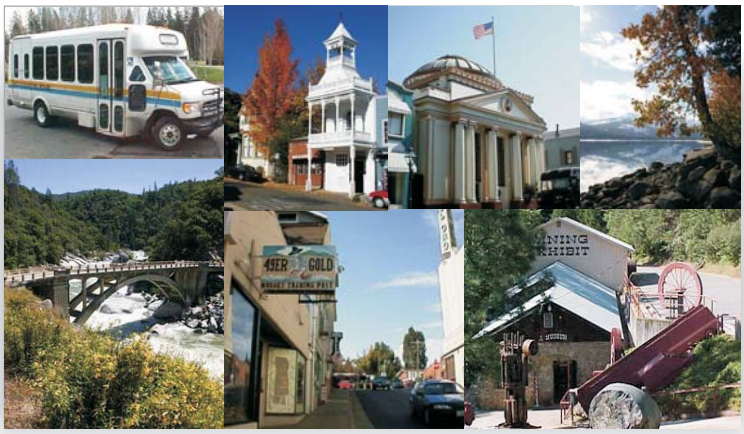
Western Nevada County
Transit Development Plan Update

Draft Final Report



Prepared for the

Nevada County Transportation Commission

Prepared by

TRANSPORTATION
CONSULTANTS, INC.

LSC Transportation Consultants, Inc.

WESTERN NEVADA COUNTY
TRANSIT DEVELOPMENT PLAN UPDATE

Draft Final Report

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Chapter 1
Introduction

Transportation considerations play a key role in the quality of life provided by any community. Access to social services, medical services, employment opportunities, educational resources and basic necessities are topics of universal concern, as they have a strong impact on the economy, ease of movement, and quality of life for residents. In addition to providing mobility to residents without access to a private automobile, transit services can provide a wide range of economic development and environmental benefits.

The Nevada County Transportation Commission, aware of the importance of transportation issues, has retained LSC Transportation Consultants, Inc. to prepare a five-year Transit Development Plan (TDP) for Western Nevada County. The TDP provides a "road map" for improvements to the public transit program over the upcoming five years. The intent of this study was to evaluate the specific needs for transit services, as well as to develop plans for improvements and service revisions. This was accomplished through the review of existing transit conditions and evaluation of operations, as well as through public outreach via onboard surveys and community-based meetings. A wide range of alternatives was evaluated in order to provide a comprehensive strategy of short-range service, capital, and institutional improvements. As a result of this evaluation, a supporting financial and implementation plan have been developed with both a financially constrained scenario, and a financially unconstrained scenario.

The document presented herein presents the setting in which transportation services are provided; a review and analysis of existing transit conditions; an analysis of transit demand; evaluation of service, capital, institutional and financial alternatives; and an implementation plan for the preferred alternatives.

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Chapter 2
Setting for Transportation Services

STUDY AREA

Western Nevada County is located in the heart of California's Gold Rush country. As shown in Figure 1, western Nevada County is bounded by Sierra County to the north, Placer County to south, and Yuba County to the west. Western Nevada County covers approximately 618 square miles, ranging in elevation from near sea level in the southwest to roughly 5,500 feet at Bowman Lake in the northeast. Western Nevada County is traversed by three main highways: State Route (SR) 49 running north-south, SR 20 running east-west, and SR 174 running between Grass Valley and Colfax, just south of the county boundary.

The main economic and population centers in Western Nevada County consist of Nevada City and Grass Valley, which are situated below the heavy snows of the Sierra Nevada. Nevada City serves as the county seat. The only other incorporated community in Western Nevada County is Grass Valley, located approximately 4 miles southwest of Nevada City. There are also a number of important residential areas in the outlying portions of the study area, including Lake Wildwood, Penn Valley, Lake of the Pines, Chicago Park, and North San Juan.

The geography of Western Nevada County is defined by the green rolling hills in the lower portion of the county, the pristine mountains of the Sierra Nevada to the east, the Middle Fork of the Yuba River in the north, the Bear River in the south, and numerous other rivers, lakes, and meadows. The western portion of the study area is defined by a series of east-west ridges. With four distinct seasons, Western Nevada County is an attractive area to visit, retire or live in.

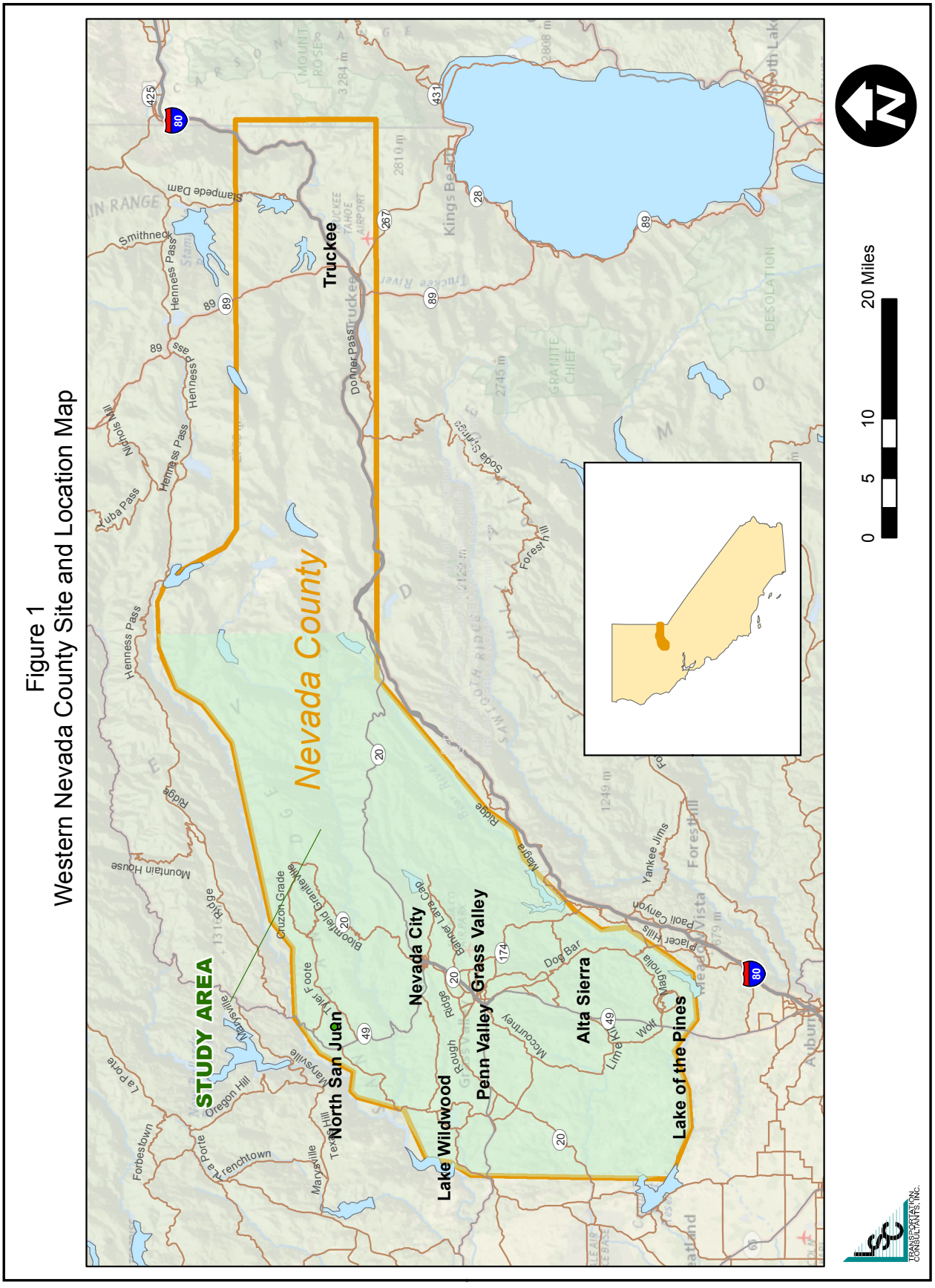
MAJOR ACTIVITY CENTERS

The identification of major activity centers is useful in determining where transportation services might be needed. The region's major activity centers are situated in and around Nevada City and Grass Valley. Major activity centers in Western Nevada County include the following:

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

- Adult and Family Services
- Alta California Regional Center
- Bear River Recreation and Park District
- Behavioral Health Department
- Big Brother Big Sister
- California Children Service
- Champion Mine Family Resource Center
- Child Advocates of Nevada County
- Community Health Department
- Community Support Network of Nevada County for Children and Families
- Crisis Pregnancy Center
- Del Oro Caregiver Resource Center
- Domestic Violence and Sexual Assault Coalition
- Forever Families.
- Food Bank of Nevada County
- FREED Center
- Gold Country Community Center
- Golden Sierra Job Training Agency
- Helping Hands Caregiver Resource
- Hospitality House
- Interfaith Food Ministry of Nevada County
- Milhous Children's Services
- Neighborhood Center of the Arts
- Nevada County Health Department
- Nevada County Housing and Community Services
- Nevada County Housing Development Corporation
- Nevada County Legal Assistance, Inc.

Figure 1
Western Nevada County Site and Location Map



- Nevada County Mental Health
- Nevada County Substance Abuse Treatment and Recovery
- Nevada County Welfare Office
- North San Juan Senior Center
- PRIDE Industries
- Retired and Senior Volunteer Program
- Senior Citizen's Foundation of Western Nevada County
- Senior Community Service Employment Program
- Sierra Nevada Children's Services
- Sierra Services for the Blind
- TEAM 3 Family Counseling Center
- Western County Crown Point Facility
- Women, Infants, and Children Supplemental Nutritional Program
- Workforce Center

Medical Facilities

- California College of Ayurveda Center for Optimal Health
- Golden Empire Convalescent Hospital
- Wolf Creek Care Center
- Hospice of the Foothills
- Living Well Medical Clinic
- Nevada County Health Department
- Sierra Family Medical Clinic
- Sierra Nevada Home Care
- Sierra Nevada Memorial Hospital
- Sierra Nevada Urgent Care
- Spring Hill Manor Convalescent Hospital
- Yuba Docs Urgent Care

Government Facilities

- Nevada County Courthouse
- Department of Motor Vehicles
- Employment Development Department
- Loma Rica Public Works Facilities
- Grass Valley Library
- Eric Rood Government Center
- Nevada County Airport
- Grass Valley Post Office
- Nevada City Post Office
- Nevada County Library
- Social Security Office

Educational Facilities

- 49er Regional Occupational Program
- Alta Sierra Elementary School
- Bear River High School
- Bell Hill Academy
- Bitney College Preparatory High School
- Bitney Springs Charter Council
- Champion Mine School
- Chicago Park Community Charter
- Chicago Park School District
- Clear Creek School
- Cornerstone Christian Schools
- Cottage Hill School
- Deer Creek School
- Earle Jamieson High School
- Echo Ridge Seventh Day Adventist School
- Foothill College
- Forest Charter School
- Ghidotti Early College High School
- Gold Run Elementary School
- Grass Valley Charter School
- Grass Valley School District
- Grizzly Hill School
- Headstart
- Hennessy School
- Highland Oaks School
- Home Study Charter School
- John Muir Charter School
- John Woolman School
- Living Wisdom School
- Lyman Gilmore School
- Magnolia Intermediate School
- Malakoff School
- Mount Saint Mary's Convent
- Mount Saint Mary's Grade School
- Nevada City Elementary School
- Nevada City Home Study Charter School

- Nevada City School of Arts
- Nevada County Charter Cooperative
- Nevada County Special Education
- Nevada County Superintendent of Schools
- Nevada Union Adult Education
- Nevada Union High School
- North Point Academy
- Oak Tree School
- Pleasant Ridge Union School District
- Pleasant Valley School
- Ready Springs School
- Reward Mine Community Day School
- Scotten School
- Seven Hills Middle School
- Sierra Academy of Expeditionary Learning
- Sierra College
- Sierra Montessori Academy
- Sierra Mountain High School
- Silver Springs High School
- Twin Ridges Home Study Charter
- Union Hill Home School
- Union Hill School District
- Vantage Point Charter
- Washington School
- Williams Ranch School
- Yuba River Charter

Recreational Activity Centers

- Alta Sierra Country Club
- Condon Park
- County Fairgrounds
- Earth Planet Museum
- Empire Mine State Historical Park
- Firehouse Museum
- Grass Valley Memorial Park
- Grass Valley Museum
- Lake Wildwood Country Club
- Lola Montez Home
- Malakoff Diggins State Park
- Nevada County Country Club
- Northstar Mining Museum
- Pioneer Park
- Searls Historical Library
- Western Gateway Park

Retail Centers

- Bitney Springs Center
- Bunch Creek Shopping Center
- Chicago Park Store
- Downtown Grass Valley
- Downtown Nevada City
- Grass Valley Shopping Center
- K-Mart Shopping Center Grass Valley
- Lake Wildwood Shopping Center
- Safeway Shopping Center
- Seven Hills Business District
- Whispering Pines Business Park
- Penn Valley Village Center
- Pine Creek Shopping Center
- Fowler Center
- Glenbrook Shopping Center
- Golden Empire Market

DEMOGRAPHIC PROFILE

Historical Population and Projections

The population of Nevada County has had steady but slow growth in the past ten years. According to U.S. Census data, the 2000 population was 92,033 for the entire County. This figure grew to 98,509 persons in 2013, representing a roughly 7 percent increase over 13 years. Of this 2013 figure, approximately 82,264 persons are within the Western Nevada County study area, or 83.5 percent of the total Countywide population.

Projections by the California Department of Finance indicate that growth will occur at a relatively similar rate over the next decade, reaching 105,389 by 2025 (a 6.8 percent increase between 2015 and 2025). This represents an annual percent growth of 0.66 percent from 2015 to 2025.

Transit Needs and Demand. The study provides detailed demographic data broken down by Census Tract, so as to allow for a thorough understanding of population trends and locations of transit dependent persons.

Transit Dependent Population

Nationwide, transit system ridership is drawn largely from various groups of persons who make up what is often called the "transit dependent" population. This category includes youths, elderly persons, persons with disabilities, low-income persons, and members of households with no available vehicles. There is considerable overlap among these groups. Overall, more than 70 percent of the population in Western Nevada County falls into one of these groups, excluding the zero vehicle households.

Table 1 presents the transit dependent population by Census Tract in Western Nevada County from the 2013 American Community Survey from the U.S. Census. As presented in the table, the population of Western Nevada County in 2013 was 82,264, roughly a 5.6 percent increase since 2000. Not surprisingly, the highest population densities are found in the Nevada City and Grass Valley areas. As discussed in detail below, the number of persons within each group has dramatically increased since 2000.

Youth Population

The youth population, which considered persons under the age of 18 years, represents 17.7 percent of the Study Area population, totaling 14,592 persons. The youth population is considered to be transit dependent persons, as children of school age that travel independently may need public transit to go to/from school or after school activities, while younger children may be riding with parents or guardians that rely solely on public transit themselves. Census Tracts with the most youth are located in the Lake of the Pines area (1,472 persons), Penn Valley / Rough and Ready (1,352 persons), northern Grass Valley (1,325 persons) and Chicago Park (1,319 persons). As a whole, the Census Tracts making up Grass Valley have a total of 3,400 youths (roughly 19.9 of the Grass Valley area's population). Similarly, Nevada City Census Tracts include a total of 1,895 youths (16.2 percent of the Nevada City area's population). Figure 2 presents the youth population distribution throughout the Study Area on a Block Group level.

Senior Population

There are an estimated 27,411 persons aged 60 or over residing in western Nevada County, comprising 33.3 percent of the total population. This population is roughly 41 percent greater than the number of seniors in the study area in 2000. The percentage of elderly persons is distributed relatively evenly throughout western Nevada County, although larger concentrations are found in the Chicago Park (2,864 persons), Lake of the Pines (2,527 persons), Alta Sierra (2,320 persons) and Nevada City (2,225 persons). Seniors comprise approximately 28.7 percent of the population in the three Census Tracts for Grass Valley (5.01, 5.02 and 6), and 33.9 percent of the total population in the Census Tracts associated with Nevada City (8.01 and 8.02). This information, at the Block Group level, is presented graphically in Figure 3.

Disabled Population

The US Census Bureau defines "ambulatory difficulty" as persons having a health condition that makes it difficult to walk or climb stairs, and is an important factor when considering transit needs. Many disabled persons may be mobile, but are not able to drive their own vehicle or do

TABLE 1: Western Nevada County Population Profile, by Census Tract

	Alta Sierra	Lake of the Pines	La Barr Meadows	SR 49 Corridor	South-western County	S. Grass Valley	Lake Wildwood	Penn Valley, Rough & Ready	Grass Valley			Chicago Park		Northern Nevada City	Nevada City	CT 9.01	CT 9.02	CT 9.03	Washington, North San Juan	*TOTAL STUDY AREA*
	CT 1.02	CT 1.03	CT 1.04	CT 1.05	CT 2	CT 3	CT 4.01	CT 4.02	CT 5.01	CT 5.02	CT 6	CT 7.01	CT 7.02	CT 8.01	CT 8.02	CT 9				
Total Population	***6,645***	**7,826**	**3,043**	**2,654**	**2,561**	**2,175**	**6,086**	**7,405**	**6,298**	**4,897**	**5,891**	**7,551**	**3,632**	**5,012**	**6,673**	**1,465**	**1,815**	**635**	**3,915**	***82,264***
Transit Dependent Population																				
Youth (Under 18 years)	1,256	1,472	413	490	495	295	1,042	1,352	1,325	1,078	997	1,319	456	799	1,096	263	368	76	707	***14,592***
% of Total	*18.9%*	*18.8%*	*13.6%*	*18.5%*	*19.3%*	*13.6%*	*17.1%*	*18.3%*	*21.0%*	*22.0%*	*16.9%*	*17.5%*	*12.6%*	*15.9%*	*16.4%*				*18.1%*	*17.7%*
Senior (60+ years)	2,320	2,527	1,416	812	855	758	2,591	1,928	1,878	1,303	1,736	2,864	1,537	1,747	2,225	308	494	112	914	***27,411***
% of Total	*34.9%*	*32.3%*	*46.5%*	*30.6%*	*33.4%*	*34.9%*	*42.6%*	*26.0%*	*29.8%*	*26.6%*	*29.5%*	*37.9%*	*42.3%*	*34.9%*	*33.3%*				*23.3%*	*33.3%*
Low-Income	142	552	178	472	174	200	517	642	1,514	940	1,618	712	267	806	472	354	439	153	946	***10,152***
% of Total	*2.1%*	*7.1%*	*5.8%*	*17.8%*	*6.8%*	*9.2%*	*8.5%*	*8.7%*	*24.0%*	*19.2%*	*27.5%*	*9.4%*	*7.4%*	*16.1%*	*7.1%*				*24.2%*	*12.3%*
Disabled	475	419	234	161	106	134	415	604	613	228	523	495	336	387	363	114	141	49	305	***5,798***
% of Total	*7.1%*	*5.4%*	*7.7%*	*6.1%*	*4.1%*	*6.2%*	*6.8%*	*8.2%*	*9.7%*	*4.7%*	*8.9%*	*6.6%*	*9.3%*	*7.7%*	*5.4%*				*7.8%*	*7.0%*
Zero Vehicle Households	18	72	31	55	15	6	58	60	304	147	493	45	11	19	180	17	27	17	61	***1,575***
% of Total Households	*0.7%*	*2.3%*	*2.1%*	*5.1%*	*1.6%*	*0.7%*	*2.1%*	*2.1%*	*11.3%*	*7.1%*	*16.7%*	*1.4%*	*0.7%*	*0.9%*	*6.5%*				*4.1%*	*4.5%*

Source: US Census American Community Survey 2009 - 2013 Estimates

Figure 2

Number of Youth (18 and Under) By Census Block Group

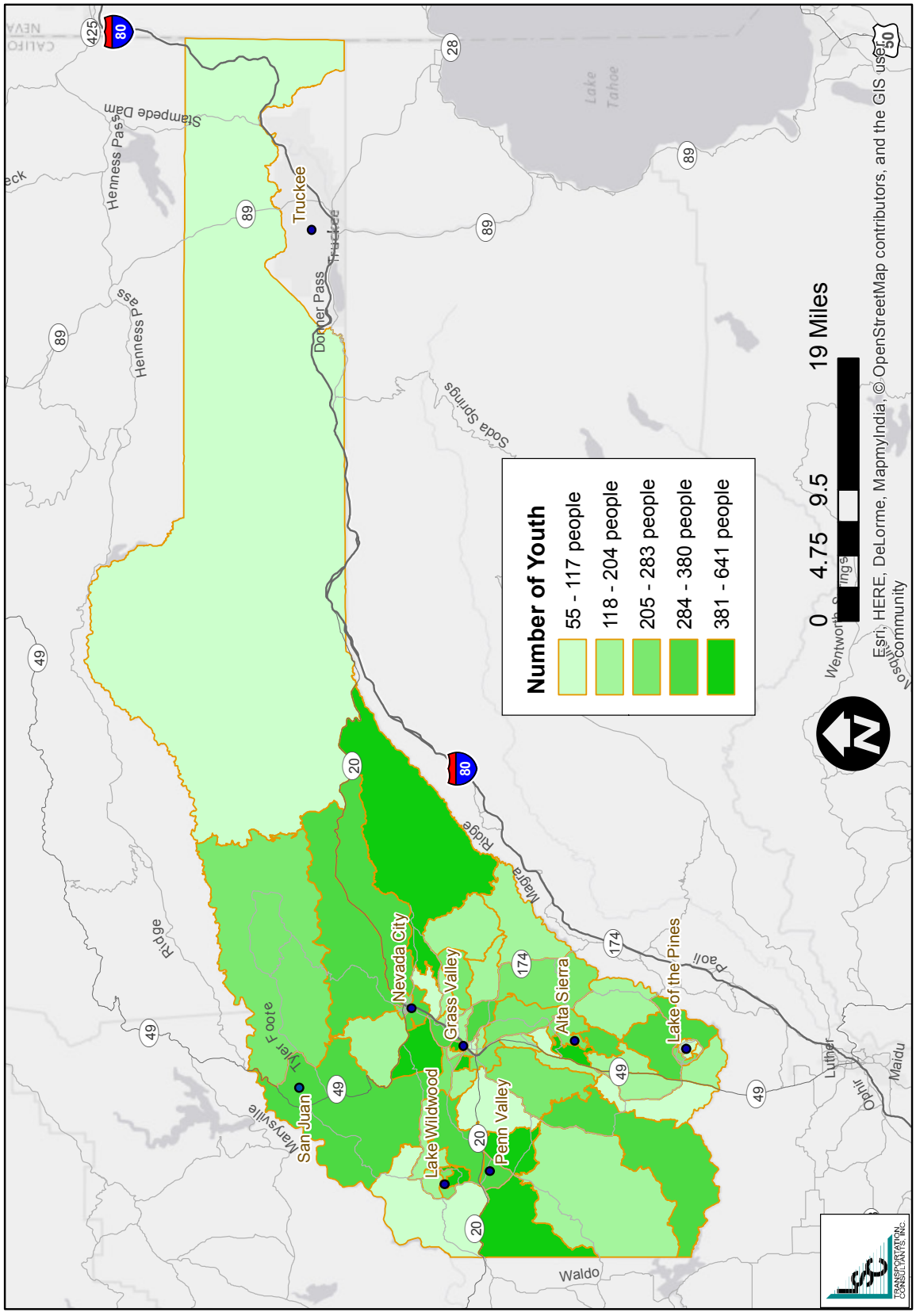
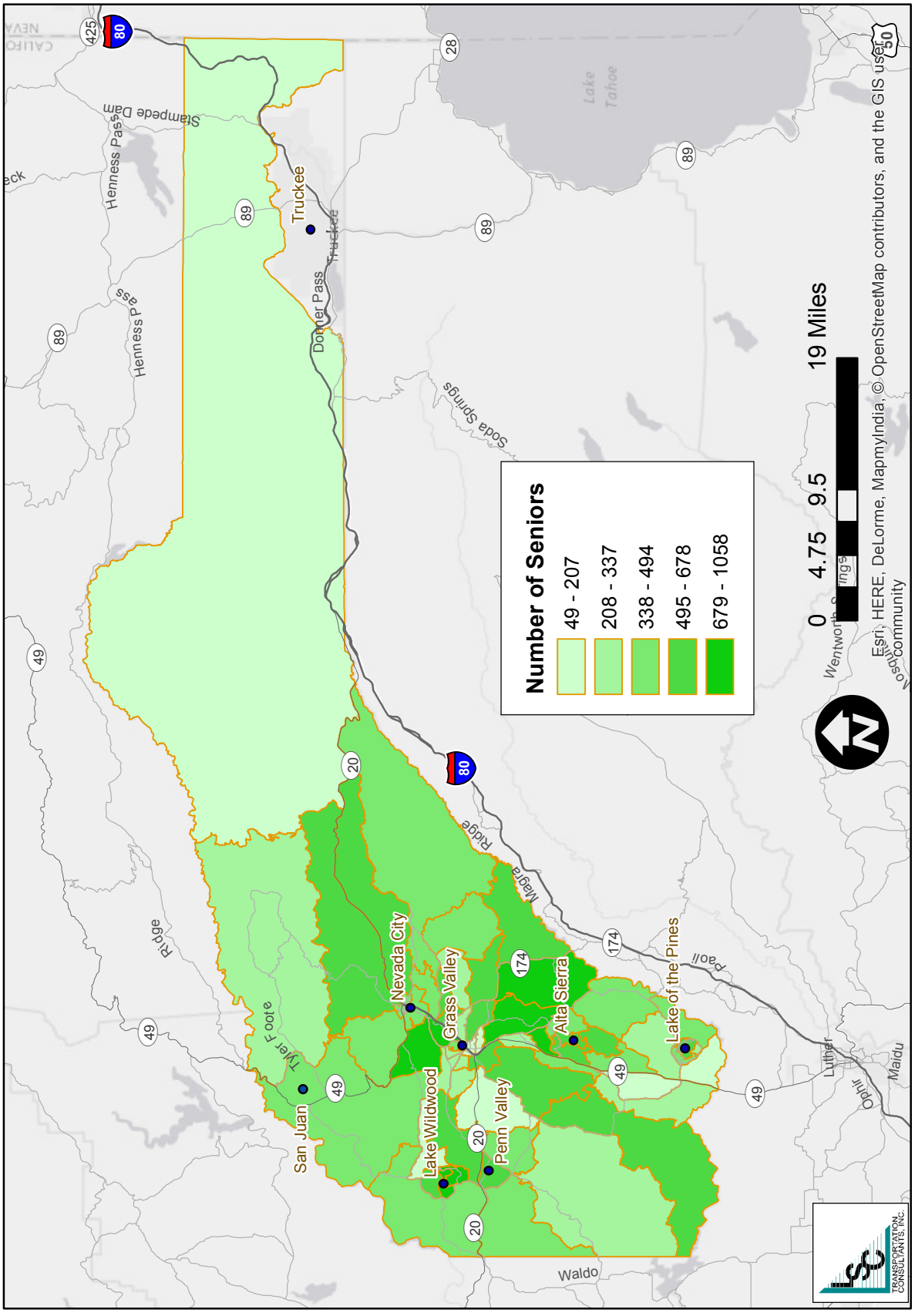


Figure 3

Number of Seniors (60 and Up) By Census Block Group



not have access to a vehicle. Currently, it is estimated there are 5,798 disabled persons in western Nevada County, which comprises 7.0 percent of the study area population. When compared to the 2000 Census data, the number of disabled persons has increased 169 percent over the last 13 years, which no doubt has been observed through the local transit services. The highest number of disabled persons are located in the western portion of the County, in Penn Valley / Rough and Ready (604 persons) and Lake Wildwood (517 persons). The southern portion of the county also have high numbers of disabled persons, including Alta Sierra (475 persons) and Lake of the Pines (419 persons). Not surprisingly, as a whole, Grass Valley has the highest total between Census Tracts 5.01, 5.02 and 6, where 7.9 percent of the population is disabled. Similarly, roughly 6.4 percent of Nevada City's population is disabled (within CT 8.01 and 8.02). This information is presented graphically in Figure 4 at the Block Group level.

Low-Income Population

Low-income persons are another likely market for transit services, as measured by the number of persons living below the poverty level. An estimated 10,152 low-income persons reside in the study area, representing 12.3 percent of the total population. Again, as with the other categories, the number of low-income residents has increased 52 percent since 2000. The percentage and concentration of those below poverty status are highest in Grass Valley, where 23.8 percent of the population in Census Tracts 5.01, 5.02 and 6 are considered low-income. Other areas with relatively large low-income populations include Washington / North San Juan (946 persons), Nevada City (CT 8.01 – 806 persons), Chicago Park (CT 7.01 – 712 persons) and Penn Valley / Rough and Ready (642 persons). See Figure 5 for details.

Zero Vehicle Households

The last important category to consider is households that do not have a vehicle available, as public transit is likely the only option for travel. The number of households without a vehicle available is estimated at 1,575, as shown in the table. This represents 4.5 percent of the total households in the area. Of all the transit dependent categories, this is the only one that decreased; the number of zero vehicle households actually went down roughly 2 percent since the 2000 Census. The greatest concentration of zero-vehicle households is in Grass Valley, where there are a total of 944 households without vehicles (or roughly 12.2 percent of households). This information is presented graphically in Figure 6.

ECONOMIC PROFILE

Historically, the local economy of western Nevada County was based on mining and timber. Today, services, retail trade and government dominate the current economic base. Additionally, many development professionals, high-tech companies and hardware and design firms add to the diversity of the economy.

Area Employers

Table 2 provides a list of the major employers within western Nevada County. As presented, there is a mix of industry associated with these employers, ranging from government offices to electronic manufacturers to grocery stores. The largest employer, by far, is the Sierra Nevada Memorial-Miners Hospitals, which employs over 1,000 persons in Grass Valley. The County of Nevada and the Sierra Nevada Memorial Hospital organizations also employ significant numbers of persons in the area.

Figure 4

Number of Disabled Persons By Census Block Group

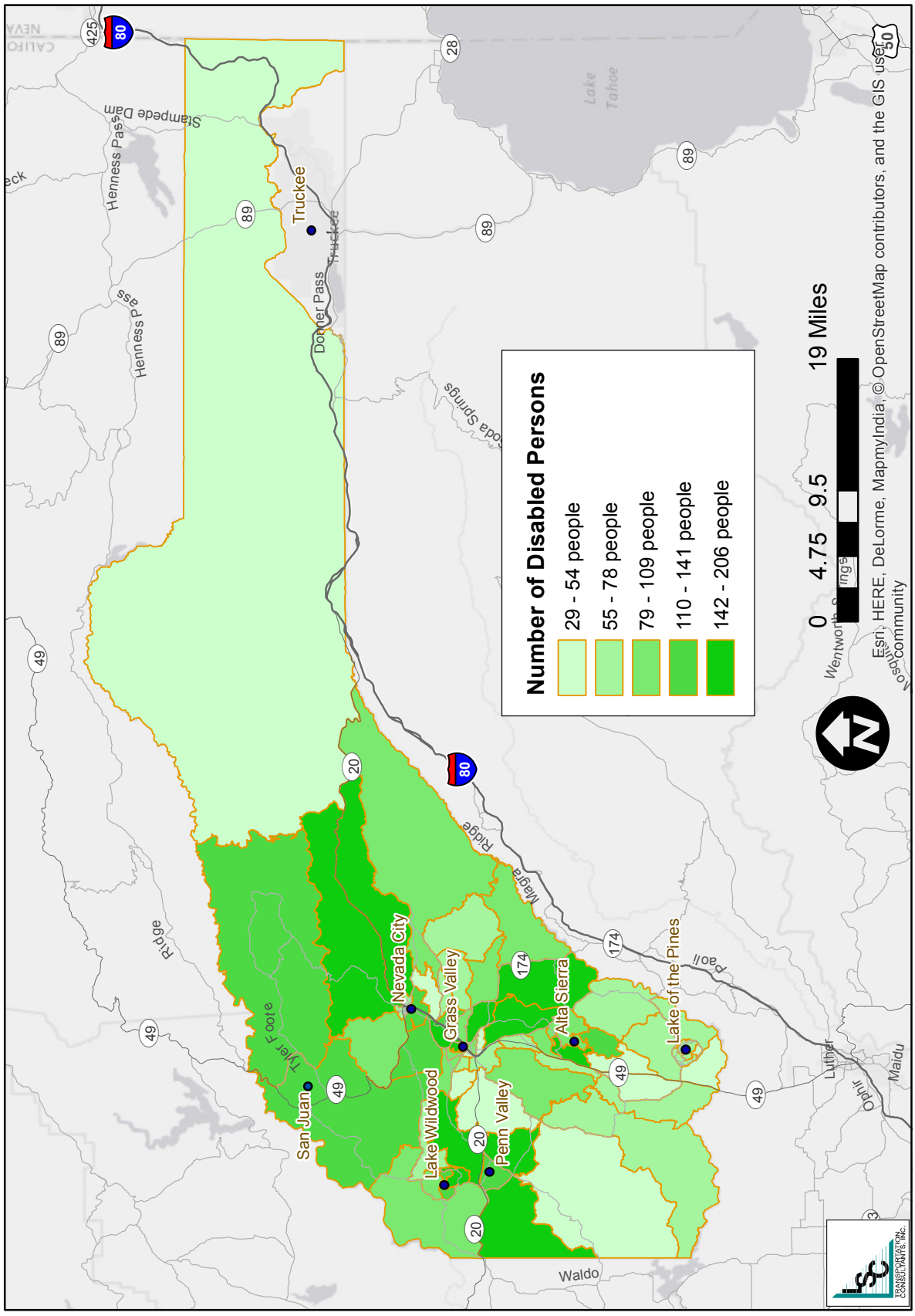


Figure 5

Number of People Living Below Poverty Level by Census Block Group

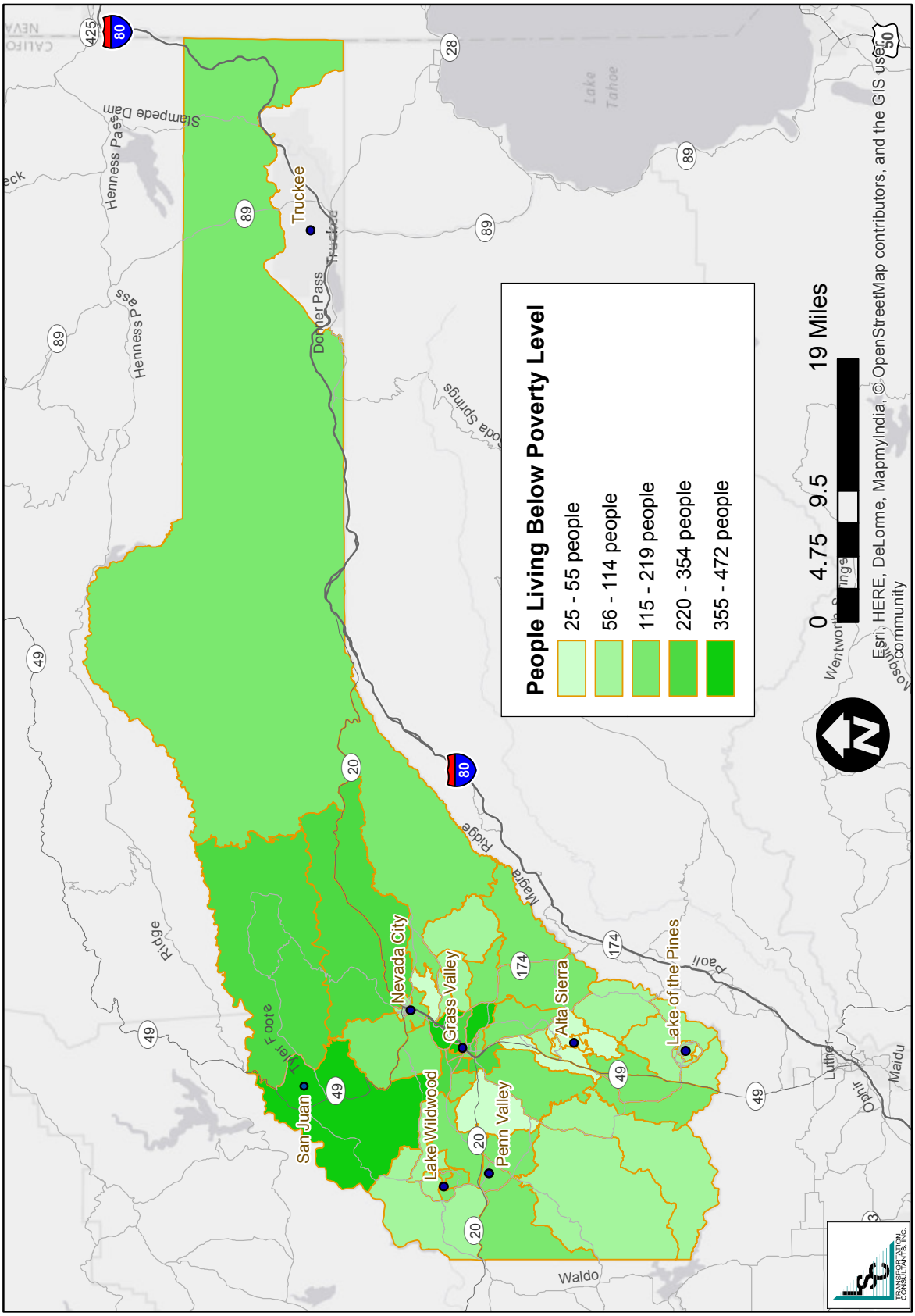
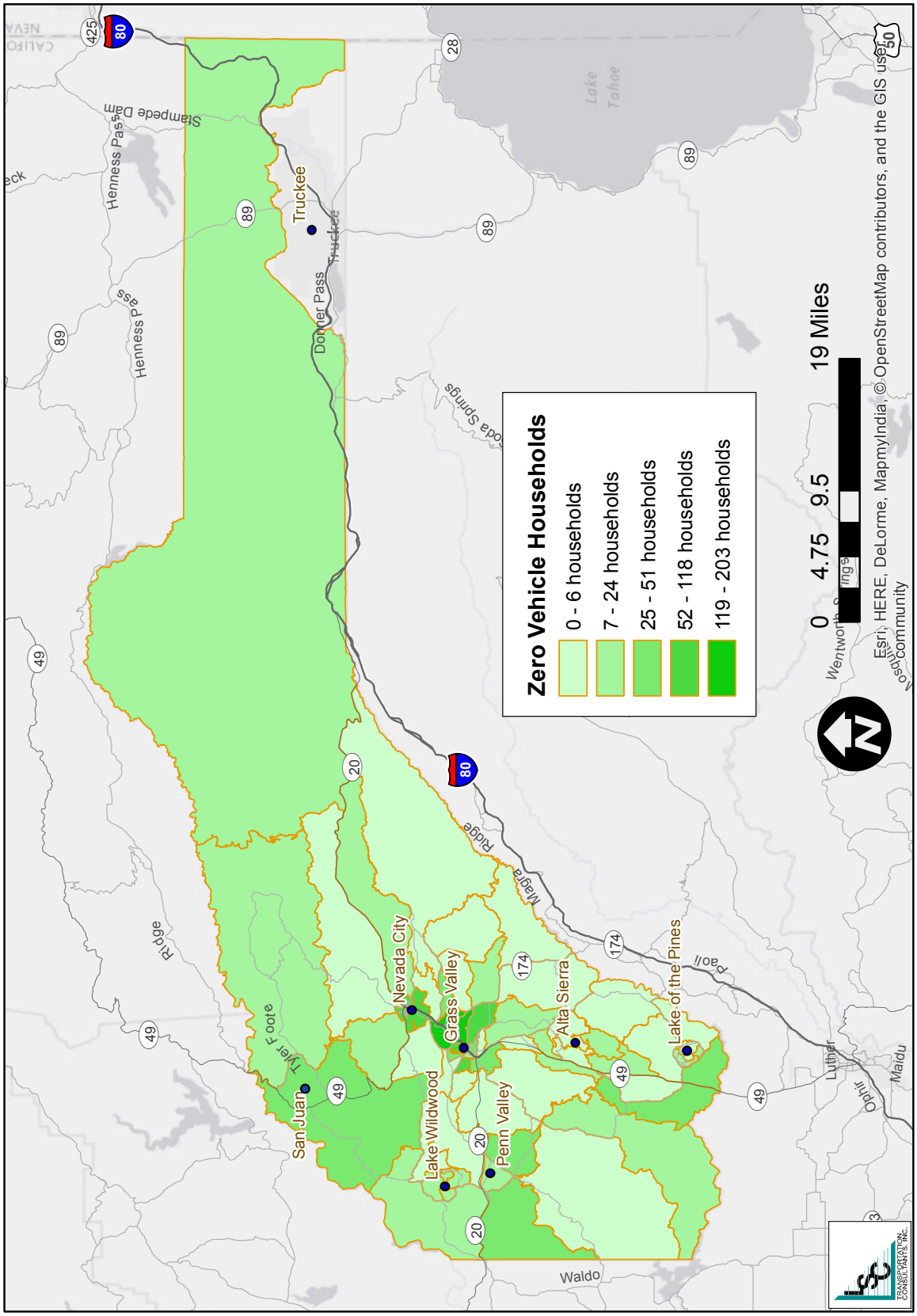


Figure 6

Number of Zero Vehicle Households by Census Block Group



Unemployment

The US Census American Community Survey 5-Year Estimates for 2008 – 2013 provide insight into the employment conditions in Western Nevada County. The most recent data shows that the unemployment rate in Western County is roughly 10.7 percent (Table 3). The study area rate is equal to the overall countywide unemployment rate, but below the statewide rate of 11.5 percent. It is important to note that almost half (46 percent) of the population is not in the labor force, reflecting in part the high proportion of retired residents.

