNECTIONS	ANNUAL COSTS (I)
<b>TRANSIT ENHANCEMENTS</b>	<b>ANNUAL COSTS (I)</b>	Bike/Ped Projects (5)	\$3,937,704
Inter-Intra (1)	\$270,000	<hr/>	
Aviation (2)	\$2,300,000	<b>ENVIRONMENTAL STORMWATER</b>	<b>ANNUAL COSTS (I)</b>
TART (3)	\$1,094,300	WQ Roadways- (State) (6)	\$28,907,869
BlueGO (4)	\$15,813,400	WQ Roadways- (Local) (6)	\$12,457,881
<b>Total Costs</b>	<b>\$19,477,700</b>	<b>Total WQ Roadways</b>	<b>\$41,365,750</b>
		<hr/>	
		<b>COMPLETE STREETS</b>	<b>ANNUAL COSTS (I)</b>
		ITS/O&M/Parking (7)	\$960,652

Note (I) Annual Costs include Capital and Operations/Maintenance

Sources: (1) Table 56; 64 TIITS. LSC 2006 (4) BlueGo CBSRTP (2008-2013)  
 (2) TVA ACIP (5) 2004 RTP Bike/Ped Element  
 (3) Table 47, Table 48 TART Systems Plan, LSC, 2005 (6) Draft TRPA EIP Update Phase II  
 (7) Tahoe Basin ITS Plan

Figure 3.2



*The Tahoe Regional Planning Agency cooperatively leads the effort to preserve, restore and enhance the unique natural and human experience of the Lake Tahoe region now and in the future.*

**LEAD AGENCY:**

City of South Lake Tahoe

**FUNDED:**

Phase I Funded:  
\$19.6 Million

**ESTIMATED COST:**

\$48 Million



# U.S. Highway 50 Pedestrian & Bicycle Improvements Project



## Overview

U.S. Highway 50 is South Lake Tahoe's Main Street and functions as a primary artery for vehicles, pedestrians, and bicycles. The U.S. 50 Phase I Improvement Project goal is to improve the character of the highway by making the corridor pedestrian and bicycle friendly while meeting ADA-standards. The project will include landscaping and lighting to create a more aesthetic section of roadway. The Lake Tahoe Region has secured \$19 million dollars for a 2 mile stretch to provide the desired amenities through local STIP and other funding sources. An additional 3 miles of U.S. 50 through South Lake Tahoe's commercial corridor are targeted for similar treatment and leaves the second phase of the project with an unfunded need of \$36 million.

## Project Goals

- Widen roadway, allowing the installation of Class II bike lanes for commuters and more serious cyclists that currently use the highway shoulders.
- Where space permits, build meandering multi-use paths to be shared by cyclists and pedestrians.
- Install sidewalks with curbs where right-of-way is limited.
- Improve street frontage with continuous landscaping, lighting, street furniture, etc.

## Timeline

Caltrans is proceeding with SHOPP funding in 2009 to complete water quality and crown reduction work. No resources are available to include the bike, pedestrian, and landscaping amenities throughout much of the highway sections. Efforts are ongoing to acquire funding that includes this additional work into the Caltrans water quality projects.





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**LEAD AGENCY:**

Tahoe Transportation District

**FUNDED:**

Project Study Report and Environmental Documentation

**ESTIMATED COST:**

\$65,000,000



# U.S. Highway 50 Stateline Corridor Project



## Overview

U.S. 50 plays a vital role in moving people and goods through the Stateline, NV/South Lake Tahoe, CA corridor. During peak travel times, the corridor becomes congested and does not provide safe conditions for motorists, transit riders, bicyclists, or pedestrians. A major aspect of the proposed project would be to increase the capacity of the sidewalks and increase the amount of landscaping and street furnishings adjacent to the existing roadway.

Currently, U.S. 50 is four-lanes with a center turn lane that provides access to redevelopment in California and travel to the Stateline, NV region and beyond. Traffic volumes peak in July with approximately 124 percent of the annual average. Winter weekend travel may reach 1,550 vehicles per hour, while the summer weekends often exceed 1,650 vehicles per hour. Pedestrian and bicyclist facilities are limited and do not accommodate the heavy volume of traffic.

## Project Goals

- The proposed project realigns U.S. 50 and spans South Lake Tahoe, CA and Stateline, NV. Lake Parkway would be expanded to accommodate traffic through the area. The roadway would be designated as U.S. 50 and would provide two travel lanes in each direction, with turn pockets at major intersections and driveways. The converted U.S. 50 would include two eastbound lanes, a single two-way transit lane, and expand upon bicycle and pedestrian facilities.
- The primary goal is to improve mobility while balancing transportation needs with community goals of economic vitality and environmental preservation.

## Timeline

A Caltrans Project Study Report is currently being developed with accompanying environmental documentation preliminary design and engineering to follow.



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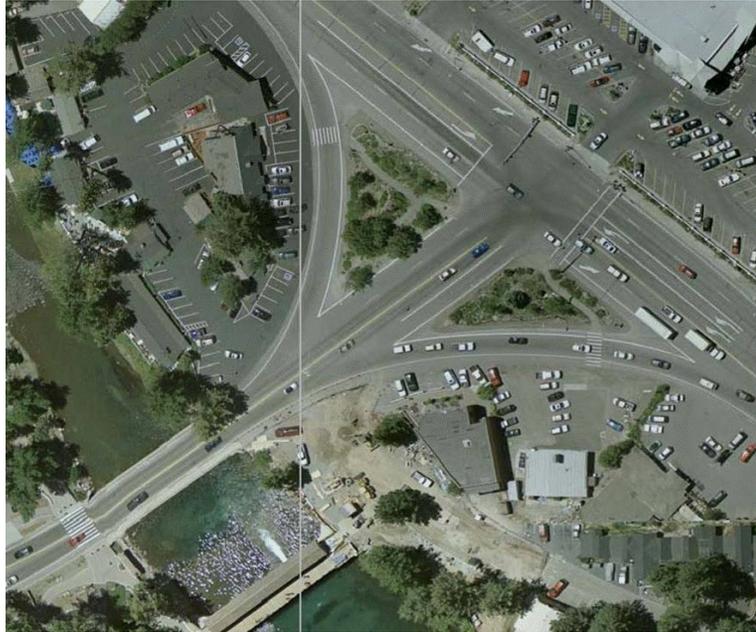
**LEAD AGENCY:**  
TRPA

**FUNDED:**  
TBD

**ESTIMATED COST:**  
\$50 Million



## Fanny Bridge / SR 89 Realignment Project



### Overview

State Routes 89 and 28 in Tahoe City, CA on the North Shore of Lake Tahoe meet at a signalized intersection. It is a congestion node between the popular destinations of Kings Beach, Truckee, the West Shore, and South Lake Tahoe. South of the intersection is a two-lane vehicular bridge known as Fanny Bridge that attracts pedestrians viewing the Truckee River. The park at Fanny Bridge is a popular community and visitor congregation area with numerous businesses, bicycling, rafting, and wildlife viewing at the river outlet.

The project addresses traffic congestion from excess roadway capacity during the summer months, the structural deficiencies requiring seismic retrofit within the next ten years, and the planned transit and parking facility south of Fanny Bridge. Fanny Bridge will be upgraded to provide improved

pedestrian and bicycle safety and access. Traffic congestion will be addressed with a wider Fanny Bridge and/or a new SR 89 realignment through the 64-acre USFS parcel located west of the existing SR 89.

### Project Goals

- Coordinate with planned transit facility design so access points and other improvements are appropriately linked between both projects.
- Construct water quality treatment facilities for all project improvements that meet regulatory requirements to the maximum extent practicable.
- Improve traffic flow and level of service through the Fanny Bridge area.
- Construct roadway/bridge improvements to reduce traffic congestion.
- Improve access and construct dedicated bike lanes.
- Construct bridge under-crossings or over-crossings for pedestrians.

### Timeline

A Project Study Report is anticipated to be complete once funding has been acquired.



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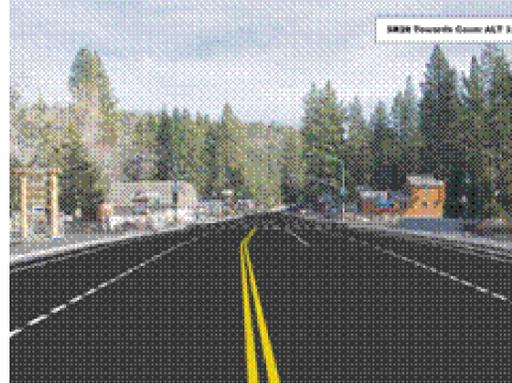
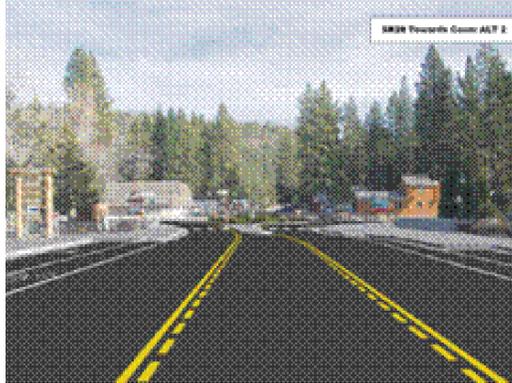
**LEAD AGENCY:**  
Placer County

**FUNDED:**  
\$24 Million

**ESTIMATED COST:**  
\$50 Million



## State Route 28 / Kings Beach Commercial Core Improvements



### Overview

Kings Beach, CA is located on the North Shore of Lake Tahoe and has developed without consistent frontage improvements along SR 28. It is the largest urban/commercially developed area on the North Shore. State Route 28 is the major community thoroughfare with four lanes connecting California and Nevada. The State Route is in close proximity to the shore of Lake Tahoe, much of it within 200 feet of the lake. There are minimal water quality treatment facilities or storm water drainage controls along the 1.1 mile stretch of SR 28 through Kings Beach. Few features exist for safe pedestrian and bicycle mobility.

### Project Goals

- Improve and construct water quality treatment facilities to meet TRPA and Lahontan Regional Water Quality Control Board effluent limits for target pollutants.
- Improve bicycle mobility by constructing facilities and dedicated bike lanes.
- Improve pedestrian mobility by constructing facilities and sidewalks for pedestrians.

- Improve the scenic and aesthetic character of the Kings Beach Commercial Core.
- Provide streetscape elements, lighting, transit stops, street furniture, etc.
- Enhance safety with planned parking and provide an additional pedestrian crossing on SR 28.

### Timeline

The environmental document was certified by the TRPA Governing Board in June 2008. Construction could begin as early as 2009 with project completion anticipated for 2012.



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**LEAD AGENCY:**  
Placer County

**FUNDED:**  
\$3 Million

**ESTIMATED COST:**  
\$7 Million



## Tahoe City Transit Center



### Overview

A proposed inter-modal transit center is located on the west side of State Route 89 in Tahoe City, south of the intersection of State Route 28 (“Y”). The project will be positioned on approximately 2.5 acres of the U.S. Forest Service 64 Acre Tract.

Currently, Tahoe City does not have an inter-modal transit center and passengers transferring between buses are required to cross SR 89 in Tahoe City near the busy “Y.” Additionally, a designated park-n-ride lot for motorists does not exist.

The inter-modal transit center will serve Tahoe Area Regional Transit buses and other privately operated employee and skier shuttles.

The goal of the project is to enhance opportunities for residents, commuters, and visitors to use public transit services in North Tahoe. This project is consistent with the goals of the Tahoe City Community Plan and the Tahoe Regional Planning Agency Regional Transportation Plan and Environmental Improvement Program.

### Project Goals

- To provide an inter-modal transit center with six bus bays and 130 parking spaces, outdoor covered passenger waiting areas, drop-off areas, bathrooms, bike racks, ski/snowboard racks, and connections to existing trail systems.
- To provide a safe and convenient transit passenger boarding and transfer location.
- To enhance support of transit operations by reducing dependency on private vehicles while alleviating traffic congestion along the roadway corridors on the North Shore.

### Timeline

The environmental phase is complete, project is in the design phase and is expected to start construction in 2009-2010.





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**LEAD AGENCY:**

Tahoe Transportation District

**FUNDED:**

FTA New Starts Alternatives Analysis = \$115,000

SAFETEA-LU Authorization = \$8 Million

**ESTIMATED COST:**

\$14 Million



# Lake Tahoe Waterborne Transit

## Overview

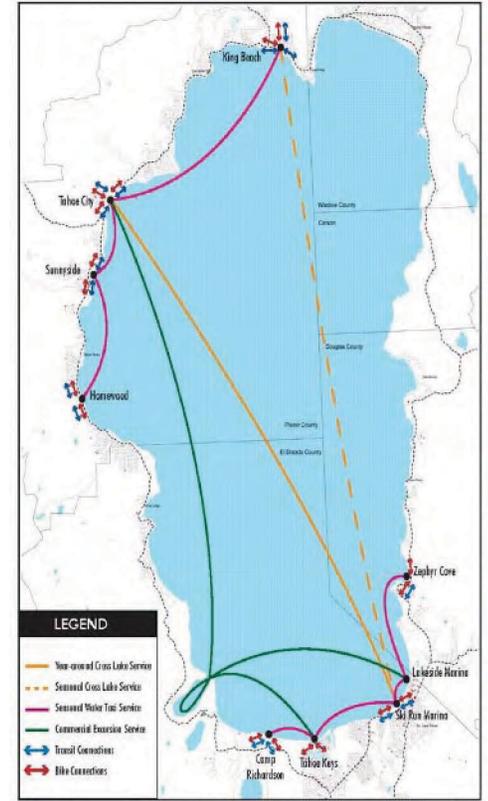
Lake Tahoe has a long history of waterborne transportation connecting the communities along the shore with passenger ferry services. The current transportation plan for the Lake Tahoe Region continues to build on that history. Transportation alternatives free of the delays associated with roadways appeal to residents and visitors. Traffic congestion is consistently rated a chief complaint in recreation user surveys. Using the region’s greatest natural asset, Lake Tahoe, as an element of the region’s transportation infrastructure is a vision that needs to be fully developed.

The public-private Waterborne Stakeholder Committee recognizes the importance of partnerships in implementing waterborne transit across Lake Tahoe. The committee is working to analyze operations, including inter-modal connections to desired destinations, and partnering options for a trans-lake ferry service on-line, creating a new regional asset. The visitor market would see the “enjoy the ride - skip the traffic” value of waterborne transit. It is likely that the “portal to portal” time would be competitive when road construction, peak summer season traffic, road closures, and inclement winter weather delay driving times. Using innovative boating technology that is “clean and green” complements the values inherent in protecting Tahoe’s clarity and provides a transportation option that is environmentally friendly and efficient, provides additional Lake access, and is enjoyable to the user.

## Project Goals

- Enhance regional mobility and support Regional Planning policies.

- Create a transit option that is an attractive alternative to the automobile.
- Offer a transit option that can be initiated in an efficient, environmentally and cost effective manner.
- Provide water transit service that is reliable, safe, and fully accessible.
- Develop terminals that are consistent with local and regional plans.



## Timeline

In 2005 the Tahoe Transportation District was awarded a \$65,000 Federal Transit Administration 5313(b) transit funding grant that included a Ferry Terminal Site Selection Study. Future efforts include developing a Locally Preferred Alternative through the FTA “Small Starts” funding program.

# Regional Transit Enhancement Strategies

The Tahoe Region is served primarily by two publicly operated transit systems. BlueGO operates public transit on the South Shore in cooperation with: the City of South Lake Tahoe, South Shore casino and resort properties, El Dorado and Douglas counties, and Heavenly Ski Resort. On the North Shore, Placer County operates the Tahoe Area Regional Transit (TART). Both systems struggle with inadequate funding for both operations and capital investments. A common concern of both operators is a lack of transit shelters and maintenance of existing shelters, which are considered a critical amenity for riders, especially in the region's extreme weather. Providing adequate transit shelters must be considered a priority for attracting and retaining transit users.



<b>BlueGO Enhancements</b>		Estimated 2008 Annual Cost	<b>BlueGO Service Capital Enhancements</b>		Estimated 2008 Annual Cost
<u>BlueGo Service Operational Enhancements</u>			<u>BlueGo Service Capital Enhancements</u>		
Fixed Route Neighborhood Service		\$1,576,800	Purchase/Replace seven 40-foot buses		\$2,450,000
Fixed Route to Meyers		\$306,600	Purchase/Replace four cut-away vans.		\$560,000
Casino Service Reduced U.S. 50 Headways		\$1,051,200	Purchase/Replace 14 cut-away vans.		\$1,960,000
Nevada Flex Route		\$350,400	BlueGo Maintenance Facility		\$7,000,000
U.S. 50 Fixed Route Reduced Headways		\$788,400	Purchase and Install 20 passenger shelters		\$400,000
<b>Total Operational</b>		<b>\$4,073,400</b>	<b>Total Capital</b>		<b>\$12,370,000</b>
Source: BlueGo CBSRTP (2008-2013)			Source: BlueGo CBSRTP (2008-2013)		

<b>TART Enhancements</b>		Annual Cost	<b>TART Service Capital Enhancements</b>		Total Cost
<u>TART Service Operational Enhancements</u>			<u>TART Service Capital Enhancements</u>		
<b>Mainline Route</b>			<b>TART Fleet Expansion</b>		\$1,405,300
Half-Hourly North Shore Service-Year Round (Incremental)		\$231,600	ADA Van for Service Contractor		\$41,200
Evening Service -Summer All Mainline Until 10 PM		\$39,700	Cabin Creek Facility Improvements		\$50,000
<b>SR 89/ SR 267 Service</b>			Bus Stop Shelters and Benches		\$170,300
Second Winter SR 267 Pk. Period Service (Incremental)		\$50,500	North Stateline Bus Bay		\$21,000
Year-Round All-Day 90 Minute SR 267 Service		\$186,600	Smart Card Fare System		\$300,000
<b>Total Operational Enhancements</b>		<b>\$508,400</b>	<b>Total Capital Enhancements</b>		<b>\$1,987,800</b>
Source: TART Systems Plan; Table 48 LSC, 2005			*Construction of Tahoe City Transit Center Included as Project Strategy		
					\$7,000,000

Figure 3.3

## Inter-Intra-Regional Transit Enhancement Strategies

Connecting existing regional transit services into a viable network and providing convenient transit services to and from urban areas are key objectives that will reduce single occupancy vehicle use trips, and thus overall traffic congestion in the Tahoe Region. Private transit operators provide the majority of intercity and charter bus services within the Basin. The Tahoe casino shuttles, ski shuttles, and private shuttle services all provide important alternatives to the private automobile for both residents and visitors. Future efforts should also include encouraging intercity rail or high capacity transit, such as extending California's Capitol Corridor passenger service from Sacramento and Roseville to Reno. Restoring a rail connection to North Lake Tahoe is being considered, and would require an increase in passenger rail service over the I-80 corridor.

Connections between Truckee and North Lake Tahoe via SR 267 and SR 89 are currently provided by Placer County's TART service. This "Resort Triangle" connection is a critical link for employees and visitors in the Region.

The North Lake Tahoe Express is a good example of the type of inter-regional transit connection providing transit service between Reno-Tahoe Airport, North Lake Tahoe and Truckee. Recently, a direct commuter service between the Carson Valley and South Lake Tahoe (The Kingsbury Express) was initiated to provide transit for commuters from the Gardnerville and Minden areas. Other planned services include connections between Carson City and South Lake Tahoe. Connections to the greater Sacramento area, including the Sacramento International Airport are currently being analyzed.



Another intra-regional transit service, the Summer Lake Lapper Service should be reexamined. As recently as August 1997, average ridership totals (117 passenger trips/day) suggest that during the summer months, the Lake Lapper could provide a strong transit connection between the North and South Shores. Lake Lapper service would also address some of the seasonal parking issues along the east shore and Emerald Bay areas. Based on information contained in the Tahoe Inter-regional/Intra-regional Transit Study (LSC, 2006), the capital and operating requirements for

an 82-day Lake Lapper Summer Service (June 15th – Labor Day) would require an estimated \$240,000 in operational subsidy and \$30,000 in capital subsidy assuming a \$3.00 fare for a one-way trip.

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## Aviation Enhancement Strategies

Although Lake Tahoe Airport experienced declining activity during the 1990s and early 2000s, it has enjoyed both an increase in business and revenue. Business aircraft activity has especially shown strong improvement. Other regional airports, including Reno-Tahoe International Airport, Truckee-Tahoe Airport, and Minden-Tahoe Airport provide complementary service within the Region. Hyphenation in their titles to include “Tahoe” suggests that the future plans for competing service need to be understood in planning for the Region’s overall transportation needs. Airlines consider market viability, and the availability of aircraft and environmental constraints in determining which markets they will serve.

The Lake Tahoe Airport served as a critical base for helicopter fire-fighting efforts during and after the Angora Wildfire of June 2007. Consistent with the SAFETEA-LU planning factors, the City of South Lake Tahoe recently adopted an airport vision statement emphasizing the airport’s economic, transportation, public safety and security importance to the region.

Funding for Lake Tahoe Airport improvements is largely generated through the Airport Capital Improvement Program (AICP), a document leveraging funding from the Federal Aviation Administration (FAA) with local matches from the City’s general fund. Current plans at Lake Tahoe Airport through the AICP include annual improvements averaging approximately \$1.5 million for runway, apron and taxiway rehabilitation projects, and the purchase of snow removal equipment with an estimated \$800,000 for annual operating costs. The City of South Lake Tahoe also recently initiated a project that will reduce impervious coverage and provide for water quality improvements at the airport.



# Bicycle/Pedestrian Connection Strategies



Throughout the Tahoe Region, the current condition of existing bicycle and pedestrian trails and facilities in many locations discourages pedestrian and bicycle activity and encourages vehicle use for even short trips. During the winter months, snow and ice removal occurs infrequently and is a significant issue. The lack of snow removal during the winter months often forces pedestrians to walk immediately adjacent to, or on the highway. On the North Shore, there are pedestrian facilities in Incline Village, Tahoe City, and to a limited extent in Kings Beach. The Tahoe City

sidewalk improvement project, completed in early 2000, was designed to enhance the downtown shopping area and has proven successful. Pedestrian use has estimated to have tripled since the project's completion. On the South Shore, redevelopment efforts at Stateline, NV are a prime example of how vastly improved pedestrian facilities will increase pedestrian activity.

The Tahoe Region has an extensive system of bicycle trails and facilities; however, the system is incomplete and disjointed, lacking connections between neighborhoods and communities. Bicycle trails and facilities range from separated paths (Class I) to bicycle routes (Class II) to shared routes on the roadway (Class III). Pedestrian facilities are located primarily in the urbanized areas of the Basin and include both sidewalks and walkways, which are generally paved and include off-street shared-use paths. However, parts of the trails and sidewalk systems are under-utilized because of the lack of winter maintenance, long crossing distances, and disjointed segments between urban areas. In 2004, The TMPO completed a Bicycle-Pedestrian Element to the 2004 Regional Transportation Plan. This Element is also known as the TMPO Lake Tahoe Region Bicycle and Pedestrian Master Plan (Bike/Ped Plan). The Bike/Ped Plan functions as a stand-alone document and provides guidelines for bicycle and pedestrian planning and identifies priority projects. Priority considerations of the Bike/Ped Plan include the elements shown on pages 54-55.

## Bicycle and Pedestrian Facilities: Constructed and Proposed



**Figure 3.4**

\* Facilities include bicycle paths, lanes, and routes, and sidewalks

# Complete Streets Strategies

Many of the existing urban roadways in the Tahoe Region are incomplete. They are designed to allow a large throughput volume of motor vehicles, but do not provide safe and convenient access to bicyclists, pedestrians, wheelchair users, or transit users. Nationwide, communities, states, and the federal government have adopted or are considering “Complete Streets” policies that require roadway designs that accommodate all users. Complete streets also support communities by providing transportation options that encourage physical activity, and reduce impacts to climate change.”

In Lake Tahoe, a complete street brings people, jobs, and services together and is designed to be efficient, safe, and convenient to travel on by foot, bicycle, transit, or car. Complete streets also should be developed at a scale that is appropriate to specific communities.”

Complete Street strategies can also require that routine roadway maintenance practices are conducted, traffic signals are synchronized and that advanced traveler information system (ITS) applications are provided to inform travelers when roadway construction and congestion occurs.

Typical components that encourage Complete Street development in Lake Tahoe include the following principal strategies:

## Complete Street Components

- Multi-Modal Facilities
- Parking Incentives



- Operations and Maintenance
- Intelligent Transportation Systems (ITS)

## Mult-Modal Facilities

- Projects will provide for the accommodation of all users of the roadway including pedestrians, bicyclists, individuals, seniors, and users of public transportation.
- Where traffic volumes are low pursue “road-diet” lane reduction strategies to open up opportunities for multi-modal transportation.

## Parking Incentives

- Consider both minimum and maximum parking standards and parking in-lieu fees.
- Encourage shared parking and parking in-lieu fees that are economically viable and valuable from several perspectives (i.e. local government, developer, resident, and employer). Encourage shared parking strategies that integrate and enhance, rather than divide a site.
- Recognize the seasonal and peak weekend parking variations that occur when reviewing development and re-development proposals.
- Allow phased parking which transitions from surface lots to podium parking and structured parking that uses land coverage efficiently.



- Acknowledge that providing a parking space comes at a cost and that cost should be transferred to the user.
- Where possible, locate parking to the rear and sides of buildings to keep the transit stops and building entrances oriented to the sidewalk and for pedestrian use. When located along sidewalks parking structures can enhance the public environment with pedestrian-friendly facades. Maximize on-street parking on all roadways including State Routes within PTOD areas.

- Encourage and work with the lodging associations, chambers of commerce, and other groups and agencies to coordinate on regional marketing and advanced traveler information systems that can be broadcast via the internet to hotel and motel rooms, resorts, and other venues.
- Provide incentives to lodging properties that allow guests a later check-out time when conditions for traveling are unsafe.

## Operations and Maintenance Strategies

- Recognize that snow removal on Tahoe Region roadways can be an arduous, costly, and time-consuming task with public health and safety considerations.
- Consider public health and safety when pedestrians and bicyclists are forced to travel within the roadway.
- Work with local jurisdictions to require businesses and property owners to organize themselves either through BIDs (Business Improvement Districts) or Special Districts for snow removal and maintenance of sidewalks, bike trails, and transit shelters adjacent to or fronting their property.



## Intelligent Transportation System (ITS) Strategies

- Encourage the utilization of advanced weather information, roadway changeable message signs, and traffic and parking management advisories as a basic tenet of complete streets and safety and security purposes.
- Providing up to the minute information on delays and the existence of poor travel conditions will allow travelers to alter routes, parking decisions and where or when to travel.
- Encourage transit collection efforts that assists in tracking transit service levels and future capital and operational needs.



# Environmental Stormwater Strategies

Roadway runoff treatment continues to be a major emphasis of transportation planning in the Tahoe Region. Treating runoff before it reaches the Lake is one of the most important strategies to restoring Lake Tahoe's clarity, identified by the Lake Tahoe Maximum Daily Load (TMDL) report. Roadways will continue to convey polluted runoff into the Lake unless water quality improvements are installed. The California Department of Transportation (Caltrans) and Nevada Department of Transportation (NDOT) have installed improvements that reduce or eliminate runoff along more than 26 miles of state highways in the Tahoe Region. The two state departments of transportation have completed an estimated 60 million square feet of roadway stormwater treatments. The ongoing inter-agency efforts are crucial to reducing the amount of fine sediment and nutrients that damage Lake Tahoe's clarity.

In 2006, Caltrans completed an Environmental Improvement Program (EIP) plan for retrofitting all of the state highways with erosion control measures. NDOT is also proceeding with implementing an EIP plan for the Nevada state routes. Both state agencies continue planning large erosion control projects that will significantly improve water quality along State Routes 28, 89, 207 and U.S. Highway 50. Major efforts are underway involving sand recovery and de-icing technology. Ongoing water quality monitoring efforts inform the design and effectiveness of future projects. Future efforts on California state routes include the construction of an estimated \$493 million of EIP projects over the next seven years (2008-2015) with another \$45 million being planned for construction along Nevada roadways over the next nine years (2008-2017).

Since stormwater treatment projects often involve disturbance of the road profile, they present an important opportunity for completing bicycle and pedestrian improvements concurrently. Stormwater projects should be planned with these modes in mind, and implement, up to 20% of the full project cost, bicycle lanes, sidewalks, bicycle-friendly stormwater grates, and bicycle-activated traffic signals. Likewise, all bicycle and pedestrian path and parking lot projects should incorporate water quality improvements appropriate to the facility."