TABLE 2: Major Employers in Western Nevada County

Organization / Company	Location	Industry	# of Employees
County of Nevada	Nevada City	Government	500 - 999
Sierra Nevada Memorial Hospital	Grass Valley	Hospitals	500 - 999
Interfaith Food Ministry	Grass Valley	Non-Profit	250 - 499
Milhous School Inc.	Nevada City	Schools	250 - 499
Safeway	Grass Valley	Grocers - Retail	250 - 499
American Rivers, Inc.	Nevada City	Civic and Social Organizations	100 - 249
Briarpatch Community Market	Grass Valley	Grocers - Retail	100 - 249
Golden Empire Convalescent Hospital	Grass Valley	Nursing and Convalescent Homes	100 - 249
Grass Valley	Nevada City	Electronic Instrument Manuf.	100 - 249
Networked Insurance Agents	Grass Valley	Insurance	100 - 249
Nevada County Charter Co-Op	Nevada City	County Government	100 - 249
Nevada Irrigation District	Grass Valley	Water and Sewage Company	100 - 249
Nevada Union High School	Grass Valley	Schools	100 - 249
Pacific Gas and Electric	Grass Valley	Electric Company	100 - 249
Raley's	Grass Valley	Grocers - Retail	100 - 249
Robinson Enterprises, Inc.	Nevada City	Logging Company	100 - 249

Source: California Department of Economic Development, Labor Market Information, 2015

TABLE 3: Unemployment in Western Nevada County

	Study Area		Nevada County	California State
	# of Persons	% of Total		
In Labor Force	37,418	*53.6%*	*57.2%*	*64.2%*
Employed	33,261	*47.6%*	*50.9%*	*56.4%*
Unemployed	4,020	*10.7%*	*10.7%*	*11.5%*
Not In Labor Force	32,436	*46.4%*	*42.8%*	*35.8%*

Source: US Census American Community Survey 2009 - 2013 Estimates

COMMUTE PROFILE

Means of Transportation to Work

The American Community Survey's 5-Year Estimates for 2008 – 2013 also include data regarding what mode of transportation workers in the County use to get to / from work. As shown in Table 4, the majority of employed residents (75.6 percent) drove alone, while 7.1 percent carpooled. Of other means of transportation to work, 2.3 percent walked, 1.1 percent used taxis, rode a motorcycle or other means, 0.9 percent used public transportation, and 0.7 percent bicycled. Approximately 12.3 percent of employed residents worked from home, which is an increase from 2008 when the figure was 7.6 percent.

TABLE 4: Means of Transportation to Work

	# of Workers	% of Total
Drive Alone	24,405	*75.6%*
Carpool	2,295	*7.1%*
Public Transit	283	*0.9%*
Walk 7	35	*2.3%*
Bicycle	214	*0.7%*
Taxi, Motorcycle, Other	358	*1.1%*
Work at Home	3,979	*12.3%*
Total Workers	*32,268*	

Source: US Census American Community Survey 2009 - 2013 Estimates

Commute Patterns

One important consideration for transit services is the commute patterns currently in place by both residents and employees of the area. Table 5 presents data regarding commute patterns for residents of the study area, both within the study area and to key outside locations (City of Sacramento, City of Auburn and Truckee). The table also provides data for inbound commuters from these key outside locations. Overall, this data reveals that:

- Approximately 88 percent of the workers within these four key areas (study area + three outside locations) also live within the study area.

- More study area residents commute outside than outside residents commute into Western Nevada County for work. Roughly only 6 percent of this population commute to Sacramento, 5 percent to Auburn and 1 percent to Truckee. Only about 4 percent of jobs within the study area are held by persons that commute into Western Nevada County from Sacramento, Auburn or Truckee.

TABLE 5: Commute Patterns For Persons Employed or Living in Western Nevada County

			Place of Employment																		
			Within Study Area																Key Locations Outside Study Area		
			Alta Sierra	Lake of the Pines	La Barr Meadows	SR 49 Corridor	SW Nev. Co,	S. Grass Valley	Lake Wildwood	Penn Valley/ R&R	N. Grass Valley	W. Grass Valley	E. Grass Valley	E. Chicago Park	W. Chicago Park	N. Nevada City	Nevada City	Wash/ N. San Juan	Total Study Area Workers	Sacra-mento	Auburn	Truckee
			1.02	1.03	1.04	1.05	2.00	3.00	4.01	4.02	5.01	5.02	6.00	7.01	7.02	8.01	8.02	9.00				
Place of Residence	Within Study Area	1.02	59	72	21	1	13	1	3	27	330	69	207	66	16	18	108	65	**1,076**	57	87	16
		1.03	7	205	2	21	0	0	3	13	152	29	67	22	4	13	43	31	**612**	80	227	3
		1.04	7	19	21	6	2	2	2	17	165	46	74	37	11	23	61	43	**536**	21	42	10
		1.05	11	41	5	23	2	2	3	4	73	22	75	14	2	1	23	20	**321**	34	63	1
		2.00	8	29	6	7	38	11	7	7	83	16	33	$ 6	2	5	24	12	**294**	28	54	8
		3.00	7	8	3	1	5	17	1	6	122	24	58	18	6	10	39	34	**359**	19	11	2
		4.01	8	5	2	5	1	0	94	88	193	49	114	28	2	9	67	46	**711**	57	20	5
		4.02	5	6	11	0	2	6	40	130	272	58	155	38	6	14	91	59	**893**	64	24	4
		5.01	8	25	7	2	5	2	14	17	456	60	215	54	16	15	157	64	**1,117**	62	20	10
		5.02	15	8	3	5	8	3	6	22	358	98	172	39	19	17	120	79	**972**	45	29	4
		6.00	16	11	11	3	3	2	20	22	365	64	263	56	12	31	177	52	**1,108**	52	15	9
		7.01	11	12	10	7	10	1	11	14	432	76	249	141	24	36	184	92	**1,310**	81	43	17
		7.02	14	4	5	5	2	1	8	4	178	36	106	23	40	5	66	43	**540**	41	33	8
		8.01	17	5	3	0	0	1	12	10	241	18	160	48	12	54	151	57	**789**	41	10	6
		8.02	10	16	3	5	5	0	6	20	359	48	212	54	17	42	380	96	**1,273**	57	37	14
		9.00	$ 1	5	2	1	11	1	6	9	114	16	39	9	2	19	52	237	**524**	57	7	23
		Total Jobs Held by Study Area Residents	**204**	**471**	**115**	**92**	**107**	**50**	**236**	**410**	**3,893**	**729**	**2,199**	**653**	**191**	**312**	**1,743**	**1,030**	**12,435**	**796**	**722**	**140**
	Key Locations Outside of Study Area	**Sacramento**	$ 1	13	$ 1	$ 7	$ 0	$ 0	$ 0	$ 4	$ 61	$ 34	$ 28	$ 20	$ 1	$ 3	$ 27	$ 29	**229**	--	--	--
		Auburn	$ 3	$ 17	$ 1	$ 5	$ 3	$ 0	$ 1	$ 7	$ 38	$ 10	$ 28	$ 6	$ 2	$ 3	$ 9	$ 20	**153**	--	--	--
		Truckee	$ 3	$ 1	$ 0	$ 2	$ 0	$ 0	$ 0	$ 2	$ 16	$ 2	$ 17	$ 13	$ 0	$ 16	$ 18	$ 86	**176**	--	--	--
		Total Inbound Commuters	**7**	**31**	**2**	**14**	**3**	**0**	**1**	**13**	**115**	**46**	**73**	**39**	**3**	**22**	**54**	**135**	**558**			
		% Jobs Held by Inbound Commuters	*3%*	*6%*	*2%*	*13%*	*3%*	*0%*	*0%*	*3%*	*3%*	*6%*	*3%*	*6%*	*2%*	*7%*	*3%*	*12%*	*4%*			

Note: Excludes persons commuting to or from other locations outside of study area

Source: LEHD OnTheMap Database, 2015

- Not surprisingly, the greatest numbers of jobs held by this population dataset are located in the Grass Valley and the Nevada City areas. Note that Census Tract 9 has a relatively high figure. This is likely due to a few factors – the Caltrans maintenance station located in Kingvale and the ski resorts in the Soda Springs / Donner Summit area.

The fact that most residents of western Nevada County also work within the study area is further evidenced by some basic commute data from the US Census. According to the 2009 – 2013 American Community Survey 5-Year Estimates, approximately 75.4 percent of study area residents work within Nevada County, while 23.8 percent work outside. While these figures themselves somewhat conflict with those provided by the LEHD data presented above, it is important to acknowledge that the general trend is similar, that primarily being that most residents stay within the study area for work. Further supporting this is that approximately 64.7 percent of workers that do not work at home have a commute of less than 25 minutes.

REVIEW OF EXISTING PLANNING DOCUMENTS

The following presents a review of relevant existing planning documents that have helped guide the transit program in Western Nevada County. This is not an all-inclusive list, but rather the most recent reports that have been completed.

Nevada County Coordinated Public Transit-Human Services Plan Update (2014)

An updated *Nevada County Coordinated Public Transit-Human Services Plan* was completed in 2014 by LSC Transportation Consultants, Inc. in December 2014. This plan focused on continuing and expanding the facilitation of transportation coordination among the various human service entities and the private and public transportation services in the region.

The Plan provided an overview of the existing transportation services in the area, and evaluated the coordination efforts, existing transit gaps, and existing transit needs. Additionally, a review of previous Coordinated Plan strategies was conducted to determine which strategies had been implemented and which were still relevant. The end of the document presented a number of strategies including:

<u>High Priority Strategies</u>

- *Expand Transportation Options for Eastern Nevada County Residents* – Included improved demand response services, year-round Highway 267 transit service, development of ridesharing programs, and other long term goals like increased commute options on the fixed route and transportation to outlying areas in Eastern County.

- *Expand Transportation Options for Residents Outside of Western County's Fixed Route Service Area and ADA Corridor* – Included shuttle services to connect areas outside of the fixed route service area (i.e. Penn Valley) to GCS and a lifeline service between Nevada City/Grass Valley and North San Juan.

- *Develop Communication and Coordination Mechanism to Facilitate Shared Use of Resources Among Human Service Agencies* – Included increased participation of Eastern and Western Nevada County entities in coordination efforts with social service agencies and regional councils/groups, and expanding the Dial 211 program to incorporate mobility management activities for the County.

Medium Priority Strategies

- *Increase Multimodal Options in Nevada County* – Included improvement of bicycle and pedestrian facilities, coordination between the transit services and planning departments during new development review, and ongoing improvement and expansion of bus stop facilities.

- *Increase Marketing and Education to Encourage Ridership on Fixed Route Transit Services* – Included increased marketing efforts targeted at senior and disabled passengers to help encourage ridership on fixed route service from those who can use them, as well as travel training programs.

Western Nevada County Transit Governance Study (2012)

LSC Transportation Consultants, Inc. completed the *Western Nevada County Transit Governance Study* in 2012. The objective of the study was to provide the NCTC with a detailed evaluation of institutional alternatives for the structure of public transit service in western Nevada County, with a goal of reducing overall costs and improving efficiency. The study looked at options regarding municipal operations, JPA formation, special district formation, consolidation of public transit with school bus transportation, and private contracts for fixed route and paratransit services. The final study recommended that Gold Country Stage not pursue a JPA formation, and that RFPs should be released for contract services of both fixed route and paratransit services.

It was acknowledged that the study was a comprehensive report. Commissioner comments related to the Gold Country Stage privatization option indicated that the County is a stable platform for Transit Services, the transit system is currently stable and running well, the system is not broken and nothing has come out of the Governance Study to state otherwise. The possible savings were based on uncertain numbers and the possible savings related to this option would not be realized for up to ten years and it is extremely difficult to project that many years out based on unstable base numbers and questioning on the timing and need for issuing a RFP at this juncture. The overall consensus was that the fixed route privatization option was not the direction to pursue at the time.

Western Nevada County TDP and ADA Plan Update (2010)

In 2010, the Transit Resource Center developed the *Western Nevada County Transit Development Plan Update* for Fiscal Years 2010-11 to 2014-15. The document focused on two objectives – to address decreasing revenues while still maintaining a viable transit system, and to develop alternatives related to a mobility management program.

Two Plan Scenarios were developed, including a partial recovery scenario and a base case scenario, as well as mobility management strategies. Key findings and recommendations in this plan are as follows (keeping in mind that Gold Country Telecare is no longer in operation and has been replaced by Gold Country Lift):

- *Recommendation 1A: Continue to monitor route performance to determine if the May 2010 route changes are meeting minimum performance standards. Consider corrective actions as recommended in Chapters 4 and 5 if routes do not meet minimum performance standards.*

- *<u>Recommendation 2A:</u> There is a need to reconsider governance practices for public transit service delivery in western Nevada County. The objective of the review of governance practices should be to minimize administrative costs in order to provide as much fixed-route transit and paratransit services as possible to provide mobility options, particularly for individuals who cannot drive or cannot afford an automobile. Competitive contracting for the combined operation of Gold Country Stage and Telecare could also be considered as a means of reducing overall operational costs.*

- *<u>Recommendation 3A:</u> Build upon the strong mobility management foundation to expand the mobility options to those without access to an automobile for the trip they need to make. A collaborative process, called Mobility Action Partners, is being formulated by the Transit Services Manager that will consist of key stakeholders in western Nevada County. A primary goal of the consensus process is to define the elements of an application for FTA 5316 and/or 5317 funding to further support mobility management.*

- *<u>Recommendation 3B:</u> The following are the TDP consultant recommendations for consideration by the Mobility Action Partner process:*

    1. *Provide an incentive to Telecare for further implementing mobility management strategies in the contract between Nevada County and Gold Country Telecare.*
    2. *Expand the eligibility in the Telecare contract to seniors 65+.*
    3. *Consolidate Gold Country Stage and Telecare services from Lake Wildwood and Penn Valley into a single route-deviation route.*
    4. *Consider utilization of taxis for supplemental service when Telecare is not operating.*
    5. *Establish a progression of lifeline service to the North San Juan and North Columbia communities.*
    6. *Establish a bicycle library program.*
    7. *Determine the best approach for a community ridesharing program*

- *<u>Recommendation 4A:</u> If revenues are available to restore and expand services, the following is the recommended priority order in which they should occur:*

    1. *School tripper service coordinated in cooperation with the school districts.*
    2. *Restoration of Saturday service for Gold Country Stage.*
    3. *Telecare consolidated operation on Route 6.*
    4. *Lifeline service to North San Juan and North Columbia.*
    5. *Restoration of 30-minute service on Route 1.*
    6. *Providing commuter service to Sacramento.*

- *<u>Recommendation 5A:</u> It is recommended that the Transit Services Division procure and own the Telecare vehicles and provide them to Gold Country Telecare for use in paratransit services.*

- *<u>Recommendation 6A:</u> Establish an ongoing policy of maintaining 10% of operating revenues in an operating reserve fund.*

Chapter 3
Transportation Services

WESTERN NEVADA COUNTY TRANSIT SERVICES

Background

Western Nevada County transit services are provided through a joint powers agreement executed on October 28, 2003, between Nevada County, the City of Grass Valley, and Nevada City. The Nevada County Transit Services Division (TSD) is responsible for the oversight of the public transit system operating in Western Nevada County. The TSD operates one of the transit programs directly and oversees the other program with services provided under contract by Paratransit Services, Inc. The two programs are:

- Gold Country Stage, a fixed-route program operated directly by the TSD using County employees.

- Gold Country Lift, a demand-response service providing both paratransit service required under the Americans with Disabilities Act (ADA) as well as additional services, under contract to the TSD.

GOLD COUNTRY STAGE

The GCS is a fixed-route transit program that connects population, commercial, and employment centers throughout Western Nevada County. GCS operates six routes that serve the Nevada City/Grass Valley area, unincorporated Western Nevada County and along the SR 49 corridor between Auburn and Nevada City. The transit system's major transfer point is the Tinloy Street Transit Center in Grass Valley, which serves all routes. Other transfer points in Grass Valley include the Fowler Center and City Hall. In Nevada City, the transfer point is located at the bus stop at Nevada City Highway/Banner Lava Cap Road (providing an opportunity to transfer between Routes 1 and 4). Also, in Auburn, transfers from Route 5 are available at the Amtrak/Placer County Transit stop. Service is provided on weekdays from 6:00 AM to 8:00 PM, and on Saturdays from 7:15 AM to 5:30 PM.

The fare structure for GCS is dependent upon a zone system, as shown in Table 6. Most routes are considered to be local and within one zone, while longer distance routes (i.e. Routes 5 and 6) travel between more than one zone and thus have higher fares.

The Stage routes are shown in Figure 7 and are described below:

- **Route 1: Nevada City/Grass Valley** connects the two cities with service generally between 6:15 AM and 8:15 PM, Monday through Friday, and from 7:15 AM to 5:30 PM on Saturday. The route operates between the Tinloy Street Transit Center and the Nevada County Government Center, except the first two runs (6:15 AM and 7:15 AM) start at the Gold Country Stage offices. Service is offered on an hourly basis throughout the day.

Figure 7

Gold Country Stage Route Map

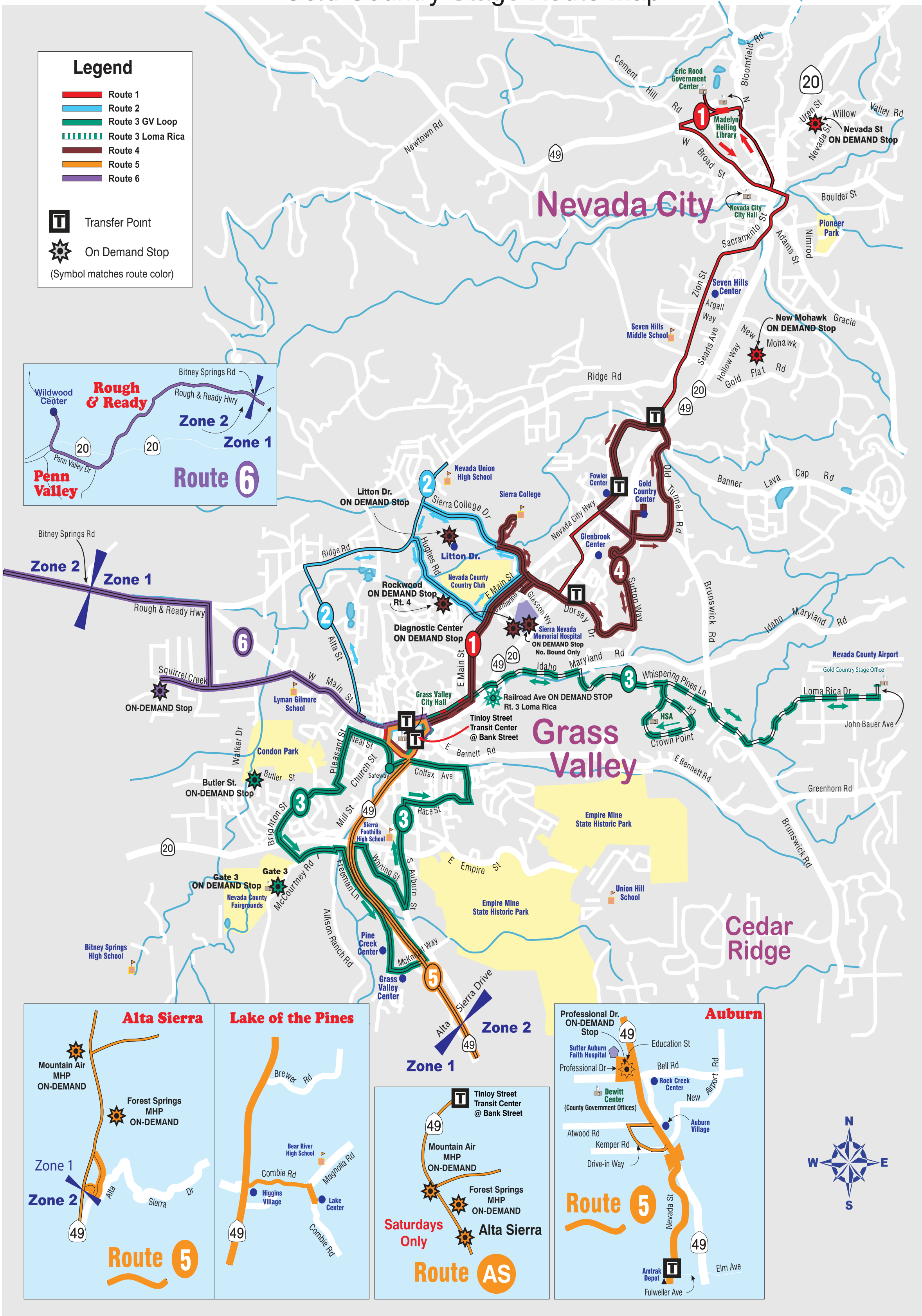


TABLE 6: Gold Country Stage Fare Structure

Type of Fare	Fare Rate: General	Fare Rate: ADA, Seniors, Youth
Local/One Zone Fares		
Local One-Way	$1.50	$0.75
Day Pass	$4.50	$2.25
Monthly Pass	$45.00	$22.50
Two Zone Fares		
Local One-Way	$3.00	$1.50
Day Pass	$7.50	$3.75
Monthly Pass	$90.00	$45.00

Source: Gold Country Stage

- **Route 2: Ridge Road** operates a loop in Grass Valley via Ridge Road, Sierra College Drive and Hughes Road, beginning and ending at the Tinloy Street Transit Center. Monday through Friday the route is in service between 7:15 AM and 6:56 PM, and on Saturday between 7:15 AM and 2:55 PM.

- **Route 3: Grass Valley Loop** commences and terminates at the Tinloy Street Transit Center in Grass Valley. This route serves the lower Grass Valley area every 60 minutes from 6:45 AM to 7:45 PM Monday through Friday, and from 8:00 AM to 4:45 PM on Saturday. Additionally, the route travels to Loma Rica six times per day, between 8:28 AM and 5:53 PM, Monday through Friday.

- **Route 4: Brunswick Basin** route operates service between Grass Valley and Nevada City, with service originating at the Tinloy Street Transit Center in Grass Valley and the Fowler Center in Nevada City. Hourly service is provided at these points Monday through Friday hourly from 6:15 AM to 8:00 PM, and from 7:15 AM to 4:45 PM on Saturday.

- **Route 5: Auburn** route provides regional service primarily between Grass Valley and Auburn via Highway 49. The route serves Nevada City at 5:30 AM only, and departs the Tinloy Street Transit Center at 6:00 AM. The route is in operation between 5:30 AM and 7:30 PM Monday through Friday, with six round-trip runs each day. The 9:00 AM run is an express service with limited stops along the Highway 49 corridor. The final stop in Auburn is at Auburn Station, where passengers can connect to Placer County Transit, Auburn Transit, and Amtrak services (*Capital Corridor* trains, the *California Zephyr*, and Thruway bus service).

- **Route 6: Penn Valley** route originates at the Tinloy Street Transit Center in Grass Valley and serves the Rough and Ready and Penn Valley communities to the west via the Rough and Ready Highway. The route ends at Wildwood Center in Penn Valley. Service is provided weekdays from 6:30 AM to 8:00 PM, while Saturday service is provided through Route 6X four times per day between 7:00 AM and 5:15 PM.

- **Route AS: Alta Sierra** route is operated on Saturdays only with limited service consisting of two morning runs (8:30 AM and 10:30 AM) and two afternoon runs (1:30 PM and 4:30 PM). The route originates at the Tinloy Transit Center and travels to Alta Sierra, with an on-demand stop on the way at Forest Springs and Mountain Air Mobile Home Park. This service is new within Fiscal Year 2014-15, and therefore is not included in the overall service analysis presented below.

Gold Country Stage Operating Characteristics

Gold Country Stage Ridership

Gold Country Stage ridership has been rather volatile over the last five fiscal years, which is not a surprise due to the economic downturn. As shown in Table 7, overall ridership in the 5-year period has dropped 11 percent. This is largely due to a ridership loss of almost 25 percent between Fiscal Years 2009-10 and 2010-11. However, since that loss ridership has stabilized and increased. Most notably, between Fiscal Year 2012-13 and 2013-14, ridership grew by over 17 percent, showing a recovery within the system; prior to this, increases did not exceed less than 1 percent. A big contributor to the overall growth was the reinstatement of Saturday service in Fiscal Year 2013-14 and the opening of the Tinloy Transit Center.

TABLE 7: Historical Gold Country Stage Ridership

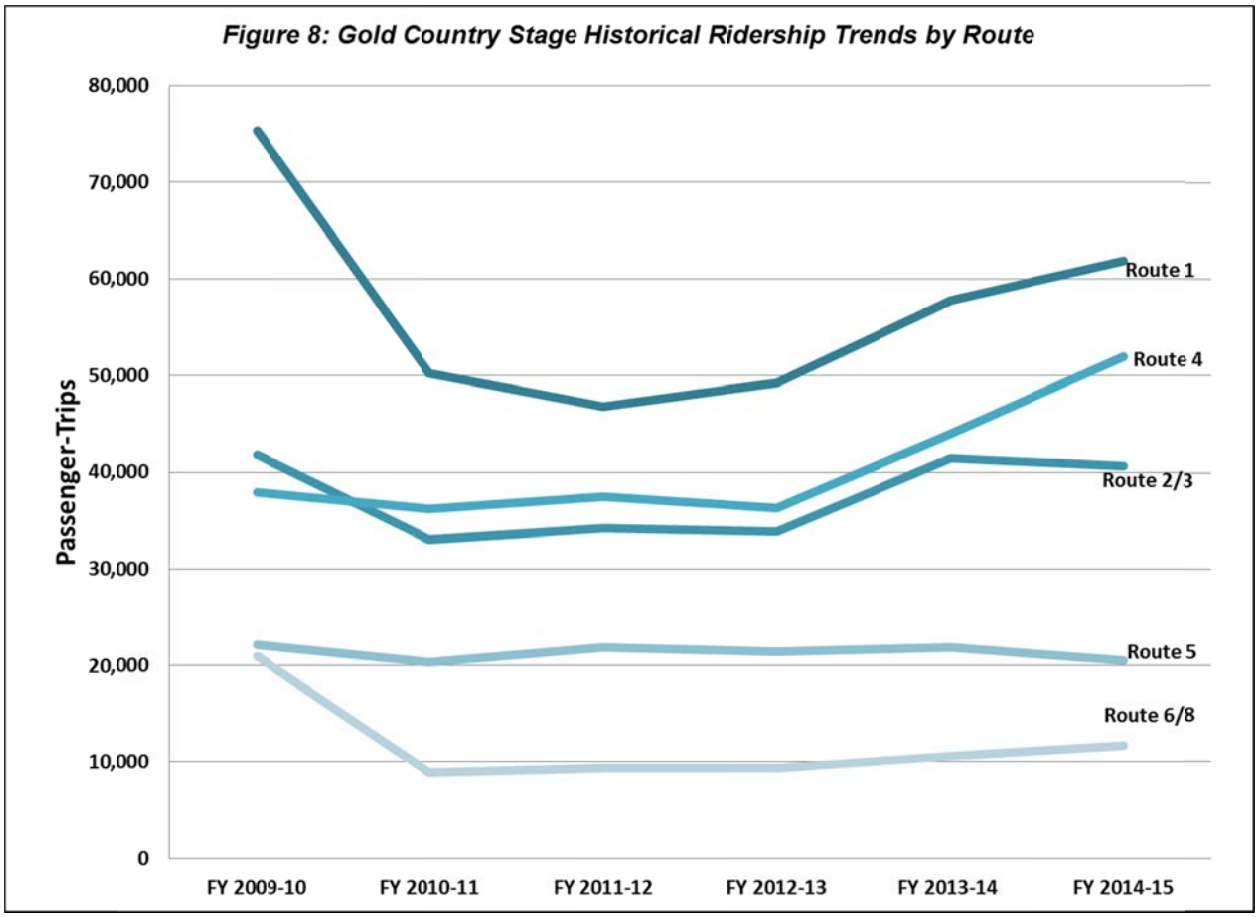
Fiscal Year 2009-10 to 2014-15

	Route 1	Route 2/3	Route 4	Route 5	Route 6/8	*Total Ridership* [2]
FY 2009-10	75,259	41,779	37,944	22,144	20,908	198,034
FY 2010-11	50,232	32,989	36,182	20,355	8,923	148,681
FY 2011-12	46,809	34,153	37,503	21,892	9,306	149,663
FY 2012-13	49,241	33,798	36,274	21,363	9,299	149,975
FY 2013-14 [1]	57,787	41,435	44,028	21,859	10,566	175,675
FY 2014-15 [1]	61,852	40,594	52,013	20,483	11,725	186,667
Percent Change						
2009-10 to 10-11	*-33.3%*	*-21.0%*	*-4.6%*	*-8.1%*	*-57.3%*	*-24.9%*
2010-11 to 11-12	*-6.8%*	*3.5%*	*3.7%*	*7.6%*	*4.3%*	*0.7%*
2011-12 to 12-13	*5.2%*	*-1.0%*	*-3.3%*	*-2.4%*	*-0.1%*	*0.2%*
2012-13 to 13-14	*17.4%*	*22.6%*	*21.4%*	*2.3%*	*13.6%*	*17.1%*
2013-14 to 14-15	*7.0%*	*-2.0%*	*18.1%*	*-6.3%*	*11.0%*	*6.3%*
6-Year % Change	*-18%*	*-3%*	*37%*	*-8%*	*-44%*	*-6%*

Note 1: Saturday service began in FY 2013-14 Note 2: Excludes Fair Service

Source: Gold Country Stage Operating Reports 09.10-13.14

On a route by route basis, Route 6/8 has decreased by nearly one-half, however this is largely due in part to the elimination of Route 8, so it is to be expected. Note that ridership on Route 6 has increased since Route 8 was cut in Fiscal Year 2009-10. In contrast, Route 4 is the only route that grew over the 5-year period, with a total increase of 16 percent between Fiscal Years 2009-10 and 2013-14, while both Route 2/3 and Route 5 were relatively unchanged with 1 percent declines in ridership. As shown in Figure 8, ridership on both Route 5 and 6 have remained flat, while the remaining routes are experiencing significant upswings in ridership.



Monthly Ridership by Route

Table 8 summarizes the GCS monthly ridership by route for FY 2014-15. As shown in the table, September and October had the highest ridership (17,290 passenger-trips and 18,599 passenger-trips, respectively). The remainder of the year is very steady, with little seasonal or monthly fluctuations in ridership. This suggests that the users of the transit system are likely dependent on the service and consistent passengers.

When reviewing ridership by route, Route 1 had the highest number of one-way passenger trips, with a total of 61,852 (33.1 percent of the systemwide total). As this route offers service between the two main cities within the western portion of the county (Grass Valley and Nevada City), the route lends itself to a higher ridership potential. The next highest ridership occurred on Route 4 (52,013 one-way passenger trips), followed by Route 2/3 (40,594 one-way passenger trips). In comparison, the lowest ridership on a fixed-route occurred on Route 6, with 11,725 one-way passenger trips. This was followed by Route 5 (20,483 one-way passenger trips).

TABLE 8: Gold Country Stage Ridership by Month

Fiscal Year 2014-15

Month	Route 1	Route 2/3	Route 4	Route 5	Route 6	*Total Ridership*	*% of Monthly Average*
July	5,029	3,386	4,014	1,868	965	15,262	98%
August	5,388	3,845	4,568	1,905	1,028	16,734	108%
September	5,366	3,899	4,971	1,952	1,102	17,290	111%
October	5,809	4,186	5,394	1,957	1,253	18,599	120%
November	4,808	3,180	4,331	1,610	897	14,826	95%
December	4,849	3,384	4,581	1,555	824	15,193	98%
January	5,200	3,037	4,200	1,514	864	14,815	95%
February	4,741	2,970	3,810	1,564	913	13,998	90%
March 5,	433	3,390	4,361	1,816	902	15,902	102%
April	5,404	3,287	3,961	1,751	986	15,389	99%
May	5,070	3,078	3,943	1,515	976	14,582	94%
June	4,755	2,952	3,879	1,476	1,015	14,077	90%
Total Ridership	61,852	40,594	52,013	20,483	11,725	186,667	
% of Total	*33.1%*	*21.7%*	*27.9%*	*11.0%*	*6.3%*		

Note 1: Excludes Fair Service

Source: Gold Country Stage Ridership Reports, 2015

Ridership by Fare Type

Ridership by the type of fare paid was also evaluated, as shown in Table 9. During Fiscal Year 2014-15, monthly passes accounted for nearly 40 percent of all fares, while regular cash comprised just over 28 percent. Discount fares, such as those for youth, senior and disabled passengers, totaled almost 15 percent of the fares, while 10.6 percent of passengers transferred.

Of all the routes, Route 2/3 had the highest rate of monthly pass use (47.8 percent of passengers), followed by Route 4 (46.7 percent). Route 1 was close to the systemwide rate, with 34.2 percent of passengers using a monthly pass. Both routes 5 and 6 had higher rates of cash fares – 43.9 percent of passengers on Route 5 were cash and another 20.3 percent were discount cash fares, while on Route 6, 33.3 percent of passengers paid as regular cash and 17.1 percent were discount cash fares. Route 5 also had the lowest occurrence of free and daily pass users, which isn't surprising since the route is mostly a commuter-oriented service. Additionally, Route 5 had the highest percent of transfers.

Ridership by Time of Day

Table 10 presents average daily boarding data by hour for all GCS routes, collected for the month of March 2015. This shows a morning (8:00 AM) peak, as well a slightly higher afternoon (2:00 PM) peak, with an average of 41.1 boardings. This was followed by the 8:00 AM hour (37.5 boardings) and the 1:00 PM hour (35.6 boardings).

TABLE 9: Ridership by Fare Type

Fiscal Year 2014-15

	Route 1		Route 2/3		Route 4		Route 5		Route 6		Total Gold Country Stage	
Fare Type	**# of Psgrs**	**% of Route**	**# of Psgrs**	**% of Route**	**# of Psgrs**	**% of Route**	**# of Psgrs**	**% of Route**	**# of Psgrs**	**% of Route**	**# of Psgrs**	**% of Total System**
Regular Cash	19,599	*31.7%*	7,360	*18.1%*	10,472	*20.1%*	8,988	*43.9%*	3,899	*33.3%*	50,318	*28.6%*
Discount Cash	8,996	*14.5%*	3,744	*9.2%*	6,713	*12.9%*	4,167	*20.3%*	2,010	*17.1%*	25,630	*14.6%*
Free	1,368	*2.2%*	1,157	*2.9%*	1,715	*3.3%*	122	*0.6%*	390	*3.3%*	4,752	*2.7%*
Daily Pass	4,054	*6.6%*	2,846	*7.0%*	3,678	*7.1%*	491	*2.4%*	679	*5.8%*	11,748	*6.7%*
Monthly Pass	21,130	*34.2%*	19,384	*47.8%*	24,277	*46.7%*	2,290	*11.2%*	2,457	*21.0%*	69,538	*39.6%*
Transfer	4,968	*8.0%*	4,484	*11.0%*	3,371	*6.5%*	3,988	*19.5%*	1,839	*15.7%*	18,650	*10.6%*
One Ride Ticket	1,737	*2.8%*	1,619	*4.0%*	1,787	*3.4%*	437	*2.1%*	451	*3.8%*	6,031	*3.4%*
	61,852		*40,594*		*52,013*		*20,483*		*11,725*		*186,667*	

Note: Excludes Fair Service

Source: Gold Country Stage Ridership Reports, 2015

TABLE 10: Boardings by Time of Day

Data for March 2015

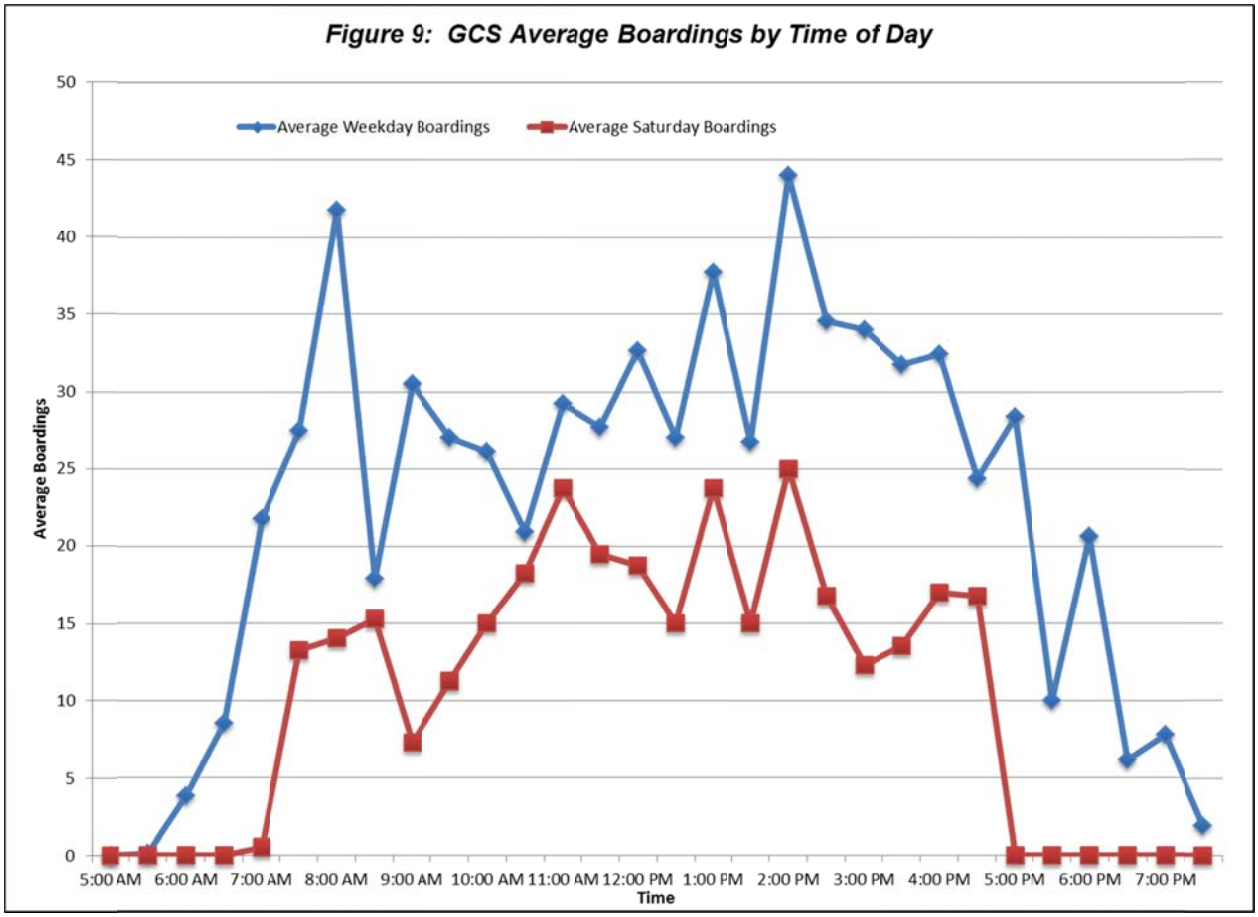
Peak Boardings Shaded

Time	Total Boardings [1]	Average Daily Boardings [2]	Average Weekday Boardings	Average Saturday Boardings
5:00 AM	0	0.0	0.0	0.0
5:30 AM	2	0.1	0.1	0.0
6:00 AM	84	3.2	3.8	0.0
6:30 AM	187	7.2	8.5	0.0
7:00 AM	481	18.5	21.8	0.5
7:30 AM	657	25.3	27.5	13.3
8:00 AM	974	37.5	41.7	14.0
8:30 AM	454	17.5	17.9	15.3
9:00 AM	700	26.9	30.5	7.3
9:30 AM	640	24.6	27.0	11.3
10:00 AM	634	24.4	26.1	15.0
10:30 AM	533	20.5	20.9	18.3
11:00 AM	738	28.4	29.2	23.8
11:30 AM	688	26.5	27.7	19.5
12:00 PM	793	30.5	32.6	18.8
12:30 PM	655	25.2	27.0	15.0
1:00 PM	926	35.6	37.8	23.8
1:30 PM	648	24.9	26.7	15.0
2:00 PM	1,068	41.1	44.0	25.0
2:30 PM	828	31.8	34.6	16.8
3:00 PM	797	30.7	34.0	12.3
3:30 PM	752	28.9	31.7	13.5
4:00 PM	781	30.0	32.4	17.0
4:30 PM	603	23.2	24.4	16.8
5:00 PM	624	24.0	28.4	0.0
5:30 PM	220	8.5	10.0	0.0
6:00 PM	453	17.4	20.6	0.0
6:30 PM	135	5.2	6.1	0.0
7:00 PM	171	6.6	7.8	0.0
7:30 PM	42	1.6	1.9	0.0
8:00 PM	0	0.0	0.0	0.0

Note 1: Total boardings for the month of March 2015
Note 2: Average daily boardings for Monday through Saturday

Source: Hourly Passenger Report March 2015

The table also presents data for weekday and weekend boardings, and is graphically depicted in Figure 9. As shown, weekday boardings averaged 44 passengers during the 2:00 PM hour, and Saturday boardings averaged 25 passengers. The second highest weekday boardings occurred at 8:00 AM, with an average of 41.7 boardings. On Saturdays, there was an average of 23.8 boardings at both 11:00 AM and 1:00 PM.



The activity during the survey period is not consistent with what would be considered commute hours for full-time workers, however it may indicate that persons using the service are using it for part-time jobs or general daily activities. Mornings had the greatest activity, near typical start times for work, followed by periods in midday from roughly 12:00 PM to 3:00 PM. The typical afternoon/evening commute times had much lower average daily boardings, with a significant drop-off after 5:00 PM. For example, the total boardings at 5:00 PM for the month of March are 35 percent lower than those at 8:00 AM.

Ridership by Stop

Table 11 presents the stops within the Gold Country Stage system that have five or more boardings per day for the month of March 2015. Approximately 9.3 percent of the stops within the system had an average of 5 or more boardings per day, which interestingly generated approximately 68.5 percent of all boardings systemwide. As expected, the Tinloy Street Station had the highest number of boardings, with an average of 189 per day during March 2015. The National Hotel stop in Nevada City had approximately 27 boardings per day, followed by East Main Street / Grass Valley City Hall (average of 25 boardings) and Sutton Way / Glenbrook Center (average of 24 boardings). As indicated in the table, stops that serve both Routes 1 and Route 4 are the most popular. Not shown in the table is that roughly 10 percent of stops did not have a single boarding during the observed period.

TABLE 11: Gold Country Stage Stops with 5 or More Boardings per Day

Boardings for March 2015

	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	Route AS [1]	*Total*	*Average per Day*
Tinloy St Transit Ctr at Bank St	1,487	323	1,004	1,060	603	411	24	*4,912*	189
Broad St at The National Hotel	700	--	--	--	--	--	--	*700*	27
E Main St at Grass Valley City Hall	293	2	27	318	22	--	--	*662*	25
Sutton Way at Glenbrook Ctr	--	--	--	634	--	--	--	*634*	24
Nevada City Hwy at Fowler Ctr	339	--	--	261	--	--	--	*600*	23
Nevada St at Amtrak Station	--	--	--	--	503	--	--	*503*	19
Sutton Way at Gold Country Ctr	--	--	--	315	--	--	--	*315*	12
W McKnight Way at Grass Valley Ctr	--	--	304	--	--	--	--	*304*	12
Church St at Neal St	--	--	232	--	--	--	--	*232*	9
Freeman Ln at Pine Creek Ctr	--	--	228	--	--	--	--	*228*	9
Nevada City Hwy across from Fowler Ctr	221	--	--	--	--	--	--	*221*	9
Zion St at Brock St across from Seven Hills Ctr	221	--	--	--	--	--	--	*221*	9
Nevada City Hwy at Banner Lava Cap Rd	209	--	--	4	--	--	--	*213*	8
Maidu Ave at Eric Rood Government Center	183	--	--	--	--	--	--	*183*	7
E Main St at E Berryhill Dr	112	--	--	68	--	--	--	*180*	7
Sutton Way at Olympia Garden Apts	--	--	--	175	--	--	--	*175*	7
Old Tunnel Rd at Nevada City Senior Apts	--	--	--	151	--	--	--	*151*	6
Robert Ross Way at Sierra College	--	--	--	149	--	--	--	*149*	6
E Main St at Humpty Dumpty Kitchen	148	--	--	--	--	--	--	*148*	6
E Main St at What's Up Coffee	98	--	--	44	--	--	--	*142*	5

Total Number of Boardings in March 2015	16,268
# of Boardings at Stops with 5 or More Boardings per Day	11,137
% of Boardings at Stops with 5 or More Boardings per Day	*68.5%*
Total Number of Stops	237
Number of Stops with 5 or More Boardings per Day	22
% of Stops with 5 or More Boardings	*9.3%*

Note 1: Route AS only operates on Saturdays

Source: Gold Country Stage, 2015

Gold Country Stage Vehicle Hours and Vehicle Miles

In Fiscal Year 2014-15, Gold Country Stage operated a total of 14,824 vehicle service hours, and 276,186 vehicle service miles. As shown in Table 12, the greatest number of hours was associated with Route 1 (4,047 vehicle service hours), followed by Route 4 (3,945 vehicle service hours). Route 5 had the greatest number of miles (87,939 vehicle service miles), which is not surprising since the route services Auburn. Following this was Route 2/3, with 62,204 vehicle service miles.

TABLE 12: Gold Country Stage Hours and Miles of Service

Data for 2014-15

	Routes						Total
Service Factor	Route 1	Route 2/3	Route 4	Route 5	Route 6	Fair	Annual
GCS Vehicle Service Hours	4,047	3,278	3,945	3,162	1,876	141	16,450
GCS Vehicle Service Miles	50,179	62,204	55,909	87,939	46,039	1,133	303,403

Source: Gold Country Stage, 2015

Gold Country Stage On-Time Statistics

On-time performance data was collected from the RouteMatch system for February 2015. During that time period, approximately 93.87 percent of stops were on-time and 4.45 percent were early. One important point to note is that the RouteMatch software requires cellular connections to collect and relay data. Some locations do not have access to the network, and therefore stop statistics do not register. As a result, on time data may be skewed with respect to the late stops, where nothing has registered for the stop.

Gold Country Stage Transit Capital Assets

Vehicle Fleet

GCS currently uses a total of 10 revenue vehicles and 7 services vehicles. The entire revenue fleet is wheelchair-accessible, and all are equipped with bicycle racks. The vehicle fleet is presented in Table 13. As shown in the table, one vehicle has recently been replaced, while the remaining vehicles are planned for replacement over the TDP plan period.

Bus Stops and Shelters

The GCS routes have signs at most scheduled stops, while others are flag stops. There are a total of 37 benches and 24 bus shelters at various stops along these routes. An additional bus shelter is planned for construction in 2015, bringing the total up to 25 shelters. Gold Country Stage also has a transit center where all routes originate / end, called the Tinloy Transit Center. The facility is located along Tinloy Street, between Bank Street and Bennett Street in Grass Valley, and officially opened in 2013. In addition to shelters for passengers, there is a driver restroom facility / safety station.

TABLE 13: Gold Country Stage Fleet

Make	Model	Year	Seating Capacity # of Pax	Seating Capacity W/C
Revenue Vehicles (in use by Gold Country Stage)				
Chevrolet	Aero Elite 5500	2008	26	2
Chevrolet	Aero Elite 290	2008	26	2
Chevrolet	Aero Elite 5500	2008	26	2
Chevrolet	Aero Elite 5500	2008	26	2
Chevrolet	Aero Elite 5500	2008	26	2
Chevrolet	Aero Elite 290	2009	26	2
Chevrolet	Aero Elite 290	2009	26	2
Chevrolet	Aero Elite 290	2009	26	2
Chevrolet	Aero Elite 5500	2009	26	2
El Dorado	Maxx 7	2015	26	2
Revenue Vehicles (in use by Gold Country Lift)				
Dodge Braun	Entervan	2013	4-6	1
Dodge Braun	Entervan	2013	4-6	1
Dodge Braun	Entervan	2013	4-6	1
Dodge Braun	Entervan	2013	4-6	1
Service Vehicles				
Ford	Escape 4WD	2008		
Chevrolet	Amerivan	2008		
Dodge	Braun Entervan	2010		
Dodge	Braun Entervan	2010		
Ford	Escape XLT-AWD	2012		
Ford	F250 4x4	2012		

Source: Gold Country Stage

Operations and Maintenance Facility

A preventative maintenance schedule is in place that meets the requirements of the bus manufacturers. Most maintenance services are provided by the Nevada County Department of Transportation Services (NCDOTS). GCS also works with the area Ford and Chrysler dealerships for warranty work, and other outside vendors as needed. Vehicles are inspected daily by the drivers, and defects are noted on a vehicle checkout sheet. If safety-related defects are discovered, the vehicle is "red-tagged" until the vehicle is repaired. To ensure vehicle availability, NCDOTS mechanics are instructed to complete simple repairs first and then concentrate on more labor-intensive repairs next. This priority system seems to work well, since there is not typically a backlog of repairs. The Transit Services Manager has ultimate responsibility for deciding whether or not a defective vehicle will be repaired by the NCDOTS, the local Ford and Chrysler dealerships (primary warranty work), or an outside vendor. No

formal maintenance agreements are executed with outside vendors, though the Transit Services Manager and/or Transit Supervisor review all repair estimates prior to repair authorization.

Operations are performed at the Transit Services Division offices located at the Nevada County Airport on John Bauer Avenue. The facility includes all administrative and dispatch functions, as well as secured vehicle storage/parking.

GOLD COUNTRY LIFT

Gold Country Lift provides the ADA paratransit services in western Nevada County, operated under contract by Paratransit Services, Inc. The service is available to Americans with Disabilities (ADA) qualified persons that cannot use the Gold Country Stage system. Service is offered Monday through Friday from 6:35 AM to 8:00 PM, and Saturday from 7:30 AM to 5:00 PM. The paratransit program operates within a specific Paratransit Service Area – the main ADA corridor being within ¾-mile from the fixed routes. Service is also provided in an Outlying Defined Paratransit Service Area in other areas of the western portion of the county, as resources allow. The overall service area is shown in Figure 10. Current fares are $3.00 for one-way trips within the ADA corridor and $5.00 for one-way trips outside the ADA corridor.

Gold Country Lift Operating Characteristics

Gold Country Lift Ridership

Ridership by Month

As presented in Table 14, the total ridership for Gold Country Lift in Fiscal Year 2014-15 equaled 39,625 passenger-trips. Over the course of the year, the ridership is fairly evenly distributed, but was highest in June and October (9.4 and 9.2 percent of the annual ridership, respectively) and lowest in November and February (7.1 and 7.3 percent, respectively. In general, ridership is higher in the spring and summer, and lowest in the winter.

Ridership by Hour and by Day

Ridership by hour and by day of week is presented in Table 15, with information obtained from the week of May 3, 2015 to May 9, 2015. As shown in the table and in Figure 11, ridership is highest during the middle of the day, with the peak from 2:00 PM and 4:00 PM. Not surprisingly the first and last hours of service generate substantially fewer riders. Additionally, when looking at day of week ridership patterns, the greatest passenger activity occurs on Wednesday and Tuesday, while Saturday has very little activity. For the week of data, only 4.4 percent of the weekly ridership occurred on Saturday.

Gold Country Lift Ridership and Passenger-Trip Statistics

Approximately 97 percent of the passenger-trips completed on the Lift system are for ADA passengers. Subscription trips make up just under half of all trips. Only 2.3 percent of scheduled trips were no-shows during Fiscal Year 2013-14, and 3.34 percent were late cancels. During the entire fiscal year, there were only 29 trip refusals and 3 trip denials, none of which were associated with ADA-required trips.

Figure 10
Gold Country Lift Service Area in Western Nevada County

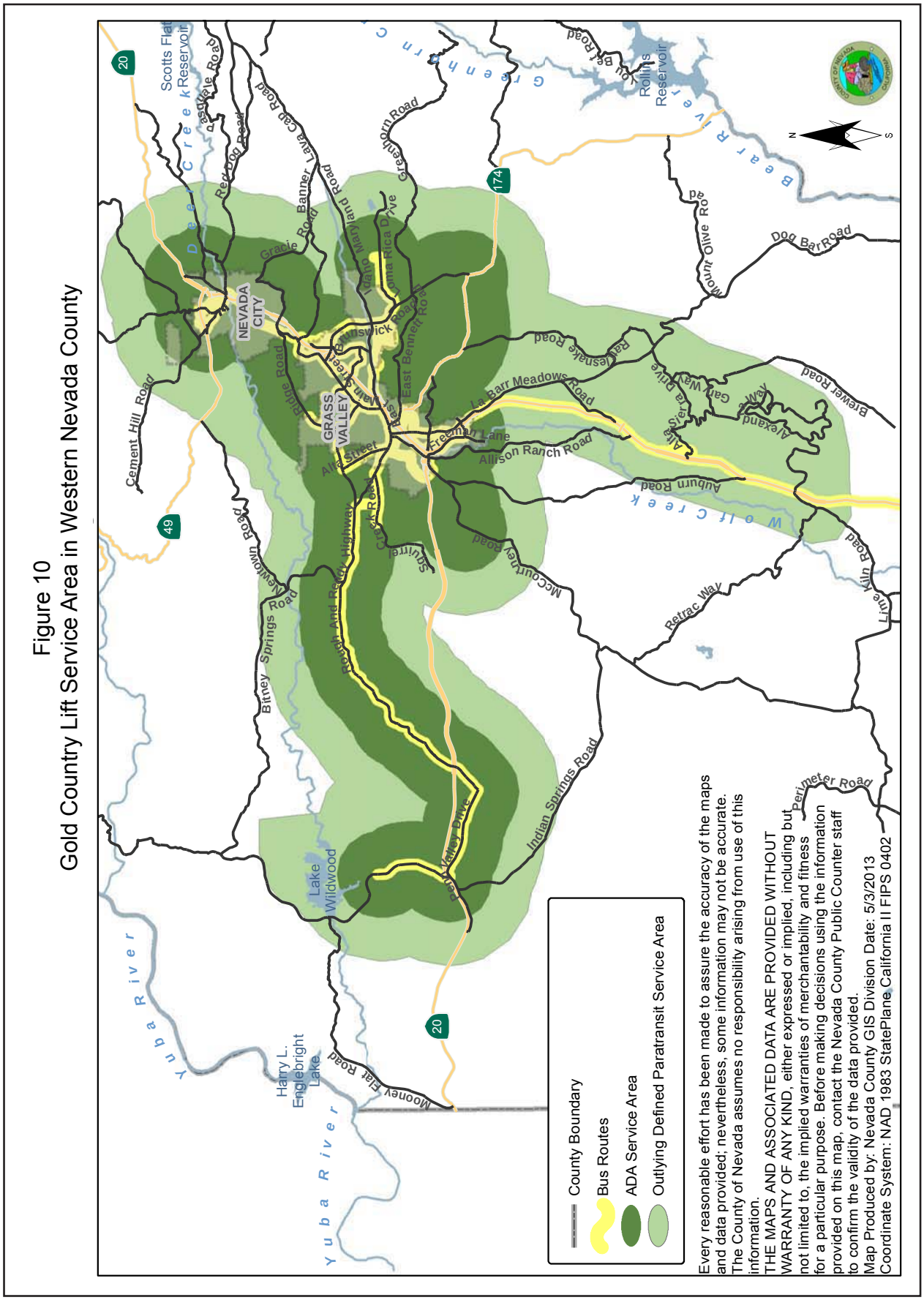


TABLE 14: Gold Country Lift Ridership by Month

Fiscal Year 2014-15

Month	Ridership	% of Total Ridership	*% of Monthly Average*
July	3,354	8.5%	*101.6%*
August	3,396	8.6%	*102.8%*
September	3,233	8.2%	*97.9%*
October	3,664	9.2%	*111.0%*
November	2,795	7.1%	*84.6%*
December	3,026	7.6%	*91.6%*
January	3,069	7.7%	*92.9%*
February	2,905	7.3%	*88.0%*
March	3,546	8.9%	*107.4%*
April	3,562	9.0%	*107.9%*
May	3,362	8.5%	*101.8%*
June	3,713	9.4%	*112.4%*
Total Ridership	*39,625*		

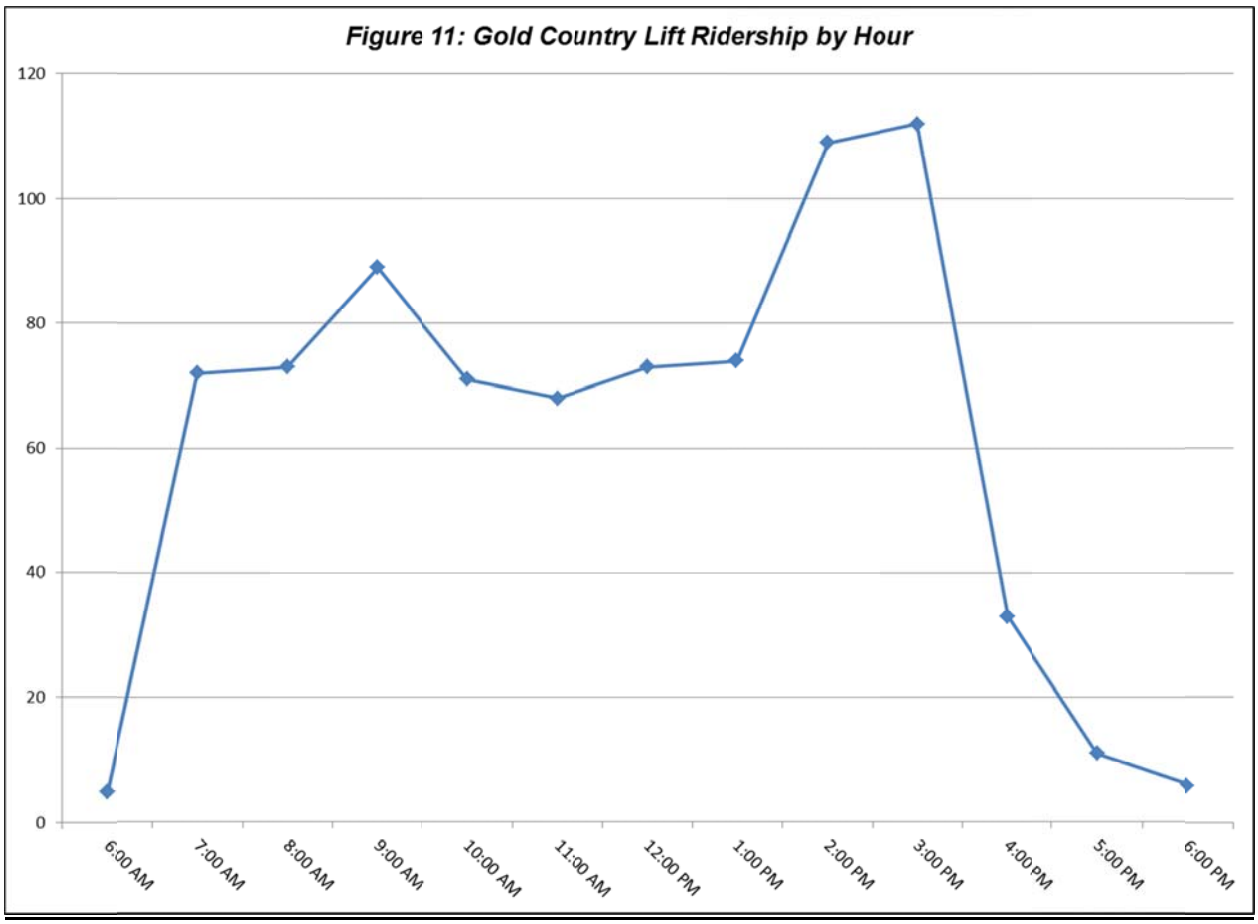
Source: Gold Country Stage Ridership Reports, 2015

TABLE 15: Gold Country Lift Ridership by Day and by Hour

For the week of May 3, 2015 to May 9, 2015

	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	*% Total Ridership by Day*
Monday	1	17	9	16	11	6	8	8	17	26	7	1	1	*16.1%*
Tuesday	0	13	13	18	14	18	14	22	23	21	5	1	0	*20.4%*
Wednesday	2	18	15	18	18	12	19	12	23	20	7	3	3	*21.4%*
Thursday	1	12	17	14	9	12	15	16	20	17	6	4	1	*18.1%*
Friday	1	12	14	20	12	15	12	13	24	25	6	2	1	*19.7%*
Saturday	0	0	5	3	7	5	5	3	2	3	2	0	0	*4.4%*
Total Hourly Ridership	5	72	73	89	71	68	73	74	109	112	33	11	6	
% of Total Ridership	*0.6%*	*9.0%*	*9.2%*	*11.2%*	*8.9%*	*8.5%*	*9.2%*	*9.3%*	*13.7%*	*14.1%*	*4.1%*	*1.4%*	*0.8%*	

Source: Gold Country Lift Ridership by Hour Report, 2015



Gold Country Lift Vehicle Hours and Vehicle Miles

The Gold Country Lift service operates six days per week over a fairly large geographic area. The level of service provided resulted in a total of 15,841 vehicle service hours and 193,519 vehicle service miles for Fiscal Year 2014-15. The contract between Nevada County Transit Services Division and Paratransit Services, Inc. identified a total of 17,600 vehicle hours allowed, including 16,200 hours for weekday service and 1,400 for Saturday service.

Gold Country LIFT Transit Capital Assets

Vehicle Fleet and Operations Facility

Gold Country Lift currently uses a total of 12 vehicles, all of which are wheelchair accessible. The fleet consists of eight small to mid-size buses and four minivan vehicles, ranging in seating capacity from 5 passengers to 14 passengers. This data is presented in Table 16.

Paratransit Services, Inc. offices are located in a leased facility that accommodates all transit administrative and operations functions, located at 900 Whispering Pines Lane in Grass Valley. It features a dispatch center, administrative offices, driver areas, and a paved area for parking buses. Paratransit Services, Inc. utilizes the Mobilitat software program for computerized dispatching and scheduling rides, as well as data analysis/maintenance.

TABLE 16: Gold Country Lift Fleet Inventory

Make	Model	Year	Passenger Capacity	
			Ambulatory	Wheelchair
Dodge Braun	Entervan	2013	4-6	1
Dodge Braun	Entervan	2013	4-6	1
Dodge Braun	Entervan	2013	4-6	1
Dodge Braun	Entervan	2013	4-6	1
Ford	E350	2013	8	2
Ford	E350	2013	8	2
Ford	E350	2013	8	2
Ford	E350	2013	8	2
Ford	E450	2013	10	2
Ford	E450	2013	10	2
Ford	E450	2013	14	2
Ford	E450	2013	14	2

Source: Paratransit Services Inc., 2015

NEVADA COUNTY TRANSIT SERVICES FINANCIAL CHARACTERISTICS

Revenues

The Transit Services Division revenues for FY 2014-15 are shown in Table 17. As indicated, a total of $3.45 million was received (not including $800,000 of Prop 1B funds for capital purchases). For the fiscal year, the Local Transportation Fund was the primary source of revenue, which totaled $2,479,140, or 72 percent of the total revenues. Other major revenue sources include total passenger fares (11 percent, including contract fares), FTA 5311 funding (10 percent) and Job Access and Reverse Commute (JARC) funds (7 percent). While no State Transit Assistance (STA) funds were available in 2014-15, this is commonly a revenue source for Gold Country Stage, with projections of $379,000 to be received annually over the next several years.

Expenses

The operating expenses for the Transit Services Division for FY 2014-15 are presented in Table 18. Operating expenses for Gold Country Stage fixed route services were $2,138,695. The contract cost for ADA paratransit totaled $1,318,888, Inc. for the Gold Country Lift service. The cost of labor accounted for 56 percent of the Gold Country Stage operating expenses, plus 25 percent for administrative costs, and 18 percent for vehicle-related costs.

Cost Allocation Model

When developing and evaluating service alternatives, it is useful to have a cost model that can accurately show the financial impact of any proposed change. As presented in Table 18, this model allocates the total costs (not total subsidy) by service quantity. Each cost item is allocated

to that quantity on which it is most dependent. Fuel costs, for example, are allocated to vehicle service miles. (This provides a more accurate estimate of costs than a simple total-cost-per-vehicle-hour factor, which does not vary with the differing mileage associated with an hour of service on the various routes.) When divided by the total quantity of service, a "cost equation" can be developed. For FY 2014-15, this equation is:

Operating Cost = $1.13 x vehicle service miles
+ $64.70 x vehicle service hours
+ $731,705 annual fixed costs

TABLE 17: Nevada County Transit Services Revenues

Fiscal Year 2014-15 Estimated Budget

Source		Revenue	% of Total
Local Funds			
Gold Country Stage Passenger Fares		$216,000	6%
Gold Country Lift Passenger Fares		$78,000	2%
Transit Contract Fares		$68,000	2%
On-board Advertising Revenues		$1,800	0%
	Subtotal	*$363,800*	11%
Federal and State Funding			
LTF		$2,479,140	72%
STA Funding		$0	0%
JARC		$232,140	7%
Federal 5311 Funding		$350,000	10%
	Subtotal	*$3,061,280*	89%
Other Funds			
Miscellaneous Revenues		$4	0%
Interest Revenue		$5,000	0%
Risk Management Reimbursements		$27,500	1%
	Subtotal	*$32,504*	1%
	Total Revenue	**$3,457,584**	100%

Source: Gold Country Stage Revenue Budget Detail Worksheet, 4/3/2014.

This equation can be used to estimate the relative cost of any changes in service, such as the operation of additional routes or changes in service span. It is used as part of this study to evaluate the cost impacts of service alternatives. It should be noted that the cost model does not include depreciation, the Gold Country Lift contract, or capital items (such as vehicle purchases) made during the fiscal year.

As mentioned, the Paratransit Services, Inc. contract for Fiscal Year 2014-15 totaled $1,318,888. The contract allows for up to 16,200 vehicle hours on weekdays and 1,400 vehicle hours on weekend, at a rate of $34.74 per hour. In addition, there was an additional $55,253 in fixed monthly costs, totaling $663,036 in fixed annual costs, per the contract.

TABLE 18: Fiscal Year 2014-15 Transit Operating Expenses & Cost Allocation

Gold Country Stage Cost Allocation				
	Allocation Variable			Total
Line Item	Fixed	Hourly	Per Mile	Expense
Operating Personnel Expenses				
Permanent Salaries	$110,314	$438,227	--	$548,541
Overtime	$2,947	$13,815	--	$16,762
Temporary Salaries	$0	$178,344	--	$178,344
Benefits	$38,610	$156,113	--	$194,723
Insurance	$42,740	$224,791	--	$267,531
Subtotal: Personnel	*$194,611*	*$1,011,290*	*$0*	*$1,205,901*
Administrative Expenses				
Uniform Expenses	--	$3,000	--	$3,000
Custodial Services	$2,000	--	--	$2,000
Utilities and Telephone	$12,500	--	--	$12,500
Publications and Legal Notices	$1,500	--	--	$1,500
Rents, Leases and Equipment	$35,242	--	--	$35,242
Professional Services	$36,208	--	--	$36,208
Household Expense	$3,000	--	--	$3,000
Special Department Expenses	$21,750	--	--	$21,750
Office and Computer Expenses	$15,000	--	--	$15,000
Memberships and Job Proficiency	$500	--	--	$500
Miscellaneous Inter/Intrafund	$275,083	--	--	$275,083
Judgements and Damages	$2,500	--	--	$2,500
Self Insurance	$27,500	--	--	$27,500
Overhead Cost Allocation	$103,811	--	--	$103,811
Subtotal: Administrative	*$536,594*	*$3,000*	*$0*	*$539,594*
Vehicle Expenses				
Insurance	--	$50,000	--	$50,000
Maintenance and Fuel	--	--	$342,700	$342,700
Mileage Reimbursement	$500	--	--	$500
Subtotal: Vehicles	*$500*	*$50,000*	*$342,700*	*$393,200*
Total Gold Country Stage Expenses	$731,705	$1,064,290	$342,700	$2,138,695
Purchased Transportation (Paratransit)				$1,318,888
Total Transit Program Expenses				$3,457,583

Gold Country Stage Service Factors for FY 14-15		Vehicle Service Hours	Vehicle Service Miles
		16,450	303,403
Gold Country Stage Cost Allocation:			
Vehicle Service Hour Cost Factor		$64.70	
Vehicle Service Mile Cost Factor			$1.13
Annual Fixed Cost	$731,705		

Gold Country Lift Cost Formula (from Total Hours, Contract Costs 2014-15)				
Gold Country Lift Cost Allocation	Monthly Fixed Cost	Vehicle Service Hours	Cost Per Hour	Total Annual Expense
Vehicle Service Hour Factor		15,841	$34.74	$550,331
Fixed Contract Costs	$55,253			$663,036
Total Purchased Transportation				$1,213,367

Source: Gold Country Stage & Gold Country Lift Monthly Operations Report YTD, June 2015; Cost formula by LSC

TRANSIT SERVICE SYSTEM PERFORMANCE

Gold Country Stage Transit System Performance

Table 19 presents operating and performance data for all GCS routes for Fiscal Year 2014-15. This data is useful to conduct an analysis of ridership and operating data on a per route basis, including subsidy requirements and farebox recovery ratios, and are used to evaluate a number of productivity and service measures.

An important measure of service effectiveness is "efficiency," or productivity, defined as the number of **one-way passenger-trips provided per vehicle service hour**. The fixed route service averaged 11.4 passenger-trips per vehicle service hour. Route 1 had the highest ratio of passenger-trips per vehicle service hour, with 15.28, followed by Route 4 (13.18) and Route 2/3 (12.38). Route 6 had the lowest, with 6.25 passenger-trips per vehicle service hour. This data can be found in Table 19 and Figure 12.

Another measure of service effectiveness is the number of one-way **passenger-trips provided per vehicle service mile**. Overall, the GCS system averaged 0.62 passenger-trips per vehicle service mile. The data indicates that Route 1 is the most productive route, with 1.23 passenger-trips per vehicle service mile, as shown in Table 19. This is followed by Route 4 (0.93 passenger-trips per vehicle service mile) and Route 2/3 (0.65 passenger-trips per vehicle service mile). On the opposite end of the spectrum, Route 5 results in the least productivity, with 0.23 passenger-trips per vehicle service mile, largely due to high long distance of the route.

The total annual operating cost for FY 2014-15 was $2,138,698. As presented in Table 19, the operating cost per route/service varies depending upon the service level of each route/service. As indicated, Route 1 had the greatest amount of operating costs, totaling $498,593; Route 4 and Route 5 followed, with $493,896 and $444,513, respectively.

The financial efficiency of a system can be measured by the **operating cost per one-way passenger-trip**, as presented in Table 19. The average operating cost per passenger trip for Gold Country Stage was $11.38. This figure ranges from a high of $21.91 on the Route 6 service to a low of $8.06 on the Route 1 service.

Another measure of each route's efficiency is provided by the **farebox recovery ratio**, which is illustrated in Table 19. The farebox recovery ratio is particularly important as a measurement for meeting the mandated minimums required for state funding (10 percent). Gold Country Stage farebox revenues totaled $225,700 during the fiscal year. Dividing this figure into the operating cost equates to an annual operating farebox recovery ratio of 10.6 percent. As presented in Table 19, Route 1 collected the greatest amount of annual farebox revenues at $74,448, followed by the Route 4 service ($59,236) and the Route 2/3 service ($41,852). Route 5 service collected the $29,914 in fare revenue, but is also supported in part through Placer County contributions to operate the service, but these contributions are not included in the comparison. The estimated farebox ratio therefore varies from a high of 14.9 percent on Route 1, to 12.0 on Route 4, and 6.7 percent on Route 5 (though due to contributions, the actual farebox return ratio is higher because the contributions are calculated as fare revenue).

By subtracting the fare revenue from the operating cost, it is possible to determine the **operating subsidy required**, which was $1,912,995 for FY 2014-15. This equates to an average annual operating subsidy per one- way passenger-trip of $10.18. As presented in Table

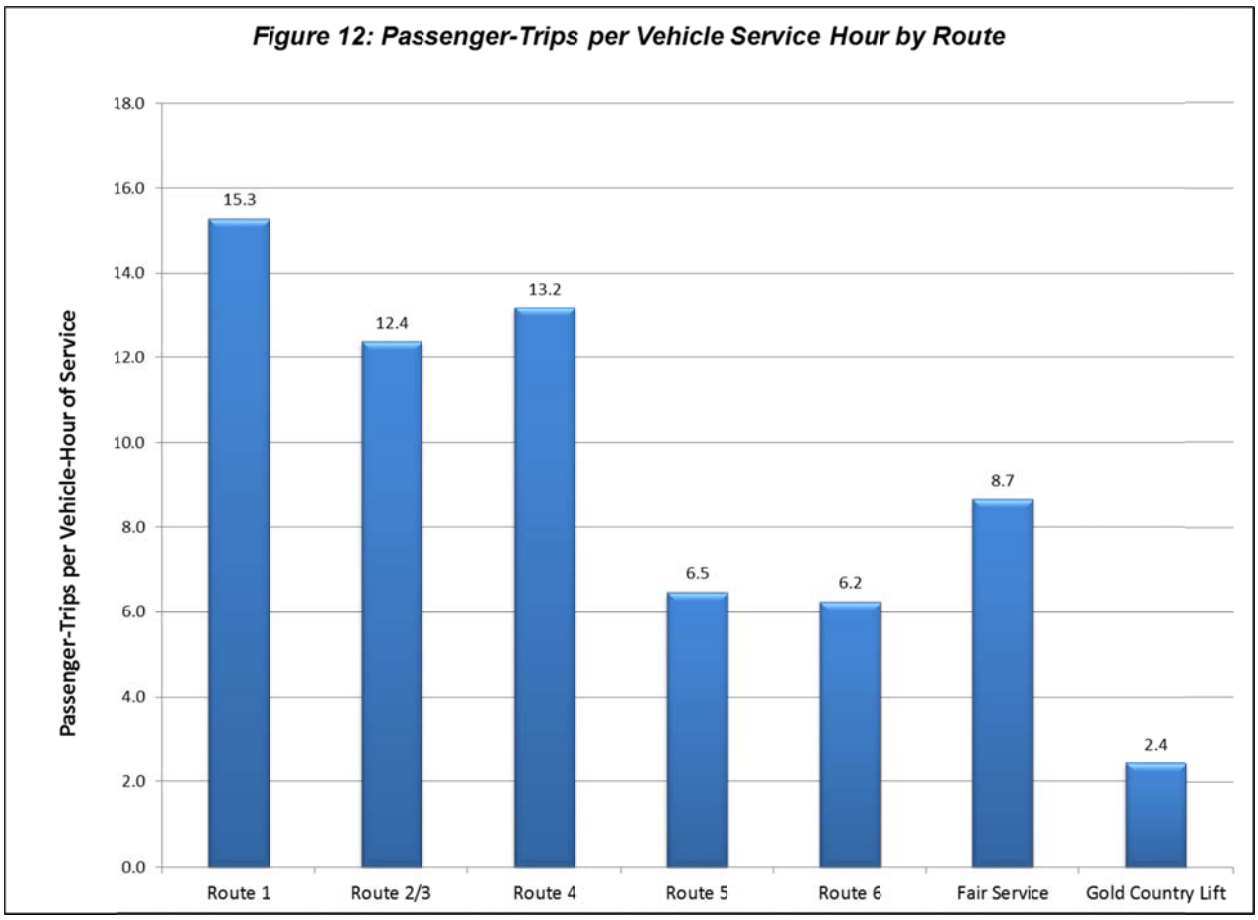
TABLE 19: Nevada County Transit Services Performance Evaluation

Fiscal Year 2014-15

	Route								
	Route 1	**Route 2/3**	**Route 4**	**Route 5**	**Route 6**	**Fair Service**	**Gold Country Stage Total**	**Gold Country Lift**	**TOTAL SYSTEMWIDE**
Passenger Trips	61,852	40,594	52,013	20,483	11,725	1,224	187,891	38,510	*226,401*
Vehicle Service Hours	4,047	3,278	3,945	3,162	1,876	141	16,450	15,841	*32,291*
Vehicle Service Miles	50,179	62,204	55,909	87,939	46,039	1,133	303,403	193,539	*496,942*
Annual Costs									
Marginal Operating Costs	$318,517	$282,372	$318,406	$303,882	$173,395	$10,419	$1,406,990	$550,330	*$1,957,320*
Allocated Fixed Operating Costs	$180,016	$145,828	$175,490	$140,631	$83,458	$6,283	$731,705	$663,036	*$1,394,741*
Total Annual Operating Costs	$498,533	$428,200	$493,896	$444,513	$256,853	$16,702	$2,138,695	$1,213,366	*$3,352,061*
Farebox Revenue [1]	$74,488	$41,852	$59,236	$29,914	$18,853	$1,357	$225,700	$113,824	*$339,524*
Operating Subsidy Requirement	$424,045	$386,348	$434,660	$414,599	$238,000	$15,345	$1,912,995	$1,099,542	$3,012,537
Service Efficiency									
Psgr-Trips per Vehicle Service Hour	15.28	12.38	13.18	6.48	6.25	8.67	11.42	2.43	*7.01*
Psgr-Trips per Vehicle Service Mile	1.23	0.65	0.93	0.23	0.25	1.08	0.62	0.20	*0.46*
Service Effectiveness									
Op. Cost per Passenger Trip	$8.06	$10.55	$9.50	$21.70	$21.91	$13.65	$11.38	$31.51	*$14.81*
Subsidy per Passenger Trip	$6.86	$9.52	$8.36	$20.24	$20.30	$12.54	$10.18	$28.55	*$13.31*
Farebox Recovery Ratio	14.9%	9.8%	12.0%	6.7%	7.3%	8.1%	10.6%	9.4%	*10.1%*

Note 1: Does not include Placer County revenues for Route 5.

Source: Gold Country Stage Operating Reports, 2015



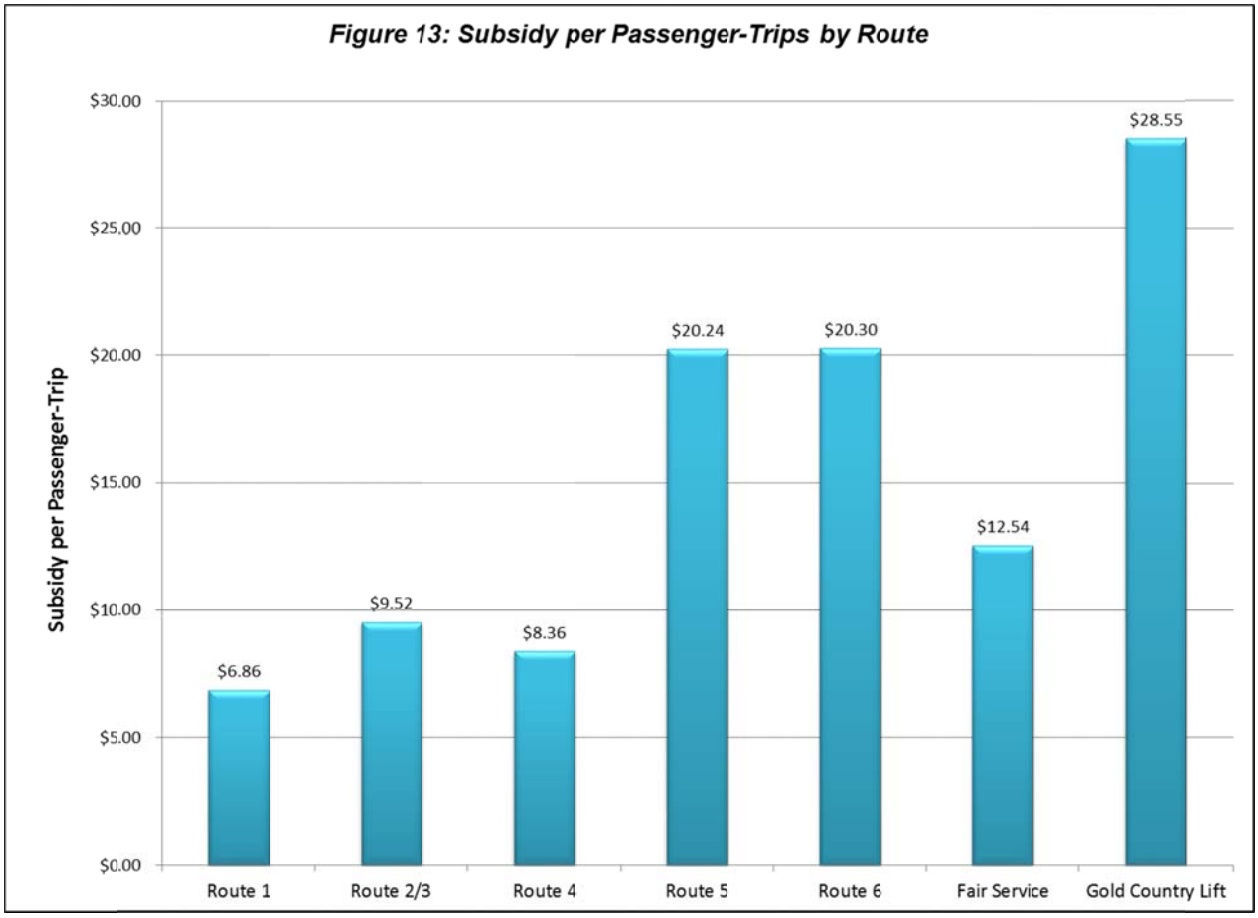
19 and Figure 13, the operating subsidy per one-way passenger-trip ranges from a low of $6.86 on Route 1 to a high of $21.91 on Route 6. This performance measure is particularly important, as it directly compares the most significant public "input" (public subsidy funding) with the most significant "output" (passenger-trips).