Local jurisdictions including the City of South Lake Tahoe, El Dorado, Placer and Washoe counties, along with local general improvement districts have completed roadway erosion control projects that are combined with neighborhood erosion control projects. Installation of curbs and gutters along roadways and drop-inlets, detention ponds, retention ponds, and other techniques are critical to eliminating additional roadway runoff that pollutes the Lake. Local jurisdictions have completed an estimated \$26 million worth of such efforts since FY 2000.

# Land Use Redevelopment Strategies

Achieving increased pedestrian travel and decreased dependency on the automobile requires an integration of transportation and land-use. Pedestrian/Transit Oriented Development is a land-use pattern of dense compact development that creates a critical massing of population and travel distance conducive for pedestrian travel. In addition to density, build types and a mixture of uses, building design and relationships to the street are key elements of Pedestrian Oriented Development.

There are three types of Pedestrian and Transit Oriented Developments (PTOD) planned for “community plan areas” of the Basin: main streets, mixed-use nodes, and neighborhood centers. These areas are designed for bringing together people, jobs, and services in a way that allows efficient, safe, and convenient travel on foot, bicycle, transit, or automobile.

PTOD areas feature compact, walkable, mixed-use development within walking distance of transit stops. Many of these areas do not have connected sidewalks extending into surrounding neighborhoods. Studies have shown that walking is the preferred travel mode for distances of up to five minutes or 1/4 mile to a neighborhood center, mixed-use node for services or for local or regional transit connections. If the destination is a main street area within a central business district, the acceptable walking distance increases to 10 minutes or up to 1/2 mile, if that distance is along an interesting retail corridor designed for pedestrians (as illustrated in the “Ped Shed” graphics on page 53).

Factors deemed to create a walkable atmosphere include:

- A mix of land uses and the types of services.
- Safe and connected sidewalks, walkways, and trails.
- Convenient parking opportunities.

The PTOD section highlights opportunities for reshaping priority redevelopment areas of the Basin to improve walkability, increase densities where appropriate, support transit usage and provide vertical mixed-use development that reduces the amount of required parking by shared parking facilities. Shared or “bundled” parking in mixed-use structures requires fewer parking spaces overall because most residents



parking overnight typically depart for jobs during the day. This frees up the same physical parking spaces for business patrons or employees during the day.

## Pedestrian-Transit Oriented Development (PTOD) Strategies

- Encourage greater flexibility in site design, uses, Level of Service, and density. Land use changes will support walkable mixed mode main streets, nodes, and compact neighborhood centers.
- Recognize that all PTODs are not the same; each development is located within its own unique context and serves a specific purpose in the Basin.
- Encourage a mix of transit supported land uses, which generate higher pedestrian use and promote increased transit use and opportunities for multi-purpose trips. Locate similar uses close to transit stops, encouraging shorter walking distances. Orient residential units, building entrances and retail shops to the sidewalk.

- Encourage a pleasant pedestrian environment by providing a place of rest and refuge. Buffer pedestrians from traffic with landscaping, wide sidewalks, and on-street parking.
- Encourage convenient and secured bicycle storage locations at major employers and along main streets.
- Encourage architectural variety with distinct façade features. Cluster buildings to offer a one-stop opportunity to conveniently access a variety of destinations on foot.
- Leave room to grow so low density areas around transit stops can grow with the community's needs.
- Where possible, locate transit stops near public places and provide a safe and comfortable sheltered area for transit users.
- Work with local communities to create BIDs and/or landscape, lighting and parking districts to create and support viable mixed mode main streets and nodes.

## Economic Development Incentives

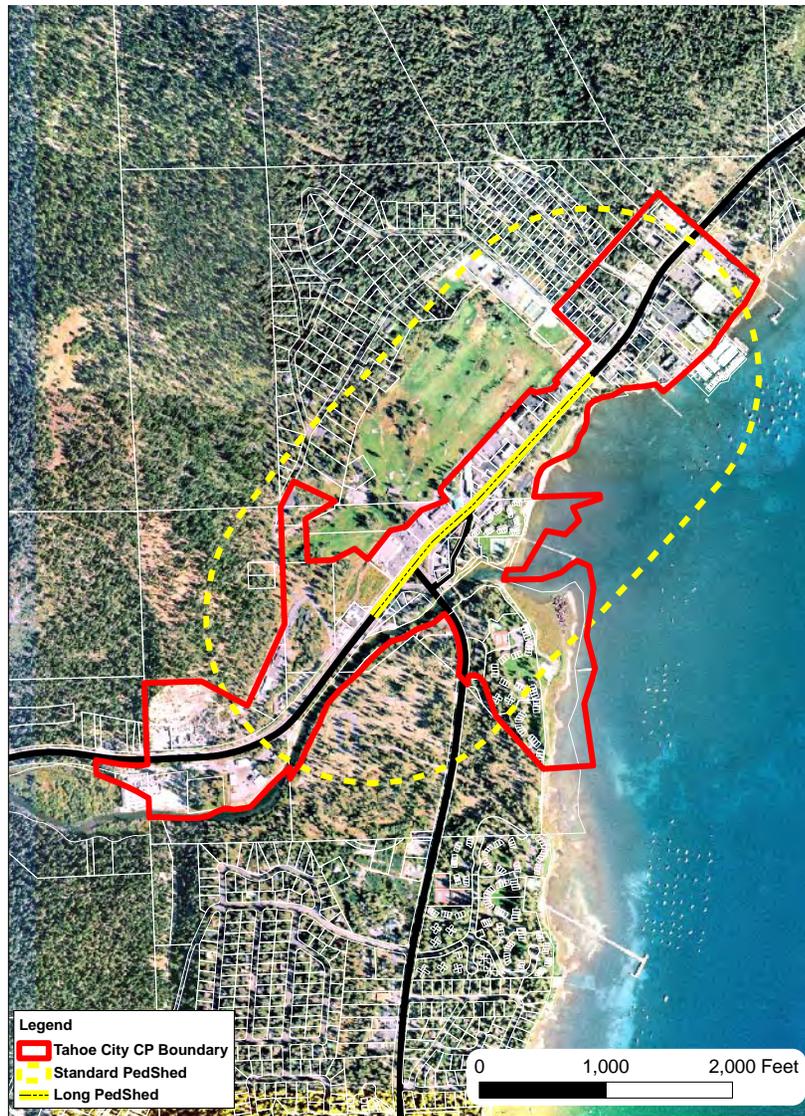
- Recognize that the high cost of land, construction, and land use planning creates a challenge for proposed investment (and reinvestment) to occur. Increases in construction and development costs are currently outpacing the increased economic value created by redevelopment.
- Recognize that the lack of economic incentives to upgrade, expand, or renovate existing buildings/structures, is in part driven by the lack of market support (second homeowners, developers) to achieve reasonable economic returns on new investment.
- Encourage vertical mixed-use in priority PTOD areas with residential, commercial and retail space or a combination of condominium and leasable space in the development of commercial or mixed-use projects. These amendments could help proposed projects secure private sector financing (debt) and investment

(equity) by allowing for a project to achieve some near-term economic profitability with the sale of the condominium space and long-term return (economic profitability) for the portion retained for leasing purposes.

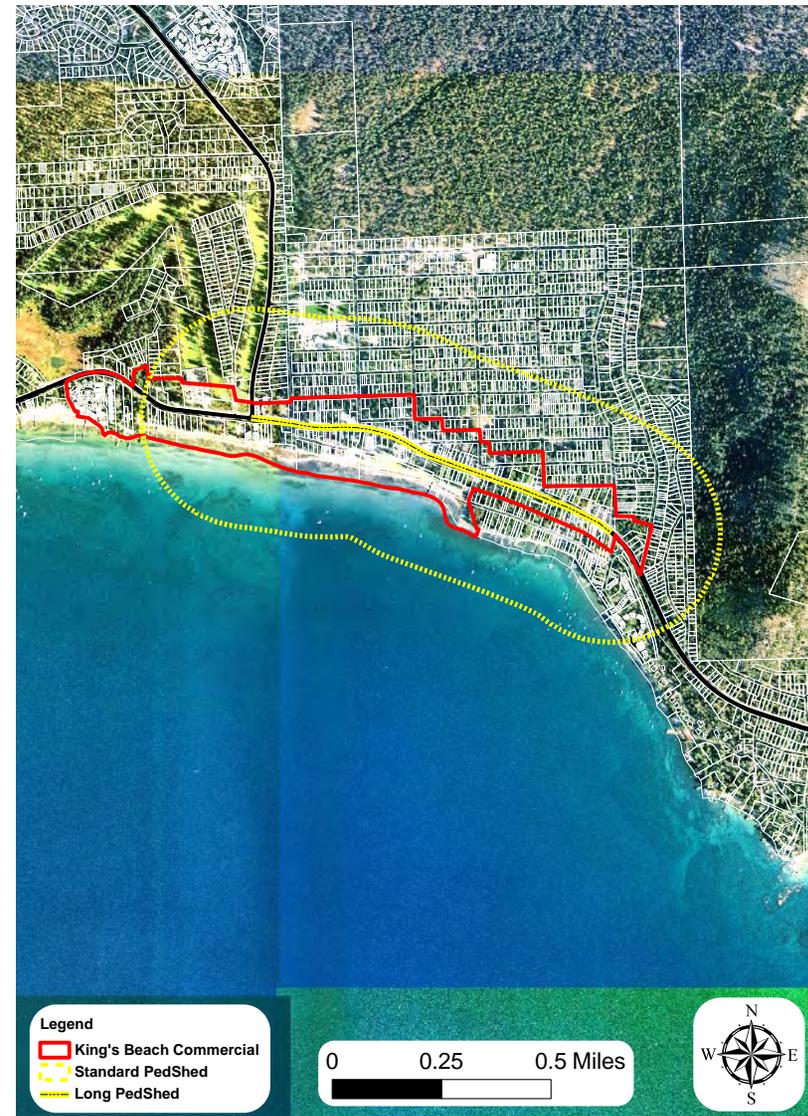
- Consider providing incentives including reduced administrative fees, increased lot coverage (Floor Area Ratio), building heights; increased commercial floor area (CFA), tourist accommodation units (TAU) or residential units (for year-round resident occupancy), reduced parking requirements for shared parking; and/or priority for EIP funding. This approach could include an ongoing annual monitoring and periodic update process (e.g. threshold evaluation) to review and evaluate the activities as they relate to the current market conditions.
- Consider streamlining applications that implement PTOD including mixed mode main streets, nodes and neighborhood centers with an appropriate mix of uses that create walkable communities and reduce automobile dependence. Create incentives for regional planning and design, coordinating urban water quality improvements, parking management, and connections between properties within PTOD priority areas.



Tahoe City Ped Shed Figure 3.5



Kings Beach Ped Shed Figure 3.6



Pedestrian sheds (Ped Shed), are the basic building blocks of walkable neighborhoods. A “ped shed” is the area within easy walking distance of a town or neighborhood center, often defined as the area covered by a 5-minute walk (about 0.25 miles). They may be drawn as perfect circles, but in practice “ped sheds” have irregular shapes because they cover the actual distance and routes walked, not linear distances. Individual nodes or transit stops are identified with a true circle. Main street areas stretch out the circle when numerous transit stops and other amenities are present along a main street corridor.

# Mobility 2030 Project List

**Table C- Mobility 2030 Project Strategy Costs by Objective and Year of Implementation**

RTP No.	Project Strategies	Cost 2008 Dollars	Project Objective	Location	Est. Year Complete	Cost Expenditure Year
1	U.S. 50 Bicycle and Pedestrian Improvement Project(s)	\$48,000,000	Bike/Ped/WQ	ELDO	2012	\$56,153,211
2	Kings Beach Commercial Core Improvement Project	\$50,000,000	Bike/Ped/WQ	Placer	2010	\$54,080,000
3	State Route 89 Realignment Project	\$50,000,000	Bridge/Intersection	Placer	2022	\$86,583,822
4	Tahoe City Transit Center	\$7,000,000	Transit Operations	Placer	2012	\$8,189,010
5	U.S. 50 Stateline Corridor Project	\$65,000,000	Bike/Ped/WQ	ELDO	2022	\$112,558,969
6	Waterborne	\$14,000,000	Transit Operations	NV/CA	2012	\$16,378,020
<b>Project Strategies Sub-Total</b>		<b>\$234,000,000</b>				<b>\$333,943,032</b>
<b>Transit Strategies</b>						
7	BlueGo Service Operational Enhancements	\$4,073,400	Transit Operations	ELDo	2009	\$4,236,336
8	BlueGo Service Capital Enhancements	\$4,740,000	Transit Operations	ELDo	2009	\$4,929,600
9	BlueGo Maintenance Facility	\$7,000,000	Transit Operations	ELDO	2018	\$10,361,710
10	TART Service Operational Enhancements	\$813,000	Transit Operations	Placer	2009	\$845,520
11	TART Service Capital Enhancements	\$281,300	Transit Operations	Placer	2009	\$292,552
12	Lake Lapper Capital	\$30,000	New Transit Service	All	2012	\$35,096
13	Lake Lapper Operational	\$240,000	New Transit Service	All	2012	\$280,766
14	Aviation Capital	\$1,500,000	AICP Capital	CSLT	2009	\$1,560,000
15	Aviation Operational	\$800,000	AICP Operational	CSLT	2009	\$832,000
<b>Transit Strategies Sub-Total</b>		<b>\$19,477,700</b>				<b>\$23,373,580</b>
<b>Bike and Pedestrian Strategies</b>						
16	PIONEER TRL From - LAKE TAHOE BLVD./US HWY 50 To - SKI RUN BLVD	\$3,560,000	C-I/Shared Use	CSLT	2018	\$5,269,670
17	HARRISON AVE FROM - LAKEVIEW AVE TO LOS ANGELES AVENUE	\$450,000	C-I/Shared Use	CSLT	2013	\$547,494
18	LK TAHOE-NEVADA ST PK From - INCLINE VILLAGE To - SAND HARBOR	\$7,920,000	C-II Bike Lane	Washoe	2018	\$11,723,535
19	SAWMILL RD From - LAKE TAHOE BLVD To - US HWY 50	\$3,680,000	C-II Bike Lane	EI Do	2012	\$4,305,080
20	AL TAHOE TRL. From - LAKE TAHOE BLVD/US HWY 50 To - AL TAHOE TRL	\$500,000	C-I /Shared Use	CSLT	2015	\$657,966
21	LAKE TAHOE BLVD- From SAWMILL ROAD TO D STREET	\$2,100,000	C-I /Shared Use	EI Do	2012	\$2,456,703
22	US HWY 50 From - CAVE ROCK To - ZEPHYR COVE	\$9,500,000	C-I/Shared Use	Douglas	2023	\$17,108,963
23	US HWY 50 From - ZEPHYR COVE To - ROUNDHILL/ELKS POINT TRL	\$2,960,000	C-I /Shared Use	Douglas	2023	\$5,330,793
24	U.S.F.S TRL. From - SPRING CREEK To - CASCADE	\$3,840,000	C-I /Shared Use	EI Do	2017	\$5,465,517
25	DOLLAR HILL TRL From - DOLLAR HILL To - N. TAHOE REGIONAL PARK	\$6,160,000	C-I/Shared Use	Placer	2014	\$7,794,365
26	OLD HWY 50 ROW From - CSLT CITY LIMITS To - DOUGLAS COUNTY LINE	\$6,760,000	C-I/Shared Use	EI Do	2025	\$13,167,807
27	OLD HWY 50 ROW From - CSR 89-MEYERS To - CSLT CITY LIMITS	\$9,480,000	C-I /Shared Use	EI Do	2017	\$13,492,996
28	LK TAHOE-NEVADA ST PK From - INCLINE VILLAGE To - SAND HARBOR	\$990,000	C-II Bike Lane	Washoe	2015	\$1,302,772
29	COLLEGE DR From - MT ROSE HWY To - VILLAGE BLVD	\$200,000	C-II Bike Lane	Washoe	2010	\$216,320
30	NSR 207/KINGSBURY GRADE From - BASIN BNDY/SPOONER SUMMIT	\$12,320,000	C-II Bike Lane	Douglas	2025	\$23,998,134
31	BROCKWAY SUMMIT From - KINGS BEACH / CSR 28 To - BROCKWAY	\$1,610,000	C-II Bike Lane	Placer	2015	\$2,118,650
32	NSR 28 From - SAND HARBOR To - CHIMNEY BEACH	\$120,800	C-II Bike Lane	Washoe	2017	\$171,936
33	CSR 89 From - CASCADE To - N. EMERALD BAY	\$196,400	C-III Bike Lane	EI Do	2020	\$314,443
34	HOMEWOOD From - TAHOE SKI BOWL WAY To - SILVER ST.	\$2,000,000	C-I/ Shared Use	Placer	2015	\$2,631,864
35	INCLINE VILLAGE --NSR 28 From - SOUTHWOOD To - COUNTRY CLUB DR	\$300,000	C-II/Shared Use	Washoe	2014	\$379,596
36	NEVADA SOUTH DEMO - From STATELINE TO ROUND HILL PINES BEACH	\$6,000,000	C-I/ Shared Use	Douglas	2019	\$9,236,724
<b>Bike and Pedestrian Subtotal</b>		<b>\$80,647,200</b>				<b>\$127,691,328</b>
<b>Environmental Stormwater Strategies- Caltrans</b>						
37	ED 50 EA 1E140 Echo Summit to Meyers Road	\$6,251,000	Erosion Control/WQ	EI Do	2012	\$7,312,786
38	ED 50 EA 3C390 Echo Summit to Meyers Road	\$1,943,000	Erosion Control/WQ	EI Do	2012	\$2,273,035
39	ED 50 EA 1A731 Meyers Road to Incline Road	\$60,805,000	Erosion Control/WQ	EI Do	2012	\$71,133,250
40	ED 50 EA 1A732 Airport Road to "Y"	\$15,865,000	Erosion Control/WQ	EI Do	2012	\$18,559,806
41	ED 89 EA 1A841 Alpine County Line to Route 50	\$46,282,000	Erosion Control/WQ	EI Do	2012	\$54,143,394
42	ED 89 EA 1A842 Route 50 to Cascade Road	\$37,739,000	Erosion Control/WQ	EI Do	2013	\$45,915,264
43	ED 89 EA 1A843 Cascade Rd. to Eagle Falls	\$37,774,000	Erosion Control/WQ	EI Do	2013	\$45,957,847
44	ED 89 EA 1A844 N. Eagle Falls Viaduct to Meeks Creek	\$59,623,000	Erosion Control/WQ	EI Do	2013	\$72,540,496
45	ED 89 EA 1A845 Cascade Rd to Eagle Falls	\$40,629,000	Erosion Control/WQ	EI Do	2013	\$49,431,391
46	PLA 28 EA 2A940 Tahoe State Park to Route 267	\$70,115,000	Erosion Control/WQ	Placer	2014	\$88,717,843
47	PLA 89 EA 2A920 El Dorado County Line to Route 28	\$74,720,000	Erosion Control/WQ	Placer	2023	\$134,566,499
48	PLA 89 EA 41450 Elizabeth Drive and Sugar Pine Rd	\$819,000	Erosion Control/WQ	Placer	2018	\$1,212,320
49	PLA 89 EA 2A921 Route 28 to Squaw Valley Road	\$35,905,000	Erosion Control/WQ	Placer	2018	\$53,148,171
50	PLA 267 EA 1C972 South of Brockway Summit to Stewart	\$4,631,000	Erosion Control/WQ	Placer	2018	\$6,855,011
<b>Environmental Stormwater Strategies- Subtotal Caltrans</b>		<b>\$493,101,000</b>				<b>\$651,767,112</b>

**Figure 3.7**

## Mobility 2030 Project List continued

<b>Environmental Stormwater Strategies- NDOT</b>						
51	CC199808-08 SR 28 from the CC/DO County Line to the CC/WA County Line.	\$100,000	Erosion Control/WQ	Carson	2009	\$104,000
52	CC200504-LRE Clear Creek watershed south Hwy 50 ROW from Spooner Summit	\$3,000,000	Erosion Control/WQ	Carson	2020	\$4,803,097
53	CC199808-LRE SR 28 from the CC/DO County Line to CC/WA County Line	\$300,000	Erosion Control/WQ	Carson	2020	\$480,310
54	CC200702-09 SR 28 from the CC/DO County Line to the CC/WA County Line.	\$1,788,386	Erosion Control/WQ	Carson	2009	\$1,859,921
55	DO200701-09 from US 50 at Spooner Lake to the DO/CC County Line	\$556,890	Erosion Control/WQ	Douglas	2009	\$579,166
56	DO200513-08 US 50 from the north side of Cave Rock	\$30,000	Erosion Control/WQ	Douglas	2010	\$32,448
57	DO200424-09 US 50 from 1.00 M E of Jct. with Cedar Brook Dr	\$615,000	Erosion Control/WQ	Douglas	2009	\$639,600
58	DO200902-09 SR 207 Kingsbury Grade from the Jct with US 50 to the Summit	\$5,675,000	Erosion Control/WQ	Douglas	2009	\$5,902,000
59	DO200423-10 US 50 from 1.32 M E of Cave Rock	\$13,875,000	Erosion Control/WQ	Douglas	2011	\$15,607,488
60	DO200424-LRE US 50 from 1.00 M E of Jct. with Cedar Brook Dr.	\$3,450,000	Erosion Control/WQ	Douglas	2025	\$6,720,257
61	WA199851-08 SR 28 Tahoe Blvd from CC/WA County Line	\$650,000	Erosion Control/WQ	Washoe	2009	\$676,000
62	WA199851-08 SR 28 Tahoe Blvd from CC/WA County Line	\$4,602,000	Erosion Control/WQ	Washoe	2026	\$9,322,808
63	WA200202-08 SR 28 from the Mt. Rose Hwy (SR 431) to the CA/NV State Line.	\$3,000,000	Erosion Control/WQ	Washoe	2009	\$3,120,000
64	WA200559-08 SR 431 Mt Rose Hwy from Tahoe Blvd (SR 28)	\$2,850,000	Erosion Control/WQ	Washoe	2010	\$3,082,560
65	WA200703-08 SR 28 from CC/WA County Line to East Lakeshore Blvd.	\$2,254,724	Erosion Control/WQ	Washoe	2009	\$2,344,913
66	WA200559-LRE SR 431 Mt Rose Hwy from Tahoe Blvd (SR 28) to Mt. Rose Smt.	\$2,650,000	Erosion Control/WQ	Washoe	2025	\$5,161,936
<b>Environmental Stormwater Strategies- Subtotal NDOT</b>		<b>\$45,397,000</b>				<b>\$60,436,503</b>
<b>Total Environmental Stormwater Strategies- Caltrans-NDOT</b>		<b>\$538,498,000</b>				<b>\$712,203,615</b>
<b>Local Roadway Environmental Stormwater Strategies</b>						
67	Stormwater CSLT	\$4,000,000	Erosion Control/WQ	CSLT	2012	\$4,679,434
68	Stormwater CSLT	\$4,000,000	Erosion Control/WQ	CSLT	2017	\$5,693,247
69	Stormwater CSLT	\$6,000,000	Erosion Control/WQ	CSLT	2022	\$10,390,059
70	Stormwater CSLT	\$8,000,000	Erosion Control/WQ	CSLT	2030	\$18,959,350
71	Stormwater El Dorado	\$7,000,000	Erosion Control/WQ	ELDO	2012	\$8,189,010
72	Stormwater El Dorado	\$7,000,000	Erosion Control/WQ	ELDO	2017	\$9,963,183
73	Stormwater El Dorado	\$9,000,000	Erosion Control/WQ	ELDO	2022	\$15,585,088
74	Stormwater El Dorado	\$11,000,000	Erosion Control/WQ	ELDO	2030	\$26,069,107
75	Stormwater Placer	\$8,000,000	Erosion Control/WQ	Placer	2012	\$9,358,868
76	Stormwater Placer	\$8,000,000	Erosion Control/WQ	Placer	2017	\$11,386,494
77	Stormwater Placer	\$10,000,000	Erosion Control/WQ	Placer	2022	\$17,316,764
78	Stormwater Placer	\$12,000,000	Erosion Control/WQ	Placer	2030	\$28,439,025
79	Stormwater Washoe	\$3,500,000	Erosion Control/WQ	Washoe	2012	\$4,094,505
80	Stormwater Washoe	\$3,500,000	Erosion Control/WQ	Washoe	2017	\$4,981,591
81	Stormwater Washoe	\$5,500,000	Erosion Control/WQ	Washoe	2022	\$9,524,220
82	Stormwater Washoe	\$7,500,000	Erosion Control/WQ	Washoe	2030	\$17,774,391
83	Stormwater Douglas	\$3,000,000	Erosion Control/WQ	Douglas	2012	\$3,509,576
84	Stormwater Douglas	\$3,000,000	Erosion Control/WQ	Douglas	2017	\$4,269,935
85	Stormwater Douglas	\$5,000,000	Erosion Control/WQ	Douglas	2022	\$8,658,382
86	Stormwater Douglas	\$7,000,000	Erosion Control/WQ	Douglas	2030	\$16,589,432
87	Private PUD,GID, HOA	\$2,000,000	Erosion Control/WQ	Private	2012	\$2,339,717
88	Private PUD,GID, HOA	\$2,000,000	Erosion Control/WQ	Private	2017	\$2,846,624
89	Private PUD,GID, HOA	\$4,000,000	Erosion Control/WQ	Private	2022	\$6,926,706
90	Private PUD,GID, HOA	\$6,000,000	Erosion Control/WQ	Private	2030	\$14,219,513
<b>Total Local Roadway Environmental Stormwater Strategies</b>		<b>\$146,000,000</b>				<b>\$261,764,223</b>
<b>Complete Streets Strategies</b>						
91	US 50 and Sierra Blvd. Intersection Improvements	\$755,000	Intersection Safety/LOS	CSLT	2011	\$849,272
92	US 50 Signal Synchronization (Meyers to Steteline)	\$3,000,000	Signal Coordination	CSLT	2010	\$3,244,800
93	US 50 and Apache Intersection Improvements	\$320,000	Intersection Safety/LOS	ELDO	2012	\$374,355
94	Meyers Highway Corridor Operations Study	\$700,000	Corridor Study	ELDO	2010	\$757,120
95	Tahoe City Traffic Management Program	\$550,000	Traffic Control	Placer	2009	\$572,000
96	Intersection Detection Equipment (various Locations)	\$900,000	ITS (various locations).	ELDO	2013	\$1,094,988
97	Changeable Message Signs (Various Locations)	\$2,850,000	ITS (various locations).	ELDO	2012	\$3,334,097
98	Sierra Traffic Operation System (ITS at Various Locations in CA)	\$5,300,000	ITS (various locations).	ELDO	2011	\$5,961,779
99	Traffic Monitoring Stations (various locations)	\$520,000	ITS (various Locations)	CA/NV	2012	\$608,326
100	Bike & Pedestrian Facilities O&M	\$2,000,000	Bike/Ped/Safety	NV	2009	\$2,080,000
101	Safety and Rehabilitation Projects (Minor Projects-NV)	\$1,800,000	Roadway/Rehabilitation.	NV	2013	\$2,189,975
102	Safety and Rehabilitation Projects (Minor Projects-CA)	\$2,800,000	Roadway/Rehabilitation.	CA	2013	\$3,406,628
103	Emergency Roadway Repair Program	\$600,000	Roadway/Rehabilitation.	CA/NV	2014	\$759,191
		<b>\$22,095,000</b>				<b>\$25,232,532</b>
<b>Total by Year of Implementation</b>						
Year of Implementation (2008-2012) Strategy Costs		\$392,113,440				
Year of Implementation (2013-2017) Strategy Costs		\$383,717,854				
Year of Implementation (2018-2022) Strategy Costs		\$370,949,001				
Year of Implementation (2023-2030) Strategy Costs		\$337,428,015				
<b>Total 2008-2030 Strategy Costs</b>		<b>\$1,484,208,310</b>				

Figure 3.7 cont.

# CHAPTER 4: FINANCIAL

The issue of funding continues to be a crucial factor in the provision of transportation services in the Tahoe Region and has often proven to be the greatest determinant of success or failure. The success or failure of almost all transportation systems is linked to the importance of developing secure sources of local funding, particularly for ongoing operating subsidies and local match programs. SAFETEA-LU requires that the Regional Transportation Plan be financially constrained, whereas the costs of proposed projects over the 23-year plan need to be within the “reasonably foreseeable” revenues of the same period. In order to maintain and plan mobility for residents and visitors over the next twenty years, it will require making assumptions of federal, state and local transportation funding and priorities over a 23 year time horizon.