Gold Country Lift Transit System Performance

Table 19 also presents operating and performance data for the Gold Country Lift service. Gold Country Lift's operating cost (for contracted Nevada County services) in FY 2014-15 was $1,213,366 (per the Gold Country Stage's estimated budget). The total annual subsidy was $1,099,542, calculated by deducting total annual farebox revenues ($225,700) from total operating costs.

Passenger-trips per vehicle service hour are also presented in the Table 19 and Figure 12. As shown, Gold Country Lift achieved a productivity of 2.43 one-way passenger trips per vehicle service hour. Also shown are **passenger-trips per vehicle service mile**, which averaged roughly 0.20 passengers per mile for the Gold Country Lift services.

In FY 2014-15, Gold Country Lift achieved a **farebox recovery ratio** of 9.4 percent, as shown in the Table 19. This is a significant increase over the previous year, which had a farebox ratio of only 5.8 percent, and reflects changes in operations by the new contractor after Gold Country Telecare was discontinued.



As presented in Table 19, the Lift **operating cost per passenger trip** was $31.51, while the **operating subsidy per passenger-trip** averaged $28.55 (Figure 13). This performance measure is particularly important, as it directly compares the most significant public "input" (public subsidy funding) with the most significant "output" (passenger-trips).

On-time performance is another measure for demand response / paratransit services. According to information provided by Paratransit Services, Inc. for Fiscal Year 2013-14, 95.6 percent of all pick-ups were on-time, while 94.7 percent of drop-offs were on time.

Systemwide Performance Summary

Lastly, Table 19 provides an overview of all performance data for the entire system – both Gold Country Stage and Gold Country Lift.

- The total operating costs for the entire system were roughly $3,352,061, based on actual Gold Country Stage costs ($2,128,695) and the total billed for Gold Country Lift ($1,213,366).

- Fare revenues systemwide totaled $339,524 for the fiscal year, while operating subsidy totaled $3,012,537.

- Overall, the system resulted in a total of 7.01 passenger-trips per vehicle service hour and 0.46 passenger-trips per vehicle service mile. As typical with systemwide data, the

demand response services were quite lower than the fixed route, which lowers the overall results. However, these figures are on par with similar sized transit programs.

- The operating cost per passenger-trip was roughly $14.81 for the fiscal year, while the subsidy per passenger-trip totaled $13.31.

- The total systemwide farebox recovery ratio was 10.1 percent. However, contributions from Placer County to support Route 5 are counted as farebox revenue, bringing the systemwide farebox ratio to 11.1 percent.

OTHER TRANSIT / TRANSPORTATION PROVIDERS

Within western Nevada County, there are no other forms of public transportation available. However there are connections to other public transit services, rail service and social service / non-profit specialized transportation programs.

Amtrak *Capital Corridor* Service

Gold Country Stage Route 5 connects Grass Valley / Nevada City with Amtrak services directly at the rail station in Auburn, providing passengers with access to the *Capital Corridor* trains, where concurring schedules allow. Trains leave the Auburn station in the westbound direction (to Sacramento / Oakland) at 6:30 AM, arriving in Sacramento at 7:32 AM / 7:40 AM (depending on location) and in Oakland at 9:38 AM. In the return direction, the train leaves at 3:30 PM from Oakland and at 5:22 PM / 5:25 PM from Sacramento, arriving in Auburn at 6:30 PM.

The Auburn station is also served by Amtrak Thruway bus service, which provides connections (for passengers traveling at least a part of their trip by rail) to additional rail services in Sacramento. Westbound buses serve Auburn on weekdays at 10:30 AM, 1:55 PM, 4:50 PM and 5:10 PM, while eastbound buses arrive at 11:25 AM, 2:00 PM, 5:10 PM, 8:00 PM, and 10:10 PM.

Note that there is no other intercity bus service (such as Greyhound) serving Auburn.

Other Public Transit Agencies

Gold Country Stage currently provides direct connections to neighboring area transportation services, including the following:

- **Auburn Transit** – Direct connections are made between GCS Route 5 and Auburn Transit at the Auburn Station on Nevada Street. Auburn Transit operates two bus routes, the Red Route and the Blue Route, roughly between 6:00 AM and 5:00 PM, Monday through Friday. Saturday service is provided with one route from 9:00 AM to 5:00 PM.

- **Placer County Transit** – GCS Route 5 provides connections to Placer County Transit at the Auburn Station on Nevada Street. The Auburn – Light Rail route provides hourly service to key cities in Placer County, as well as to Sacramento RT Light Rail service at Watt Avenue. In general, Placer County Transit operates between approximately 4:40 AM and 9:00 PM, depending on the route.

Social Service and Non-Profit Services

The Veteran's Service Office (VSO) in Nevada County provides free transportation to the Reno Veterans Administration (VA) Medical Center through a volunteer driver program. The VSO uses a 6-passenger van to travel from Grass Valley to the medical center in Reno, making stops in Truckee if there is a passenger need. To ensure a seat on the vehicle, a person must have an appointment at the Reno VA Medical Center and must call the VSO at least a week in advance. In most cases, the van does not provide service to residences, but rather will meet the passenger at a location close to the highway. Unfortunately, the van is not wheelchair accessible and cannot accommodate persons using walkers. This program is funded through the Disabled American Veteran's program.

The Area 4 Agency on Aging (A4AA) is involved with a number of transportation services in Nevada County. The agency is responsible for the Retired Senior and Volunteer Program (RSVP), which coordinates volunteers aged 55 and older to provide services to elderly members of the community, including rides to medical appointments, errands and meal delivery service.

A non-profit organization, Sierra Services for the Blind and Visually Impaired, offers programs and services designed to help persons with visual disabilities to continue living independently in their homes. With respect to transportation, the organization offers transportation services to medical appointments, to pick up prescriptions and to meetings/events. Clients can use the service for trips within western Nevada County, as well as Placer County and Sacramento.

Private Cab Companies

There are two taxicab companies operating in Western Nevada County: Gold Country Cab and Courier and Fast Taxi. Taxicab service is provided in and around western Nevada County, as well as long distance inter-county service upon request. ADA accessible taxi service is available through Gold Country Cab and Courier.

EXISTING COORDINATION OF SERVICES

In 2014, the *Nevada County Coordinated Public Transit-Human Services Plan* was completed, and identified existing coordination efforts within the whole County. Specific to Western County, County Transit Services is a regional CTSA and provides numerous coordination efforts with social service and non-profit agencies in the area, including an enhanced partnership with Gold Country Lift to increase coordination between paratransit and fixed route in transporting common passengers. Various human service providers offer services to the Western County area as well. The Transit Services Division has coordinated with different human service agencies and other regional entities in the area in the following ways:

- The majority of agencies in the Study Area purchase bus passes for their clients.
- The various human service agency departments provide information through referral services such as Helpline and the Dial 2-1-1 program. The local Nevada Sierra In-Home Supportive Services (IHSS) Public Authority received FTA 5310 grant funding for mobility management, expanding the Dial 2-1-1 program. The 2-1-1 program allows callers to access a myriad of information regarding services, including transportation options.

- Social service agencies, such as Alta Regional Center, provide training for disabled persons on how to use the transit system.

- The Area 4 Agency on Aging funds and supports many different programs that are important to the mobility of seniors and disabled persons in the rural Western County area, such as the RSVP program and the Gold Country Lift Sunday Service for seniors.

Major Barriers to Coordination

Despite good intentions, there are multiple factors which limit the various transportation providers' ability to coordinate resources and trips. Major barriers to coordination identified in the recent Plan update, include:

- The more significant barriers to coordination in Nevada County are the distance, terrain and minimal transportation options between the two populated areas, as well as the distance to out-of-area medical/social services. Most specialized medical services are 30 to over 100 miles from the populated areas. Trips for the transit dependent population to Sacramento or Roseville require a full day of travel. As such, it is difficult to coordinate human service agency transportation needs as there is a vast array of destinations combined with a relatively small population.

- Social service organizations may have access to small vehicles for transporting clients, however insurance and legal restrictions can present issues. Typically, vehicle insurance or agency/county/funding source rules prohibit the use of these vehicles by other entities. The use of these vehicles for client transportation purposes can also be limited by staff time available. Further, projects in Nevada County must go through multiple offices (Risk Management, legal counsel and the CEO's office), a process that often results in a project or service that differs greatly than when it was originally developed.

- The local transit providers have found funding to be a major barrier to coordination. There is simply not enough money available to meet all transportation needs for the target population through the transit agencies or human service agencies, particularly in light of the dispersed communities and long travel distances. Funding has generally limited the level of service that is possible by the transit providers , such as the inability to serve the less populated areas with higher transit dependent residents throughout the county (such as North San Juan or Washington). Additionally, lack of funding makes it difficult for human service agencies to provide their own transportation services, whether from the inability to purchase and/or insure a vehicle or due to limited staff time to pursue coordination efforts. These, in turn, do not provide the population with the needed services, and restricts the coordination with important resources such as employment centers and medical clinics/services.

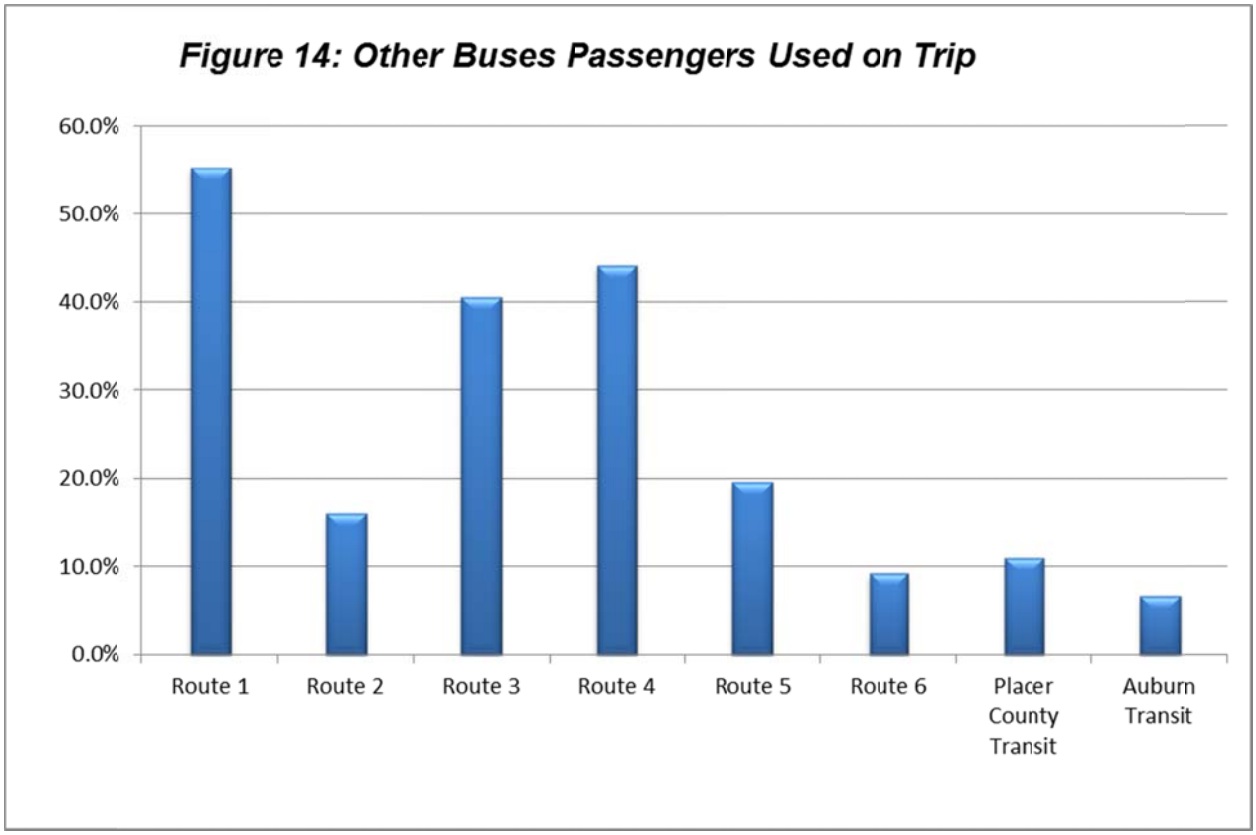
ONBOARD SURVEY RESULTS

Surveys were conducted on both the fixed route and demand response services in Western Nevada County, in an effort to better understand passenger activity, ridership patterns and overall perception of the system. The following sections outline the survey results.

Summary of On-Board Survey - GCS

The on-board survey was conducted over two weekdays (Tuesday, April 28, 2015 and Wednesday, April 29, 2015) and a Saturday (May 2, 2015). Surveyors boarded various buses during the course of the day, conducting passenger surveys to cover all Gold Country Stage routes on weekdays, and fifty percent of the routes on Saturday. The following is a summary of the main findings.

On the local fixed routes 218 valid survey responses were received. Passengers were asked to list all the GCS routes and other regional routes they were using in their trip. Out of the 218 riders, 163 people answered the question; the results are displayed below in Figure 14. Respondents were able to select multiple answers and the most popular routes indicated were Routes 1, 3 and 4.



The first few questions of the survey were open-ended permitting respondents to specify bus stops and intersections where they were boarding and de-boarding the bus. Riders were primarily coming from and going to the Tinloy Transit Center in Grass Valley, with one quarter of the riders (26.1 percent) getting on and off the bus at the Transit Center. The Fowler Center followed as the next most popular origin and destination with 4 percent getting on and off the bus there. The Auburn Transit Station was a popular destination as well. More popular bus stops are displayed below in Table 20. The response count under 'other' is often on account of the respondent's textual response being difficult to standardize so a higher number doesn't automatically mean the rider wasn't also nearby one of the common bus stops.

TABLE 20: Common Bus Stops of Riders

I got on this bus at this stop:

answered question	$203.00
skipped question	$15.00

Common Bus Stop	Response Count	Response Percent
Transit Center	53	26.1%
Fowler Center	8	3.9%
City Hall	8	3.9%
Dorsey Dr	7	3.4%
K Mart	6	3.0%
Sierra College	6	3.0%
Auburn Transit Station	5	2.5%
Grocery Outlet	5	2.5%
National Hotel	5	2.5%
Rough and Ready	4	2.0%
SPD	4	2.0%
Berryhill	3	1.5%
Berryhill/Dokimos		
Brighton St	3	1.5%
Brighton and Packard		
Broad St	3	1.5%
Broad and National		
Chevron	3	1.5%
E Main St	3	1.5%
E Main St and Brunswick		
E Main St and SC		
Glenbrook	3	1.5%
Humpty Dumpty	3	1.5%
Mountain Air	3	1.5%
Rankin	3	1.5%
Alta Sierra	2	1.0%
Banner Lava Cap	2	1.0%
Brunswick	2	1.0%
Brunswick and Sutton Cinemas		
Brunswick Safeway		
Combie Rd	2	1.0%
CVS	2	1.0%
Dorsey and Catherine Ln	2	1.0%
Rockwood Dr	2	1.0%
Rood Center	2	1.0%
Zion/Walrath	2	1.0%
Wildwood	1	0.5%
Zion and Pine	1	0.5%
Forest Charter School	1	0.5%
Other	44	21.7%

I will get off the bus at this stop:

answered question	$182.00
skipped question	$36.00

Common Bus Stop	Response Count	Response Percent
Grass Valley Transit Center	54	26.6%
Auburn Transit Station	8	3.9%
Fowler Center	8	3.9%
K Mart	6	3.0%
Banner Lava Cap	4	2.0%
SPD	4	2.0%
Broad St	3	1.5%
Brunswick	3	1.5%
Dorsey Dr	3	1.5%
Bike Shop NC	2	1.0%
Dorsey and Segsworth	2	1.0%
Downtown Nevada City	2	1.0%
Lime Kiln Blvd	2	1.0%
Little Valley Rd	2	1.0%
Litton	2	1.0%
Nevada City Bridge	2	1.0%
Penn Valley Dr	2	1.0%
Segsworth	2	1.0%
Sierra College	2	1.0%
Springhill	2	1.0%
Wildwood Center	2	1.0%
Zion St	2	1.0%
Brunswick and Old Tunnel	1	0.5%
Dorsey and Sulton	1	0.5%
Downtown Grass Valley	1	0.5%
Nevada City	1	0.5%
Nevada County Government Center	1	0.5%
Other	58	28.6%

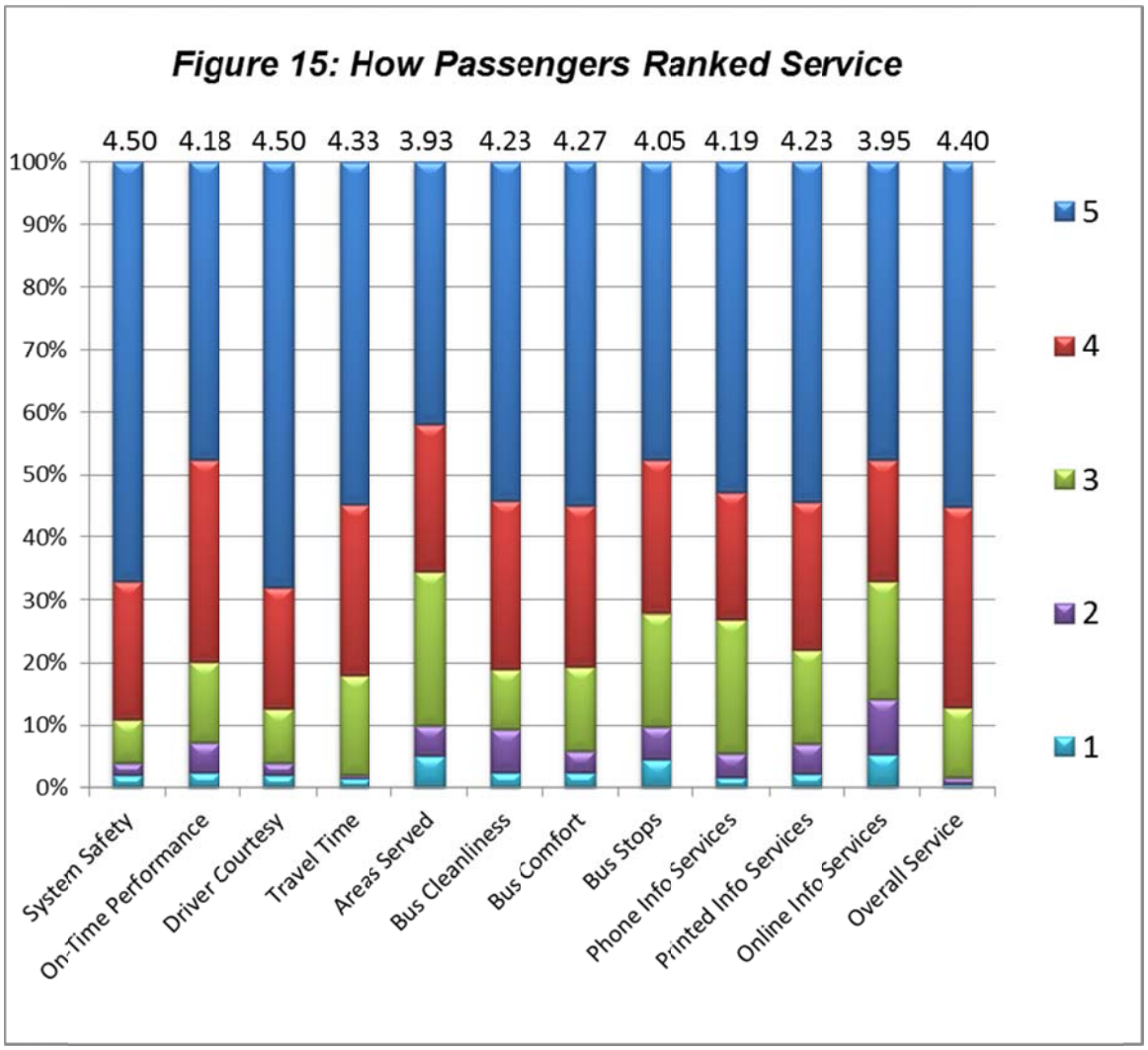
Source: LSC Transportation Consultants, Inc. Surveys conducted May, 2015.

Riders were asked how they traveled to the bus. Approximately 83 percent of the riders walked to the bus, while 9 percent had a ride from someone. It was only 3 percent each who drove themselves or rode a bike. The survey requested that riders indicate the purpose for their trip and the answers were widespread with the following percentages:

- to work 27.3 per cent
- to school 10.0 per cent
- recreation/social event 10.0 per cent
- shopping/errands 23.9 per cent
- medical/dental 7.2 per cent
- other 33.0 per cent

Riders were asked how often they usually ride the bus and almost half (45 percent) ride the bus between 4-6 days every week. Nearly 30 percent only ride the bus 2-3 times per week and 11 percent only take the bus a few times per month.

Respondents were asked to rate the GCS transit service on a 5-Point scale of 1 to 5, with 1 being “Poor” and 5 being “Excellent”. The “Areas Served” and “Online Information Services” received the lowest average rating below a 4. Results are displayed in Figure 15.



At the time of the survey, more than half of the riders (61 percent) did not have a driver's license or even own a car by their household (56 percent). There is a question in the survey requesting that riders identify themselves as Senior (65+), Youth, or Disabled, if applicable. Only half of the riders answered this question and of those 109 respondents, 40 percent indicated they were disabled and 30 percent each designated themselves as Senior or Youth.

The riders were asked about their source of internet and transit information. Nearly 20 percent claimed they have no internet access. The riders' primary source for transit information varied with the following percentages:

- Bus driver 47.5 percent
- Bus stop 25.5 percent
- GCS website 11.0 percent
- GCS office 4.0 percent
- Route Shout (new program) 4.5 percent
- Google Maps 6.5 percent
- Nevada County 211 4.0 percent
- Printed guide / schedule 36.5 percent

It should be noted that Route Shout was introduced in October 2014, just seven months before the survey was conducted. As passengers are learning about the program, its use has been increasing. Furthermore, Nevada County has been awarded a Federal Section 5310 grant to add a Mobility Management information component to the Nevada County 211 program, which will increase transit information availability and participation.

The full results, including customer comments, are displayed in Appendix A.

Summary of On-Board Survey – Gold Country Lift

An on-board survey was also conducted for Gold Country Lift clients on Wednesday, April 29, 2015 and Saturday, May 2, 2015. Drivers passed out and collected completed surveys from the passengers. There were only 11 participants in the Gold Country LIFT Dial-A-Ride Transit Survey and following is an overview of the survey findings.

- Most of the customers were riding the Lift between the hours of 9:00 and 10:00 AM.
- More than half of the customers called 4-7 days in advance for their reservation and two have a subscription trip.
- Almost half were travelling for the purpose of medical or dental services.
- None of them had a vehicle available to use instead of the LIFT service and claimed they would not have been able to make the trip without the service.
- Most of the customers use the service between 2-3 days per week and two of them use it 4-6 times per week.
- Six of the riders have a disability that makes using the fixed route difficult.
- Only 8 of the respondents use a wheelchair, while two responded that they do not use a wheelchair; the remaining one person skipped the question.

- Five of the respondents have a driver's license; four do not have a license, while the remaining two passengers skipped the question.

- Seven of the riders indicate they are a Senior Citizen and four are disabled.

- The riders were asked to rate the Lift service on a 5-Point scale of 1 to 5 with 1 being "Poor" and 5 being "Excellent". Most of the customers gave the LIFT services a 4-5 rating. There was one respondent who ranked the "System Safety" with a 3-rating and there were two respondents who gave a 3-rating to the "Areas Served". No one ranked a service below a 3.

- Three customers requested Sunday Service and one requested Saturday service.

- There were two positive remarks about the service.

- One person said that some drivers need to learn how to strap in a wheelchair better.

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Chapter 5
Transit Needs and Demand

A key step in developing and evaluating transit plans is a careful analysis of the mobility needs of various segments of the population and the potential ridership of transit services. Transit "needs" are defined as the number of persons likely to require transportation services. An important consideration is that this does not equate to number of trips or correspond directly to the ridership; rather it is a figure that estimates the potential number of persons that could benefit from transit service, and generally includes disabled and low income populations, as well as zero vehicle households. Transit "demand" represents the upper bound for an idealized transit service that could serve all of the needs of the community, while transit ridership reflects the number of one-way passenger-trips that can actually be served, given the specific characteristics of a transit system. The following sections discuss both needs and demand for transit services in more detail.

TRANSIT NEEDS AND DEMAND ANALYSIS

In many areas, the majority of transit passengers are typically transit dependent, as outlined in Chapter 2. The communities that include the largest number of transit dependent persons are highlighted below:

- The highest numbers of youth are located in the more populated areas of Grass Valley and Nevada City, although relatively higher numbers are also found in neighboring areas like Chicago Park, Lake of the Pines, Penn Valley/Rough and Ready, and Alta Sierra. For the most part, transit service is provided to these areas, with the exception of Chicago Park.

- The elderly population is generally high throughout the study area, however Grass Valley, Nevada City and Chicago Park have especially high figures. Additionally, Lake of the Pines, Lake Wildwood and Alta Sierra also have a relatively high number of senior residents. An important consideration here is the projected growth of the senior population in the County. According to the California Department of Finance, the population aged 65 years and older is estimated to grow 48 percent (over 2010 base figures) by 2020, and 72 percent (over 2010 base figures) by 2030. As such, it is likely that the population will increase in those areas with current high senior populations, as well as possibly in outlying areas that may have lower numbers currently.

- The greatest numbers of low income persons are located in Grass Valley, Nevada City and the North San Juan / Washington area. The remaining areas of the County have relatively lower populations of low-income persons.

- The locations of disabled persons are highest in Grass Valley, Nevada City and Washington / North San Juan. With the exception of Washington / North San Juan, most areas with high disabled populations are served by transit.

- While zero vehicles households are located throughout the county, the greatest numbers by far are located within Grass Valley and Nevada City.

An overall review of the demographic data shows residents with a high propensity to use transit are mostly located within the current service area for Gold Country Stage and Gold Country Lift. Overall, the majority of transit dependent residents are located within the major population centers of Grass Valley and Nevada City limits, while outlying areas like Washington / North

San Juan, Chicago Park and Lake of the Pines have also have higher populations of transit dependent residents, depending on the category.

Transit Needs Index

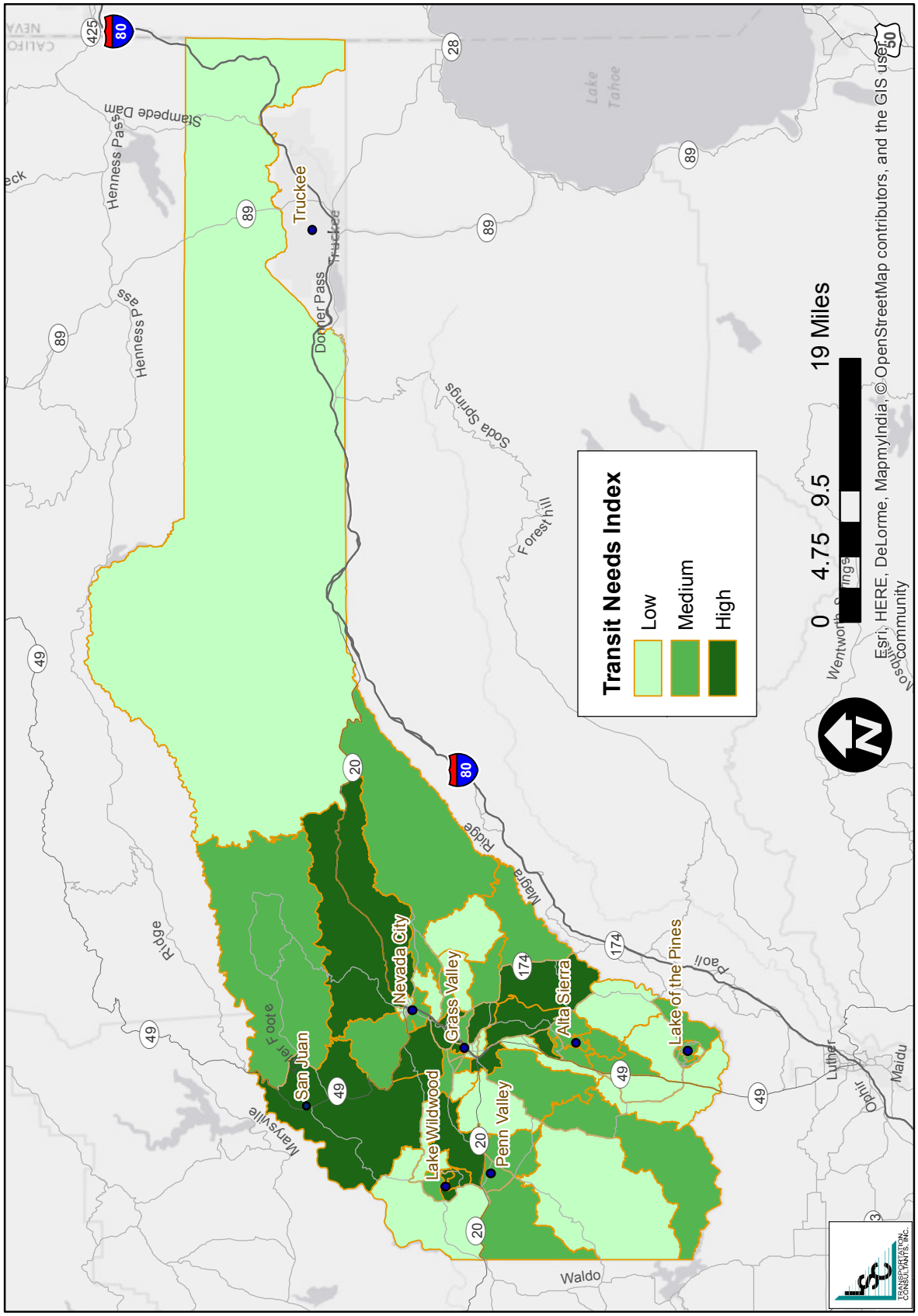
To assess the potential high, medium and low areas of transit needs in Nevada County, a "transit needs index" was developed. Data from the US Census' American Community Survey (ACS) 5-Year Estimates (2009 – 2013) at the Census Block Group level was gathered for the senior population (age 60 and above), the low income population and the disabled population. Once compiled, the data for each of the three categories – disabled, senior and low income – were factored using values reflecting the relative need for transit service by demographic characteristic, as presented in The Transportation Research Board's *Transit Cooperative Research Program Report B-3: Workbook for Estimating Demand for Rural Passenger Transportation*. Each "weighted" population figure was added together and "normalized" to a range of 0 (no need) to 100 (greatest need) by dividing by the maximum value and multiplying by 100. The resulting values, as shown in Table 10, reflect the relative need for transit service in each census tract, based upon the number of residents in the demographic categories most in need for transit service. The index was split into three levels – high, medium and low – and mapped to show the locations and level of transit needs throughout the study area. This is shown in Figure 16 and Table 21. Note that the table was consolidated to show data only by Census Tract, rather than Block Group. The darker shaded areas are considered locations with a high transit need, while the lighter areas have a relatively low transit need.

TABLE 21: Transit Needs Index

Census Tract	Area	Relative Transit Need on a Range from 0 (No Need) to 100 (Highest Need)
1.02	Alta Sierra	72
1.03	Lake of the Pines	86
1.04	La Barr Meadows	45
1.05	SR 49 Corridor, South of Alta Sierra	35
2.00	Southwestern Nevada County	28
3.00	South Grass Valley	27
4.01	Lake Wildwood	87
4.02	Penn Valley / Rough & Ready	75
5.01	Northern Grass Valley	95
5.02	Western Grass Valley	60
6.00	Eastern Grass Valley	93
7.01	Eastern Chicago Park / Banner Mountain	100
7.02	Western Chicago Park	52
8.01	Northern Nevada City / Route 20	71
8.02	Nevada City	75
9.00	Washington / North San Juan	51

Figure 16

Transit Needs Index for Western Nevada County



As shown, the census tracts with the highest relative need are a mix of outlying areas (Chicago Park, Lake of the Pines, Lake Wildwood) as well as the eastern and northern portions of Grass Valley. While a relatively moderate need resulted in Washington / North San Juan, the index does not necessarily discount the transit needs of the area as less important, as it is outlying area with very little service, yet some rather higher population groups that are transit dependent.

Zero Vehicle Households – Mobility Gap Analysis

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

Trip rates for zero-vehicle households in rural areas of the California region of the nation were determined to be 3.3 daily one-way trips. For rural households with at least one vehicle, the trip rate was 5.8 daily one-way trips. The mobility gap is calculated by subtracting the daily trip rate of zero-vehicle households from the daily trip rate of households with at least one vehicle. Thus, the mobility gap is calculated at 2.5 household one-way trips per day for this region.

To calculate the transit need for each subarea of the study area, the number of zero-vehicle households is multiplied by the mobility gap number. Table 22 shows this information broken out for the Census Tracts in the study area.

TABLE 22: Mobility Gap Analysis of Potential Transit Need

		2013 Demographics				
Census Tract	Area	Population	Households	Households With No Vehicle	Mobility Gap	Transit Need (Daily One-Way Trips)
1.02	Alta Sierra	6,645	2,701	18	2.5	45
1.03	Lake of the Pines	7,826	3,095	72	2.5	180
1.04	La Barr Meadows	3,043	1,463	31	2.5	78
1.05	SR 49 Corridor, South of Alta Sierra	2,654	1,079	55	2.5	138
2.00	Southwestern Nevada County	2,561	936	15	2.5	38
3.00	South Grass Valley	2,175	917	6	2.5	15
4.01	Lake Wildwood	6,086	2,718	58	2.5	145
4.02	Penn Valley / Rough & Ready	7,405	2,841	60	2.5	150
5.01	Northern Grass Valley	6,298	2,680	304	2.5	760
5.02	Western Grass Valley	4,897	2,079	147	2.5	368
6.00	Eastern Grass Valley	5,891	2,944	493	2.5	1,233
7.01	Eastern Chicago Park / Banner Mountain	7,551	3,154	45	2.5	113
7.02	Western Chicago Park	3,632	1,613	11	2.5	28
8.01	Northern Nevada City / Route 20	5,012	2,121	19	2.5	48
8.02	Nevada City	6,673	2,774	180	2.5	450
9.00	Washington / North San Juan	3,915	1,505	61	2.5	153
					Total Transit Need	*3,938*

Sources: TCRP Web-Only Document 49: Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation; 2009-2013 American Community Survey 5-Yr Estimates

In general, this approach establishes a level of transit need. As shown, a fairly high level of transit need is identified for the study area based on this method. In total, 3,938 daily one-way

person-trips need to be provided via transit to make up for the gap in mobility, or 1,228,500 daily one-way trips over the course of a year (based on 6 days of service per week). In comparison, Gold Country Stage's *total* one-way passenger-trips equated to 175,675 trips in Fiscal Year 2013-14. As such, this level is rather unreasonable to meet, as is expected when talking about need versus demand.

One important piece extracted from this analysis is the *location* of the highest need, rather than the potential number of daily trips needed. As shown in the table, Census Tract 6 (Eastern Grass Valley) has the greatest need by far. In fact, nearly 61 percent of the total need is estimated to be generated from this area. Northern Grass Valley (Census Tract 5.01), followed as the area with the next greatest amount of transit need, which comprised over one-third (37.5 percent) of the total Western Nevada County transit needs. However, since transit service is available through Gold Country Stage in these areas, much of the transit needs identified through the above methodology may already be served.

General Non-Program Transit Demand

In addition to program demand, demand for transit services is generated by non-program travel. The TCRP methodology also provides analysis methodologies to estimate this element of demand. The TCRP analytical technique uses a "logit model" approach to the estimation of transit demand, similar to that commonly used in urban transportation models. This model incorporates an exponential equation that relates the quantity of service and the demographics of the area.

As with any other product or service, the demand for transit services is a function of the level of supply provided. To use the TCRP methodology to identify a feasible maximum demand, it is necessary to assume a high supply level, as measured in vehicle-miles of annual transit service per square mile of service area. For rural areas, a reasonable maximum level of service would be to serve every portion of the county with four round-trips of transit service daily, Monday through Friday. However, due to the dispersed nature of the population in Western Nevada County, as well as large quantities of unpopulated areas, this level of service is not feasible; current services in the service area are equivalent to approximately 521 annual vehicle-miles per square-mile.

Employing this service density to the population of the study area yields a total estimated demand of 76,550 annual one-way passenger-trips throughout Western Nevada County, or 245 daily one-way passenger-trips, as shown in Table 23. Of this total, 67 percent is estimated to be generated by elderly residents, 19 percent from the general public and 14 percent from disabled persons.

General Public Employee Transit Demand

An important element of the total demand for transit services in the region is commuter services. This element has become an important "market" for other transit systems.

In evaluating a reasonable maximum commuter mode split for transit services, it is necessary to consider those factors that impact the feasibility of transit service in the regional commuter market. In light of observed transit commuter mode split in other similar areas, a maximum feasible mode split of 2.0 percent of all commuter travel is appropriate. This figure is applied to the total number of employed persons in the study area that work outside of the home, which totaled 28,289 persons in 2013.

Typically, each employee makes two trips approximately 250 days per year; thus, the 28,289 commuters in 2013 would make a total of approximately 14,144,272 commuter trips per year. Applying the 2.0 percent mode split suggests a total commuter demand for transit trips on the order of 282,885 one-way transit passenger-trips per year, or 1,132 daily one-way trips (Table 22):

28,289 x 2 x 250 = 14,144,272 total annual one-way passenger-trips
14,177,272 x 2.0% = 282,885 annual one-way transit trips

Given that the overall ridership for Gold Country Stage in Fiscal Year 2013-14 was 175,675 passenger-trips, it is not likely that this demand will be realized. As with other demand estimates, this represents the upper bound of potential demand, rather than what is generally expected.

TABLE 23: Western Nevada County Rural Non-Program Transit Demand

Census Tract	Area Description	Estimated Annual Passenger-Trip Demand				Estimated Daily Transit Demand
		Elderly	Disabled	General Public	TOTAL	
1.02	Alta Sierra	6,260	1,170	300	7,730	31
1.03	Lake of the Pines	6,820	1,030	1,150	9,000	36
1.04	La Barr Meadows	3,820	580	370	4,770	19
1.05	SR 49 Corridor, South of Alta Sierra	2,190	400	980	3,570	14
2.00	Southwestern Nevada County	2,310	260	360	2,930	12
3.00	South Grass Valley	2,050	330	420	2,800	11
4.01	Lake Wildwood	6,990	1,020	1,080	9,090	37
4.02	Penn Valley / Rough & Ready	5,200	1,490	1,340	8,030	32
5.01	Northern Grass Valley	5,070	1,510	3,150	9,730	39
5.02	Western Grass Valley	3,520	560	1,960	6,040	24
6.00	Eastern Grass Valley	4,690	1,290	3,370	9,350	38
7.01	Eastern Chicago Park / Banner Mountain	7,730	1,220	1,480	10,430	42
7.02	Western Chicago Park	4,150	830	560	5,540	22
8.01	Northern Nevada City / Route 20	4,720	950	1,680	7,350	30
8.02	Nevada City	6,010	890	980	7,880	32
9.00	Washington / North San Juan	2,470	750	1,970	5,190	21
	Total Western Nevada County	*51,800*	*10,510*	*14,490*	*76,800*	*246*
		67%	*14%*	*19%*	*100%*	

Note: Demand estimated based on the methodology presented in "*TCRP Report 3: Workbook for Estimating Demand for Rural Passenger Transportation* ."

Intercity Transit Demand

In order to estimate demand for intercity bus service, a model was used from the report "Planning Techniques for Intercity Transportation Services." In general, the model considers the following input factors: the number of passengers traveling one-way on a given route is a function of the frequency of service, the population served, the cost to the rider, and the distance for the trip. The specific model that was used for the estimation of demand in this study was chosen based on the route distance of the study area, where the final equation used for this study was designed for route distances of between 20 and 200 miles.

This equation can be applied to estimate the potential demand for services between Nevada City and a large urban area such as Sacramento, with a 2013 population of 471,477. Assuming one round-trip per day throughout the year, and a fare equivalent to $0.10 per mile (an industry standard), the total demand for intercity service can be calculated to equal 14,570 one-way passenger-trips per year, or approximately 58 passengers per one-way trip (Table 24). Again, this figure represents an upper bound, as discussed above.

TABLE 24: Western Nevada County Transit Demand Summary

	Annual One-Way Passenger-Trips	Daily One-Way Passenger-Trips
General Public Demand (Mobility Gap)	1,228,500	3,938
Non-Program Demand	76,800	246
Employee/Commuter Demand	282,885	1,132
Intercity Demand	14,570	$ 58
Total Transit Demand	1,602,755	5,373

Source: LSC Transportation Consultants, Inc.

UNMET TRANSIT NEEDS

The California TDA requires annual unmet transit needs hearings if a jurisdiction proposes to spend some TDA funds on streets and roads. The TDA is the primary source of funding for public transit in Nevada County. In recent years, Nevada County has not allocated TDA funds towards streets and roads. Therefore, an official unmet needs report has not been prepared. NCTC does, however, hold a public meeting each year to receive public input on transit needs in the region. The following is a summary of the unmet transit needs for the last three years.

Fiscal Year 2012-13

For unmet needs in the western portion of the county, the SSTAC held a meeting on November 15, 2012 and received the following input regarding services for western Nevada County:

- There is a need for public transportation from Grass Valley / Nevada City to the Miner's Clinic in North San Juan.
- The hours of GCS Route 2 should be extended to better serve Sierra College students taking evening courses. *(Note that GCS service began running until 8:00 PM on 7/7/14.)*
- CalWORKs clients and members of the public requested the restoration of GCS Saturday service to provide a means of getting to employment opportunities and shopping. *(Note that the Saturday GCS service was re-established on 7/1/13 with a focus on transporting low income workers.)*
- There is a need for transportation services to areas outside of the Town of Truckee for non-emergency medical trips to Reno, Kings Beach, Grass Valley / Nevada City, Auburn and Sacramento.
- The Nevada County Transit Services Division should expand on current marketing strategies to increase ridership and awareness of available transit services. *(Note that*

increased marketing efforts in FY 2013/14 have resulted in a 10% ridership increase on Gold Country Stage.)

- Additional runs on GCS Routes 3 and 4 from the Bret Harte Retirement Inn to the new transit transfer facility.

- Bus schedules should be posted on GCS buses. *(Since this meeting, bus schedules are now available on all GCS buses and at all bus shelters.)*

Fiscal Year 2013-14

For Western Nevada County, a public hearing was held on November 21, 2013. The following comments were received:

- There is a need for transit service between North San Juan and Grass Valley / Nevada City.

- Route 5 should have additional morning and evening runs that coincide with Amtrak trains.

- Public transportation should be offered to the Sierra College campus and Ghidotti Early College High School after 6:30 PM. *(Note that public transit hours were extended until 8:00 PM starting 7/7/14.)*

Nevada County ATCI Transportation Plan

In 2011, Western Nevada County was chosen by the Easter Seals Project ACTION (Project Action) to be a participant in the Accessible Transportation Coalition Initiative (ATCI) Event. According to the program's website, Project Action is "a federally funded training and technical assistance center cooperative agreement between Easter Seals, Inc. and the U.S. Department of Transportation Federal Transit Administration". Of the many responsibilities held by Project Action, one is to give technical assistance that is tailored to a specific community.

During a two-day coalition event in Nevada County, Project Action worked with the local participants (nineteen in total) to develop an action plan with a goal of improving and increasing transportation and mobility options. The group established the following vision statement:

> *"To ensure a diverse range of accessible, sustainable, safe and affordable transportation systems throughout Western Nevada County by implementing a collaborative plan that promotes wellness"*

Nevada County's ATCI Coalition Plan included objectives related to accessibility of sidewalks and bus stops, increasing availability of public transit/multi-modal transportation and lack of transit options, and increasing pedestrian and bicycle accessibility. The plan lists a step-by-step guide to help achieve each objective, including data collection and collaboration with other agencies, services and community groups. During the coalition, the group also came up with a list of transportation and mobility gaps/needs, which included:

- Poor condition and discontinuity of sidewalks

- Bus service is not always convenient for employees – related to time of service and location relative to place of employment, such as Grass Valley Group location on Providence Mine Road. *(Note that since the ATCI Plan group meeting developed these needs, the Grass Valley Group no longer resides at this location.)*

- Bus stops are often poorly located in areas where it is unsafe to cross the street, do not have a level well-drained surface and, in many cases, poorly lit.

- Even though Telecare provides transportation to/from medical appointments and shopping, the need for more services is high. Unfortunately for a lot of people, $2.00 is too much to pay. *(Note that this comment was made when Telecare was operating the paratransit service, which is now operated by Gold Country Lift/Paratransit Services, Inc*.)

- Need for transportation to/from hospitals outside the area (Auburn, Roseville, Davis, and even San Francisco).

- More hours/service for Gold Country Stage bus. *(Note that since this needs list was developed, Gold Country Stage has extended Monday through Friday hours to 8:00 PM.)*

- Commuter bus service from Nevada County to Yuba County.

- Designated bike path from Penn Valley to Grass Valley.

- Lack of pedestrian access to shopping stores off of Brunswick.

- Saturday service *(Note that since this list was developed, Saturday service has been reinstated)*.

- Service when Gold Country Stage, Gold Country Lift and Telecare are not running.

- Service to outlying areas, especially North San Juan.

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Chapter 6
Service Alternatives

INTRODUCTION

The findings of this study to date, as presented in previous chapters, provided the foundation for developing numerous service alternatives. The service alternatives are in response to the demand analysis, the review and analysis of transit services and transit performance, and public input. The service alternatives presented below include an analysis of resources necessary to implement the alternative (including capital equipment and cost of the service), ridership impacts, and expected fare revenues. The advantages and disadvantages of each alternative are also described. Based upon the service plan, capital requirements, funding requirements, and appropriate institutional and management strategies can be determined. The preferred alternatives are further developed in later chapters, including an implementation plan in Chapter 10.

It should also be noted that the service analyses reflect long-term ridership estimates for each alternative. Typically, it takes new transit services three years to reach the total ultimate ridership potential. This reflects the fact that it takes potential transit riders roughly two years to become aware of new services and to adjust their travel patterns. While this document evaluates the long-term ridership potential, the transit plan will reflect this "lag" in ridership response.

SERVICE ALTERNATIVES

When reviewing the alternatives, the reader should consider that any major increases in the cost of services to implement an alternative will require either an additional revenue stream for transit or an equivalent reduction in services in another area. When determining the strength of a service alternative, performance measures and improvement in overall mobility should be considered. These objectives are both quantitative and qualitative considerations.

Status Quo

A good starting point for the evaluation of service alternatives is the consideration of the impacts of the "status quo" – if current services remain unchanged over the upcoming planning period.

The operating characteristics of Gold Country Stage and Gold Country Lift services are shown in Table 25, based on the current operating plan. The status quo is used as a basis of comparison and therefore shows the calculated characteristics of the existing service plan so that it can be related to the operating characteristics of the service elements of each alternative. Cost assumptions for Gold Country Stage and Gold Country Lift are as follows:

- The marginal operating cost includes per hour and per-mile costs, and excludes fixed costs. These are the costs subject to change based on the amount of service that is provided. This does not present a complete representation of the current costs of services (as it excludes fixed costs such as facility costs), but is a good metric for comparing changes of service alternatives.

- The marginal operating cost was determined by allocating costs (as described in Tech Memo One, such as driver wages and benefits, to hourly services), as well as per-mile costs to expense items such as fuels and lubricants. Based on the planned hours and miles of operation for 2015-16 and the adopted budget, the hourly cost is calculated at

TABLE 25: Gold Country Stage Service Alternatives

Fiscal Year 2015-16 *Costs Exclude Allocated Fixed Costs*

Alternatives Options/Details	Additional Vehicles	Annual Vehicle Service.. Hours	Annual Vehicle Service.. Miles	Annual Marginal Operating Cost [1]	Ridership Impact (One-Way Trips) Daily	Ridership Impact (One-Way Trips) Annual	Annual Farebox Revenue	Annual Marginal Subsidy Required
Status Quo of Gold Country Stage Services								
Route 1	NA	4,047	50,179	$345,077	204	61,852	$74,488	$270,589
Route 2/3	NA	3,278	62,204	$308,712	134	40,594	$41,852	$266,860
Route 4	NA	3,945	55,909	$345,862	172	52,013	$59,236	$286,626
Route 5	NA	3,162	87,939	$335,539	81	20,483	$29,914	$305,625
Route 6	NA	1,876	46,039	$190,806	39	11,725	$18,853	$171,953
Fair Service	NA	141	1,133	$11,207	153	1,224	$1,357	$9,850
Gold Country Stage Total	NA	16,450	303,403	$1,525,996	--	187,891	$225,700	$1,300,296
Gold Country Lift	NA	15,841	193,539	$556,034	127	38,510	$113,824	$442,210
Reduce Hours of Service on Low Ridership Routes								
Route 5	0	-500	-13,910	-$53,100	-7	-1,750	-$2,560	-$50,540
Route 6	0	-300	-7,450	-$30,600	-4	-1,080	-$1,740	-$28,860
Total	*0*	*-800*	*-21,360*	*-$83,700*	*-19*	*-2,830*	*-$4,300*	*-$79,400*
Saturday Service on Route 5 -- 2 Runs	0	200	5,630	$21,300	9	490	$720	$20,580
Sunday Service								
Routes 1, 2, 3 and 4	0	1,440	19,900	$125,600	243	12,630	$12,950	$112,650
Complementary ADA		530	6,660	$18,600	10	500	$1,480	$17,120
Additional Support Costs		--	--	$13,330	--	--	--	$13,330
Total		*1,970*	*26,560*	*$157,530*	*253*	*13,130*	*$14,430*	*$143,100*
Increase to 30 Minute Frequency								
Route 1 (only)	1	2,520	31,520	$215,200	81	20,420	$24,590	$190,610
Routes 1, 2, 3, 4								
Route 1 (in combination with 3 and 4)	1	2,520	31,520	$215,200	100	25,250	$30,410	$184,790
Routes 2 and 3	1	2,650	24,340	$214,400	66	16,570	$17,080	$197,320
Route 4	1	2,770	41,430	$245,800	84	21,230	$24,180	$221,620
Total	*3*	*7,940*	*97,290*	*$675,400*	*250*	*63,050*	*$71,670*	*$603,730*
Alta Sierra Lifeline Service	1	410	4,900	$34,700	10	1,040	$5,200	$29,500
Service to North San Juan								
One Day/Week Fixed Route Service	0	190	5,660	$20,700	20	1,000	$2,000	$18,700
Three Days/Week Fixed Route Service	0	570	16,980	$62,000	18	2,720	$5,440	$56,560
One Day/Week Reserved Van Service	0	310	3,570	$26,100	16	810	$1,380	$24,720

Note 1: Marginal operating cost is estimating using the 2015-16 budget and developing a cost allocation per the method described for Table 16 in Tech Memo One. Assumes costs of $68.49 per hour of service plus $1.35 per mile of service for fixed route service, and $35.10 per revenue vehicle hour for paratransit service.

Source: LSC Transportation Consultants, Inc.

$68.49 per revenue hour, while per mile costs are estimated at $1.35 per revenue mile. Fixed costs for 2015-16 are estimated at $784,259.

- The cost assumptions for Gold Country Lift are based on the contract for 2015-16, which is $35.10 per revenue hour of service. Fixed costs are $55,728 per month. The contract is for a maximum of 18,400 hours of service.

FIXED ROUTE AND SEMI-FIXED ROUTE ALTERNATIVES

Alternative: Reduce Hours of Service on Low Ridership Routes (5 and 6)

Routes 5 and 6 have the lowest ridership per hour of service at 6.2 to 6.5 passenger trips per hour, compared to the system wide average of 11.4 and the highest ridership of 15.3 per hour on Route 1. Given this quantitatively poor performance, this alternative considers the impact of reducing the hours of service to boost overall service efficiency.

Under this alternative, the Route 5 outbound 9:00 AM (which is an express run) and inbound 11:00 AM runs would be eliminated as the lowest performing runs (3.5 passengers per day on average at 9:00 AM and 3.7 inbound at 11:00 AM, compared to 6.7 averages of all runs on Route 5 in March 2015). While much of the ridership from these runs would shift to other runs, the remainder would be lost, and the reduced options would negatively affect ridership to some extent (as estimated by an elasticity model). It is estimated that eliminating these two runs on Route 5 would reduce annual ridership by 1,750 passenger trips per year, with a reduction in fare revenue of $2,560. The operating cost would be reduced by an estimated $53,100. Considering lost revenue, the annual subsidy would be reduced by $50,540. It should be noted that the express run is not subsidized by Placer County because passengers are not picked up in Placer County on these runs.

Similarly, Route 6 could be reduced by one run per day. The specific run to be eliminated or combined would be determined through a survey of current passengers to determine their trip purpose and specifically their ability to use remaining runs to accomplish their trip purpose. This alternative would reduce annual ridership by an estimated 1,080 passenger trips per year, with a reduction in fare revenue of $1,740. The operating cost would be reduced by an estimated $30,600 per year. Considering lost revenue, the annual subsidy would be reduced by $28,860 annually.

Despite the quantitative findings, these routes perform an important role in the overall connectivity of Gold Country Stage routes and regional routes. In particular, Route 5 provides connectivity to transit services in Auburn, including commuter services, as well as medical transportation. In particular, the reduced service might make scheduling medical visits more difficult.

Alternative: Provide Saturday Service on Route 5

As mentioned above, Route 5 offers connections to regional services. Currently, no service is available on Route 5 on weekends, which limits residents' ability to get to distant locations and makes it more difficult to be reliant on transit as a travel mode. Providing one morning and one afternoon round trip on Route 5 to Auburn on Saturdays would allow individuals greater flexibility in regional travel. As shown in Table 25, this would add 200 hours and 5,630 miles of service annually at a marginal operating cost of $21,300. Given that ridership on Saturdays is typically approximately just 35 percent of that on weekdays, it is estimated 490 passengers would use the service annually, generating $720 in farebox revenue (based on the current

average fares collected). This alternative would therefore require an annual operating subsidy of $20,580 annually.

Alternative: Provide Sunday Service on Routes 1, 2, 3 and 4

One of the most frequently requested improvements on Gold Country Stage onboard surveys was for Sunday service. Operating Sunday service on Routes 1, 2, 3 and 4 would add 1,440 hours and 19,900 miles of service per year at a marginal cost of $125,600 annually (not including complementary Dial-A-Ride service). While there would be no additional capital costs (vehicles would be available), this service would require complementary Dial-A-Ride service (an estimated 530 hours at a marginal cost of $18,600). Furthermore, there would be additional fixed costs based on the need for dispatchers and a road supervisor. Assuming $25 per hour of additional administrative and office support would bring the total operating cost of this alternative to an estimated $157,530 annually, as shown in Table 25. Ridership on Sundays at the limited number of similar services that offer Sunday service is typically approximately 90 percent of that generated on Saturdays. Applying this factor to STAGE ridership, this alternative would generate approximately 13,130 passenger trips annually and $14,430 in fare revenue, for an annual subsidy of $143,100. Gold Country Lift currently provides Sunday service for individuals 60 years and older between 8:00 AM and 2:30 PM through a grant from A4AA. The average ridership has been approximately 70 passengers per month (or 1.8 passenger trips per hour) for the first four months of service. Given that this is a new service and limited to seniors only, this is in line with expected Sunday ridership.

Alternative: Provide 30-Minute Headways in Peak Periods on Route 1

Increasing service frequency is typically one of the most desired customer improvements and can greatly improve a transit systems appeal to passengers. As the most effective GCS transit route as measured in passengers per vehicle-hour, and as the “backbone” of the transit route network, a logical first candidate for more frequent service is Route 1.

Under this alternative, Route 1 would operate on 30-minute headways, by adding a second bus between 7:30 AM (departing Grass Valley) and 5:30 PM. This alternative would add 10 hours of service per weekday at an operating cost of $215,200, as shown in Table 25. Ridership can be estimated by applying an elasticity formula to existing ridership on the route, and taking into consideration that transfers are currently optimally timed for transfers with most routes at the Tinloy Center (though transfers to Route 4 would improve under this alternative). Therefore, ridership is estimated to increase by 20,420 passenger trips annually, generating an estimated $24,590 in fare revenue. This would result in a subsidy of $190,610 annually. This alternative would require the purchase of an additional vehicle to operate the service.

Alternative: Provide 30-Minute Headways in Peak Periods on Routes 1, 2, 3 and 4

At least 10 percent of Gold Country Stage passenger trips require transfers, and perhaps as much as 40 percent. Providing better frequency on a network of the busier routes would better serve many of these transfer trips. This alternative considers increasing service frequency on the routes within Grass Valley and Nevada City which have the highest ridership. Under this alternative, Route 1 would operate an additional ten hours per day to provide 30-minute headways, using two buses instead of one, while a second bus would be used to operate 11 hours of service (7:00 AM to 6:00 PM) on Route 4. An additional bus would be used to operate the Route 2/3 service from 7:30 AM to 6:00 PM, providing half-hourly service on Route 3 Grass Valley Loop as well as new runs on Route 2 and on Route 3 Loma Rica runs 30 minutes after the existing runs. This alternative would add 7,940 hours of service and would cost $675,400 annually, which is roughly 40 percent of the existing marginal operating cost of the fixed routes.

Ridership would increase by an estimated 63,050 passenger trips per year, generating $71,670 in fare revenue. The subsidy impact would therefore be $603,730 per year.

Alternative: Provide Reservation Van Service to Alta Sierra Neighborhood

While low ridership on a route can be indicative of low demand, it also can indicate that the service is not meeting the requirements of potential passengers, leaving travelers to find alternative options for transportation or leaving them with unmet needs. Within the Alta Sierra neighborhood, for example, residents have expressed difficulty accessing Route 5. The current Route 5 stays close to Highway 49 by only serving Little Valley Road and two on-demand mobile home parks. Findings of the transit demand estimations in Tech Memo One indicated the transit need index is fairly high in the Alta Sierra census tract, primarily due to the large population of seniors. A closer look at this demand shows that it also is highest close to Highway 49. The poverty level and number of zero-vehicle households is relatively low in other blocks of this census tract. Furthermore, other than the mobile home parks which generate much of the transit demand, there are no dense areas of housing which would generate a strong need for transit. Transit needs within the Alta Sierra census tract away from Highway 49 are very dispersed and therefore not reasonably served by fixed-route transit service. Finally, it is important to consider that simply extending Route 5 to serve low-density nearby areas would increase travel time for existing passengers, which would result in a reduction among through passengers.

Much of Alta Sierra area is within the ADA *Outlying Defined Paratransit Service Area*, meaning that qualified passengers can access transit through Gold Country Lift, if resources are available. However, while Gold Country Lift receives 5 to 10 requests per week for service, often after a reservation is made in Alta Sierra, subsequent reservations made within the prioritized paratransit service area result in Gold Country Lift having to cancel the Alta Sierra reservation. This creates uncertainty for the passenger and difficulty with customer service for Gold Country Lift.

One potential solution would be to provide life-line service in Alta Sierra. Under this alternative, a vehicle would be assigned to serve Alta Sierra three times per day, two days per week. The vehicle would pick up passengers in the Alta Sierra area starting at 8:30 AM and bring them to the Tinloy Station and to medical appointments in Grass Valley by 10:00 AM. A midday run would leave Grass Valley at noon, provide drop-offs and pick-ups in Alta Sierra, and return to the Tinloy Station by 1:30 PM. Finally, an afternoon outbound trip would depart Grass Valley to bring residents back to the Alta Sierra neighborhood; starting at 3:30 PM reservations would be required to be made by phone (or online) at least 1 hour prior to the service time.

This service would cost approximately $34,700 per year to operate. It is assumed hourly ridership would be similar to current patterns on Gold Country Lift, or an average of 2.4 passenger trips per hour, generating 1,040 passenger trips per year. Fares would be $5.00 per one-way passenger trip, which would generate an estimated $5,200. The subsidy for this service would be $29,500 per year.

Alternative: Service to North San Juan One Day per Week

Residents of North San Juan and “The Ridge” have long expressed a desire for transportation services. The proportion of elderly and low-income residents is higher than average in the area, but the overall population is relatively low and residences are widely dispersed (1,815 residents, or 2.0 percent of the area’s population within several square miles). Because of this, it is not reasonable to provide daily fixed-route service. This is further supported by data which shows low ridership when service was available in the area. Regular fixed-route service was provided

for a decade, ending in September 2009. From September 2006 to December 2008, four roundtrips were provided to North San Juan every weekday, reduced to three round trips in January 2009, and ending in May of 2009. Ridership averaged 3.7 passenger trips per vehicle-hour, compared to a system wide average of 11.8 passenger trips per hour.

One option would be to provide life-line service, consisting of three trips per day, one day per week. Under this alternative, a morning, midday, and afternoon run would be operated from Grass Valley to North San Juan. The route would be 37 miles roundtrip and would take 1.25 hours to operate at an annual marginal cost of $20,700. Ridership was estimated taking into account a number of factors: the increase in fares since 2009, previous ridership statistics, and the level of service of the current alternative. It is estimated that 1,000 passenger trips would be made annually. Fares would be in Zone 2 and therefore $3.00 for regular fares and $1.50 for elderly, disabled and youth. This alternative would generate an estimated fare revenue of $2,000 annually, requiring a marginal subsidy of $18,700.

Alternative: Service to North San Juan Three Days per Week

Given the requests for service, it is worthwhile considering the effectiveness of providing fixed-route service three days per week to North San Juan. Operating a trip morning, midday, and late afternoon three days would add an annual marginal cost of $62,000. It is estimated that 2,720 passenger trips would be made annually based on fares, level of service, and needs in the area. This alternative would generate an estimated fare revenue of $5,440 annually, requiring a marginal subsidy of $56,560.

Alternative: Service to North San Juan One Day per Week via Reservation Van

When fixed-route service was previously operated to North San Juan, many of the trips had no or few passengers, while other trips would carry up to ten passengers. To better target needs, one option would be to provide a van to North San Juan once per week on a reservation basis. Under this alternative, a van would be operated when a minimum of five passengers request service. If the minimum reservations are met, the bus would depart Grass Valley in the morning and travel via Highway 20 to Nevada City, through Nevada City on Broad Street, and to the North San Juan Post Office via Highway 49, and then return via the same route. A second run would be made departing Grass Valley around 3:30 PM.

Complementary paratransit service would be offered (using the same vehicle) to ADA passengers within 3/4 of a mile of the route. ADA service requests would be scheduled the previous service day, though same-day requests would be accommodated when possible. Trips could be scheduled up to 14 days in advance, but if the minimum number of requests is not met two days before the scheduled run, the trip would be cancelled and any individuals who made reservations would be notified. Fares would be $3.00 for the general public, and $1.50 for elderly, disabled or youth. Route deviations would have a $0.50 surcharge.

This service would cost approximately $26,100 per year to operate. Ridership is estimated to be 810 passenger trips per year assuming the minimum five passengers make reservations each week, which would generate fare revenue of $1,380. The subsidy required to operate this service would be $24,720 per year.

DIAL-A-RIDE AND TAXI VOUCHER ALTERNATIVES

Alternative: Eliminate Outlying Defined Paratransit Service Areas

As with any public transportation provider, Nevada County must prioritize and provide transportation to make the best possible use of available resources. In an effort to do this, a paratransit boundary was established in 2003 which meets the requirements of the Americans with Disabilities Act (ADA), and an "outlying defined paratransit service area" was established to provide service when additional resources or carrying capacity are available on paratransit. While the hope was that this would ensure that all possible contracted paratransit hours were put into service, there have been some negative consequences to having this secondary service area.

More and more frequently, the demands within the primary paratransit service area have required all paratransit resources, and individuals making reservations in the outlying defined paratransit service area often have their reservations cancelled in order that the legally-required trips are made in the primary area. This causes great frustration among those in the outlying areas and makes the service undependable, and it also frustrates the service provider when they are faced with having to cancel a service they had offered to an individual. Overall, it results in poor customer service. While some might argue that it is better to have semi-dependable service than no service, eliminating the outlying paratransit service areas and instead using targeted services such as weekly life-line services ultimately results in more predictable and reliable transportation.

Under this alternative, the outlying defined paratransit service areas would be eliminated. As these resources would be needed to provide the same level of paratransit service within the primary service area has as demand has increased, there would be no operational impacts to this alternative.

Alternative: User-side Subsidy or Taxi Voucher Program

The concept of a "user-side subsidy" program is to direct the public subsidy funding traditionally provided to the transit provider (such as Gold Country Stage) and instead providing it directly to the transit user, in the form of a voucher that can be used to purchase private transportation services. As these private transportation services are often taxi companies, this concept is also referred to as a "taxi voucher" program.

The concept takes advantage of existing private transportation providers and the market process, making transportation affordable and strengthening private companies. User-side subsidy programs are commonly provided for relatively low-demand areas, typical of point-to-point services provided for special user groups (e.g., senior persons and persons with disabilities). Eligible citizens receive subsidies in the form of coupons or vouchers to purchase transportation services at a discount. The sponsoring agency (city, county, or other group such as a social service agency) redeems the coupons or vouchers at full value, with rates negotiated with private firms in advance. This ensures that the providers receive full fare for their services. There are three basic approaches to a user-side subsidy program:

1. One is to sell coupons at a discount through approved outlets. For instance, a book of 20 $1 coupons, for use as payment for rides, might sell for $10.

2. The second approach is to issue identification cards to eligible users. Upon presentation of the card, the individual pays a fixed price (such as $1) for the trip, or a variable price

based on mileage. The carrier presents the signed voucher to the sponsoring agency for the difference.

3. In the third form, if a taxicab service is used, the user pays a percentage of the metered fare upon presentation of the ID card.

In all cases, it is important to establish rigorous controls and monitoring procedures to address any potential for abuse. One mechanism used to prevent overcharging by operators and to simplify program administration is negotiation of a flat fare system. For example, Lassen County and the City of Susanville, California, negotiated a flat rate with a taxicab company to provide subsidized trips to seniors and persons with disabilities for specific trip purposes. Coupons to use the service are available to qualified users for the same price as the Dial-A-Ride service provided by Lassen Rural Bus (the public transit provider in the county). Eligible persons may choose which of the two providers they wish to utilize.

User-side subsidy programs are only effective when a reliable and willing taxi provider can be engaged, and when the contract clarifies expectations for customer service and vehicle standards, among other details. Many public entities have experienced unfavorable taxi voucher programs due to poorly written contracts, or due to taxi companies' inability to meet the required standards. However, the presence of longstanding and successful programs indicates that this service option can effectively address specific transportation needs.

Some examples of user-side subsidy programs in rural Northern California include:

- City of Rio Vista/Solano County: Rio Vista sells $5,000 of taxi script annually, which provides a 50-percent discount on taxi fares for ADA-eligible passengers. Vouchers are good for travel within 35 miles of Rio Vista. In 2011, the taxi provider withdrew from the program, and another provider was found, but after two months also withdrew, and a third provider was contracted. The taxi voucher program is a supplement to deviated fixed-route services and dial-a-ride services and is intended to provide mobility at times and locations where regular service is not available. Solano County has a similar program for intercity taxi service throughout the county. Passengers purchase $100 worth of script for $15.00, valid only for intercity trips.

- Yuba City/Sutter County: Yuba-Sutter Transit offered a weekday evening subsidized taxi program between 1994 and 1999. The taxi program was available from 6:00 PM to 10:00 PM each weekday within the urban dial-a-ride boundary. There were no eligibility requirements. Discounts were offered to seniors (age 62 or older) and persons with disabilities. A valid Discount Eligibility Card was presented to the taxi driver to receive service. To obtain the discount card, an application had to be filed in person at the Yuba-Sutter Transit Administrative office with proof of age or disability. Upon approval of the application, a valid discount eligibility card was issued. There was no charge for the application or card. The taxi firm kept all the fare revenue generated. Yuba-Sutter Transit subsidized the difference between passenger fares and a contract rate of $9.00 per trip (regardless of the number of passengers per trip).

- This program had mixed results. It was an effective way to meet demand initially. The first year, 1,800 trips were served. However, the program grew rapidly, to 3,500 trips the second year and 5,400 trips the third year, before declining to 3,800 trips and ending with 1,800 trips in the last year. As the program became more known, more passengers started using the program, but trip lengths increased as well. Eventually the taxi provider felt the trip rate agreed upon initially was not adequately covering the cost, and the administrative demand on both the taxi provider and Yuba/Sutter Transit were very high.

The taxi company was not keeping up with drug testing, drivers were starting to demand tips from passengers (in violation of their agreement), and there was not an adequate supply of accessible vehicles. Furthermore, there was fraud as individuals started selling taxi vouchers, and record keeping by the taxi companies was inadequate. Ultimately, the taxi provider withdrew from the program as they felt they were losing money on the program. The decline in ridership on the last two years was likely due to the provider being less interested in promoting the program and their decreased ability to meet the demands of the program.

- Lassen County: The "Taxi Coupon Program" is operated by the Lassen Transit Service Agency (LTSA) and is managed by Lassen Senior Services. The program is designed to provide subsidized transportation to seniors and/or disabled. Allowable trips under the program are trips to and from the hospital, doctor's office, pharmacies, shopping, eating establishments, and senior centers within the City of Susanville. Coupons can be used for rides within the service area on both the Lassen Rural Bus "Dial-A-Ride" service and the Sierra Express Taxi Service (the current taxi provider). Qualified patrons for the program purchase ride coupons from the Lassen Senior Services for $1.75 each and are required to sign their name on a coupon register and coupons at the time of purchase.

- The Sierra Express Taxi hours are 7:00 AM to 2:00 AM, Monday through Sunday. The taxi service must respond to requests for a ride within 20 minutes of the call during non-peak hours of operation, and within 30 minutes during peak hours.

- Thousand Palms, California: Sunline Transit Agency operates a taxi voucher program for seniors and disabled residents of the Coachella Valley (Desert Hot Springs to Mecca). The taxi program supplements an extensive fixed route and paratransit system and is available 24 hours per day. Trips are restricted to within the Coachella Valley, but do not have to be within three quarters of an existing route.

- Passengers complete an application form, and if eligible (age and/or disability, and proof of residency), may purchase up to $150 of taxi fare at a 50 percent discount. Initially, the program used paper vouchers (a 10-voucher book with ten $1.00 vouchers could be purchased for $5.00, or a 20-voucher book with ten $2.00 vouchers could be purchased for $10.00). The taxi vouchers were presented to the taxi provider in lieu of cash and could not be used for tips. Vouchers expire October 31 each year. The program switched to a Smart Card system, and passengers can add up to $75.00 (a value of $150) on their cards every 30 days.

- Sunline Transit Agency states that the administration of the program has not been difficult, but the agency is also the regulating agency for the taxi program, which gave political support to establishing the program. Each cab company has a number of accessible vehicles, so access has not been a problem. The cab companies have Smart Card readers which makes administering the program fairly simple.

- The program was originally funded 25 percent through an FTA New Freedom grant, 25 percent through local match, and 50 percent through passenger fares. The original two-year New Freedom grant was for $161,000, though the agency did not use all of the funding over four years.

- El Dorado Hills: A Transit Needs Assessment study was conducted for El Dorado Hills in 2013. El Dorado Hills was a bedroom community for decades, but over time has developed a more extensive commercial and service base, increasing the need for locally-based transportation. The community was only served by El Dorado Transit via a

commuter route with no local services. The transit needs assessment evaluated the growing and somewhat unique needs of the local community, and recommended establishment of a taxi voucher program. It was determined that a taxi voucher program would work best for the dispersed transit needs and the local terrain, which is not well suited for installation of bus stops or for accommodating El Dorado Transit's large fixed-route vehicles. Furthermore, there are a number of potentially well-qualified taxi companies who would be able and willing to participate in the program.

- The taxi voucher program for El Dorado Hills was launched October 19, 2015 under contract with Gold Rush Taxi. Participants must be eligible (60 years or older, or disabled) and must register to participate. Taxi vouchers cost $3.00 for trips within the El Dorado Hills Community Services District (the taxi company receives $12.00, and passengers pay an additional regular fare if the trip extends outside of the area. Residents are allowed to purchase ten vouchers per month in order to control transit costs. Service is available from 7:00 AM to 10:00 PM seven days per week.

Taxi Voucher Program for Nevada County

As described above, the taxicab voucher concept takes advantage of existing private transportation providers by providing subsidies to eligible citizens to purchase transportation services at a discount. There are a number of methods for subsidizing the service, such as a voucher system (subsidizing a portion, such as 50 percent of a trip); scrip (where discounted tickets or books of tickets are bought at a discount and redeemed for face value); and coupons (purchased at a discount, entitling the passenger to percentage discount of the normal charge).

Given the expansive area where taxi service would be desired, a flat fare is not a viable option. Instead, to control costs to the transit system, the most likely method of providing a taxi voucher program would be to sell scrip which would provide discounts to the existing taxi service. Current taxi fares in Grass Valley are $3.00 to $4.00 flat rate plus $2.75 to $3.00 per mile. A typical three-mile trip would have a fare between $11.25 and $13.00. Subsidizing this trip by 25 to 50 percent would therefore require a subsidy per trip of $2.81 on the low end and $6.50 on the high end. At a 50% subsidy, passengers would purchase scrip at a cost of $1.00 for every $2.00 in scrip value when used to pay the taxi fare. The taxi firm(s) would then turn the collected scrip into GCS at full value. The potential to have multiple passengers in one cab can reduce the cost to the passenger and the subsidy needed.

There are two taxicab companies operating in Western Nevada County which could potentially participate in a taxi voucher program: Gold Country Cab and Courier, and Fast Taxi. These companies provide service in and around western Nevada County, as well as long distance inter-county service upon request. Gold Country Cab and Courier has ADA accessible vehicles. As mentioned above, any taxi company selected to participate in a taxi voucher program would need to understand ADA requirements and other funding-related guidelines and regulations to provide service, as well as be willing and able to provide a high standard of customer service, to monitor and report on the service, and to establish a random drug testing program. A lack of these abilities has been the downfall of many taxi voucher programs. It would therefore be critical that a clear and precise contract be developed for the voucher program. Until the program can be better defined, cost and ridership cannot be predicted.

Furthermore, Gold Country Stage administrative time would be required to establish and maintain the taxi voucher program procedures for reimbursement. Staff would be required to review the submitted vouchers and service documents to ensure the program is being used as intended and to prevent fraud or abuse.

OTHER SERVICE ALTERNATIVES

Volunteer Driver Program for Non-Emergency Medical Transportation

Many rural areas turn to volunteers to bolster non-emergency medical transportation. For many years, Western Nevada County participated in such a volunteer driver program overseen by Gold Country Telecare. Telecare recruited volunteers and paid mileage reimbursement for individuals who drove residents to medical services, primarily in the Roseville and Sacramento area.

Volunteer driver programs can be useful in serving rural areas where budgets will not allow all areas to be served, or where demand is so low and infrequent that regular service is not warranted. The biggest challenge in providing a volunteer driver program is finding, training, and maintaining a volunteer base. Managing the volunteers requires extensive oversight, which can be provided by a half-time transit agency administrative position, or under the oversight of a volunteer organization or board.

A number of rural areas in California have volunteer driver programs which illustrate the various types of programs as well as "lessons learned." These are described below.

Former Gold Country Telecare

Gold Country Telecare in Nevada County began in the 1970s as an all-volunteer transportation service. Telecare's program began as a volunteer service to offer various aid services to seniors, but it was quickly realized that transportation was the greatest need of those calling for assistance. Telecare recruited drivers to take seniors to medical appointments. By the mid-1970s, the volunteer program did not have sufficient capacity to meet the needs of residents, so a paid driver program was established. The paid program had over 20 full- and part-time drivers covering western Nevada County which had a population around 82,200. However, because Telecare had a limited service area, it still maintained the volunteer driver program. At any one time, typically six to ten drivers were signed up as volunteers. Volunteer drivers were reimbursed at $0.55 per mile, and the client was charged $0.65 (the $0.10 difference going towards administration). The driver provided his or her own vehicle and insurance and paid for fuel. Background checks of potential volunteers were conducted, including fingerprinting, and occasionally drug testing. The program provided between 1,000 to 2,200 miles of service monthly, serving an estimated 30 to 35 round-trips each month.

While trips were allowed for all purposes, the majority were for medical appointments, primarily in Roseville or Sacramento (though some of the drivers will only go as far as Roseville, due to heavy traffic). For some time, trip purpose was limited to medical appointments only, but when transit service availability on was low due to cutbacks, the volunteer program was opened up to all trip purposes.

Telecare staff found that having a parallel paid program did not impact the willingness of residents to volunteer. Where there was an unmet need (such as outside of the paid program service area), volunteers still felt their service was worthy. However, other factors impacted volunteerism, such as when volunteers aged and became incapable of driving. Additionally, volunteers declined to continue when their insurance providers increased premiums after having identified them as "commercial drivers" because they were paid to drive (though many insurance providers do not consider this a problem). Also, volunteers increasingly faced increased liability costs, increased maintenance costs, and increased fuel costs. Ultimately, the program ended when Gold Country Telecare was dismantled in 2013.

Community Resources Connection, Sonoma/Mendocino Coast

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

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

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

The Redwood Coast Medical Services (RCMS), the only local medical clinic in the region, provides for the operating cost of the van (insurance, gasoline, and maintenance). The in-kind service by RCMS includes office space, office expenses including a toll-free phone number and insurance, maintenance, and gasoline for the van. Approximately 60 RCMS clients use the van service annually.

In addition to costs covered by the RCMS, the CMC provides cash outlay of approximately $5,000 per year. This covers the cost for the Directors and Officers and General Liability Insurance, as well as office supplies and an annual volunteer appreciation dinner. Cash contributions are received from clients, the general public, and board members.

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

Tehama County Medical Transportation Services (METS)

Tehama County has a volunteer driver program to provide medical transportation. The 23-year-old program is under direction of the Transit Manager within the Tehama Department of Public Works, with a Supervisor working part time Monday through Wednesday to oversee daily

operations. The Supervisor is paid $9.34 hourly without benefits and works an annual maximum of 1,000 hours.

METS currently has ten volunteer drivers. Drivers use their personal vehicles and are reimbursed at the federal IRS rate (currently $0.56 per mile). Drivers are recruited by word-of-mouth. Ten-year DMV records are required, but fingerprinting is not. Drivers are covered by workman's compensation insurance.

The Supervisor coordinates appointments and assigns trips to drivers. This employee is also responsible for recruiting volunteers, record-keeping, and reimbursing drivers. Efforts are made to assign drivers who live closest to the passenger, for greatest efficiency.

Clients are asked for a $5.00 round-trip donation within Tehama County or $10.00 round-trip donation to Butte, Glenn, or Shasta Counties. An estimated 80 to 90 percent of clients pay this donation. METS receives $0.16 per mile reimbursement from the American Cancer Society for passengers seeking cancer treatment. There are 150 regular clients. The program provides between 60,000 to 90,000 reimbursed vehicle-miles each year. While the program is for medical trips only, clients may shop in conjunction with picking up prescriptions, at the driver's discretion. Clients must be ambulatory to use the service. Spouses or attendants may accompany the passenger if desired. Most of the clients are elderly, though some children and other adults use the service as well.

Lessons Learned

The review of the previous Nevada County and other similar northern California communities' volunteer transportation programs indicate the following:

1. Volunteer driver programs typically start out from a grass roots effort based on an identified need.

2. Overseeing the volunteers requires a dedicated individual, likely a paid employee. In CRC's case, the program is overseen by a board with the rotating chairman overseeing day-to-day operations. Over 40 volunteers keep the CRC program running.

3. Some volunteer programs provide reimbursements, and some do not.

4. The biggest challenge is to recruit and maintain volunteers. The volunteers want to feel they are providing a worthwhile service. Turnover is high due to burnout or declining ability, which in turn requires sustained ongoing efforts to attract new volunteers.

5. Volunteers are more difficult to recruit as gas prices and auto insurance costs increase.

6. Grant funding can be obtained to offset costs of reimbursed driver volunteer programs. Using such grants may limit trip purpose and client eligibility.

7. Volunteer driver programs require a "sponsor" such as a non-profit or government agency.

Establishing a Volunteer Driver Program to Serve Western Nevada County Residents

To establish a volunteer driver program, the first step would be to determine who would oversee or "sponsor" the program. An entity such as Gold Country Stage has the potential to oversee the funding for such a program, but may not be the best organization for providing the oversight due

to its focus on fixed-route services. Non-profit social service providers often have their finger on the pulse of their communities and can be best at identify advocates within the community who might be willing to develop a volunteer driver program. Furthermore, in other communities it has been found that residents are more likely to volunteer for a nonprofit entity rather than for "the county". In some cases, the passenger can select a driver, such as a family member, friend, or neighbor, which generally leads to a higher level of comfort for driver and passenger, easier scheduling, and fewer problems or complaints.

Regardless of who oversees the program, it would require a half-time position (paid) and funding for either full or partial reimbursement of mileage costs. A half-time position, without benefits (but with workmen's compensation and unemployment insurance) would cost approximately $21,000 annually (at $14.00 per hour). Reimbursement for volunteer mileage would add costs between $15,000 to $30,000 depending on the rate of reimbursement and the actual miles provided. Previously, this type of program might be funded through a 5317 New Freedoms Grant, but this program is being combined under the 5311 Rural Transit Program. Funding this position would therefore likely compete with other existing transit services. Unless additional grant funding becomes available, this program would result in a reduction of other transit services.

COMPARISON OF ALTERNATIVES

A comparison of the service alternatives is presented in Table 26 and Figures 17 through 21. Note that alternatives which were discussed qualitatively rather than quantitatively are not reflected in this summary. The operating characteristics of each of the alternatives are shown, with the assumption that each would be individually implemented in addition to or as a replacement of the current services, as appropriate. Performance measures of the alternatives can then be evaluated in terms of how the change in service would impact the transit program. A review of this summary indicates the following:

- The impact of the various alternatives on annual ridership ranges from a decrease of 1,750 passenger trips annually (for reducing Route 5 by one round trip per day) to an increase of 63,050 passenger-trips (for the alternative offering half-hour headways on Routes 1, 2, 3 and 4). This is shown in Table 26 and Figure 17.