## Federal Funding

For many years the Highway Trust Fund has served as the federal government’s primary conduit for funding transportation improvements and projects. Recent projections by the United States Government Accountability Office (GAO) in its overview of Highway Trust Fund Estimates, (April 2006), suggest that the fund could be entirely exhausted and in a negative balance by fiscal year 2011. The current administration’s budget analysts estimate a \$10 billion deficit by the end of FY 2011. More recent projections indicate that the trust fund will be in the red as early as FY 2009, with estimates of a \$1.7 billion deficit in 2009 reaching \$8.1 billion by the end of 2010. These estimates were generated by the National Association of Regional Councils (NARC) and the National Chamber Foundation (NCF). Supported largely by the \$18.4 cent per-gallon federal gas tax, the Highway Trust Fund hasn’t seen a rate increase since 1993. The primary reason for the projected shortfall is the failure to index the tax to adjust for inflation. As such, since 1993 the federal gas tax has lost an estimated one-third of its purchasing power. The TMPO Federal Transportation Improvement Program (FTIP) is used to program and monitor federal funding for transportation projects. The FTIP requires projects to be included in the RTP prior to being eligible for funding through the FTIP. This RTP



is consistent with the current FTIP and includes additional projects for programming in future FTIPs.

Another looming factor in estimating future transportation revenues is the re-authorization of SAFETEA-LU scheduled for 2010. Previous national transportation legislation provided guidance and funding allocations for many transportation programs and projects. The upcoming re-authorization will most certainly have to address the nation’s aging infrastructure needs and Highway Trust Fund deficits. Another factor that may come into play is global warming and how Congress will react to pressure to reduce greenhouse gas emissions.

## State Funding

On the state level, transportation revenues are also linked to gasoline taxes, which have been outstripped by inflation and rising construction costs as well. While not directly tied to state gas taxes, the governors of California and Nevada have announced proposed reductions to their respective state budgets for the current and projected fiscal years. The

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State of California was sued on September 6, 2007 by public transit advocates who argued that the redirection of \$1.3 billion in transportation funds for other purposes the previous year was illegal. (California Legislative Analysts Office, Nov, 2007). State funding is programmed through the State Transportation Improvement Program (STIP) require consistency with the RTP.

As shown in Figures 4.1 and 4.2, Caltrans has programmed an estimated \$600 million of EIP projects that are planned for construction over the next seven years (2007-2014). NDOT has programmed about \$45 million for EIP projects over a five year time frame (2007-2012). In all likelihood, the completion of these EIP projects will occur after the 2014 forecast period, with a more realistic timeframe identified as FY 2024.

## Local Funding

Local jurisdictions and improvement districts provide capital and operations and maintenance funding to keep local roadway and other transportation infrastructure usable. This also includes snow removal and roadway water quality maintenance.

All while a variety of economic indexes (i.e. gaming revenues, gaming employment, school enrollment, room nights rented, and traffic volumes) have declined, while the full-time resident population has been reduced by an estimated 7,600 over the past five years due largely to turnover of property owned by full time residents to seasonal residents purchasing second homes and the conversion of homes to vacation rentals.

## Southern Nevada Public Lands Management Act

The Southern Nevada Public Lands Management Act (SNPLMA) allows the federal Bureau of Land Management (BLM) to sell public land within a specific boundary around Las Vegas, Nevada with the proceeds of the sale going towards a variety of specified projects. In November of 2003, the Act was amended to include Lake Tahoe Restoration Act Projects. The Amendment directs a total of \$300 million or \$37.5 million each year over the next eight years, to the Tahoe Region

to fund the federal share of the Environmental Improvement Program. Under the Restoration Act, several transportation related water quality projects are funded; however unless reauthorized or restructured the Act will expire in 2011. While some of these funds are available for transportation projects, the bulk of the funds are for other restoration projects.

## Environmental Improvement Program

The 1997 Lake Tahoe Presidential Forum was a turning point in Tahoe's history. The Forum, hosted by President Clinton, helped renew and increase federal, state and local commitments to restore the Lake's ecosystem and spur the creation of the Environmental Improvement Program (EIP). As of 2006, \$1.1 billion has been invested by Congress, the states of California and Nevada, local governments and the private sector to implement the EIP. Now that we have reached the 10-year anniversary of the EIP, new commitments will need to be made in support of the updated EIP and associated transportation improvement projects. TMPO is coordinating with the EIP to provide consistency in selecting and funding transportation projects in the region.



## Baseline Revenue Forecast

Given the above perspective of gazing through the financial crystal ball, two financial forecasts of revenues have been prepared. A baseline forecast has been developed, limited to historical or projected funding sources that are "reasonably foreseeable" in the future. As shown in Table A, Figure 4.1, under the baseline revenue forecast the Lake Tahoe Region would have an estimated \$1,530,670,546 over the 23-year forecast period with \$392,113,440 estimated over the first five-year period (2008-2012). A sharp decline is projected in FY 2024 as a result of two variables. The Caltrans-SHOPP and NDOT erosion control projects are anticipated to be completed within this time frame and the funding rounds of SNPLMA are anticipated to end in 2011.

<b>Table A</b>						
<b>Tahoe Region Transportation Revenue Baseline 2008-2030 Forecasts</b>						
<b>LOCAL SOURCES</b>	<b>Assumptions</b>	<b>2008-2012</b>	<b>2013-2017</b>	<b>2018-2022</b>	<b>2023-2030</b>	<b>2008-2030</b>
Farebox Revenues	2% Annual Increase	\$6,140,767	\$6,779,903	\$7,485,561	\$13,630,825	\$34,037,057
Tahoe-Douglas Transportation District Transient Occupancy Tax	3% Annual Increase	\$2,760,751	\$3,200,467	\$3,710,218	\$7,204,064	\$16,875,500
North Lake Tahoe Resort Association. Transient Occupancy Tax *	3% Annual Increase	\$4,618,948	\$5,354,627	\$6,207,480	\$12,052,954	\$28,234,009
Washoe County Regional Transportation Commission	3% Annual Increase	\$1,533,013	\$1,777,182	\$2,060,241	\$4,000,334	\$9,370,770
TRPA Rental Car Mitigation Fund	CPI Annual	\$637,096	\$738,569	\$856,204	\$1,662,476	\$3,894,346
TRPA Air Quality Mitigation Fund	15% Every 5 yrs.	\$3,090,000	\$3,553,500	\$4,086,525	\$7,847,716	\$18,577,741
Coordinated Transit System Mitigation Fund (CTS)	2% Annual Increase	\$520,404	\$574,568	\$634,370	\$1,155,155	\$2,884,496
Regional Surface Transportation Program (RSTP)	2% Annual Increase	\$3,158,233	\$3,486,945	\$3,849,869	\$7,010,414	\$17,505,460
Private**	2% Annual Increase	\$23,938,585	\$26,430,132	\$29,181,001	\$53,137,113	\$132,686,831
Local Government General Funds	2% Annual Increase	\$416,323	\$459,654	\$507,496	\$924,124	\$2,307,597
Environmental/Stormwater-Local Roadways	3% Annual Increase	<u>\$3,981,852</u>	<u>\$4,616,058</u>	<u>\$5,351,276</u>	<u>\$10,390,477</u>	<u>\$24,339,663</u>
<b>Total Local</b>		<b>\$50,795,972</b>	<b>\$56,971,605</b>	<b>\$63,930,241</b>	<b>\$119,015,651</b>	<b>\$290,713,469</b>
<b>STATE SOURCES</b>						
State Transit Assistance and Local Transportation Fund	Previous Year Alloc.	\$9,972,521	\$11,560,886	\$13,402,235	\$26,022,881	\$60,958,523
Regional Improvement Program (RIP)	3% Annual Increase	\$15,927,407	\$18,464,231	\$21,405,104	\$41,561,909	\$97,358,651
California Proposition 1B (10 yrs)	Discretionary Grants	\$5,000,000	\$5,000,000	\$0	\$0	\$10,000,000
Nevada Bond Sales (Question #1)	\$5 million available	\$5,000,000	\$0	\$0	\$0	\$5,000,000
Environmental/Stormwater State Roadways***	\$645m over 15 years	<u>\$245,106,123</u>	<u>\$238,736,511</u>	<u>\$215,000,000</u>	<u>\$91,157,366</u>	<u>\$790,000,000</u>
<b>Total State</b>		<b>\$281,006,052</b>	<b>\$273,761,627</b>	<b>\$249,807,339</b>	<b>\$158,742,157</b>	<b>\$963,317,174</b>
<b>FEDERAL SOURCES</b>						
Federal Lands Highway Program	SAFTEA-LU Provision	\$25,000,000	\$33,000,000	\$41,000,000	\$68,000,000	\$167,000,000
Congestion Mitigation & Air Quality Program (CMAQ)	PYA - 2% Annual	\$3,300,085	\$3,643,560	\$4,022,785	\$7,325,286	\$18,291,716
Regional Surface Transportation Program (RSTP)	PYA - 2% Annual	\$3,214,098	\$3,548,624	\$3,917,968	\$7,134,420	\$17,815,111
FTA Section 5309 Transit Capital Improvements	\$2 million every 3 yrs	\$4,000,000	\$4,000,000	\$2,000,000	\$6,000,000	\$16,000,000
FTA Section 5311 Small Urban and Rural Transit Assistance	3% Annual Increase	\$265,457	\$307,737	\$356,752	\$692,698	\$1,622,644
FTA Section 5310 Social Service Transportation Program	3% Annual Increase	\$238,911	\$276,963	\$321,077	\$623,429	\$1,460,380
FTA Section 5339 New Starts – Small Starts Program	Discretionary Grants	\$600,000	\$400,000	\$600,000	\$800,000	\$2,400,000
FTA Section 5316- Job Access and Reverse Commute Program	3% Annual Increase	\$265,457	\$307,737	\$356,752	\$692,698	\$1,622,644
FAA Airport Improvement Program	\$1.5M Annually	\$7,500,000	\$7,500,000	\$7,500,000	\$12,000,000	\$34,500,000
Southern Nevada Public Lands Management Act ****	3% Annual Increase	<u>\$15,927,407</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$15,927,407</u>
<b>Total Federal</b>		<b>\$60,311,415</b>	<b>\$52,984,623</b>	<b>\$60,075,333</b>	<b>\$103,268,531</b>	<b>\$276,639,902</b>
<b>Total Local/State/Federal</b>		<b>\$392,113,440</b>	<b>\$383,717,854</b>	<b>\$373,812,912</b>	<b>\$381,026,339</b>	<b>\$1,530,670,546</b>
<b>Footnotes:</b>						
	* NTRA 2% set aside for Infrastructure. Voter Renewal in 2012					
	** Private includes BlueGO, Ski Shuttles, Waterborne, Tahoe Casino Express.etc					
	*** Caltrans-SHOP/NDOT Erosion Control Projects \$645M over 15 years. O&M 2023-2030					
	**** SNPLMA ends 2011					

**Figure 4.1**

## Expanded Program Forecast

Given that many transportation funding programs are highly restricted, divided into separate sources for operating costs, capital costs, matching funds and project readiness, each with individual eligibility requirements, the TMPO isn't always in the position to benefit from all of these transportation funding programs. For this reason an additional expanded program forecast was prepared, which includes potential revenue sources that could be accessible through focused efforts and could be utilized for future planning, transit operations and project implementation.

As shown in Figure 4.2, Table B under the Expanded Program Forecast, an estimated \$1,766,733,722 would be available over the 23-year forecast period with \$403,454,128 available over the most immediate five-year period (2008-2012). It should be noted that both baseline and expanded forecasts do not account for future revenue increases as a result of legislative initiatives or lobbying efforts, which the Tahoe Region has been highly successful in pursuing. The forecasts are however intended to reflect what has been historically available given variability in federal, state and local funding priorities and resources.

<b>LOCAL SOURCES</b>	<b>Assumptions</b>	<b>2008-2012</b>	<b>2013-2017</b>	<b>2018-2022</b>	<b>2023-2030</b>	<b>Total 2008-2030</b>
Farebox Revenues	2% Annual Increase	\$6,140,767	\$6,779,903	\$7,485,561	\$13,630,825	\$34,037,057
Tahoe-Douglas Transportation District Transient Occupancy Tax	3% Annual Increase	\$2,760,751	\$3,200,467	\$3,710,218	\$7,204,064	\$16,875,500
North Lake Tahoe Resort Association. Transient Occupancy Tax	3% Annual Increase	\$4,618,948	\$5,354,627	\$6,207,480	\$12,052,954	\$28,234,009
Washoe County Regional Transportation Commission .	3% Annual Increase	\$1,533,013	\$1,777,182	\$2,060,241	\$4,000,334	\$9,370,770
TRPA Rental Car Mitigation Fund	CPI Annual	\$637,096	\$738,569	\$856,204	\$1,662,476	\$3,894,346
TRPA Air Quality Mitigation Fund	15% Every 5 yrs.	\$3,090,000	\$3,553,500	\$4,086,525	\$7,847,716	\$18,577,741
Coordinated Transit System Mitigation Fund (CTS)	2% Annual Increase	\$520,404	\$574,568	\$634,370	\$1,155,155	\$2,884,496
Regional Surface Transportation Program (RSTP)	2% Annual Increase	\$3,158,233	\$3,486,945	\$3,849,869	\$7,010,414	\$17,505,460
Private**	2% Annual Increase	\$23,938,585	\$26,430,132	\$29,181,001	\$53,137,113	\$132,686,831
Advertising*****	3% Annual Increase	\$185,820	\$215,416	\$249,726	\$484,889	\$1,135,851
Basin Wide Local Funding *****	\$5 Million Annually	\$20,608,040	\$28,165,102	\$31,096,549	\$56,625,227	\$136,494,918
Local Government General Funds	2% Annual Increase	\$416,323	\$459,654	\$507,496	\$924,124	\$2,307,597
Environmental/Stormwater Local Roadways	3% Annual Increase	<u>\$3,981,852</u>	<u>\$4,616,058</u>	<u>\$5,351,276</u>	<u>\$10,390,477</u>	<u>\$24,339,663</u>
<b>Total Local</b>		<b>\$71,589,832</b>	<b>\$85,352,123</b>	<b>\$95,276,515</b>	<b>\$176,125,767</b>	<b>\$428,344,238</b>
<b>STATE SOURCES</b>						
State Transit Assistance and Local Transportation Fund	PYA - 3%	\$9,972,521	\$11,560,886	\$13,402,235	\$26,022,881	\$60,958,523
Regional Improvement Program (RIP)	3% Annual Increase	\$15,927,407	\$18,464,231	\$21,405,104	\$41,561,909	\$97,358,651
California Bicycle Lane Account *****	FTIP Discretionary	\$150,000	\$100,000	\$150,000	\$200,000	\$600,000
California Proposition 1B (10 yrs)	FTIP Discretionary	\$5,000,000	\$5,000,000	\$0	\$0	\$10,000,000
California Energy Commission - Nevada State Energy Office	FTIP Discretionary	\$407,605	\$407,605	\$407,605	\$652,168	\$1,874,983
California Tahoe Conservancy	FTIP Discretionary	\$1,410,990	\$1,410,990	\$1,410,990	\$2,257,584	\$6,490,554
Nevada Surface Transportation Program *****	FTIP Assumption	\$9,700,570	\$9,700,570	\$9,700,570	\$15,520,912	\$44,622,622
Nevada Bond Sales (Question #1)	\$5 million/ 5 years	\$5,000,000	\$0	\$0	\$0	\$5,000,000
Environmental/Stormwater State Roadways ***	\$645m over 15 years	<u>\$215,000,000</u>	<u>\$215,000,000</u>	<u>\$215,000,000</u>	<u>\$145,000,000</u>	<u>\$790,000,000</u>
<b>Total State</b>		<b>\$262,569,094</b>	<b>\$261,644,281</b>	<b>\$261,476,504</b>	<b>\$231,215,455</b>	<b>\$1,016,905,333</b>