- The impact on annual marginal subsidy requirements ranges from a decrease of $50,540 (again, for reducing Route 5) to an increase of $603,730 (for half-hour headways on Routes 1, 3 and 4). This is shown in Table 26 and Figure 18.

- The estimated additional passenger-trips provided per vehicle-hour of transit service ranges from a reduction of 3.6 passengers per reduced hour of service on Route 6, to a modest addition of 2.5 passengers per hour for the Alta Sierra service, and a substantial increase of 8.1 passenger trips per hour by operating 30-minute frequency on Route 1. This data is shown in Table 26 and Figure 19.

- The "farebox return ratio" is the ratio of the net change in fare revenues to the total operating costs. The farebox return ratios in Table 26 are relative since they are based on marginal costs, but they offer a basis of comparison. Implementing 30-minute frequency on Route 1 would offer the best relative farebox ratio at 8.1 percent, followed by 30-minute frequency on Routes 1, 2, 3 and 4. The life-line service to Alta Sierra and one day per week van to North San Juan would result in the lowest farebox ratios at 2.5-2.6 percent, and Saturday service on Route 5 would have only a 3.4 percent relative farebox return ratio. This data is shown in Table 26 and Figure 20.

TABLE 26: Comparison of Gold Country Stage Transit Service Alternatives

Alternative	Annual Vehicle Service Miles	Annual Vehicle Service Hours	Annual Ridership	Annual Operating Cost	Marginal Fare Revenue	Marginal Annual Subsidy	Performance Measures: Ridership per Vehicle Service Hour	Performance Measures: Marginal Farebox Return Ratio	Performance Measures: Net Operating Subsidy per Passenger-Trip
Status Quo	303,403	16,450	187,891	$1,525,996	$225,700	$1,300,296	11.4	14.8%	$6.92
Reduce Hours on Low Ridership Routes									
Route 5	-13,910	-500	-1,750	($53,100)	($2,560)	($50,540)	3.5	4.8%	$28.88
Route 6	-7,450	-300	-1,080	($30,600)	($1,740)	($28,860)	3.6	5.7%	$26.72
Total	-21,360	-800	-2,830	($83,700)	($4,300)	($79,400)	3.5	5.1%	$28.06
Saturday Service on Route 5 -- 2 Runs	5,630	200	490	$21,300	$720	$20,580	2.5	3.4%	$42.00
Sunday Service									
Routes 1, 2, 3 and 4	19,900	1,440	12,630	$125,600	$12,950	$112,650	8.8	10.3%	$8.92
Complementary ADA	6,660	530	500	$18,600	$1,480	$17,120	0.9	8.0%	$34.24
Additional Support Costs	--	0	--	$13,330	--	$13,330	--	--	--
Total	26,560	1,970	13,130	$157,530	$14,430	$143,100	6.7	9.2%	$10.90
Increase to 30 Minute Frequency									
Route 1 (only)	31,520	2,520	20,420	$215,200	$24,590	$190,610	8.1	11.4%	$9.33
Route 1, 3, 4									
Route 1 (in combination with 3 and 4)	31,520	2,520	25,250	$215,200	$30,410	$184,790	10.0	14.1%	$7.32
Routes 2 and 3	24,340	2,650	16,570	$214,400	$17,080	$197,320	6.3	8.0%	$11.91
Route 4	41,430	2,770	21,230	$245,800	$24,180	$221,620	7.7	9.8%	$10.44
Total	97,290	7,940	63,050	$675,400	$71,670	$603,730	7.9	10.6%	$9.58
Alta Sierra Lifeline Service	4,900	410	1,040	$34,700	$5,200	$29,500	2.5	15.0%	$28.37
Service to North San Juan									
One Day/Week Fixed Route Service	5,660	190	1,000	$20,700	$2,000	$18,700	5.3	9.7%	$18.70
Three Days/Week Fixed Route Service	16,980	570	2,720	$62,000	$5,440	$56,560	4.8	8.8%	$20.79
One Day/Week Reserved Van Service	3,570	310	810	$26,100	$1,380	$24,720	2.6	5.3%	$30.52

Source: LSC Transportation Consultants, Inc.

Meets (new) performance

Does not meet performance standards.

FIGURE 17: Gold Country Stage Projected Annual Ridership by Alternative

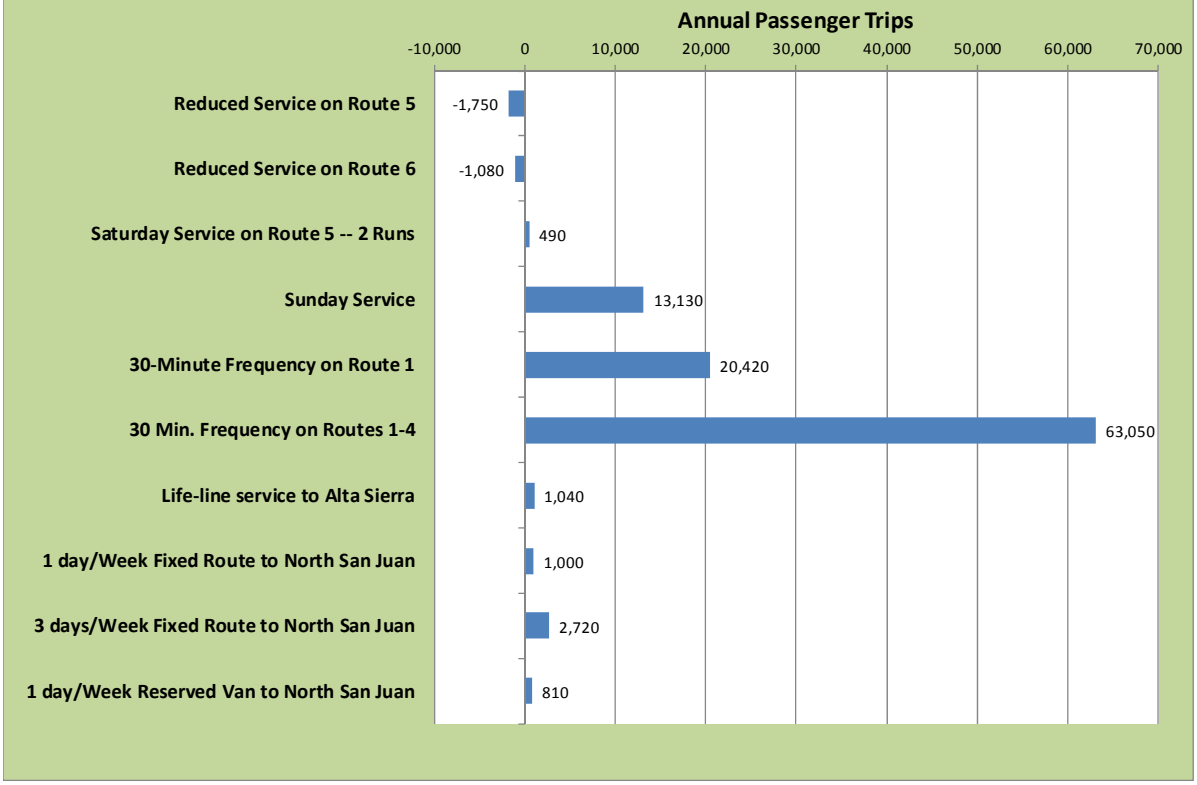


FIGURE 18: Marginal Operating Subsidy by Service Alternative

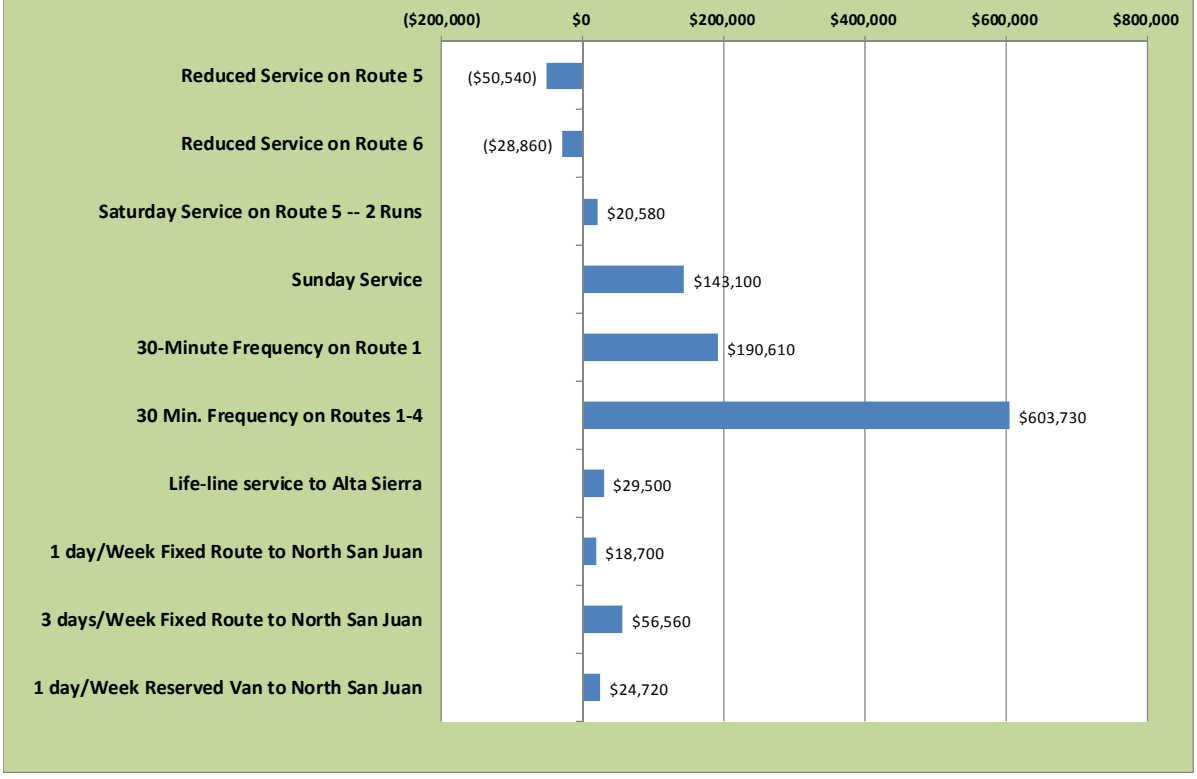


FIGURE 19: Change in Ridership per Hour by Alternative

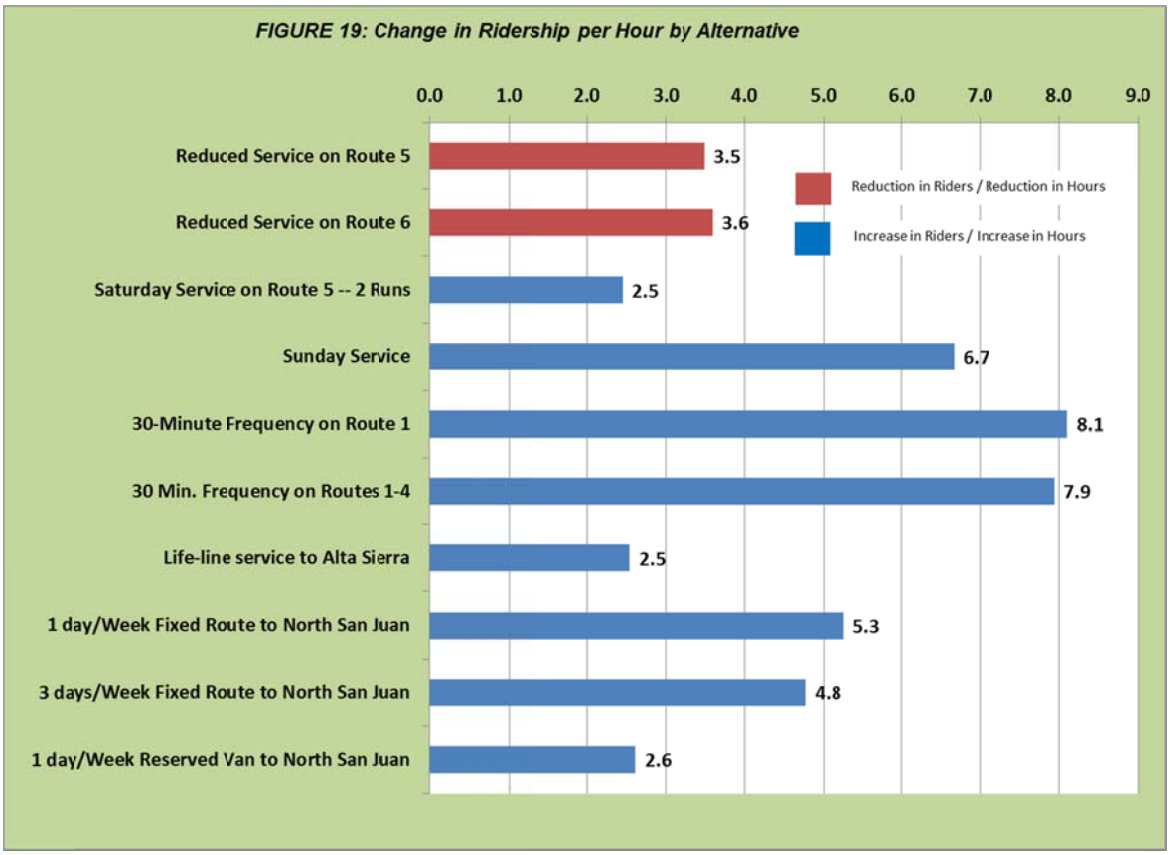
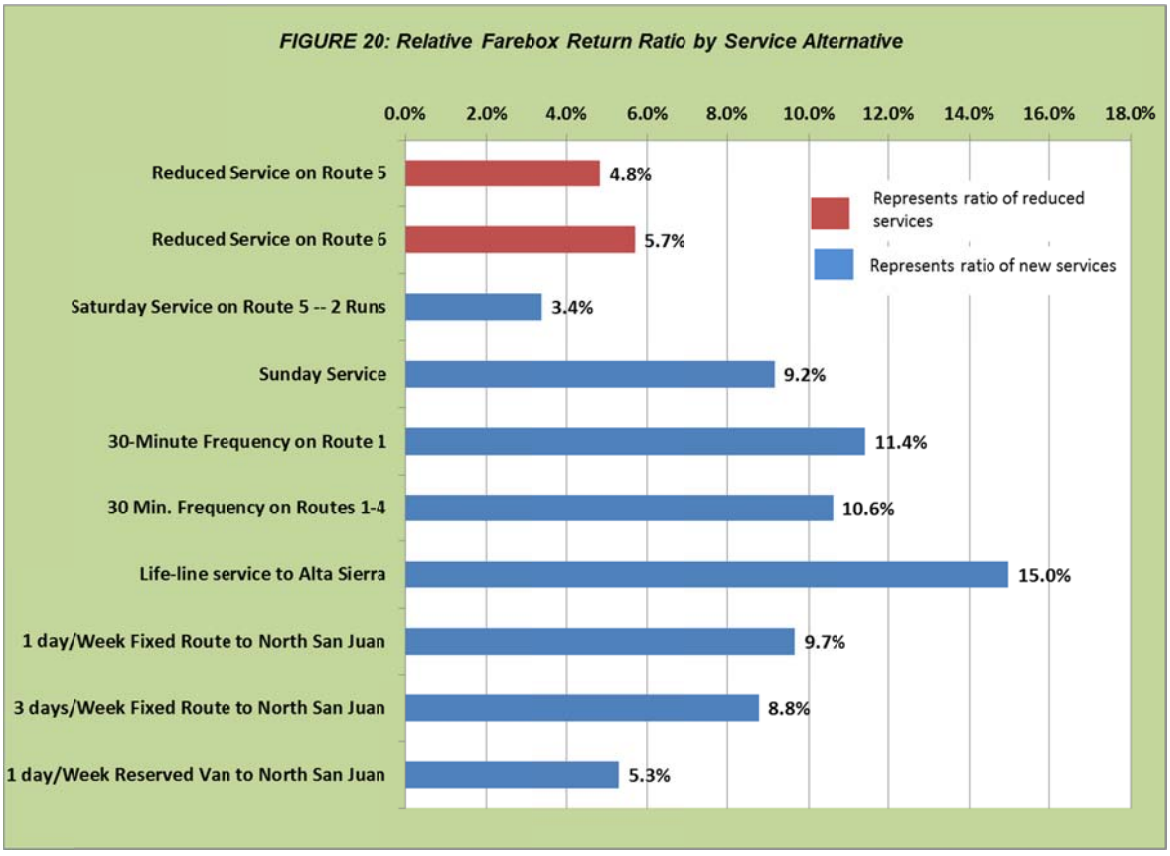
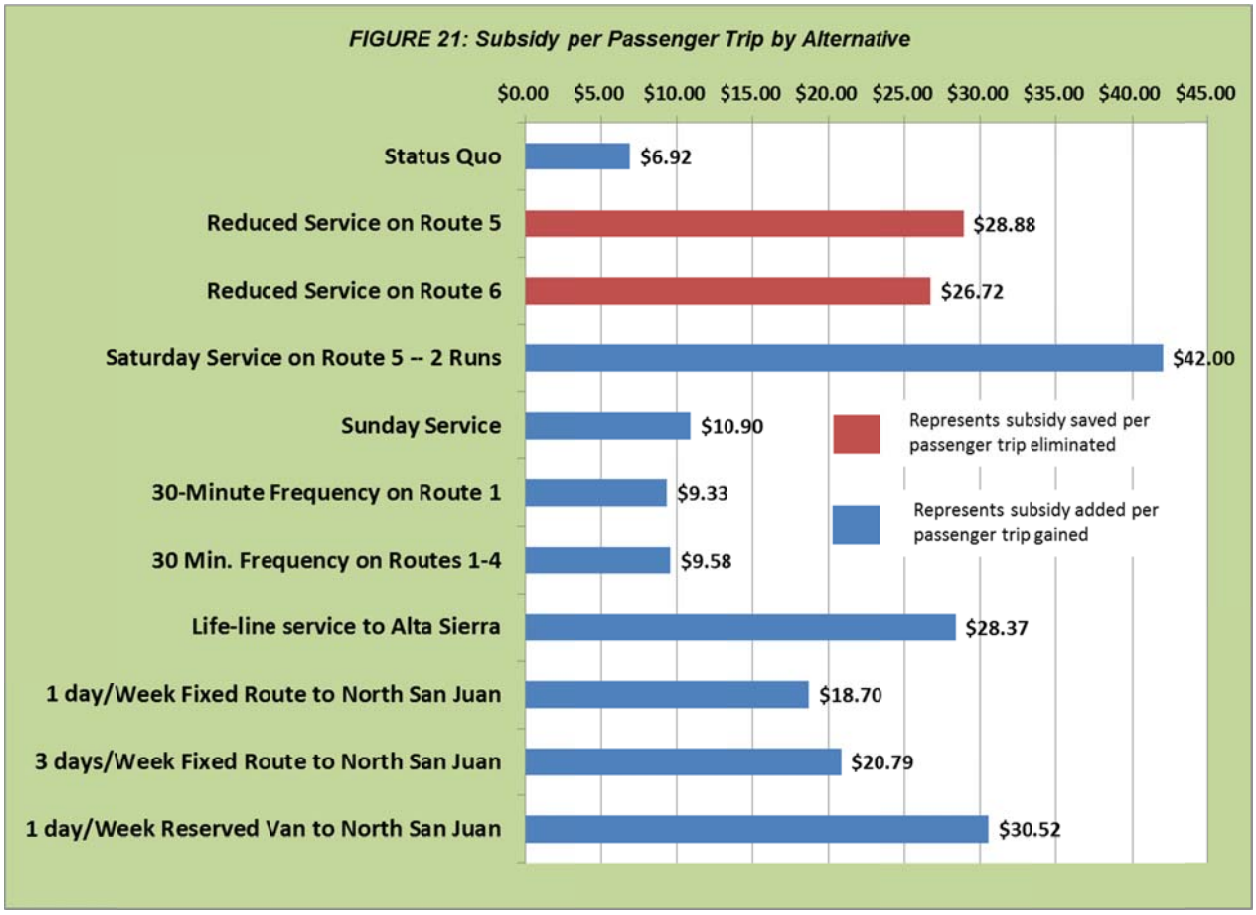


FIGURE 20: Relative Farebox Return Ratio by Service Alternative



- The best measure of the value of these alternatives is the resulting marginal subsidy per passenger-trip. Based on this measure, reducing Route 5 service represents a savings of $28.88 per passenger trip. The lowest subsidy for added service would be increased frequency on Route 1 with a subsidy of $9.33 per passenger trip, followed by increased frequency on Routes 1, 2, 3 and 4, with a subsidy of $9.58 per passenger trip. The Saturday service on Route 5 would have the highest subsidy per passenger trip at $42.00, followed by one-day per week reserved van for North San Juan at $30.52. It should be noted the marginal subsidy per passenger trip for the status quo is $6.92, which is lower than all of the alternatives. Data is shown in Table 26 and Figure 21.



Overall, Table 26 presents the differences in the various alternatives.

Performance standards recommended in the 2010 Transportation Development Plan include the following:

- Maximum Subsidy per Passenger trip: no more than $8.00 on local routes and $12.00 on regional routes (this should be increased to $13.00 per regional route as discussed in Chapter 3)

- Minimum Farebox Ratio: 10 percent system wide, 7 percent on regional routes

- Minimum Passengers per Vehicle Revenue Hour: 8 for local services, 7 for regional services, 2 for paratransit services

Given these standards, all of the service alternatives exceed the current maximum subsidy per passenger trip. If standards are revised to better reflect current conditions, only the lifeline service to Alta Vista or North San Juan, or two day per week service to North San Juan would not meet the standard. Most of the alternatives are close to meeting or do meet the minimum farebox return ratio, with the exception of lifeline service to Alta Sierra and the one day per week reserved van for North San Juan. Finally, 30 minute frequency on Route 1 would meet the minimum passengers-per-hour standard, and increased frequency on all local routes just misses this standard at 7.9 passenger trips. The Alta Sierra service meets the minimum passenger trips per hour standard if applying paratransit standards, which would be appropriate for the service.

In terms of alternatives to reduce services, because the existing Routes 5 and 6 do not meet most of the minimum standards (Route 5 does meet the minimum farebox, but Route 6 does not, and neither meets passenger per hour standards or subsidy per passenger trip standards), reducing the service has a positive impact on the statistical standards system wide.

While the half-hour headways on Routes 1 through 4 generate the greatest ridership, this comes at a relatively high cost. These two frequency improvement options are relatively equal with regards to the performance measures, with Route 1 30-minute service performing slightly better than 30-minute service for Routes 1 through 4. The reduction of Routes 5 and 6 offer some cost savings, but it results in poorer overall service and impacts the connectivity to regional services (Route 5). Service to North San Juan is effective for one day per week, but less efficient if offered multiple days per week, and scheduled service is more effective than the reserved van.

A final note regarding all of the alternatives is that under the current funding scenario, only modest changes are likely to be feasible. Adding services or hours in one area will most likely only be possible if a near equivalent reduction of services is implemented in another area.

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Chapter 7
Capital Alternatives

INTRODUCTION

The continued success of the transit program, as well as any potential improvements, depends on the ongoing provision of reliable equipment, facilities and infrastructure. This chapter evaluates the ongoing needs of the transit program as well as any potential new capital needs related to the service alternatives. In particular, this chapter evaluates the vehicle replacement needs, facility needs (maintenance and operations), and passenger amenities needs. Once service alternatives are selected for implementation, the appropriate capital alternatives will be developed as part of the five year transit plan. The revenue for capital costs will be primarily through Federal and State Capital grants. These funding sources are discussed in Chapter 9.

VEHICLE NEEDS

This Transit Development Plan evaluates the need for purchasing vehicles over the plan period in order to maintain reliable transportation services. Transit vehicles have a life expectancy defined by age or mileage depending on the vehicle type, and maintaining a viable fleet is critical to running a reliable transit service. Those vehicles which reach the end of useful life per the manufacturer's recommendation should be retired and replaced. Additionally, new vehicles may be required depending on the selected service alternatives. Furthermore, the cost of leasing vehicles through Paratransit Services, Inc. will be compared with the cost of purchasing paratransit vehicles for Paratransit Services, Inc. to run on behalf of Nevada County.

Replacement Vehicles

Gold Country Stage requires six vehicles during peak fixed-route service, and preferably four vehicles as back-ups to allow for scheduled maintenance and unscheduled repairs. As identified in Table 27, five of the ten Gold Country Stage vehicles are expiring in 2015, four more are expiring in 2016, and one vehicle does not expire until 2022. Using Proposition 1B *Public Transportation Modernization, Improvement, and Service Enhancement Account Program* (PTMISEA) funds, eight vehicles are currently on order, and two more will be purchased next year (this funding source sunsets in 2016-17).The new vehicles will therefore have a suggested life span which extends through the TDP time frame. However, because of the steep topography of Western Nevada County, and the narrow, short city blocks in the historic towns which require short stops, wear-and-tear on vehicles is much higher than for most transit programs. As such, the life span of the vehicles is more practically five years, which would indicate the vehicles will need replacing at the end of the TDP planning period as well (2020 and 2021).

One issue Gold Country Stage has had to face is that all of the vehicles are on the same life-cycle, requiring a very large capital outlay at one time for vehicle replacements. In an effort to have vehicles last as long as possible, each vehicle is rotated out of service regularly to spread wear-and-tear evenly. To break the cycle of all-out replacement, several of the vehicles should be used more heavily and retired as soon as they wear out, saving several other vehicles to last longer. Over time, this could result in a more even replacement schedule, as suggested in Table 27. After the four vehicles leased to Gold Country Lift are replaced in 2018, this new strategy would result in a schedule wherein just two or three vehicles would need replacing each year from 2019 to 2023.

TABLE 27: Gold Country Stage Fleet and Replacement Plan

Make	Model	Year	End of Useful Life	Replacements Current	Replacements Next Cycle	Seating Capacity # of Pax	Seating Capacity W/C
Revenue Vehicles (in use by Gold Country Stage)							
Chevrolet	Aero Elite 5500	2008	2015	2015	2019	26	2
Chevrolet	Aero Elite 290	2008	2015	2015	2019	26	2
Chevrolet	Aero Elite 5500	2008	2015	2015	2020	26	2
Chevrolet	Aero Elite 5500	2008	2015	2015	2020	26	2
Chevrolet	Aero Elite 5500	2008	2015	2015	2020	26	2
Chevrolet	Aero Elite 290	2009	2016	2015	2021	26	2
Chevrolet	Aero Elite 290	2009	2016	2015	2021	26	2
Chevrolet	Aero Elite 290	2009	2016	2015	2022	26	2
Chevrolet	Aero Elite 5500	2009	2016	2016	2022	26	2
El Dorado	Maxx 7	2015	2022	2016	2023	26	2
Revenue Vehicles (Leased to Gold Country Lift)							
Dodge Braun	Entervan	2013	2018	2018	2022	4-6	1
Dodge Braun	Entervan	2013	2018	2018	2022	4-6	1
Dodge Braun	Entervan	2013	2018	2018	2023	4-6	1
Dodge Braun	Entervan	2013	2018	2018	2023	4-6	1
Service Vehicles							
Ford	Escape 4WD	2008					
Chevrolet	Amerivan	2008					
Dodge	Braun Entervan	2010					
Dodge	Braun Entervan	2010					
Ford	Escape XLT-AWD	2012					
Ford	F250 4x4	2012					

Source: Gold Country Stage / LSC Transportation Consultants, Inc.

Gold Country Lift Vehicles

Gold Country Lift paratransit services are provided using four vehicles which are leased for $1.00 per year from Gold Country Stage, and eight vehicles leased through a private contractor. As identified in Table 28, the vehicles are not expiring until 2018. Typically, eight vehicles are needed in service, with ten needed at peak times. The cost of the leased vehicles is built into the operations contract. If Nevada County were to purchase the currently leased vehicles for Gold Country Lift to operate, this would result in a cost savings of $1,500 per month, per vehicle; the purchase price would be approximately $55,000 per vehicle currently. Some of the pros and cons of purchasing versus continuing to lease the vehicles are as follows:

<u>Considerations with Purchased Paratransit Vehicles</u>

- Puts Nevada County in a better bargaining position for contracting out services
- Monthly cost reduced by up to $12,000 per month
- Can select vehicle specifications

- Initial capital outlay is high (approximately $90,000 per vehicle new/$55,000 per leased vehicle purchased), but capital grant funding is easier to acquire than operational grant funding. For example, FTA 5310 or FTA 5339 grant funding, which allows "Toll Credits" as a match source, would not require local funding.

- Vehicle must stay in service for five years which has less flexibility than leasing where vehicle types can be changed, and fleet size can be increased or reduced more easily.

- Lifespan is five years, which equates to an approximate cost of $1,500 per month per vehicle which is equal to leasing.

- The mainstay for capital vehicle funding for transit vehicles for the last several years has been the Prop 1B-PTMISEA program; this funding sunsets in 2016-17. Other reliable and ongoing capital funding will need to be identified.

The current contract includes fuel and maintenance provided by the paratransit contractor. That could be continued or re-negotiated with purchased vehicles.

TABLE 28: Gold Country Lift Fleet Needs

Make	Model	Year	End of Useful Life	Passenger Capacity	
				Ambulatory	Wheelchair
Dodge Braun [1]	Entervan	2013	2018	4-6	1
Dodge Braun [1]	Entervan	2013	2018	4-6	1
Dodge Braun [1]	Entervan	2013	2018	4-6	1
Dodge Braun [1]	Entervan	2013	2018	4-6	1
Ford	E350	2013	2018	8	2
Ford	E350	2013	2018	8	2
Ford	E350	2013	2018	8	2
Ford	E350	2013	2018	8	2
Ford	E450	2013	2018	10	2
Ford	E450	2013	2018	10	2
Ford	E450	2013	2018	14	2
Ford	E450	2013	2018	14	2

Note 1: Vehicles leased from Gold Country Lift.
Source: Paratransit Services Inc., 2015

Feasibility of Hybrid Lift Minivans

Despite a current downward trend in fuel prices, inevitably, fuel prices will increase. For this and for environmental reasons, Western Nevada County would like to consider the feasibility of purchasing Hybrid Lift Minivans. Sacramento Regional Transit has operated a fleet of vans in neighborhood route service for the last several years. These vehicles are relatively expensive (on the order of $220,000 per unit). Furthermore, it is important to determine if hybrid fueled vehicles operate successfully in a foothill environment versus flat topography such as the Sacramento Valley. Calaveras County is acquiring a hybrid electric vehicle, and their experience in the foothill environment may serve as a demonstration of feasibility.

Expansion Vehicles

Several of the service alternatives would require an additional vehicle in use, and therefore the purchase of an additional vehicle. New purchases are dependent upon which service alternatives are selected. Given the narrow roads and occasional snow conditions, the vehicle size is limited to the mid-sized 26-passenger vehicles Gold County Stage typically buys.

OTHER CAPITAL NEEDS

In addition to vehicle needs, Gold Country Stage has additional capital needs, as discussed below.

Facility Improvements

Currently, Gold Country Stage leases a space from the Nevada County Airport on John Bauer Avenue in Grass Valley. The Transit Services Division, including Gold Country Stage, will be relocating to a new Corporation Yard site at La Barr Road Meadows Road just south of McKnight Way in south Grass Valley. Construction of the new yard is slated to begin in 2017. Gold Country Stage offices and yard, as well as the current County Corporation yard which maintains vehicles, will all be located at the new site. The new location will be at a lower elevation than the current site, which means the vehicles and drivers will rarely encounter snow conditions. At its current location, Gold Country Stage must move vehicles to a lower elevation when a snow storm is predicted in the area. The new location will be better suited to Gold Country Stage's operations. In particular, it is approximately 1.2 miles closer to the Tinloy Transit Center than the current facility, which will generate a modest savings in operating costs.

In the meantime, Gold Country Stage is working with the Airport to purchase security cameras to install on the current site, as discussed below.

System Safety and Security Improvements

The Gold Country Stage fleet does not currently have security cameras. Video surveillance on buses are known to reduce confrontations between passengers and between passengers and drivers, reduce vandalism on vehicles, and can potentially be used as a resource should any litigation occur from incidents on the bus. Transit systems find this a worthwhile investment, and it is recommended that Gold Country Stage equip its buses with surveillance cameras. The cost of equipping new vehicles with video surveillance is approximately $25,000 per vehicle: equipping ten buses over the plan period will cost in the range of $250,000, not including inflation. As Gold Country Stage replaces its vehicles, it will continue to equip the vehicles with video surveillance.

Passenger Amenities

The quality of passenger amenities has a significant impact on the publics' and passengers' perception of a transit system. Well designed, comfortable amenities with good access greatly enhance the reputation of a transit program as a community asset. Gold Country Stage has developed and continually re-evaluates a prioritized list of transit stops which need improving. Improvements may include replacing benches, shelters or signs, or rebuilding pads and bus stop access, etcetera. Currently, for example, Gold Country Stage is in the process of relocating a stop at the Grass Valley City Hall where it will be easier for passengers to access and for the bus to serve. This project costs approximately $50,000. In addition, Transit Services/Gold Country Stage continues to identify stops it would like to improve in the next year, and likely a similar number each year of the plan period. Given that trash receptacles at a stop cost an

estimated $1,500, costs for improvements can quickly add up. Capital funding of $40,000 to $60,000 should be included in the budget annually to maintain and update passenger amenities.

Public Restrooms

The design of the Tinloy Transit Center originally included plans for a public restroom. However, the need for drivers to have a routinely available, clean and safe restroom became a priority in order to provide mandated breaks and timely transfers. As the only restroom in the vicinity, the restroom at the transit center is only available to drivers and transit staff and doubles as a transit safety station and storage area for equipment and tools. Additionally, numerous businesses in the community have become more vigilant about allowing only customers to use their restrooms due to the increased number of individuals who were using the restrooms for washing, dressing, and suspected drug use. Furthermore, many public restrooms, such as those at City Hall, are only available during business hours, leaving passengers with few options, particularly during mornings, evenings and Saturdays.

Providing public restrooms for transit passengers and the public in general is a challenge in many cities, including small cities. It is difficult to ensure that the restrooms are used for their intended use, and not for illicit activities; and it is difficult to maintain cleanliness and discourage vandalism. The cost of public restrooms ranges from $90,000 for a simple “Portland Loo” to as much as $400,000 for self-cleaning toilets. Furthermore, the placement of public restrooms is often a contentious issue, and there are physical and legal constraints to placement as well. The issue of public restrooms is of great concern not only for the transit program, but for Western Nevada County as a whole, and the solution will require efforts beyond the scope of this TDP. It may be possible that capital funding for transit may be appropriate to pay for a portion of public restrooms, but the responsibility is not wholly a transit issue.

Transit Technology Equipment, Devices and Software

Just over a year ago, Gold Country Stage purchased and implemented Route Match© software to improve scheduling and management of the transit system. While there was a learning curve and glitches to address, the system is now working fairly well for Gold Country Stage. Other technological improvements which would benefit the transit system are described below.

Automatic Voice Annunciation (AVA)

Automatic Voice Announcement systems are programed to announce stops as they are approached by the bus. The voice announcements can be coordinated with LED signage on board the bus. Bus stop announcements are a requirement for ADA, and are a benefit to visually impaired passengers and passengers who are unfamiliar with a route. Automated announcements are generally clearer to hear, are more consistent, and allow the bus driver to concentrate on other driving tasks. The cost of AVA varies widely depending on desired features and existing communications infrastructure. A typical cost is approximately $80,000 for facility equipment and set-up plus $8,000 per vehicle. At these costs, a system installed on the entire GCS fleet would cost on the order of $160.000. There are also ongoing maintenance and service costs annually for this type of system.

Electronic Farebox Systems

Electronic fareboxes are highly recommended for the transit vehicles. Electronic fareboxes automate the process of collecting and counting fares, making boarding much easier for passengers and drivers, and therefore helping with on-time performance. Electronic fareboxes also alleviate problems of miscounted or underpaid fares. The cost per vehicle is approximately

$8,000. It would be appropriate to consider including electronic fareboxes in conjunction with vehicle purchases starting in 2019. In addition to the initial cost, there are ongoing maintenance and service costs in the range of several thousand dollars per year.

MAINTENANCE ALTERNATIVES

Currently, the Nevada County Department of Transportation Services (NCDTS) provides most of the maintenance for Gold Country Stage vehicles at the County yard located just down the street from the Gold Country Stage offices located on John Bauer Avenue. Additionally, some work is completed under warranty by the local Ford and Chrysler dealerships, and other work is bid out to vendors if the NCDTS is unable to complete the work. Several alternatives are discussed below for providing maintenance to the Gold Country Stage fleet.

Status Quo: Maintenance Provided by the Nevada County Department of Transportation

Under the status quo, the Nevada County DOT would continue to provide maintenance for Gold Country Stage. There are advantages and disadvantages to this arrangement, including the following:

Advantages of Maintenance through NCDTS

- The DOT yard is located near the Gold Country Stage offices, making it convenient to drop off and pick up vehicles.
- The Head Mechanic at NCDTS frequently works on Gold Country Stage vehicles and is familiar with the vehicles and their requirements, as are other NCDTS mechanics. The Head Mechanic has oftentimes come up with cost-efficient and workable solutions on fixing vehicle issues.
- Vehicles dropped off for safety issues are usually taken care of quickly, which allows them to be returned to service quickly.
- Gold Country Stage staff meets with the NCDTS Fleet Manager on a bi-monthly basis to review vehicle issues and projects.
- NCDTS mechanics respond to road-calls in a timely manner.
- NCDTS staff provided input and recommendation on specifications for new vehicles, again making them familiar with the vehicles and their needs.
- For safety reasons, it is important to have at least two staffers on site at any given time so that if an accident occurs, the second staff person can respond (such as a lift malfunction). This is easier to achieve with a larger organization such as the NCDTS than for Gold Country Stage.
- This arrangement avoids the need for GCS to establish and maintain a separate maintenance facility. Given the costs of factors such as hazardous waste treatment, vehicle maintenance shops can be costly to operate.
- Mechanic time not directly spent on vehicle maintenance (such as training, vacation, sick leave, etc.) is not wholly allocated to transit maintenance costs, but is spread over all elements of their work.

Disadvantages of Maintenance through NCDTS:

- Gold Country Stage vehicles must compete with all County vehicles for maintenance priority, causing some uncertainty in completion time.

- If NCDTS is short staffed, work on Gold Country Stage buses can be delayed with maintenance and service backlogged.

- Small maintenance items (i.e. fuel filter replacements, emergency exit window repairs, bulbs, etcetera) may be left undone or require repeated requests for completion because they are low priority.

- NCDTS has a limited inventory of transit vehicle parts which generally requires them to order the parts. This often delays repairs.

- The maintenance rate is $165.80 per hour for the light shop rate and $181.58 per hour for the heavy shop rate. More cost-effective options may be available.

Alternative: Maintenance Provided by Gold Country Stage

Under this alternative, Gold Country Stage would maintain its own vehicles. This would require Gold Country Stage to build and staff its own maintenance facility. There are advantages and disadvantages to this arrangement, including the following:

Advantages of GCS Maintaining Vehicles:

- GCS would have control of the maintenance schedule, and would be able to set priorities for vehicle maintenance and repairs which best suit the transit program.

- GCS would be better able to control maintenance costs.

Disadvantages of GCS Maintaining Vehicles:

- Assuming that existing maintenance bays at the NCDTS facility would not be available to GCS mechanics, GCS would need to build or lease its own maintenance facility. This would be very expensive, and would compete for capital funds for bus replacements and other important capital improvements.

- GCS would need to ensure that a minimum of two staffers are onsite during periods of active vehicle maintenance.

At present, GCS annual expenses for vehicle maintenance average approximately $186,000. This covers maintenance of 17 high-mileage vehicles, including 11 buses, only one of which has less than 165,000 miles. That maintenance expense also covers the cost of a team of mechanics that can be summoned on-call if needed. If vehicle maintenance were instead provided by GCS mechanic staff, costs to the transit program would include the following:

- All vehicle maintenance salary and benefit costs, including Mechanics, Head Mechanic, and Parts Clerk

- Training costs

- Maintenance facility operating costs, including hazardous waste disposal, utilities, building maintenance, and so on

- Parts inventory costs

These costs could easily exceed the current costs of vehicle maintenance. This is therefore not considered to be a viable alternative.

Alternative: Maintenance Provided by a Private Vendor

Under this alternative, Gold Country Stage would develop a Request for Bids to have a private vendor maintain the transit vehicles. There are advantages and disadvantages to this arrangement, including the following:

Advantages of a Private Vendor

- It is possible that a more cost-effective arrangement could be made.

- Competition for the Stage's business might lead to better customer service and better attention to detail.

- Parts might be more readily available on-hand (particularly if regular business is established).

- Repairs might be made more quickly, depending on the vendor's capabilities.

- Repairs should come with a guarantee so that if the vehicle is not correctly repaired and fails in the same way, repairs should be made free of charge.

Disadvantages of a Private Vendor

- Vehicles might need to be hauled a long distance for repairs, causing vehicles to be out-of-service longer and adding time and expense to maintenance.

- Mechanics might not be as familiar with the vehicles and therefore lose some efficiency in making repairs. This issue would lessen as familiarization increased.