**Figure 4.2**

<b>Table B cont.</b>						
<b>Tahoe Region Transportation Revenue Expanded 2008-2030 Forecasts</b>						
<b>FEDERAL SOURCES</b>	<u>Assumption</u>	<u>2008-2012</u>	<u>2013-2017</u>	<u>2018-2022</u>	<u>2023-2030</u>	<u>Total 2008-2030</u>
Federal Lands Highway Program	SAFTEA-LU Provision	\$25,000,000	\$33,000,000	\$41,000,000	\$68,000,000	\$167,000,000
Congestion Mitigation & Air Quality Program (CMAQ)	PYA - 2% Annual	\$3,300,085	\$3,643,560	\$4,022,785	\$7,325,286	\$18,291,716
Regional Surface Transportation Program (RSTP)	PYA - 2% Annual	\$3,214,098	\$3,548,624	\$3,917,968	\$7,134,420	\$17,815,111
Transportation Enhancement Activities Program (TEA)	FTIP Discretionary	\$120,000	\$120,000	\$60,000	\$180,000	\$480,000
FTA Section 5307 Capital and Operating	3% Annual	\$26,545,679	\$30,773,718	\$35,675,173	\$69,269,849	\$162,264,419
FTA Section 5309 Transit Capital Improvements	\$2 million every 3 yrs	\$4,000,000	\$4,000,000	\$2,000,000	\$6,000,000	\$16,000,000
FTA Section 5311 Small Urban and Rural Transit Assistance	PYA- 3% Annual	\$265,457	\$307,737	\$356,752	\$692,698	\$1,622,644
FTA Section 5310 Social Service Transportation Program	PYA- 3% Annual	\$238,911	\$276,963	\$321,077	\$623,429	\$1,460,380
FTA Section 5339 New Starts – Small Starts Program	Discretionary Grants	\$600,000	\$400,000	\$600,000	\$800,000	\$2,400,000
FTA Section 5316- Job Access and Reverse Commute	PYA- 3% Annual	\$265,457	\$307,737	\$356,752	\$692,698	\$1,622,644
Airport Improvement Program	\$1.5M per year	\$7,500,000	\$7,500,000	\$7,500,000	\$12,000,000	\$34,500,000
National Scenic Byways Program	Discretionary Grants	\$20,000	\$0	\$20,000	\$40,000	\$80,000
Southern Nevada Public Lands Management Act ****	3% Annual Increase	\$15,927,407	\$0	\$0	\$0	\$15,927,407
Highway Bridge Replacement and Rehabilitation	FTIP Assumption	\$1,243,267	\$1,586,759	\$2,025,151	\$4,466,680	\$9,321,857
ITS	FTIP Assumption	\$1,625,000	\$1,625,000	\$1,625,000	\$2,600,000	\$7,475,000
Recreational Trails	FTIP Assumption	\$211,520	\$211,520	\$211,520	\$338,432	\$972,992
Forest Service (Roadway Erosion Control)	FTIP Assumption	\$5,764,000	\$5,764,000	\$5,764,000	\$9,222,400	\$26,514,400
<b>Total Federal</b>		<b>\$95,840,881</b>	<b>\$93,065,619</b>	<b>\$105,456,177</b>	<b>\$189,385,893</b>	<b>\$483,748,570</b>
<b>Total Local/State/Federal</b>		<b>\$429,999,807</b>	<b>\$440,062,023</b>	<b>\$462,209,196</b>	<b>\$596,727,114</b>	<b>\$1,928,998,141</b>
Footnotes:						
* NTRA 2% set aside for Infrastructure. Voter Renewal in 2012						
** Private includes BlueGO, Ski Shuttles, Waterborne, Tahoe Casino Express.etc						
*** Caltrans-SHOP/NDOT Erosion Control Projects \$645M over 7 years. O&M 2015-2030						
**** SNPLMA ends 2011						
***** Potential Future Source of Funding						

**Figure 4.2 cont.**

## Financial Constraints - Strategy Costs

One of the most significant changes brought about by SAFETEA-LU and previous federal transportation funding measures is the requirement that long-range transportation plans and transportation improvement programs (TIPs) be financially constrained. The basic tenet behind the requirement is that MPOs can no longer develop a “wish list” of projects. Now, federal funding is prioritized based on realistic financial assumptions (benefits and project costs) in the transportation planning process. As a result of SAFETEA-LU (Title 23 CFR Part 450.322(f) (10) (iv), costs of future transportation projects must use “year of expenditure dollars” rather than “constant dollars” to better reflect the time-based value of money. After cost estimates are prepared for the RTP strategies, the costs must be expressed in “year of expenditure dollars.” In order to reflect this new SAFETEA-LU provision, the TMPO has

adjusted projected costs for future projects assuming a four percent annual adjustment for inflation and year of implementation schedule previously discussed and shown in Figure 3.7 of the Strategy-Action Section, page 54.

### Costs vs. Revenues Conclusion

As shown in Figure 4.3, Table D, sufficient revenues are anticipated to pay for the Strategy Costs under both the Baseline Revenue Projection and Expanded Revenue Projection.

2008-2012 Baseline Revenue	\$392,113,440		
2013-2017 Baseline Revenue	\$383,717,854		
2018-2022 Baseline Revenue	\$373,812,912	2008-2012 Strategy Costs	\$392,113,440
2022-2030 Baseline Revenue	\$381,026,339	2013-2017 Strategy Costs	\$383,717,854
<b>Total Baseline Revenue</b>	<b>\$1,530,670,545</b>	2018-2022 Strategy Costs	\$370,949,001
		2022-2030 Strategy Costs	\$337,428,015
2008-2012 Expanded Revenue	\$429,999,807	<b>Total 2008-2030 Strategy Costs</b>	<b>\$1,484,208,310</b>
2013-2017 Expanded Revenue	\$440,062,023		
2018-2022 Expanded Revenue	\$462,209,196		
2022-2030 Expanded Revenue	\$596,727,114		
<b>Total Expanded Revenue</b>	<b>\$1,928,998,140</b>		

**Figure 4.3**

# CHAPTER 5: TRAVEL FORECASTS

Travel demand forecasting is an important role of TMPO in order to inform decision making and planning efforts. TMPO has a comprehensive data collection and analysis program that is aimed at maintaining a calibrated traffic model and other analytical tools to provide for an informed metropolitan planning process. The Lake Tahoe region has unique visitation, travel and development patterns that are compounded by significant growth within driving distance of the region.

TMPO utilizes a new GIS-based traffic model package (TransCAD) that began development in 2004. The model utilizes an activity-based model that was informed by an extensive travel survey that collected household travel data as well as travel diary information from over 1,200 households. The survey effort focused on residents, overnight-visitors, and day-visitors within the summer and winter months to capture seasonality patterns.

With the changes in software, databases, surveys, street modeling networks and overall modeling methodology, one requirement that remains is a TRPA water quality and air-quality visibility threshold indicator to reduce Vehicle Miles Traveled (VMT) by 10 percent from the 1981 estimate. VMT is a computed value that measures the extent of travel characteristics for a given area. The previous TRPA models would calculate the number of trips made on the highway network and the distance between trip origins and trip destinations and then calibrate its models from current traffic count information.

In 1981, TRPA estimated the VMT was 1,649,000. Using the TransCAD model containing additional sets of information and a more detailed street network in 2005 VMT was estimated at 2,079,849. The TransCAD model is expected to be used by the TMPO into the future, so any modeling efforts will be consistent in methodology with the 2005 model estimate.



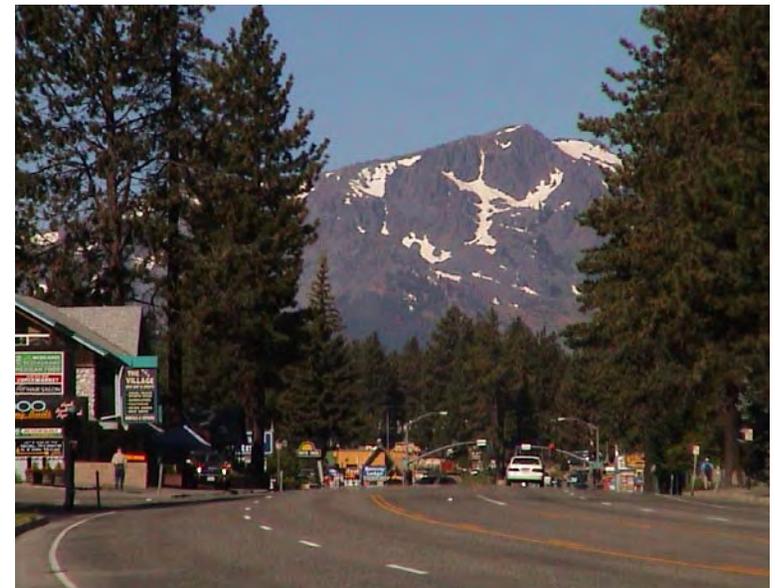
Additional enhancements of the TransCAD model include the development of a transit module that incorporates future changes to transit routes, fares and the breakout of model output under four distinct daily time frames (AM Peak, Midday, PM Peak, Overnight), as well as its ability to model with geographic accuracy. The previous model's street networks were stick and node representations, whereas now the TransCAD street network is established with a Geographic Information System (GIS) that provides accurate representations of the physical street network, and land use associations. Inclusion of bicycle and pedestrian facility's impacts on the transportation network for future considerations is under investigation.

Additional information concerning the TransCAD model development and calibration efforts are referenced in *Lake Tahoe Resident and Visitor Model; Model Description and Final Results*; Parsons, Brickerhoff, Quade & Douglas Inc. August 2007.

## Growth Assumptions

In order to assemble the growth assumptions for population and land use patterns, the TMPO staff drew on discussions of the TRPA general plan update (Pathway) to help formulate future growth forecasts. Utilizing the new TMPO transportation model (TransCAD), staff analyzed the cumulative impact of the appropriate project strategies identified in Chapter 3, page 35.

The new TransCAD model is based on an expanded and more complex street network than the old TranPlan model. For that reason, the new model results are not directly comparable to the old model and should be considered a worse case VMT analysis. Future forecasts will be made using the new model, but comparisons to past VMT estimates must be made using an update method to the old model. Using actual traffic counts to update previous estimates, VMT has been estimated to have decreased by 6.5 percent from 1981 levels.



## Model Results

Based on the growth assumptions, Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT) were modeled for the 2012, 2017, 2022 and 2030 forecast time periods. As shown in Figures 5.1 and 5.2, VMT and VHT are expected to increase by 15.31 and 16.27 percent over the forecast period, with the midday time period representing the greatest percentage (40 percent) of travel during the day. This increase does not include a detailed analysis of proposed bicycle and pedestrian facilities and their impact on VMT.

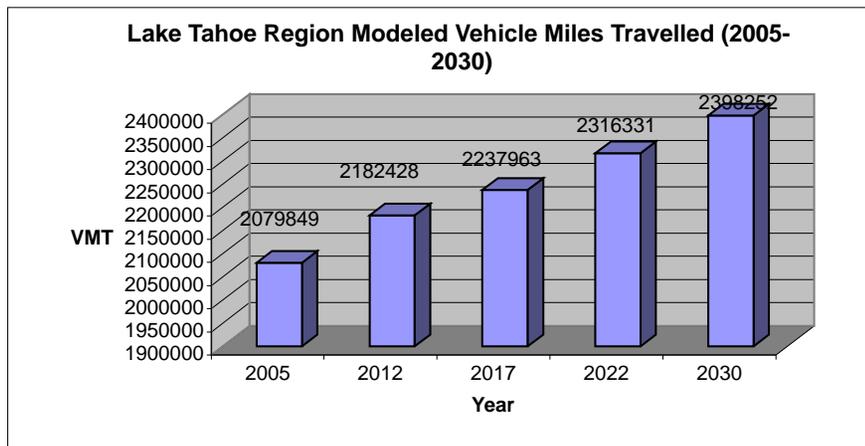


Figure 5.1, Source: TRPA Transportation Model (new TransCAD version)

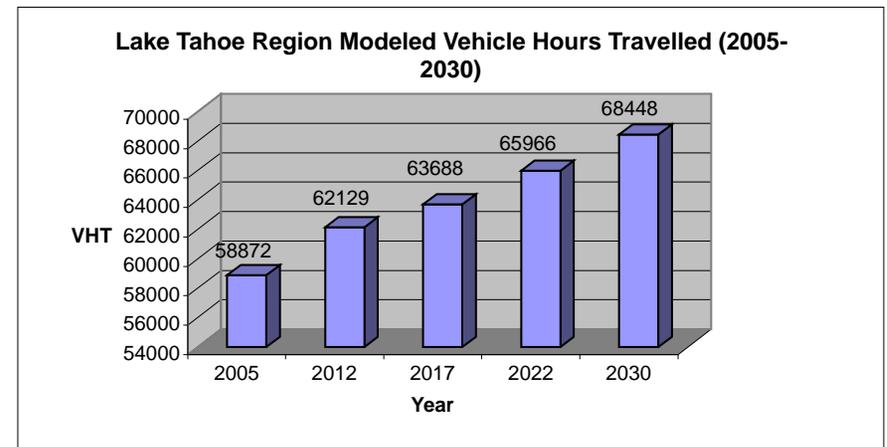


Figure 5.2, Source: TRPA Transportation Model (new TransCAD version)

## Model Results - Intersection Level-of-Service (LOS)

In order to analyze the impact of the travel demand forecasts on signalized intersection LOS, the TMPO staff analyzed eight signalized intersections using Highway Capacity Software. Increases in forecast turn movements were analyzed based on the forecast traffic volumes for each analyzed intersection. Intersection LOS is expected to be maintained at LOS "D" throughout the forecast years.