- The private maintenance vendor would have to comply with all FTA regulations, such as drug and alcohol testing requirements, and monitoring/reporting. It is often difficult if not impossible in smaller communities to find a shop willing to adhere to these requirements.

- Transit vehicles require specific training (such as for wheelchair lifts) that the private vendor would take on, and potentially pass on to the GCS through increased rates.

- There is no guarantee that a private vendor would provide timely service in order to avoid interruptions in service.

Summary of Maintenance Arrangements

While a complete cost benefit analysis is beyond the scope of this TDP Update, it can be concluded from this discussion that continuing the current strategy of vehicle maintenance through NCDTS provides the greatest benefit to the transit service. A suggestion under this

maintenance arrangement is that when DOT mechanics notice a specific action or behavior that is increasing maintenance on the GCS buses, this should be communicated to transit staff.

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Chapter 8
Institutional and Management Alternatives

INSTITUTIONAL FRAMEWORK

Public transit services are authorized through a Joint Powers Agreement (JPA) between Nevada County, the City of Grass Valley, and the City of Nevada City to operate transit services in western Nevada County. The JPA authorizes the Transit Services Commission to set fares, service areas, service hours, service levels, approve grants, vehicle purchases, capital purchases, and recommend approval of the budget to the Nevada County Board of Supervisors. The operation of transportation services is under the management and control of Nevada County Transit Services Division, per the JPA. The JPA was last amended in January 2012. Shortly thereafter, governance of the transit system was evaluated in a study to determine if improvements could be made by creating a transit agency independent of the County. This study found the current framework was most beneficial.

Management of the Transit System

Gold Country Stage fixed route and paratransit services are operated by the Transit Services Division of the Nevada County Department of Public Works. Day-to-day operations are overseen by the Transit Services Manager, who oversees supervisors, dispatchers and drivers for the transit program, and is responsible for reporting and grant management.

The complementary paratransit services for Western Nevada County are contracted by Nevada County with a private contractor, currently Paratransit Services, Inc. (Gold Country Lift). The contractor provides drivers, dispatch, and supervisors for the paratransit services, and is responsible for reporting operating data to the Transit Services Division staff, which reports to the Transportation Services Commission.

Gold Country Stage Management Concerns

Driver Recruitment

A common issue for many transit agencies is recruitment of qualified, readily available drivers, particularly on a temporary basis. Transit drivers require a set of skills (commercial driver's license, positive customer service, quick decision making), while the hours are quite variable week by week, and wages are not especially high. Employee retention is an important element of providing a high quality transit service. High turnover means more drivers that are unfamiliar with the routes and the individual passengers, and can result in reduced on-time performance and missed trips. It also increases overall costs by requiring additional resources be allocated to training and recruitment.

For many qualified drivers in Western Nevada County, numerous other opportunities exist for driving such as for school systems, paratransit services or commercial trucking. The movement to increase the minimum wage may potentially be affecting middle-wage salaries, thereby driving labor costs higher. Gold Country Stage, which is reliant on publically funded, annually-determined funding provides a higher hourly salary than the local school bus and paratransit providers and is well over the current California minimum wage. Transit Services also provides driver training for DMV required certification for Passenger Endorsement (P) and Vehicle Transit Training (VTT). Gold Country Stage relies heavily on long term temporary drivers who do not generally receive benefits and are limited to working 1,000 hours annually. Providing consistent and dependable work schedules is an important factor in whether a transit driver position is a

good fit for an individual driver. This is particularly true for drivers responsible for children, as it can be difficult to arrange day care for unusual work shifts.

When fully staffed, Gold Country Stage has 14 full-time and 16 long term temporary employees. Currently employees include a full-time General Manager, a full-time Accounting Technician, and a full-time Senior Office Assistant, as well as 11 full-time and 11 long term temporary drivers. Drivers also are used for dispatching duties. Although a good strategy is to strive to minimize part-time and seasonal positions, in favor of permanent full-time (or close to full-time) positions, temporary long term temporary drivers are vital to running GCS. These drivers fill-in for full-time employees on vacation or sick leave, staff Saturday service, perform weekend vehicle and bus stop cleaning maintenance and fulfill shorter work shift needs throughout the 15 hour service day. At the same time, GCS management is encouraged to continue to work with staff to develop work schedules that meet the needs of the individual staff members and provide work schedules that minimize breaks between work periods.

Transit Services/GCS faces an ongoing challenge of recruiting qualified long term temporary drivers due to large demand and short supply of qualified drivers in western Nevada County. This is amplified by competing transportation providers such as school transportation, paratransit and trucking companies. In recent years GCS has established a training program for A or B drivers to attain their Passenger Endorsement (P) and Vehicle Transit Training (VTT) in order to qualify for employment. An additional strategy that is present in many public transit agencies is a comprehensive training program that offers instruction to 'C' class drivers to attain their commercial B license. This component expands the pool of potential driver recruits and offers a career path to interested individuals, and is a strategy of which Gold Country Stage should take advantage.

Gold Country Lift Management Concerns

Gold Country Lift took over operations of the ADA paratransit services in July 2013. The service was previously operated by Gold Country Telecare. Overall, paratransit services have improved and costs have been better controlled under new management. At one point, there was concern over no-shows and late cancellations, as discussed below.

No-Shows and Late Cancellations

When a transit system experiences a high rate of no-shows (defined as a passenger not acknowledging the bus within 5 minutes of its arrival) or late cancellations (defined as a trip cancelled less than two hours before scheduled), it has a negative effect on the efficiency of the transit system. There has been some concern regarding the rate of no-shows and late cancellations on Gold Country Lift, although it is noted that performance in this area greatly improved over the previous contractor starting in July 2013.

A common standard is to have no more than 1 in 20 DAR trips as a "no-show" or "late cancellation" which equates to 5 percent. In 2013-14, 2.3 percent of boardings were no-shows and 3.2 percent were late cancellations. This rate increased to 2.9 percent no-shows and 3.3 percent late cancellations in 2014-15. Thus, 5.6 to 6.2 percent of scheduled trips ended up as no-shows or late cancellations. In the first few months of 2015-16, the number of no-shows continues to be 2.5 percent, but the late cancellations have dropped to 2.3 percent. Gold Country Lift has effected this change through stronger enforcement of no-show and late cancellation policies by suspending passengers who repeatedly violate the reservation policies. Continued attention to this key factor will be needed to ensure that these rates remain at acceptable levels.

MARKETING

Transit marketing in rural areas is a particular challenge because the rural transit agency is typically dealing with a small target audience and a small budget. Marketing tools in a rural area can include the following:

Branding: Transit vehicles and bus stops/amenities are a transit system's form of "packaging." They are the most visible and cheapest communication tool. The image they create is a reflection of how the public views the transit system.

Gold Country Stage's buses and bus stop signs all use a uniform logo (a gold stagecoach) and consistent colors (blue and gold accents). The buses are white, and the stripes on the buses are fairly narrow, but quite visible. The buses are easily recognizable, but not exceptionally unique.

The condition of the buses also has an impact on the branding and marketing of the system. Onboard survey results indicated some passengers were dissatisfied with the condition of buses, noting the "rough ride", the lack of cleanliness, and the poor air conditioning. However, bus cleanliness and bus comfort scored 4.2 or better on the surveys, indicating these are not system wide problems, but sporadic. GCS has boosted their external and internal bus cleaning in recent months which has greatly enhanced the cleanliness and appearance of vehicles.

Passenger Information/Riders Guide (Printed and Online): A transit system's passenger guide provides directions for using the product and is a promotional tool. It should work well for both purposes. Information should be provided in an attractive format, but should be completely functional as well. For function, the guide should provide a map, bus stop locations, a schedule, fares, transfer information, and tell how to get assistance.

Gold Country Stage has printed rider's guides as well as online versions which are easy to follow, attractive, and maintain the color scheme and logo. The online print size is very small, requiring the reader to zoom in to read specific schedules, and therefore it might be more visually appealing to provide the schedules for each individual route on separate pages.

On the map, all of the basic information is provided, including transfer locations which are shown with a uniform symbol on the maps, and on-demand stops, which also have a symbol on the maps and are highlighted in the time tables.

Testimonial Advertising: Transit systems inevitably have grateful passengers. The transit agency should let the rider tell their story. This can be done as a newspaper story, as part of a flyer or poster, or as a radio spot. Identify regular passengers on your transit system (a single mom, a student, a disabled passenger, a local politician, etc.) and ask why they ride, what they like about the service, and how transit personally helps them. Sharing this with the public can be inspirational and put your transit system in a positive light.

Public Presentations: Public speaking is the ultimate low cost marketing tool. It shows confidence in your message and is a great image builder (if done well). It puts a face on the transit organization. It can be done interactively so that the speaker can answer questions and convey customized information. The target audience would likely be seniors, students, social service program clients, and employee groups. Presentations to schools and the college, businesses, employers, social services, senior residences, senior centers, and neighborhood associations would therefore be appropriate. The presentation can be tailored for non-users as well. Speaking to members of civic and business organizations enables the transit agency to set up an identity as part of the community. It is also useful to present to decision-makers and

elected officials to maintain a positive image. Transit Services/GGCS does this on a continual basis throughout the year.

PERFORMANCE MEASURES

Gold Country Stage tracks and regularly reports on performance measures specified and defined by the Transportation Development Act (TDA). These performance indicators include:

1. Operating cost per passenger;
2. Operating cost per vehicle service hour;
3. Passengers per vehicle service hour;
4. Passengers per vehicle service mile; and,
5. Vehicle service hours per employee.

Performance standards provide a reasonable target for a transit agency to aim for in order to achieve the most efficient and effective service possible. Standards must be periodically adjusted to reflect the conditions on the ground, while still being reasonable standards within the industry.

The Transit Development Plan completed in 2010 provided a detailed analysis of performance measures and standards, and made recommendations for minimum and maximum performance standards. The recommended (and subsequently adopted) performance standards are shown in Table 29. Upon review of the 2014-15 actual performance, several changes are recommended to re-align the performance standards to more realistic levels given current conditions. These new recommendations are also shown in Table 29.

As shown in the table, the desired farebox standards were generally increased. While a 10 percent minimum is required, increases are desired, even if they are not always achieved. In terms of minimum marginal subsidy per passenger trip (calculated based on marginal operating costs by route, minus fares collected for each route, divided by passenger trips per route), the only changes recommended are to increase the maximum for routes 5 and 6 from $12.00 to $13.00 subsidy per passenger trip. Additionally, no standards were set for the Fair service and Gold Country Lift, and it is recommended that the subsidies on those services be $8.00 and $20.00 per passenger trip, respectively.

Finally, it is recommended that the passenger per vehicle hour standards should be lowered for Routes 5 and 6 (from 7.0 to 6.0) and a standard should be added for the Fair service (a minimum of 7.0 passengers per hour, with 9.0 desired).

Monitoring and Reporting

Gold Country Stage tracks and regularly reports on performance measures including ridership, operating statistics (hours and miles of revenue and dead head service), and finances (costs, fare revenues by type). Monthly reports with a written narrative and supporting spreadsheets are presented to the Transit Services Commission (TSC), and an annual report is delivered and presented at the end of the fiscal year.

Similarly, Gold Country Lift prepares and submits reports to Gold Country Stage, which it includes in presentations to the TSC. The reports for both providers are thorough and comprehensive, and are presented in a timely manner. While on-time performance is not tracked in monthly reports, it is included in the annual report. Because on-time performance has not been an issue, this is adequate.

TABLE 29: Western Nevada County Transit Performance Standards

Standard Met

Standard Not Met

Standard [1]	Gold Country Stage Services								Gold Country Lift [2]
	Local Routes				Regional Routes				
	1	2/3	4	All	5	6	Fair	*System*	
Farebox Ratio									
Current Minimum	10%	10%	10%	10%	7%	7%	NA	10%	10%
Current Desired	10%	10%	10%	10%	10%	10%	NA	13%	
2014/15 Actual	18.5%	11.9%	14.8%	15.2%	10.0%	8.9%	10.1%	13.4%	15%
New Recommended Desired	13.0%	13.0%	13.0%	13.0%	10%	10.0%	10.0%	13.0%	13%
Marginal Subsidy/Psgr Trip									
Current Maximum	$8.00	$8.00	$8.00	$8.00	$12.00	$12.00	NA	$8.00	NA
Current Desired	NA	NA	NA	NA	$10.00	$10.00	NA	NA	NA
2014/15 Actual	$3.96	$5.93	$4.99	$4.82	$13.38	$13.18	$7.43	$6.30	$17.39
New Recommended Maximum		-- no change --			$13.00	$13.00	$8.00	no change	$20.00
Passenger per Vehicle Hour									
Current Minimum	8.0	8.0	8.0	12.0	7.0	7.0	NA	NA	2.0
Current Desired	10.0	10.0	10.0	15.0	10.0	10.0	NA	7.5	3.0
2014/15 Actual	15.3	12.4	13.2	13.7	6.5	6.2	8.7	11.4	2.4
New Recommended Minimum		-- no change --			6.0	6.0	7.0	-- no change --	
New Recommended Desired		-- no change --			-- no change --		9.0	-- no change --	

Note 1: Standards as presented in the *Western Nevada County Transit Development Plan Update* published December, 2010.
Note 2: Gold Country Lift standards were originally developed for Gold Country Telecare.
Source: LSC Transportation Consultants, Inc.

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Chapter 9
Financial Opportunities

INTRODUCTION

A wide number of potential transit funding sources are available, particularly within California. This chapter presents an overview of Federal and State funding programs, as well as options for local funding. As some of these funding sources are available on a competitive basis, and the amounts available vary year-by-year for all sources, this chapter is intended to identify the most likely sources for funding transit operations and capital. Based on this discussion, and the recommended service and capital alternatives, a financial plan will be developed as part of the Draft Final Report.

Current Sources of Funding for Gold Country Stage and Gold Country Lift

The revenue sources required to support Gold Country Stage's administration, operations and maintenance are drawn from a number of sources. Currently, the largest source of revenue for the Transit Services Division is by far the Local Transportation Fund (LTF), which totaled approximately $2.26 million in 2014-15 (57 percent of total operating funds). Other major revenue sources include Proposition 1B funds ($570,000), total passenger fares ($333,039, including contract fares), FTA 5311 funding ($325,565), and State operating grants ($149,690). While no STA funds were available in the last fiscal year, this is commonly a revenue source for transit services in Western Nevada County. These sources of funding and any potential to increase funding levels for Gold Country Stage services are discussed below.

FEDERAL TRANSIT FUNDING SOURCES

The Federal Transit Administration (FTA) administers a variety of public transit grant programs across the nation. The latest legislation for funding transportation programs is MAP-21, the *Moving Ahead for Progress in the 21st Century* Act (P.L. 112-141), signed into law on July 6, 2012. MAP-21 is the first long-term highway authorization enacted since 2005 (which was extended ten times). MAP-21 is intended to create a streamlined and performance-based surface transportation program building on many of the highway, transit, bike, and pedestrian programs and policies established in 1991. Below is a description of the various grant programs, some of which are new, and some of which have been consolidated or changed from previous programs.

Programs under MAP-21

FTA Section 5339 Bus and Bus Facilities Program

A new formula grant program, established under Section 5339, replaced the previous Section 5309 discretionary Bus and Bus Facilities. This capital program provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities. Authorized funding is over $400 million annually. Each year, $65.5 million is allocated with each state receiving $1.25 million and each territory (including DC and Puerto Rico) receiving $500,000. The remaining funding is distributed by formula based on population, vehicle revenue miles and passenger miles. This program requires a 20 percent local match, which can be provided using Toll Credits. Gold Country Stage has not used this funding to date.

FTA Section 5326 Asset Management Provisions

MAP-21 requires FTA to define the term "state of good repair" and create objective standards for measuring the condition of capital assets, including equipment, rolling stock, infrastructure, and facilities. Based on that definition, FTA must then develop performance measures under which all FTA grantees will be required to set targets. All FTA grantees and their sub-recipients are required to develop transit asset management plans. These plans must include, at a minimum, capital asset inventories, condition assessments, and investment prioritization. Each designated recipient of FTA formula funding will be required to report on the condition of its system, any change in condition since the last report, targets set under the above performance measures, and progress towards meeting those targets. These measures and targets must be incorporated into metropolitan and statewide transportation plans and transportation improvement programs (TIPs). FTA supports this effort through technical assistance, including the development of an analytical process or decision support tool that allows recipients to estimate their capital investment needs over time and assists with asset investment prioritization. Gold Country Stage has not used this funding and is waiting on direction from Caltrans and regarding their plans to support transit agencies for this requirement.

Consolidated Programs under MAP-21

FTA Section 5311 Rural Area Formula Grants

This program provides capital, planning, and operating assistance to support public transportation in rural areas, defined as areas with fewer than 50,000 residents. Funding is based on a formula that uses land area, population, and transit service. The program remains largely unchanged with a few exceptions:

- *Job access and reverse commute activities eligible:* Activities eligible under the former Job Access and Reverse Commute (JARC) program, which provided services to low-income individuals to access jobs, are now eligible under the Rural Area Formula program. In addition, the formula now includes the number of low-income individuals as a factor. There is no floor or ceiling on the amount of funds that can be spent on job access and reverse commute activities. However, using this funding for projects within the JARC scope-of-work will reduce the overall 5311 operational funding amount for our overall operations.

- *Tribal 1Program:* The Tribal program now consists of a $25 million formula program and a $5 million discretionary grant program. Formula factors include vehicle revenue miles and the number of low-income individuals residing on tribal lands.

- *Other Programs:* The set-aside for States for administration, planning, and technical assistance is reduced from 15 to 10 percent. The cost of the unsubsidized portion of privately provided intercity bus service that connects feeder service is now eligible as in-kind local match.

The FTA 5311 grant program has been an important revenue source for Gold Country Stage in the past. In California, a 16.43 percent local match is required for capital programs and a 47.77 percent match for operating expenditures. The bulk of the funds are apportioned directly to rural counties based on population levels. The remaining funds are distributed by Caltrans on a discretionary basis and are typically used for capital purposes.

FTA Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities

This program provides formula funding to increase the mobility of seniors and persons with disabilities. Funds are apportioned based on each State's share of the targeted populations and are now apportioned to both non-urbanized (for all areas with population under 200,000) and large urbanized areas (over 200,000). The former New Freedom program (5317) is folded into this program. The New Freedom program provided grants for services for individuals with disabilities that went above and beyond the requirements of the Americans with Disabilities Act (ADA). Activities eligible under New Freedom are now eligible under the Enhanced Mobility of Seniors and Individuals with Disabilities program.

Projects selected for funding must be included in a locally developed, coordinated public transit-human services transportation plan; and the competitive selection process, which was required under the former New Freedom program, is now optional. At least 55 percent of program funds must be spent on the types of capital projects eligible under the former section 5310 – public transportation projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate, or unavailable. The remaining 45 percent may be used for: public transportation projects that exceed the requirements of the ADA; public transportation projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on complementary paratransit; or, alternatives to public transportation that assist seniors and individuals with disabilities. Using these funds for operating expenses requires a 50 percent local match while using these funds for capital expenses (including acquisition of public transportation services) requires a 20 percent local match. It is important to note that the 20 percent local match can be met utilizing Toll Credits, and therefore, no local funding sources would be required.

For Western Nevada County, this funding source might be appropriate for life-line services if they are restricted to elderly and disabled. However, it will more likely be used for paratransit vehicle purchases which is a priority.

STATE TRANSIT FUNDING SOURCES

Transportation Development Act Local Transportation Fund Program

A mainstay of funding for transit programs in California is provided by the Transportation Development Act (TDA). The major portion of TDA funds are provided through the Local Transportation Fund (LTF). These funds are generated by a one-fourth cent statewide sales tax, returned to the county of origin. The returned funds must be spent for the following purposes:

- Two percent may be provided for bicycle facilities per TDA statues.
- The remaining funds must be spent for transit and paratransit purposes, unless a finding is made by the Transportation Commission that no unmet transit needs exist that can be reasonably met. (Article 4 or 8)
- If a finding of no unmet needs reasonable to meet is made, remaining funds can be spent on roadway construction and maintenance purposes. (Article 8)

In Western Nevada County, each jurisdiction within the Joint Powers Agreement claims 100 percent of available TDA funds for transit services.

State Transit Assistance (STA) Funds

In addition to LTF funding, the TDA includes a State Transit Assistance (STA) funding mechanism. The sales tax on gasoline is used to reimburse the state coffers for the impacts of the 1/4 cent sales tax used for LTF. Any remaining funds (or "spillover") are available to the counties for local transportation purposes. In years past, this has been a somewhat unpredictable funding source, though in recent years it has been steadier. As a result, many transit agencies typically allocate these funds for capital purchases, rather than relying on them for ongoing operating funding. Western Nevada County has received this funding in the past recent years and is cautious with allocating for operations in any substancial amount.

Transportation Development Credits in Lieu of Non-Federal Match Funds

Federal-aid highway and transit projects typically require the project sponsors to provide a certain amount of non-federal funds as match to the federal funds, as described above. Through the use of "Transportation Development Credits" (sometimes referred to as toll revenue credits), the non-federal share match requirement in California can be met by applying an equal amount of Transportation Development Credit and therefore allow a project to be funded with up to 100% federal funds for federally participating costs. Caltrans has been granted permission by the FTA to utilize toll credits, and has begun to make credits available for FTA Section 5310, 5311, and 5316 programs. There is no definitive timeline from Caltrans on how long these credits will be available to transit operators.

Low Carbon Transit Operations Program / Greenhouse Gas Reduction Fund

The Low Carbon Transit Operations Program (LCTOP) is one of several programs that are part of the Transit Affordable Housing and Sustainable Communities Program established by the California Legislature in 2014 by Senate Bill 862. The LCTOP was created to provide operating and capital assistance for transit agencies to reduce greenhouse gas emission and improve mobility, with a priority on serving disadvantaged communities. Approved projects in LCTOP will support new or expanded bus or rail services, expand intermodal transit facilities, and may include equipment acquisition, fueling, maintenance and other costs to operate those services or facilities, with each project reducing greenhouse gas emissions. For agencies whose service area includes disadvantaged communities, at least 50 percent of the total moneys received shall be expended on projects that will benefit disadvantaged communities. Senate Bill 852 (Statues of 2014) appropriates $25 million for LSCTOP for 2014-15 and Senate Bill 862 continuously appropriates 5 percent of the annual auction proceeds in the Greenhouse Gas Reduction Fund (GGRF) for LCTOP beginning in 2015-16.

Senate Bill 862 establishes the LCTOP as a formulaic program instead of a state-level competitive program. While the California Department of Transportation (Caltrans) is responsible for ensuring that the statutory requirements of the program are met, locally, the recipient (most likely the TSC) would be responsible to ensure projects selected provide maximum public benefits. As such, recipients are strongly encouraged to select those projects that maximize public benefits for transit ridership, greenhouse gas reduction, disadvantaged community benefit, and other co-benefits. Benefits would likely include, but not be limited to, encouragement of infill development, low income housing, protection of disadvantaged communities from displacement, active transportation benefit and other health benefits. This program will be administered by Caltrans in coordination with the Air Resources Board and the State Controller's Office (SCO).

Eligible grant recipients could be either a transportation planning agency (such as the Nevada County Transportation Commission) or a transit operator (GCS). The allocation share is

determined by formula based on the ratio of the revenue of the transit operator's jurisdiction to the total revenue of all operators in the state. Eligible projects can include:

- Transit Capital Projects, such as:
  - New or expanded bus or rail services, facilities and equipment (new construction, modernization of buildings, bus shelters, or transit centers)
  - Purchase of equipment for rehabilitation, safety or modernization (e.g. bus engines, computer systems and signage)
  - Expanded intermodal transit facilities (e.g. modernization of bus shelters, transit centers, and operations and maintenance facilities, etc.)
  - Bus rapid transit (BRT)
  - Rolling stock (e.g. purchase, replace or rehabilitate transit vehicles)
  - Purchase of equipment and or materials that will enhance or modernize transit operations

- Transit Operations Projects:
  - Fueling for transit fleet
  - Costs of operational revisions that will increase mode share, increase ability to reduce GHG emission and benefit residents of a DAC
  - Outreach to communities to increase transit ridership
  - Transit passes or discounts that increase transit ridership
  - Other costs to operate transit service or facilities

- Transit Maintenance Projects
  - Costs of revisions to maintenance procedures
  - Costs of converting equipment to enhance efficiency of the fleet or equipment
  - Other costs to maintain transit services or facilities

Transit operations and maintenance investments made in one year may be included in subsequent year's project plans. For example, if a transit operator uses LCTOP funds to expand transit service in one year, future years' projects may include the continuation of that same service, through the funding of related operations or maintenance costs.

Projects must be consistent with the project sponsor's most recent TDP or RTP. Although this is not a large revenue source, many of Gold Country Stage's capital and operational needs would easily fall within the guidelines of eligibility for such funding. Gold Country Stage is using and will be using LCTOP funding currently in FY2015-16 and in FY2015-16 for a free fare project and will be applying for the FY LCTOP cycle.

Transit and Intercity Rail Capital Program

The Transit and Intercity Rail Capital Program (TIRCP) was created by Senate Bill 862 in 2014 to provide grants from the Greenhouse Gas Reduction Fund to fund capital improvements and operational investments that will modernize California's transit systems and intercity, commuter, and urban rail systems to reduce emissions of greenhouse gases by reducing vehicle miles traveled throughout California. The program has the following objectives:

1. Reduction in greenhouse gas emissions;
2. Expand and improve rail service to increase ridership;
3. Integrate the rail service of the state's various rail operations, including integration with the high-speed rail system; and improve safety.

Additionally, the program includes goals to benefit disadvantaged communities, consistent with the objectives of Senate Bill 535. It is the intent of the California State Transportation Agency (CalSTA) to adopt an initial multi-year program of projects covering a minimum of two years of estimated funding. The California Department of Transportation in collaboration with CalSTA will be responsible for administering this program.

LOCAL TRANSIT FUNDING SOURCES

Advertising Revenue

Many transit systems typically use advertising on their vehicles and at passenger facilities to raise additional revenue. Advertising on the outside of buses raises the most revenue, followed by advertising at shelters or on benches. Advertising inside buses may bring in significant revenue in urban areas, but usually is not effective in rural areas. One reason advertising on buses is attractive to advertisers is that buses are highly visible and provide a "traveling" advertisement. However, this valuable resource can also be used by the transit system to "brand" itself. Gold Country Stage currently receives $75 monthly for advertising on the rear windows of buses.

FARE ALTERNATIVES

Passenger revenues are an important source of revenue. Fares can be very flexible in that they can be reduced for portions of the population (such as the elderly and disabled) that may be least able to pay. When the available supply of transit service is exceeded by demand, fares can ration service so those who most need the service (and are thus most willing to pay) are provided with service.

Within California, transit systems must maintain a minimum farebox return ratio in order to be eligible for Transit Development Fund (TDA) monies. The farebox return ratio is calculated by dividing qualified fare revenues by the total operating costs. In order to qualify, a transit claimant must maintain a ratio of fare revenues to operating cost at least equal to the ratio it had during 1978/79, or 20 percent if the claimant is in an urbanized area, or 10 percent if the claimant is in a non-urbanized area, whichever is greater. In addition to actual fare revenues, revenues from advertising and from ticket sales (such as sales for Amtrak or Greyhound fares or package services) can also be counted toward farebox revenue. If farebox revenue cannot be met through these sources, a local entity such as a City or County can contribute from its general fund to meet the minimum farebox ratio.

For Gold Country Stage, which serves a rural area, the required farebox return ratio is 10 percent, which it currently meets through fare revenues and revenues for contracted services. This ratio is easily met on the local routes and DAR, but not quite met on the regional routes. The requirement is applied system wide. The current ratio of 13.2 attains this standard.

Another consideration is how Gold Country Stage fares compare with those of similar systems in the region. Table 30 provides a comparison of Gold Country Stage fixed route fares with those in seven peer transit systems serving rural areas and smaller cities. As shown, Gold Country Stage's current base one-way fare of $1.50/$0.75 is close to the average fare, and is a common fare level. The price of a day pass is also close to the peer average. Gold Country Stage provides a greater discount for monthly passes, resulting in a pass rate that is 16 percent below the peer average. In general, however, this review indicates little need to adjust fares at present.

TABLE 30: Transit Agency Fare Comparisons - Fixed Route Service

Agency	Single Zone			Multi Zone/Other	Day Pass		Monthly Pass		
	General	Discount	Children		General	Discount	General	Discount	Children
Gold Country Stage	**$1.50**	**$0.75**	**Free (under 6)**	**$3.00, $7.50 day pass, $90.00 monthly Discount: $1.50, $3.75 day pass, $45.00 monthly**	**$4.50**	**$2.25**	**$45.00**	**$22.50**	**Free (under 6)**
Amador Transit	$1.00	$1.00	$1.00	$2.00 for non-shuttle local routes; $1.00 for discount passengers; children under 6 ride free	$4.00	n/a	$75.00	$40.00	n/a
Calaveras Transit	$2.00	$1.00	n/a	$0.25 additional per zone (about 10 miles between zones)	$5.25	n/a	$60.00	$40.00 $45.00 (students)	n/a
El Dorado Transit	$1.50	$0.75	$0.75 (K-12)	Books available ranging between $2.50-$10.00 per trip depending on destination	n/a	n/a	$60.00	$30.00	$30.00 (k-12)
Tuolumne County	$1.50	$1.00	Free (under 12)	DAR available at $3.00 per trip and $7.00 day pass	$4.00	n/a	$50.00	$36.00	Free (under 12)
Lake Transit	$1.25	$0.75	Free (under 5)	DAR $3.00, regional $2.25, out-of-county $5.00	n/a	n/a	n/a	n/a	n/a
Tehama Rural Area eXpress (TRAX)	$0.50	$0.50	Free (under 6)	Regional $1.50 Discount Regional: $1.00	n/a	n/a	$30.00	$20.00	Free (under 6)
Glenn Ride	$1.50	n/a	Free (under 6)	Out-of-county $2.00	n/a	n/a	$45.00	n/a	Free (under 6)
Peer Average	**$1.32**	**$0.83**	--		**$4.42**	--	**$53.33**	**$31.50**	--

Note: Discount fare is typically senior (65+) and disabled, sometimes youth

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Chapter 10
Western Nevada County Transit Development Plan

INTRODUCTION

The following plan presents service programs, capital improvements, management plan elements and financial strategies to enhance public transit services that serve Western Nevada County, within the constraints of realistic funding projections. This chapter presents the individual plan elements in brief, based on the substantial discussions presented in previous chapters; the reader is encouraged to refer to previous chapters for additional background on the plan elements.

SERVICE PLAN

The service plan for Western Nevada County includes both a financially constrained plan, and a financially unconstrained plan. The financially constrained plan makes recommendations with no to very low costs in order to stay within the parameters of expected revenues. The financially unconstrained plan makes prioritized recommendations for desired improvements should revenues exceed projections.

Financially Constrained Service Plan

Eliminate Outlying Paratransit Service Area

Paratransit service to the outlying service area will be eliminated. Currently, many of the service requests are denied, and often when reservations are made, they are subsequently cancelled in order to accommodate requests in the primary service area. The very low level of resources actually used to serve this area will be shifted to better serve the ADA corridor, resulting in no change in costs or ridership. This will provide more certainty in the reservation process, will eliminate the current frustration of passenger's that cannot obtain service, and will improve service in the ADA corridor.

Explore Taxi Voucher Program

A taxi voucher program (as discussed in detail in Chapter 6) has the potential for improving mobility in western Nevada County. It is recommended Gold Country Stage staff further explore this option by contacting taxi vendors to determine their potential interest in participating in a voucher program. If local vendors are interested and are willing to abide by vehicle requirements, record keeping, drug testing and customer service standards, Gold Country Stage can better define the taxi voucher program. The next steps would be to determine what level of subsidy would be desired and thus what fares would be negotiated with the taxi company. Gold Country Stage could then explore funding options.

Financially Unconstrained Service Plan

There are a number of service alternatives which were evaluated in Chapter 6 which have reasonably strong performance measures and would improve the overall transit system, but which have operating costs at a level which cannot be sustained given the projected revenues and would require other services to be reduced. If revenues increase, it is recommended these elements be considered for implementation. These elements are discussed below, in order of priority.

Increased Frequency on Route 1

The biggest improvement a transit program can make to improve convenience and attract passengers is to increase service frequency. Under this alternative, Route 1, which is the "back bone" of the local fixed route, would operate on 30-minute frequency instead of 60-minute headways. It is estimated this would increase ridership by 20,420 passenger trips annually, which would bring the current ridership of 61,800 up to 82,220. However, this option would require an increased annual subsidy of $190,610, which is approximately a 15 percent increase over the existing Gold Country Stage operating cost. Furthermore, it would not benefit the program to provide the increased frequency unless the long-term financial outlook showed it could be continually sustained.

Limited Fixed Route Service to North San Juan

The evaluation of alternatives to serve the remote community of North San Juan One indicated the performance measures are not favorable. However, because the area has a high proportion of low income individuals (albeit very dispersed), it would be reasonable to provide a "life line" service to the area once per week so individuals could make trips into town for errands or medical/social service appointments, should revenue projections improve. It is estimated this alternative would generate 1,000 passenger trips annually at a subsidy of $18,700.

Implement Sunday Service

Providing transit service on Sundays is particularly a benefit to individuals who have no other transportation options than public transit. Sunday service allows individuals to have access to transit all days of the week and improves mobility for those who are carless. As outlined in Chapter 6, this alternative would provide service on Routes 1, 2, 3 and 4 operating the same hours as on Saturdays. This would require an annual subsidy would of $143,100 and would generate approximately 13,130 passenger trips (including 500 additional passengers on Dial-a-Ride).

INSTITUTIONAL AND MARKETING PLAN

The following institutional and marketing elements are recommended for implementation.

Update Performance Standards

Performance standards provide a reasonable target for a transit agency to aim for in order to achieve the most efficient and effective service possible. Standards must be periodically adjusted to reflect the conditions on the ground, while still being reasonable standards within the industry. Chapter 8 includes a review of the current standards in comparison to actual recent performance, and makes recommendations for revisions to better reflect conditions (Table 29). It is recommended that the changes presented in Table 29 be adopted, including:

- A recommended "desired minimum farebox ratio" of 15 percent on local routes and Dial-a-Ride, 7 percent on Route 5, and 10 percent on Route 6 and the Fair service.

- A recommended "maximum subsidy per passenger trip" of $5.00 on local routes, $13.00 on regional routes (5 and 6), $8.00 on Fair Service, and $20.00 on Dial-a-Ride.

- The recommended "minimum passengers per vehicle hour" is 10.0 on local routes, 7.0 on regional routes and the Fair service, and 2.0 on Dial-a-Ride.

- The recommended “desired passengers per vehicle hour” is 15.0 on local routes, 10.0 on regional routes, 9.0 on the Fair service, and 3.0 on Dial-a-Ride.

Improve Driver Recruitment

Transit Services/GCS faces an ongoing challenge of recruiting qualified long term temporary drivers due to large demand and short supply of qualified drivers in western Nevada County. This is amplified by competing transportation providers such as school transportation, paratransit and trucking companies. In recent years GCS has established a training program for A or B drivers to attain their Passenger Endorsement (P) and Vehicle Transit Training (VTT) in order to qualify for employment. An additional strategy that is present in many public transit agencies and recommended for Gold Country Stage is to provide a comprehensive training program that offers instruction to ‘C’ class drivers to attain their commercial B license. This component expands the pool of potential driver recruits and offers a career path to interested individuals, and is a strategy of which Gold Country Stage should take advantage.

Revise Riders Guide

The riders’ guides should be improved by identifying bus stop locations, which is helpful for planning trips, particularly for passengers new to the transit system. Most stops could be shown with a simple dot on the route. Stops offering transfers could be shown with a “T”. Examples of such maps include the SLO Transit Riders Guides and Yolobus, both of which are available online. This should be implemented the next time the riders’ guides are updated. The Gold Country Stage website provides a link to a list of all transit bus stops by route, showing timed and untimed stops, and on-demand stops.

CAPITAL PLAN

The vehicles and capital equipment necessary to implement the service plan are shown in Table 31, and discussed below.

Gold Country Stage Fleet improvements

Gold Country Stage currently has eight vehicles on order in the current fiscal year, as well as two planned for FY 2016/17, purchased through Proposition 1B funds. This will bring the fleet up to date with new, reliable vehicles. As discussed in Chapter 7, however, the vehicles only have a life expectancy of five to seven years, and given the steep topography and narrow road system of Western Nevada County, in all practicality, vehicles only last five years. Another issue is that the vehicles are all the same age, which means that they wear out all at once, and toward the end of their useful life, vehicle reliability is poor system-wide and maintenance needs begin to strain the system. Furthermore, purchasing all vehicles in a given year is difficult to manage financially.

The vehicle replacement plan shown in Table 31 includes the vehicles already ordered, and then begins to stagger the replacement vehicles starting in FY 2019/20 by purchasing two fixed route vehicles each year. In total, ten vehicles are purchased in the first two years, and a total of 16 vehicles are purchased over the next seven years. The current cost of the vehicles is $159,100. With two percent annual inflation, the purchase of fixed route vehicles is estimated at $2.65 million.

TABLE 31: Western Nevada County Transit Capital Plan

Project Description	Estimated FY15-16	Projected Costs[1] FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	7-Year Total
Transit Vehicle Requirements (Replacements)								
Total Number of Vehicles	8	2	0	0	2	2	2	16
Total Vehicle Cost	*$1,272,800*	*$324,600*	*$0*	*$0*	*$344,400*	*$351,300*	*$358,300*	***$2,651,400***
Miscellanous Capital Equipment [2]								
Transit Facility Upgrades	$0	$400,000	$0	$0	$0	$0	$0	$400,000
Bus Stops/Shelters, Safety/Security Improvements and Maintenance	$0	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$300,000
Onboard Bus Security Camera System	$0	$250,000	$0	$0	$50,000	$50,000	$50,000	$400,000
Transit Technology & AVA System Upgrades [3]	$0	$80,000	$0	$0	$16,000	$16,000	$16,000	$96,000
Total Miscellaneous Capital Equipment Costs	$0	$530,000	$50,000	$50,000	$66,000	$66,000	$66,000	**$828,000**
Total Transit Capital Costs	**$1,272,800**	**$854,600**	**$50,000**	**$50,000**	**$410,400**	**$417,300**	**$424,300**	**$3,479,400**

Additional Capital Items as Funding Allows [4]	**Estimated**		
Year of purchases and total amounts yet to be determined	**Unit Cost**	**# Required**	**Total Cost**
Electronic Fareboxes	$8,000	12	$96,000
Paratransit Vehicles in lieu of Leasing	$90,000	10	$900,000
"Portland Loo" bathroom for Tinloy Transit Center	$120,000	1	$120,000

Note 1: Assumes 2 percent annual rate of inflation.
Note 2: See Table 32 for planned funding sources.
Note 3: See text for descriptions of technology and AVL system needs.
Note 4: See text for description of additional capital items contingent on funding.

Source: Gold Country Stage staff and LSC Transportation Consultants, Inc.

Purchase Vehicles for Paratransit Service

Chapter 7 discusses the pros and cons of purchasing Paratransit Vehicles, which would reduce the contract price of Dial-a-Ride service. However, purchasing vehicles typically requires a 20 percent match, and the funding outlook will already require Gold Country Stage to draw from reserve funds in the next several years. Ultimately, purchasing vehicles for paratransit will save Gold Country Stage operating money, while increasing the need for capital purchases. As it is generally easier to secure capital funding than operating funding, this is a good long term strategy, and should be revisited in FY 2017/18. A good strategy would be to purchase 2 to 3 vehicles each year for paratransit until the purchased vehicles replace leased vehicles. Because the specific years for these purchases are yet to be determined, the purchases are listed in Table 31 as a desired capital purchase contingent on funding.

New Operations Facility—Facility Upgrades

Gold Country Stage is relocating to a new facility with construction slated to begin in early 2017. A PTMISEA grant is being used for improvements to this site, as shown in Table 31.

Bus Stops, Shelters, Safety/Security Improvements and Maintenance

Like any transit system, Gold Country Stage has ongoing needs to improve passenger amenities by installing or improving bus stops, including shelters, benches, lighting, signage and regular maintenance. Table 31 includes $50,000 annually to address this need.

Onboard Bus Security Cameras System

Security cameras protect passengers and drivers alike, and can be used for a training tool. They have become fairly standard for transit systems due to their usefulness. Table 31 includes the purchase of onboard bus security cameras for each new bus purchased.

Electronic Farebox Systems

Gold Country Stage faces an increasing problem with fare fraud through counterfeit cash and transfers. Furthermore, payment upon boarding is often slow, which can put buses behind schedule. Installing electronic farebox systems on all new buses would help expedite payment upon boarding and reduce fraudulent payments. However, purchase of electronic farebox systems will be contingent on funding, as shown in Table 31.

Transit Technology Upgrades

In 2014, Gold Country Stage purchased and implemented Route Match© software to improve scheduling and management of the transit system. Additional software and upgrades may be necessary to further improve this system during the plan period.