Future efforts to identify LOS will include analyzing overall vehicle delays at signalized intersections while acknowledging that vehicle delays will be generally greater in PTOD areas. The analysis of a bicycle and pedestrian facility LOS policy in identified PTOD areas is under development, and will result in the recognition and measurement of other travel modes at a comparable level as vehicular LOS.



<b>2005 Intersection Level-of-Service</b>	2005 Existing <u>LOS</u>	Forecast 2012 <u>LOS</u>	Forecast 2017 <u>LOS</u>	Forecast 2022 <u>LOS</u>	Forecast 2030 <u>LOS</u>
State Route 89 at State Route 28	C	C	C	D	B
State Route 28 at State Route 267	C	C	C	D	D
State Route 28 at Village Blvd.	C	C	C	C	C
U.S. Highway 50 at Park Ave	D	D	D	D	B
U.S. Highway 50 at Ski Run Blvd.	B	C	C	C	C
U.S. Highway 50 at Tahoe Keys Blvd.	C	C	D	D	D
U.S. Highway 50 at Third Street	C	C	C	C	D
U.S. Highway 50 at State Route 89	C	C	C	D	D

**Figure 5.3**

# CHAPTER 6: CONFORMITY - ENVIRONMENTAL



## Purpose

Tahoe Metropolitan Planning Organization (TMPO), and TRPA acting as the Regional Transportation Planning Agency (RTPA) in California, has prepared, pursuant to Section 176 (c)(4) of the 1990 federal Clean Air Act Amendments (CAAA) this determination of conformity of the 2008 Regional Transportation Plan (RTP) with the State Implementation Plan (SIP). The conformity analysis described herein applies to the TMPO and TRPA (as the RTPA) document given that both have identical analysis requirements. The purpose of conformity is to ensure that regional transportation planning and programming remain consistent with state and local air quality planning efforts to achieve and/or maintain the National Ambient Air Quality Standards (NAAQS).

The Transportation Conformity Rule appearing in 40 CFR Parts 51 and 93 is applicable to transportation plans developed pursuant to 23 CFR part 450 or 49 CFR part 613 by a Metropolitan Planning Organization (MPO). The Transportation Conformity Rule requires all MPOs in non-attainment areas or who are under federally approved maintenance plans to submit a conformity analysis if the planning or programming documents identify projects that have been defined as non-exempt. Consistent with Conformity Regulation Section 93.101, the CAAA also directs MPOs to facilitate the expeditious implementation of the Transportation Control Measures (TCMs) that are included in the SIP. No TCMs are applicable to the Tahoe Region therefore no control measures are identified for implementation.

## Emissions Tests

Pursuant to the conformity regulation, a regional emission analysis which incorporates all conforming non-exempt projects must meet the established emission tests before the 2008 RTP can be determined to conform to the State Implementation Plans (SIP) in California and Nevada. For California counties, the MPO must demonstrate that proposed transportation programs and plans are consistent with the SIP by showing that emissions associated with these plans and programs do not exceed applicable carrying capacities or “emission budgets” previously adopted by the California Air Resources Board (CARB). Similarly, for Nevada counties, the MPO must demonstrate that the proposed transportation programs do not increase emissions above the levels associated with the present situation (i.e. baseline conditions) or other programs that would be normally implemented for those areas.

The TMPO is responsible for conducting conformity determinations for both the California and Nevada portions of the Basin where conformity requirements apply. The previous conformity analysis was approved on September 9th, 2005. The U.S. EPA requires two 10-year CO maintenance plans. In California, EPA has approved the Lake Tahoe Air Basin (LTAB) second 10-year maintenance plan, which ends in 2018. In Nevada, the first 10-year maintenance plan ends in 2013. (Please refer to Appendix B for the historical carbon monoxide and ozone readings.) See Figure 6.1 below, for area designations requiring a conformity analysis.

<b>Pollutant and Conformity Designation by Jurisdiction</b>		
<b>Jurisdiction</b>	<b>Pollutant</b>	<b>Reason for Conformity Analysis</b>
El Dorado County	CO	Current Maintenance Plan
Placer County	CO	Current Maintenance Plan
Douglas County	CO	Limited Maintenance Plan
Carson City County	CO	Limited Maintenance Plan

**Figure 6.1**

## Modeling and Analytical Assumptions (California)

Pursuant to the conformity regulation, a regional emissions analysis, which incorporates all conforming non-exempt projects, must meet the emissions budget test before the 2008 RTP can be determined to conform to the SIP. This analysis is holistic in scope, with final conformity being based on the program, rather than on a project-by-project basis. This emissions test is required for Carbon Monoxide (CO). This analysis pertains solely to CAAA conformity mandates and should not be construed as environmental impact findings related to the NEPA or CEQA environmental review processes.

On November 30, 2005, the EPA took direct and final action to approve a State Implementation Plan revision that was submitted by the California Air Resources Board. The revision titled “Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes; Carbon Monoxide Maintenance Plan Update for Ten Planning Areas; Motor Vehicle Emissions Budgets: Technical Correction” (Federal Register/Vol. 70, No 229/Wednesday, November 30, 2005/Rules and Regulations) The above Technical Correction provides a ten-year update to the carbon monoxide maintenance plan, for 10 planning areas of which the LTAB was included. As part of this update the following Motor Vehicle Emission Budget (MVEB) (Figure 6.2) was developed for the LTAB.

<b>Motor Vehicle Emission Budget (MVEB)</b>		<b>EMISSION BUDGET</b>		
<b>CO MAINTENANCE AREA</b>	<b>AREA INCLUDED</b>	<b>2003</b>	<b>2010</b>	<b>2018</b>
Lake Tahoe North Shore	Eastern Placer	11	11	11
Lake Tahoe South Shore	Eastern El Dorado	19	19	10

**Note:** Winter Seasonal emissions are in tons per day. Emissions budget represent CARB’s seasonal on-road motor vehicle emission inventory

**Figure 6.2**

The federal conformity regulation (Section 93.119 (e)) requires that a conformity analysis must include the attainment milestone year of the SIP, the forecast horizon year of the applicable RTP and have no analysis gaps greater than ten years. Based on these requirements, the conformity analysis years selected for this analysis are: 2010, 2018, and 2030. A description of the conformity modeling planning assumptions is provided in Figure 6.3.

<b>Modeling Assumptions</b>	<b>2008 RTP Conformity Assumptions</b>
Socio-economic growth assumptions	TRPA Regional Plan Update Growth Forecasts
Vehicle Activity Levels (trips, VMT) (LDA, LDT, MDT, UB, MCY, SBUS, HHDT, HDGT,)	ARB Default Activity (2010, 2020, 2030) –TMPO Model (2012, 2017,2030)
VMT by Speed Class Distributions (LDA, LDT, MDT, HDDT, HDGT, SBUS, MCY)	ARB Default Activity (2010, 2020, 2030)
Transportation Model Networks	TMPO Travel Model ( 2030 -Build-No Build)
Infrastructure Improvements & Schedules	Programmed Projects: 2009 FTIP: Planned Projects: 2008 RTP
Emission Model	EMFAC2007 v. 2.3 (ARB)
Vehicle Type/Technology & Demographic Distributions	EMFAC2007 v. 2.3 (ARB)
Vehicle Population	ARB Default Activity (2010, 2020, 2030)
Vehicle Starts	EMFAC2007v.2.3 ARB Default Activity (2010,2020, 2030)
Emission Budgets	2005 40 CFR (2003, 2010, 2018)

**Figure 6.3**

**Note:** Additional Information concerning the TMPO Transcad Model Development and Calibration can be found in Lake Tahoe Resident and Visitor Model: Model Description and Final Results: Parsons, Brickerhoff Quade & Douglas. August 2007.

## 2008 TMPO TransCAD Modeling and Network Analysis

The 2008 RTP impact on travel behavior is assessed at the regional scale using the TMPO TransCAD Tour-Based Travel Demand Model. The TransCAD model identifies the 2008 RTP impact on region-wide circulation patterns and Vehicle Miles Traveled (VMT). The socio-economic data inputs for the regional network travel demand model were derived from the most recent growth allocations (2012, 2017, 2022 and 2030) identified through the TRPA Regional Plan (Pathway). Both non-exempt projects required modifications to the 2030 TransCAD street networks. New roads or road extensions were coded by creating new links; widening projects required re-coding the number of lanes on affected links; channelization improvements entailed increasing the coded lane capacities; and passing lanes and/or roadway improvements/upgrades were reflected by increasing the average free flow speeds on affected links.

### Non-Exempt Projects

The Lake Tahoe Region is subject to a transportation conformity analysis on specific types of projects (termed “non-exempt projects”) that are included within the planning and programming documents. Exempt projects are defined in 40 CFR 93.126 and generally include projects that will not increase roadway capacity or VMT, safety improvements, maintenance of existing transit systems, such as bus replacement and the addition of bus shelters to be implemented in the Lake Tahoe Region. The following non-exempt projects have been identified for the Tahoe Region. (A complete list of projects can be found on page 54 of the RTP.)

### U.S. Highway 50 Stateline Project

Scheduled for completion after 2022, this project will re-align U.S. Highway 50 near the casino corridor to improve bicycle, pedestrian and transit opportunities. The project straddles the California/Nevada State-line area in El Dorado County, California and Douglas County, Nevada.

It proposes to reduce the existing U.S. Highway 50 alignment to two eastbound lanes with westbound traffic redirected on Lake Parkway.

### State Route 89 Realignment

Also scheduled for completion after 2022, this project addresses seasonal traffic congestion at the Tahoe City “Wye” in Placer County and the structural and seismic deficiencies of the Fanny Bridge over the Lower Truckee River. Fanny Bridge will be upgraded to provide improved pedestrian and bicycle safety with a new State Route 89 alignment through the 64-acre USFS (U.S. Forest Service) parcel located west of the existing SR 89.

Based on the results of the TransCAD modeling and street network analysis, the resulting increase in daily VMT and vehicle trips from the two non-exempt projects have been estimated at 15,530 and 2,283 respectfully for the forecast year of 2030. In order to identify the county’s (El Dorado and Placer) VMT and vehicle trip change contribution as inputs to the on-road source emission estimates created by the two projects, the TMPO staff utilized the TransCAD model to identify El Dorado and Placer VMT and vehicle trip changes for the 2030 forecast year. Based on the results of this analysis the El Dorado and Placer County increases in VMT and vehicle trips were computed as follows for the 2030 forecast year:

<b>EL DORADO COUNTY 2030 FORECAST</b>	<b>PLACER COUNTY 2030 FORECAST</b>
VMT +10,861	VMT +4,669
Vehicle Trips +1,553	Vehicle Trips +730

Figure 6.4

## On-Road Motor Vehicle Emissions Analysis

The on-road mobile source emissions estimates for the 2008 RTP were produced with the EPA approved EMFAC2007 (v. 2.30 November 6, 2006) emission inventory model developed by the CARB for use in California. EMFAC calculates emission factors that are used as inputs to the activity module to produce an on-road mobile source emissions inventory. EMFAC uses inputs on the types of vehicles in use, vehicle speeds, vehicle operating conditions (e.g., cold starts, hot starts, hot stabilized running etc.) and temperature corrections (for diurnal and hot soak evaporative processes) to generate on-road vehicle emission factors. These emission factors are applied to the appropriate on-road activity data (e.g., VMT, VMT by speed class, and number of trip starts for each vehicle type and technology group) stratified by time of day (to account for diurnal ambient temperature variations) to produce a countywide on-road mobile source emissions estimate.

The emissions associated with VMT and vehicle starts are accounted for in the EMFAC model based on the distribution of these trips by vehicle classification, vehicle technology class, operating mode and activity by time of day. ARB distributions were used for this purpose.

El Dorado County Projected Inventory CO Emissions				
CO MAINTENANCE AREA	AREA INCLUDED	2010	2018	2030
Lake Tahoe South Shore	Eastern El Dorado	10.02*	4.94*	2.98*
Placer County Projected Inventory CO Emissions				
CO MAINTENANCE AREA	AREA INCLUDED	2010	2018	2030
Lake Tahoe North Shore	Eastern Placer	4.74*	2.60*	1.49*

\* Tons per day

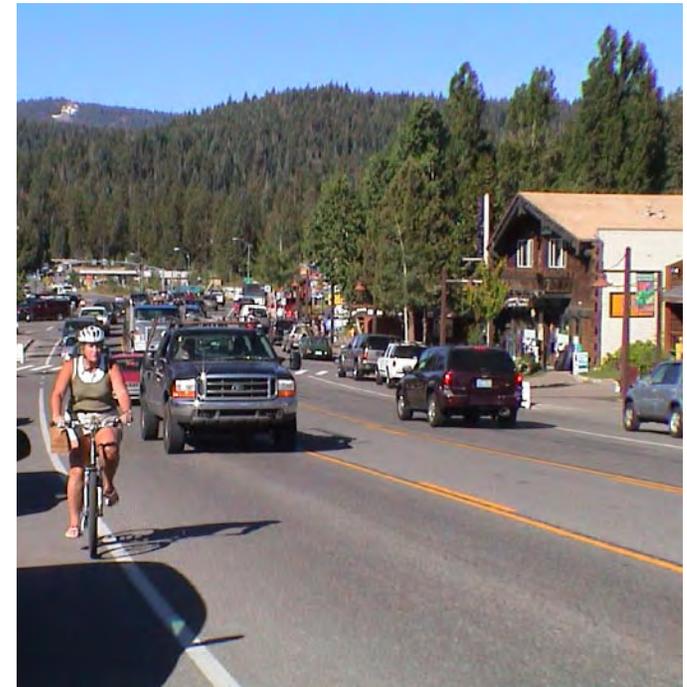
Figure 6.5

## California Emissions Results

The Emission Budget Results and On-Road Activity Data can be found in Technical Appendix B.

## California Conformity Determination

As a result of the above emission results, the TMPO finds the proposed new transportation programs discussed in this document do not affect CO attainment nor exceed the CO budget in either Placer or El Dorado Counties for the life of this plan. For this reason, the TMPO stipulates that this plan is consistent with the California's State Implementation Plan for air quality and is therefore in full compliance with the Conformity requirements of the Clean Air Act.



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## Nevada Conformity

Nevada's conformity analysis differs slightly from California's in that there is no emissions budget to form a conformity determination. Figure 6.1 on page 66 shows the current designation for Nevada's counties in the Tahoe Basin. As indicated in Figure 6.1, Carson City and Douglas Counties are now under a limited maintenance plan for CO (NDEP's Carbon Monoxide Re-designation Request and Limited Maintenance Plan was adopted by the EPA in February 2004). The limited maintenance plan includes provisions for interagency consultation procedures should CO concentrations exceed a pre-determined "trigger." This trigger includes two verified 8-hour average concentrations in excess of 7.65 ppm (85% of the CO NAAQS) at any one monitoring site in any CO season (November through February) as the pre-violation action level. Since the 2008 RTP is working under a Limited Maintenance Plan in Nevada, the 2008 RTP is not required to satisfy the regional emissions analysis for a given pollutant.



## Reducing Greenhouse Gas Emissions at Lake Tahoe

The Lake Tahoe Region is particularly vulnerable to the impacts of global climate change, just as it is to other environmental impacts. The region's economy is highly dependent on the health of its environmental assets, including its substantial snowpack, a clear lake, and healthy forests, all of which will be negatively affected by warming temperatures.

Emissions from motor vehicles, including cars, buses and boats, are a leading source of greenhouse gas emissions in the Basin. Motor vehicle use has been identified as a major contributor to the loss of clarity of Lake Tahoe, contributing to runoff from roadways and the emission of nitrogen oxides and particulate matter, causing algae growth in the Lake. Since 1982, the TRPA has strived to meet two air quality threshold indicators: Vehicle Miles Traveled (VMT) and traffic counts. Both of these criteria should be reduced to 1981 levels. These threshold indicators are consistent with the goals of California's Global Warming Solutions Act (AB32) of 2006, which specifies that the state must reduce greenhouse gas emissions to 1990 levels by 2020. Vehicle Miles Traveled have been decreasing in the Lake Tahoe Region over the last five years, and traffic counts, which, for the purposes of the threshold indicator, are measured at a location in South Lake Tahoe, are also trending downward.

Because of the air quality thresholds and the intense focus on environmental health in the Lake Tahoe Region, the goals and policies of past regional plans and regional transportation plans have focused on reducing emissions from motor vehicles, and on shifting people out of their cars and into other, lower impact modes such as transit, bicycling, and walking. This Regional Transportation Plan continues this trend, with the majority of policies and projects encouraging transit and pedestrian-oriented development, constructing pedestrian and bicycling facilities, and strengthening the transit system. Those projects that are related to roadway improvements are limited to minor changes such as adding left-hand turn lanes or improving traffic signalization to provide for a more efficient use of the current roadway network. These projects relieve

congestion without widening roadways or adding major capacity for motor vehicles.

Concurrent with the development of this regional transportation plan is a comprehensive revision and update to the regional plan for the Lake Tahoe Region. The regional plan outlines goals and policies for many resource areas in addition to transportation, and will examine land-use and building strategies that can reduce greenhouse gas emissions. The regional plan will include a region-wide analysis that looks at all aspects of the plan with respect to climate change, including transportation.

### Projects that affect greenhouse gas emissions

In the area of transportation, most greenhouse gas emissions are associated with motor vehicle use. Therefore, projects that shift people out of cars and into other, lower-emission alternatives will reduce greenhouse gas emissions. The projects proposed as part of Mobility 2030, the Lake Tahoe Regional Transportation Plan, are grouped below into three categories: projects that will likely reduce greenhouse gas emissions, projects that will likely increase greenhouse gas emissions, and those where the effect on emissions is unclear or may be neutral.

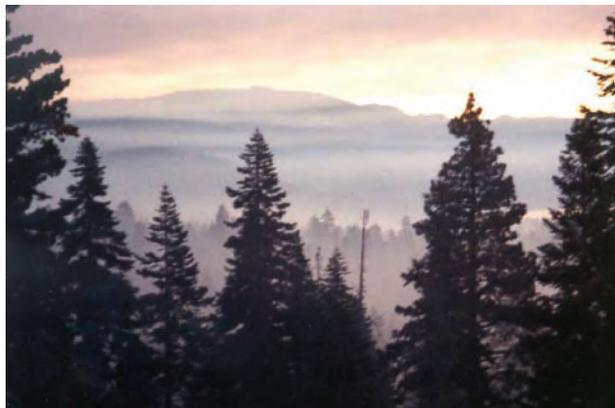
Projects that were placed in the "reduce" category are those that aim to reduce vehicle use or vehicle emissions as a primary goal. For instance, all bicycle trails and pedestrian improvements are considered to reduce emissions, since the primary goals of these projects getting drivers to walk or bicycle for trips they otherwise would have made by motor vehicle, thus reducing air quality emissions. Likewise, capital improvements in bus fleets were considered to reduce greenhouse gas emissions, since one of the main purposes of replacing buses is introducing newer, cleaner technologies to the fleets.

Projects included in the "increase" greenhouse gas emissions category are those that create capacity increases for motor vehicles. These capacity increases are still quite small, compared to those planned in larger, urban areas, but they create additional lane capacity for several thousand feet of roadway in order to alleviate reoccurring congestion

at key points. Aviation service enhancements are also considered to increase greenhouse gas emissions as air travel is one of the most energy-intensive forms of travel.

Projects that are in the “unclear” column include certain transit and roadway improvement projects. These projects may reduce greenhouse gas emissions in some ways, but could increase them in others. New transit services get people out of their cars, but if older buses with out-of-date emissions technology are used to provide that transit service, then ridership must be high enough to outweigh the impacts of the additional bus emissions. As capital improvements are made to bus fleets, however, emissions will be reduced. Likewise, roadway improvements can decrease greenhouse gas emissions by reducing idling times, but at the same time they can increase the capacity of a roadway, allowing and encouraging more vehicles to use the roadway system. The roadway capacity increases in the 2008 RTP are intended to encourage greater flexibility to implement alternative mode options.

As a percentage of total project cost, projects that will likely reduce greenhouse gas emissions are estimated at approximately 57% of expenditures; those that will likely increase greenhouse gas emissions are approximately 1% of expenditures; and those whose effect is unclear make up 42% of expenditures. See Figure 6.6.



## Policies that affect greenhouse gas emissions

Most of the goals and policies in the Regional Transportation Plan focus on reducing environmental impacts of motor vehicles, including emissions of greenhouse gasses.

**GOAL #1 Pedestrian Transit Oriented Development (PTOD)** Plan for and promote land use changes and development patterns consistent with the Regional Plan that encourage the development of walkable, mixed-use centers that support transportation enhancements and environmental improvements while improving the viability of transit systems.

**GOAL #2 Pedestrian/Bicycle Friendly Communities** Design an atmosphere elevating bicycle and pedestrian usage to the primary modes of transportation at Lake Tahoe.

**GOAL #3** Utilization of Intelligent Transportation Systems (ITS). Technology shall be considered, implemented and used to increase usage of alternative modes.

**GOAL #4** Actively pursue programs that promote the use and expansion of mass transit.

**GOAL #5** Participate in state and local transportation planning efforts to ensure coordination and consistency in the transportation system, and to strengthen inter and intra-regional transportation.

**GOAL #7** Develop parking management strategies for the Tahoe Region.

**GOAL #8** Manage and respond to transportation demand through traffic management plans.

**GOAL #10** Improve the mobility of the elderly, handicapped and other transit-dependent groups.

**GOAL #12** Develop an on-going source of regional revenue to fund alternative transportation operations and maintenance.

*For the full text of goals and associated policies, please refer to Chapter 2.*

**Figure 6.6. Regional Transportation Plan Project Strategies, Costs, and Greenhouse Gas Emission Effects**

<b><u>Project Strategies</u></b>	<b><u>Reduce GG</u></b>	<b><u>Increase GG</u></b>	<b><u>Unclear</u></b>	<b><u>Total</u></b>
U.S. 50 Bicycle and Pedestrian Improvement Project(s)	\$48,000,000			\$48,000,000
Kings Beach Commercial Core Improvement Project	\$50,000,000			\$50,000,000
State Route 89 Realignment Project		\$50,000,000		\$50,000,000
Tahoe City Transit Center	\$7,000,000			\$7,000,000
U.S. 50 Stateline Corridor Project			\$65,000,000	\$65,000,000
Waterborne			\$14,000,000	\$14,000,000
<b><u>Transit Strategies</u></b>				
BlueGo Service Operational Enhancements			\$4,073,400	\$4,073,400
BlueGo Service Capital Enhancements	\$4,740,000			\$4,740,000
BlueGo Maintenance Facility			\$7,000,000	\$7,000,000
TART Service Operational Enhancements			\$813,000	\$813,000
TART Service Capital Enhancements	\$281,300			\$281,300
Lake Lapper Capital			\$30,000	\$30,000
Lake Lapper Operational			\$240,000	\$240,000
Aviation Capital		\$1,500,000		\$1,500,000
Aviation Operational		\$800,000		\$800,000
<b><u>Bike and Pedestrian Strategies</u></b>				
Pioneer Trl - from Lake Tahoe Blvd./US Hwy 50 to - Ski Run Blvd	\$3,560,000			\$3,560,000
Harrison Ave - from Lakeview Ave to Los Angelese Avenue	\$450,000			\$450,000
Lake Tahoe Nevada State Park - From Incline Village to Sand Harbor	\$7,920,000			\$7,920,000
Sawmill Rd - from Lake Tahoe Blvd to Us Hwy 50	\$3,680,000			\$3,680,000
Al Tahoe Trl - from Lake Tahoe Blvd/US Hwy 50 to Al Tahoe Trl	\$500,000			\$500,000
Lake Tahoe Blvd - from Sawmill Road to D Street	\$2,100,000			\$2,100,000
US Hwy 50 - from Cave Rock to Zephyr Cove	\$9,500,000			\$9,500,000
US Hwy 50 - from Zephyr Cove to Roundhill/Elks Point Trail	\$2,960,000			\$2,960,000
USFS Trl. - from Spring Creek to Cascade Rd.	\$3,840,000			\$3,840,000
Dollar Hill Trl - from Dollar Hill to N. Tahoe Regional Park	\$6,160,000			\$6,160,000
OLD Hwy 50 ROW - from CSLT City Limits to Douglas County Line	\$6,760,000			\$6,760,000

**Figure 6.6**

<b><u>Project Strategies</u></b>	<b><u>Reduce GG</u></b>	<b><u>Increase GG</u></b>	<b><u>Unclear</u></b>	<b><u>Total</u></b>
OLD Hwy 50 ROW - from CSR 89-Meyers to CSLT City Limits	\$9,480,000			\$9,480,000
Lake Tahoe-Nevada State Park - from Incline Village to Sand Harbor	\$990,000			\$990,000
College Drive - from Mt. Rose Hwy to Village Blvd	\$200,000			\$200,000
NSR 207/Kingsbury Grade - from Basin Boundary/Spooner Summit to US Hwy 50	\$12,320,000			\$12,320,000
Brockway Summit - from Kings Beach/CSR 28 to Brockway Summit	\$1,610,000			\$1,610,000
NSR 28 - from Sand Harbor to Chimney Beach	\$120,800			\$120,800
CSR 89 - from Cascade to N. Emerald Bay	\$196,400			\$196,400
Homewood - from Tahoe Ski Bowl Way to Silver Street	\$2,000,000			\$2,000,000
Incline Village/NSR 28 - from Southwood to Country Club Drive	\$300,000			\$300,000
Nevada South Demo - from Stateline to Round Hill Pines Beach	\$6,000,000			\$6,000,000
<b><u>Smart Streets - Complete Streets Strategies</u></b>				
US 50 and Sierra Blvd. Intersection Improvements		\$755,000		\$755,000
US 50 Signal Synchronization (Meyers to Stateline)			\$3,000,000	\$3,000,000
US 50 and Apache Intersection Improvements		\$320,000		\$320,000
Meyers Highway Corridor Operations Study			\$700,000	\$700,000
Tahoe City Traffic Management Program			\$550,000	\$550,000
Intersection Detection Equipment (various Locations)			\$900,000	\$900,000
Changeable Message Signs (Various Locations)			\$2,850,000	\$2,850,000
Sierra Traffic Operation System (TOS) (ITS at Various Locations in CA)	\$5,300,000			\$5,300,000
Traffic Monitoring Stations (various locations)	\$520,000			\$520,000
Bike & Pedestrian Facilities O&M	\$2,000,000			\$2,000,000
Safety and Rehabilitation Projects (Minor Projects-NV)	\$1,800,000			\$1,800,000
Safety and Rehabilitation Projects (Minor Projects-CA)	\$2,800,000			\$2,800,000
Emergency Roadway Repair Program	\$600,000			\$600,000
<b>Total Project/Program Costs in 2008 dollars</b>	<b>\$203,688,500</b>	<b>\$53,375,000</b>	<b>\$99,156,400</b>	<b>\$356,219,900</b>
<b>Percentage of Total Cost</b>	<b>57%</b>	<b>15%</b>	<b>28%</b>	

**Figure 6.6 cont.**

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## Conclusion

The main focus of the regional transportation plan is to implement projects that reduce dependency on the private automobile and ultimately reduce environmental and climate impacts. There is, however, a group of projects in the plan for which the environmental impact is as yet unclear. The impact of these individual projects on greenhouse gas emissions will be fully analyzed by project level environmental documentation during project development. Many of these projects provide mobility and social services that are vital to Lake Tahoe communities, such as frequent transit service in low-income neighborhoods. These systems provide the infrastructure necessary to shift people out of private vehicles, and as transit technology improves, will no doubt provide a reduction in greenhouse gases. Overall, the regional transportation plan directs over \$200 million to projects that will reduce greenhouse gas emissions in the Basin from transportation-related sources over the next 20 years. The plan's strategies and overall policy direction set the stage for a strong focus on reducing greenhouse gas emissions in the Basin.