Automatic Voice Annunciation

As discussed in Chapter 7, Automatic Voice Announcement (AVA) systems are programed to announce stops as they are approached by the bus. The voice announcements can be coordinated with LED signage on board the bus. Bus stop announcements are a requirement for ADA, and are a benefit to visually impaired passengers and passengers who are unfamiliar with a route. The cost of AVA varies widely depending on desired features and existing communications infrastructure, but for planning purposes, it is assumed approximately $80,000

will be necessary for facility equipment and set-up plus $8,000 per vehicle. At these costs, a system installed on the entire GCS fleet would cost on the order of $160.000. There are also ongoing maintenance and service costs annually for this type of system. The purchase of AVA is shown in Table 31.

FINANCIAL PLAN

The financial plan will continue to use state and local funding sources which Gold Country Stage and Gold Country Lift have successfully received in the past to fund operations and capital improvements, as shown in Table 32. For operations, these funds include FTA Section 5311 (Rural Program) funds, State Transit Assistance (STA) funds, Low Carbon Transit Operations Program (LCTOP) funds, Local Transportation Funds (LTF), passenger fares, advertising revenue, and interest revenue. As shown in Table 32, starting in 2016/17, the operating costs will out-pace the expected revenue, and the plan will necessitate drawing from the LTF and STA reserve funds. The starting reserve funds for Fiscal Year 2015-16 included $1,418,193 of LTF funds and $1,878,456 in STA funds, for a total of $3,296,649 in reserves. Without any operational changes, the operating plan will require use of $251,600 of reserve funds in 2016-17, increasing to $457,500 by 2019-20, drawing down reserves by a total of $1,365,000 over the plan period. If the funding outlook improves, the reserves may not be drawn down as quickly. However, it will be important to annually review financial conditions and trends to consider the necessity of service reductions. For example, the service reductions on Routes 5 and 6 discussed in Chapter 7 would reduce annual operating costs by approximately $79,500.

The capital element of the Financial Plan in Table 32 includes the purchase of 16 vehicles and other miscellaneous capital improvements (carried over from Table 31). The purchase of 10 vehicles and upgrades to the new transit yard will be funded with the remainder of Proposition 1B PTMISEA Program funds ($1.27 million in 2015-16 and $724,600 in 2016-17). Additional capital purchases will be made using FTA Section 5311 funds. Typically, these grants require a 20 percent local match, but Nevada County can apply for Transportation Development Credits (toll credits) in lieu of local match to bring the funding for capital purchases to 100 percent. The capital equipment purchased with FTA 5311 funds will require $640,000, expending $128,080 in toll credits.

This financial plan reflects the current uncertain and volatile transit funding conditions. The recession of 2008 required dramatic cuts to the transit program, from which Gold Country Stage has only recently recovered. At the same time, historically low gas prices are enabling more residents to use personal vehicles, while also decreasing revenues generated by gas taxes. Transit ridership and revenues are therefore particularly difficult to predict. This financial plan provides a conservative estimate of revenues and is achievable because of the strong LTF and STA reserve funds, but it indicates the need for continuing careful monitoring of financial conditions.

IMPLEMENTATION PLAN

Fiscal Year 2015-16

- Eliminate outlying secondary paratransit service, and provide paratransit only within ¾ mile of local fixed routes.
- Adopt new performance standards
- Explore taxi voucher program; contact vendors to discern interest
- Offer Class C driver training to recruit drivers
- Improve bus stop signs and shelters
- Purchase 8 fixed route vehicles

TABLE 32: Western Nevada County TDP Financial Plan

All Figures in Thousands

	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20	5-Year Plan Total
OPERATING PLAN						
Operating Cost for Gold Country Stage [1]	$2,315.9	$2,385.4	$2,457.0	$2,530.7	$2,606.6	$12,295.5
Operating Cost for Gold Country Lift	$1,341.3	$1,381.6	$1,423.0	$1,465.7	$1,509.7	$7,121.3
Total Operating Costs [1]	$3,657.2	$3,767.0	$3,880.0	$3,996.4	$4,116.3	$19,416.8
Operating Revenues [2]						
Passenger Fares	$325.0	$328.3	$331.5	$334.8	$338.2	$1,657.8
Placer County Contribution to Rt 5	$68.0	$70.0	$70.7	$71.4	$72.1	$352.2
State Transit Assistance [3]	$379.2	$379.2	$379.2	$379.2	$379.2	$1,896.0
Local Transportation Funds [3]	$2,299.8	$2,368.8	$2,439.8	$2,464.2	$2,488.9	$12,061.4
Low Carbon Transit Operations Program	$28.5	$37.4	$37.8	$38.2	$38.7	$180.6
FTA Section 5311	$886.6	$325.0	$328.3	$331.5	$334.8	$2,206.2
Bus Advertising	$1.8	$1.8	$1.8	$1.8	$1.9	$9.1
Interest	$5.0	$5.0	$5.0	$5.0	$5.0	$25.0
Total Operating Revenues	$3,993.8	$3,515.4	$3,594.1	$3,626.3	$3,658.7	$18,388.3
Annual Balance [4]	$336.6	($251.6)	($285.8)	($370.1)	($457.5)	
CAPITAL PLAN						
Capital Costs (From Table 31)	$1,272.8	$854.6	$50.0	$50.0	$410.4	$2,637.8
Capital Revenues						
Federal (5307,5310,5311,5317) [5]	$0.0	$130.0	$50.0	$50.0	$410.4	$640.4
Proposition 1B PTMISEA	$1,272.8	$724.6	$0.0	$0.0	$0.0	$1,997.4
Total Capital Revenues	$1,272.8	$854.6	$50.0	$50.0	$410.4	$2,637.8
LTF and STA Reserve Funds						
Starting Balance LTF [6]	$1,418.2					
Starting Balance STA [6]	$1,878.5					
Starting Balance LTF/STA	$3,296.6	$3,296.6	$3,045.1	$2,759.2	$2,389.1	
LTF/STA Expenditures [7]	$2,679.0	$2,999.5	$3,104.9	$3,213.5	$3,325.6	
LTF/STA Income	$2,679.0	$2,748.0	$2,819.0	$2,843.4	$2,868.1	
Ending Balance	$3,296.6	$3,045.1	$2,759.2	$2,389.1	$1,931.6	

Note 1: Operating costs per FY 2015-16 Approved Budget, with a projected inflation rate of 3.0 percent.
Note 2: Operating revenues are based on projections provided by Gold Country Stage.
Note 3: Based on projections for new LTF and STA revenues. These funds are included in the calculations for annual LTF/STA Reserve funds under "LTF/STA Expenditures".
Note 4: Annual balance shortfalls will require use of reserve LTF and STA funds.
Note 5: Federal Funds for capital equipment will use Transportation Development Credits (toll credits) in lieu of local match.
Note 6: Reserve funds as of 6/30/2015
Note 7: Equivalent to the LTF and STA annual allocations received, as shown above under operating revenues.

Source: LSC Transportation Consultants, Inc.

Fiscal Year 2016-17

- If taxi vendors are interested in subsidy program and if funds allow, determine subsidy level and review contract needs.
- Continue driver training program for recruitment
- Monitor goals, objectives and standards; adjust as appropriate.
- Evaluate the need to reduce services
- Improve bus stop signs and shelters
- Purchase two fixed route vehicles
- Install security cameras at new yard
- Purchase video surveillance for ten new vehicles
- Purchase Automated Vehicle Location System for ten new vehicles

Fiscal Year 2017-18

- Possibly implement taxi voucher program.
- Continue driver training program for recruitment
- Evaluate need for service cuts (reductions on Routes 5 and 6)
- Monitor goals, objectives and standards; adjust as appropriate.
- Evaluate the need to reduce services.
- Improve bus stop signs and shelters.
- Re-evaluate option to purchase Paratransit vehicles

Fiscal Year 2018-19

- Continue driver training program for recruitment
- Monitor goals, objectives and standards; adjust as appropriate.
- Improve bus stop signs and shelters

Fiscal Year 2019-20

- Continue driver training program for recruitment
- Monitor goals, objectives and standards; adjust as appropriate.

Appendix A
Onboard Survey Results

Gold Country Stage Passenger Survey

Please take a moment to let us learn more about your travel needs and help GCS better plan for future services. Please read each question carefully and mark the best answer(s). Thank you!

1. I got on the bus at this stop (name or intersection):

_____

2. I left a house/business/etc at this intersection:

_____

City/Town_____

Is this home? ☐ Yes ☐ No

3. I will get off the bus at this stop (name or intersection):

_____

4. I am going to a house/business/etc at this intersection:

_____

City/Town_____

Is this home? ☐ Yes ☐ No

5. How did you get to this bus?

☐ Walk ☐ Bicycle ☐ Drive car ☐ Got a ride

☐ Wheelchair ☐ Gold Country Lift ☐ Other

6. I am taking this trip to go:

☐ To work ☐ To school ☐ Recreation/Social Event

☐ Shopping/Errands ☐ Medical/Dental ☐ Other

7. How often do you usually ride the bus?

☐ 7 days/wk ☐ 4-6 days/wk ☐ 2-3 days/wk

☐ 1 day/wk ☐ A few times per month ☐ 1st trip

8. What other buses, if any, are you using on this trip?

☐ Route 1 ☐ Route 2 ☐ Route 3 ☐ Route 4

☐ Route 5 ☐ Route 6 ☐ Placer County Transit

☐ Auburn Transit ☐ Other_____

9. How do you rate GCS transit service for each of the following? Please circle a rating for each item.

	1=poor				5=excellent
System Safety	1	2	3	4	5
On-Time Performance	1	2	3	4	5
Driver Courtesy	1	2	3	4	5
Travel Time	1	2	3	4	5
Areas Served	1	2	3	4	5
Bus Cleanliness	1	2	3	4	5
Bus Comfort	1	2	3	4	5
Bus Stops	1	2	3	4	5
Phone Info. Services	1	2	3	4	5
Printed Info. Services	1	2	3	4	5
Online Info. Services	1	2	3	4	5
Overall Service	1	2	3	4	5

10. Do you require a wheelchair lift to board/exit the bus?

☐ Yes ☐ No

11. I have a valid driver's license: ☐ Yes ☐ No

12. How many vehicles does your household own?

☐ None ☐ One ☐ More than one

13. I am:

☐ A senior (65+) ☐ A youth (6-17 yrs) ☐ Disabled

14. My primary source of transit information is from:

☐ Bus driver ☐ Bus stop ☐ GCS website

☐ GCS Office ☐ Route Shout ☐ Google Maps

☐ Nevada County 211 ☐ Printed guide/schedule

15. I access the internet using:

☐ No access ☐ Computer ☐ Smartphone

☐ Other _____

16. What improvements would you like to see to the transit program?

_____

_____

_____

_____

Estudio Pasajero de Gold Country Stage

Nos gustaria aprender mas acerca de usted y sus necesidades de viaje para ayudar a planificar futuros servicios de GCS. Por favor, lea las preguntas con cuidado y marque la respuesta apropiado. Gracias!

1. Me subi al autobus en esta parada (nombre/interseccion)

_____

2.Sali de una casa/empresa en esta interseccion:

_____

Cuidad_____

Es casa? ☐ Si ☐ No

3. Voy a conseguir del autobus en esta parada (name or intersection):

_____

4. Voy a una casa/empresa en esta interseccion:

_____

Cuidad_____

Es casa? ☐ Si ☐ No

5. Como llegaste a este bus?

☐ Caminando ☐ Bicicleta ☐ Manejando carro

☐ Pasajero en carro ☐ Aparata movil ☐ Gold Country Lift ☐ Other

6. Cual es el proposito de este viajo hoy?

☐ Compras ☐ Trabajo ☐ Escuela ☐ Otro

☐ Medico/Dento ☐ Recreativo/social

7. Con que frecuencia usted monta el autobus?

☐ 7 dias ☐ 4-6 dias ☐ 2-3 dias ☐ 1 dias

☐ Un par de veces al mes ☐ Primer viaje

8. Que otros autobuses esta usando en este viaje?

☐ Route 1 ☐ Route 2 ☐ Route 3 ☐ Route 4

☐ Route 5 ☐ Route 6 ☐ Placer County Transit

☐ Auburn Transit ☐ Other_____

9. Como califica el servicio de transito GCS para cada uno de los siguientes?

	1=poor				5=excellent
Sistema seguridada	1	2	3	4	5
Puntualidad	1	2	3	4	5
Cortesia del conductor	1	2	3	4	5
Duracion del viaje	1	2	3	4	5
Areas de servicio	1	2	3	4	5
Limpieza del autobuses	1	2	3	4	5
Comodidad de autobuses	1	2	3	4	5
Paradas de autobuses	1	2	3	4	5
La informacion del telephono	1	2	3	4	5
Informacion impresa	1	2	3	4	5
Informacion de internet	1	2	3	4	5
Servicio general	1	2	3	4	5

10. Utiliza una silla de ruedas? ☐ Si ☐ No

11. Tengo una licencia de conducir valida:

☐ Yes ☐ No

12. De cuantos vehiculos son duenos en su hogar?

☐ Ninguno ☐ Uno ☐ Mas de uno

13. Yo soy: ☐ Una persona mayor (65+)

☐ Un joven (6-17 yrs) ☐ Discapacitado

14. Mi fuente principal de informacion de transito es:

☐ Conductor ☐ Parada de autobus ☐ RouteShout

☐ Oficina de GCS ☐ Mapas de Google

☐ Nevada County 211 ☐ Guia impresta/programa

15. Como accesa el Internet?:

☐ No acceso ☐ Computadora ☐ Telefono inteligente

☐ Other _____

16. Que mejoras le gustaria ver en el programa de transito?

_____

_____

_____

_____

Gold Country Stage Onboard Survey Results

Q1. I got on this bus at this stop:

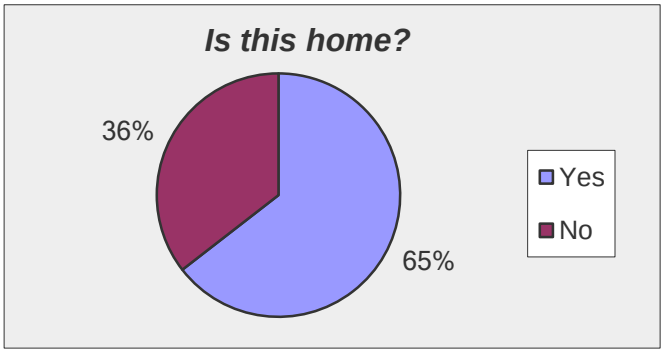
answered question **203**
skipped question **15**

Common Bus Stop	Response #	Response %
Transit Center	53	26.1%
Fowler Center	8	3.9%
K Mart	6	3.0%
Sierra College	6	3.0%
Auburn Transit Station	5	2.5%
City Hall	8	3.9%
Grocery Outlet	5	2.5%
National Hotel	5	2.5%
Rough and Ready	4	2.0%
Dorsey Dr	7	3.4%
SPD	4	2.0%
Berryhill	3	1.5%
Berryhill/Dokimos		
Brighton St	3	1.5%
Brighton and Packam		
Broad St	3	1.5%
Broad and National		
Chevron	3	1.5%
E Main St	3	1.5%
E Main St and Brunswick		
E Main St and SC		
Glenbrook	3	1.5%
Humpty Dumpty	3	1.5%
Mountain Air	3	1.5%
Rankin	3	1.5%
Alta Sierra	2	1.0%
Banner Lava Cap	2	1.0%
Brunswick	2	1.0%
Brunswick and Sutton Cinemas		
Brunswick Safeway		
Combie Rd	2	1.0%
CVS	2	1.0%
Dorsey and Catherine Ln	2	1.0%
Rockwood Dr	2	1.0%
Rood Center	2	1.0%
Zion/Walrath	2	1.0%
Wildwood	1	0.5%
Zion and Pine	1	0.5%
Forest Charter School	1	0.5%
Other	44	21.7%

Q2. I left a house/business/etc. at this:

answered question **188**
skipped question **30**

City / Town	Intersection	Response #	Response %
Grass Valley		131	69.7%
Nevada City		26	13.8%
Penn Valley		6	3.2%
Auburn		3	1.6%
Alta Sierra		1	0.5%
Rocklin		1	0.5%
Roseville		1	0.5%
Left Blank		15	8.0%
Other		4	2.1%
Grass Valley			
	Berry Hill and East Main St		
	Bitney High School		
	Brunswick-Sutton		
	Hwy 49		
	Main St		
	Mt Air		
	Sierra College		
	Sierra College and Main St		
Nevada City			
	Broad St		
	Jordan and Cross		
	Pine St		
	Zion and SPD		
Penn Valley			
	Horton St		
	Wildwood		
Auburn			
	Bell Rd		

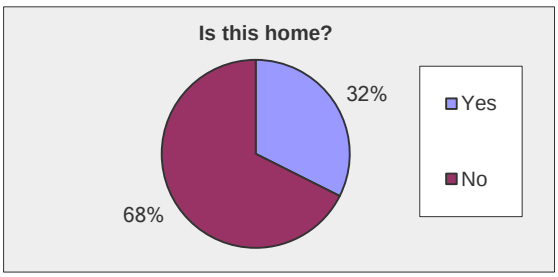


Gold Country Stage Onboard Survey Results

Q3. I will get off the bus at this stop:

answered question 182
skipped question 36

Common Bus Stop	Response #	Response %
Grass Valley Transit Center	52	25.6%
Auburn Transit Station	8	3.9%
Fowler Center	8	3.9%
K Mart	6	3.0%
Banner Lava Cap	4	2.0%
SPD	4	2.0%
Broad St	3	1.5%
Brunswick	3	1.5%
Dorsey Dr	3	1.5%
Bike Shop NC	2	1.0%
Dorsey and Segsworth	2	1.0%
Downtown Nevada City	2	1.0%
Lime Kiln Blvd	2	1.0%
Little Valley Rd	2	1.0%
Litton	2	1.0%
Nevada City Bridge	2	1.0%
Penn Valley Dr	2	1.0%
Segsworth	2	1.0%
Sierra College	2	1.0%
Springhill	2	1.0%
Tenderloin	2	1.0%
Wildwood Center	2	1.0%
Zion St	2	1.0%
Brunswick and Old Tunnel	1	0.5%
Dorsey and Sulton	1	0.5%
Downtown Grass Valley	1	0.5%
Nevada City	1	0.5%
Nevada County Government Center	1	0.5%
Other	58	28.6%



Q4. I am going to a house/business/etc. at this:

answered question 168
skipped question 50

City / Town / Intersection	Response #	Response %
Grass Valley	84	50.0%
Nevada City	31	18.5%
Penn Valley	9	5.4%
Auburn	9	5.4%
Alta Sierra	1	0.6%
Rocklin	1	0.6%
Grass Valley/Nevada City	4	2.4%
Lincoln	1	0.6%
Left Blank	26	15.5%
Other	2	1.2%

Grass Valley
- Dalton
- Dorsey Dr
- Grass Valley Library
- Grocery Outlet
- Hospital
- K-Mart
- Berry Hill and Main St
- Main St
- McDonalds
- Mill Street and Neal
- NCA
- SPD

Grass Valley/Nevada City
- Nevada and Broadway
- Smiley Guy's BBQ

Nevada City
- Bennett and Broad St
- Broad St
- Deer Creek School
- Forest Charter
- Nevada City Probation
- Pine St
- SPD
- Zion/Seven Hills

Penn Valley
- Easy St
- Lake Wildwood
- Pleasant Valley Rd and Lake Wildwood
- Penn Valley Shell
- Spencerville Road

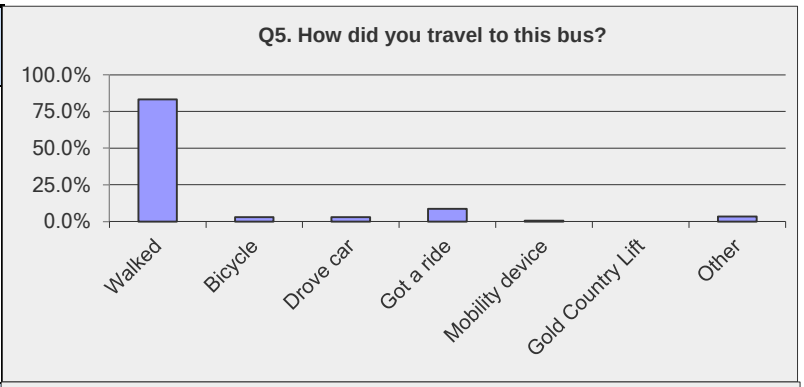
Auburn
- Enterprise
- Taylor Rd

Alta Sierra
- Jane St

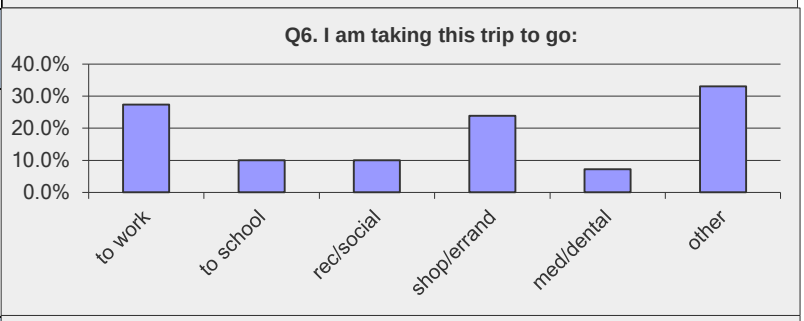
Rocklin
- Sierra College

Gold Country Stage Onboard Survey Results

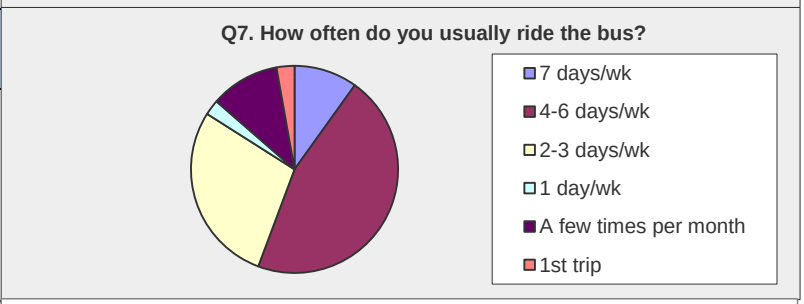
Q5: How did you travel to this bus?	Response	
Answer Options	%	#
Walked	83.2%	173
Bicycle	2.9%	6
Drove car	2.9%	6
Got a ride	8.7%	18
Mobility device	0.5%	1
Gold Country Lift	0.0%	0
Other	3.4%	7
answered question		208
skipped question		10



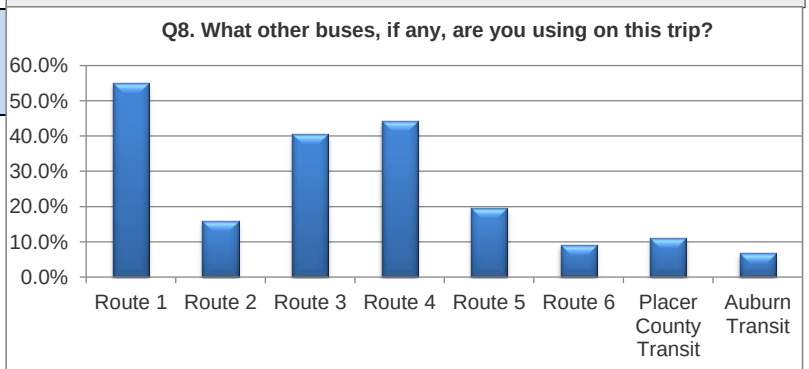
Q6: I am taking this trip to go:	Response	
Answer Options	%	#
to work	27.3%	57
to school	10.0%	21
rec/social	10.0%	21
shop/errand	23.9%	50
med/dental	7.2%	15
other	33.0%	69
answered question		209
skipped question		9



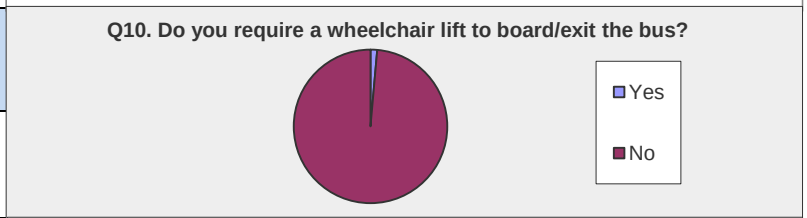
Q7: How often do you ride the bus?	Response	
Answer Options	%	#
7 days/wk	9.9%	21
4-6 days/wk	45.8%	97
2-3 days/wk	28.3%	60
1 day/wk	2.4%	5
month	10.8%	23
1st trip	2.8%	6
answered question		212
skipped question		6



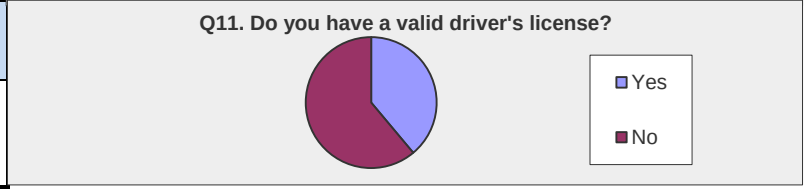
Q8. What other buses, if any, are you using on this trip?	Response	
Responses	%	#
Route 1	55.2%	90
Route 2	16.0%	26
Route 3	40.5%	66
Route 4	44.2%	72
Route 5	19.6%	32
Route 6	9.2%	15
Placer County Transit	11.0%	18
Auburn Transit	6.7%	11
Grass Valley (1)		11
answered question	*163*	163
skipped question	*55*	55



Q10. Do you require a wheelchair lift to board/exit the bus?	Response	
Answer Options	%	#
Yes	1.4%	3
No	98.6%	207
answered question		210
skipped question		8

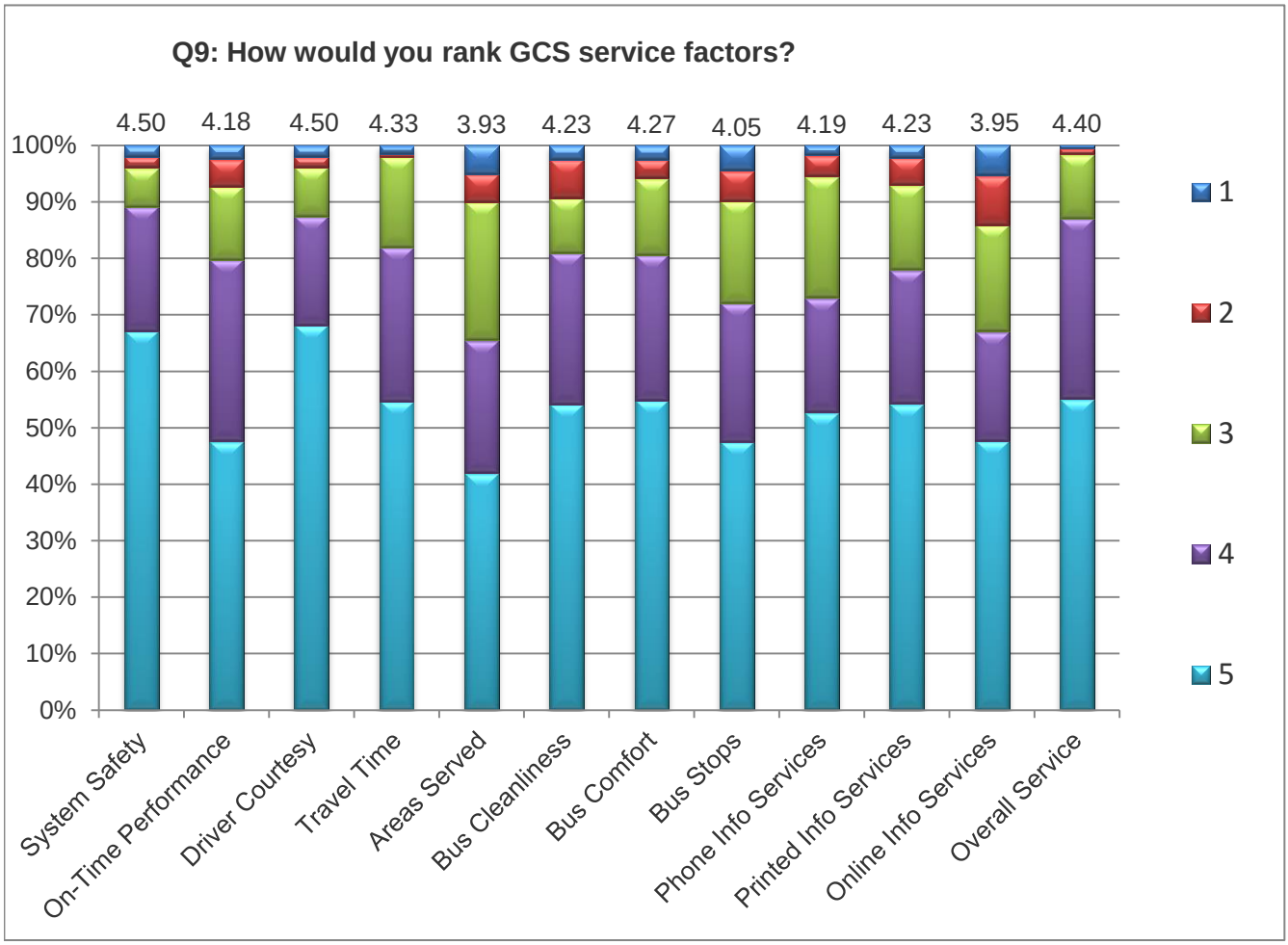


Q11. Do you have a valid driver's license?	Response	
Answer Options	%	#
Yes	38.9%	72
No	61.1%	113
answered question		185
skipped question		33



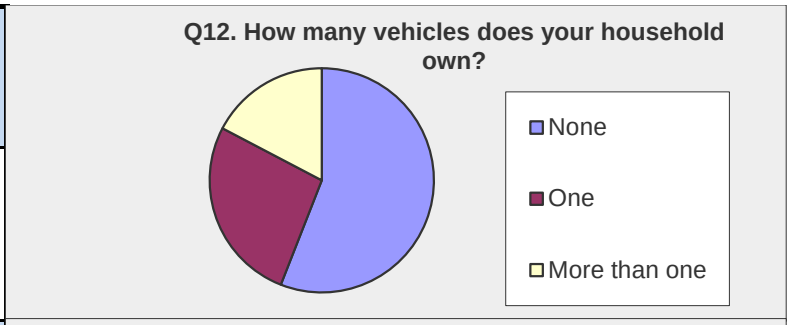
Gold Country Stage Onboard Survey Results

Q9. How do you rate GCS transit service (for factors listed)?						
	Ranking					
Service Factors	**1**	**2**	**3**	**4**	**5**	**Total**
System Safety	4	4	14	45	137	204
On-Time Performance	5	10	27	67	99	208
Driver Courtesy	4	4	18	40	141	207
Travel Time	3	1	33	56	112	205
Areas Served	10	10	49	47	84	200
Bus Cleanliness	5	14	20	55	111	205
Bus Comfort	5	7	28	53	113	206
Bus Stops	9	11	37	50	97	204
Phone Info Services	3	7	39	37	96	182
Printed Info Services	4	9	28	44	101	186
Online Info Services	9	15	32	33	81	170
Overall Service	1	2	22	62	107	194

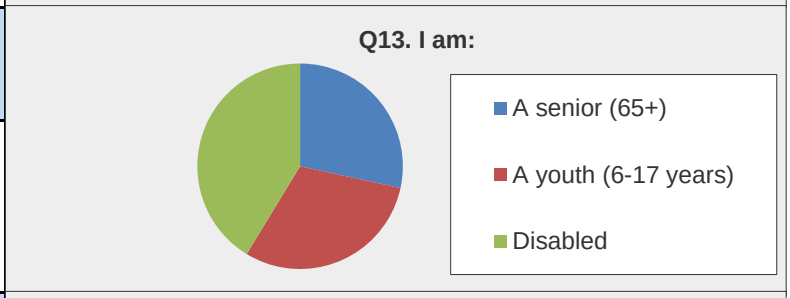


Gold Country Stage Onboard Survey Results

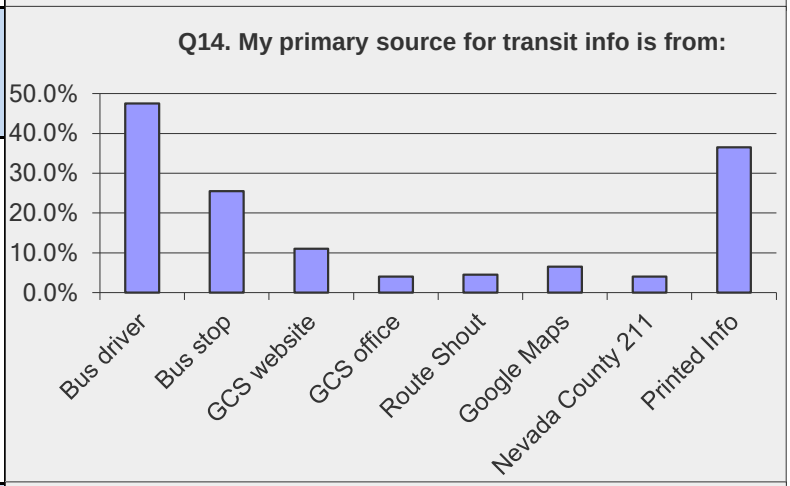
Q12. How many vehicles does your household own?	Response	
Answer Options	**%**	**#**
None	55.9%	113
One	26.7%	54
More than one	17.3%	35
answered question		**202**
skipped question		**16**



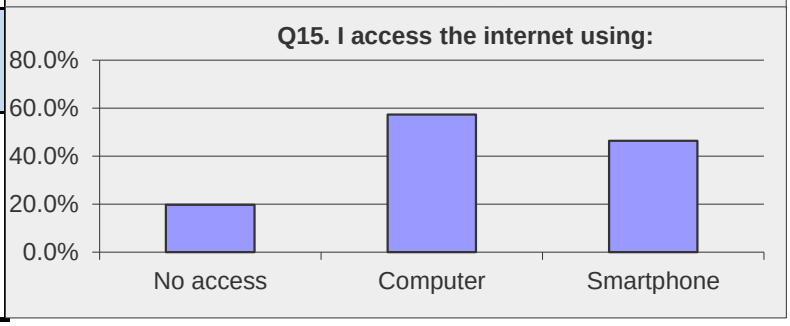
Q13. I am:	Response	
Answer Options	**%**	**#**
A senior (65+)	28.4%	31
A youth (6-17 years)	30.3%	33
Disabled	41.3%	45
answered question		**109**
skipped question		**109**



Q14. My primary source for transit information is from:	Response	
Answer Options	**%**	**#**
Bus driver	47.5%	95
Bus stop	25.5%	51
GCS website	11.0%	22
GCS office	4.0%	8
Route Shout	4.5%	9
Google Maps	6.5%	13
Nevada County 211	4.0%	8
Printed Info	36.5%	73
answered question		**200**
skipped question		**18**



Q15. I access the internet using:	Response	
Answer Options	**%**	**#**
No access	19.8%	38
Computer	57.3%	110
Smartphone	46.4%	89
Tablet (4)		8
answered question		**192**
skipped question		**26**



Gold Country Stage Onboard Survey Results

Q16. What improvements would you like to see to the transit program?

Response Category	*Written Comments*
Extended Service / Weekend Service / More Hours (continued)	
	Run the bus on Saturdays.
	Service on Saturdays on route 5.
	More sites/drop off and better stop warnings (or says better stop naming).
	Serve a wider area. More frequent service.
	Restructure schedule to align with Capital Corridor and to have available 3 trips prior to 9:00am.
	I would love route 5 to have 1 more in the evening at 7:00pm. The passenger also stated that she would ride 7 days a week if it were an option. She is an adult between 18-65 yrs old.
	More buses to Auburn after 5:00pm
	Later run times, I could ride more often if a bus left after 7 or past Alta Sierra on Saturdays.
	I would like to see route 5 have later times and all buses to run every day including weekends.
	One more stop after LMW. Divers should have more new schedules.
	Run Later. Passenger also noted that it was not possible to ride the bus 7 days a week (an option for question #7).
	More areas served such as further up banner.
	More frequent would be nice if Rt 1 could cross to Brunswick Rt to Ridge.
	Later times...night life :)
	Rural Service
	Saturdays #5 to Auburn
	Service on Sat/Sunday as all week long.
	2 route at Rough and Ready not on Bitney Springs.
	Drivers and people are very helpful. More buses, more often. Weekend service, community growth.
	Weekend available
	Wish you could offer more times for Alta Sierra. Saturday bus to Auburn.
	North San Juan Route.
	Bus shelter weekend services.
	Expanded Service
	More trips.
	More regularly scheduled buses to/from Auburn to Tinloy.
	Rethink a few stops like Sierra College
	Marking stop in Auburn would help. Two trips to Auburn would help.
	Route 5 Saturday to Auburn. Route 4 Pretzel improvement Bus until 8:00pm or later.
	Sunday service. Full Saturday service like M-F.
	More buses to Pemavoral Health
	Ashontor for AM now bus stop
	If the buses could run later on Saturdays and maybe Sunday bus service.
	Increase service area and frequency of service. Restore Saturday service to Auburn.
	F/T Saturday Service. Bring back the Colfax and North San Juan Service (even 1 day a week).
	More buses, less travel time.
	Rural Routes
Other	
	Mobil app with real time bus status.
	Internet survey should allow us to fill it out more than just one time.
	Not allow pets other than service animals.
	Nicer bus drivers
	Pads on window seats for resting heads, that's all I can think of. Passenger stated she/he would rate online info services a 0 if allowed.
	How bus drivers turn into the turning lanes. Less brakes before getting into turning lanes.
	More bike racks.
	Be on time only
	Honor all passes with love, dignity, and care.
	Marking bus stop on route 5.
	I would like to see nicer bus drivers.
	Bigger buses. Better A/C, windows.
	More buses.
	Less change money. Higher fares for gas prices.
	Better method of showing stops.
	Fare boxes that accept credit and prepaid cards.
	Be on time.
	Clock on bus. Take a penny, leave a penny" drop coin. Efficiency of route. Info about 2 zones.
	Stops in lake wildwood. Some sketchy people shouldn't be allowed. Suspension!
	Cleaner buses.

Gold Country Stage Onboard Survey Results

Q16. What improvements would you like to see to the transit program?

Response Category		Response Count
Written Comments	*answered question*	163
	skipped question	55

Positive

None come to mind. Keep up the good work.
Your drivers do a great job.
None, Great job.
Everything seems just fine how it is running now.
Very Satisfied
Satisfied
I love them all.
The bus is a real good thing. It is a must.
Rt 1 stop between professional center and Humpty Dumpty, north bound run rt 3 back wards every other hour.
They do a great job.
You guys are the sh*t.
Now is good.
Keep doing what you do is great.

Extended Service / Weekend Service / More Hours

Earlier service on Rt one. 6:00am trip.
Sunday Service
Wish it ran on Sundays.
Redo the schedule and have #3 go back to every 30 minute Pick up.
Expanded Service
Route to Auburn Saturday
More routes, quicker travel times.
More Routes outlining areas also.
If bus could run on Sunday to go to work.
Route to N. San Juan
More trash cans at bus stop. Better connection between route 6 and 5 in the morning. Route 6 starts at 6:55am, route 5 leaves at 6:00am on the first run. I would like to see route 6 start at 5:30am in order to catch route 5 at 6:00am.
A later bus route from Grass Valley to Auburn (10:00pm).
Route 2 more often. Need to have seatbelt and require people to use them.
Bus #1 every 1/2 hour. Bus #3 every 1/2 hour to Kmart.
Every 1/2 hour and Sunday Service
More stops, less rude bus drivers (one specifically he drives #3 in the afternoon on weekdays).
Sunday bus
Run the bus Sundays, later during the week, and run every half hour.
Run 24 hours.
Another route 1 extended running time.
Maybe more frequent rides but I understand why this is not plausible. Also, maybe more Saturday service.
Sunday Service. Passenger is 61 yrs old.
Sunday Service.
Rts H3 Back to every 1/2 hour. (Had a hard time with writing).
Possibly lengthening the hours. I have to walk back home tonight. Maybe weekend Auburn route.
More Routes. You guys are much better than Sacramento by far. Keep it up.
Bus to North San Juan and mother Truckers. Also should/could college students revise bus pass discounts.
More times after 5:00 to Auburn
More frequency of buses
Sunday Service
Bus service (more buses) to out lying areas.
No dead time between Rt 1 and 4.
Expansion of routes.
More buses/stops. NSJ/River
More areas covered more often. Passanger is 32 yrs old.
Longer Hours
Sunday Transport
Bus to run later than 4:30pm.
Longer hours. Every 30 minutes instead of every hour. Raise for Bill, Bob Route and Cathly/D and N.
Run more hours.
I would like another bus to GCS to come at 10am too. I do love the fact that music is played. It is relaxing.
Run later.

Q16. What improvements would you like to see to the transit program?

Response Category

Written Comments

Other (continued)

Bus drivers waiting at the stop until the correct time. Bus drivers blow right past the stop at Kmart early and don't wait sometimes.
Internet survey shuts down and should let us fill out more than just once.
A bench at Safeway, more shelter.
More shelters on demands
Drivers can stop clowning with customers!!!
Less cost for Seniors.
Put on the signs what bus stop there.
Improve safety, cleanliness, and performance.
If the Staple stop could be moved on to the street, the traffic is not safe. I've almost been hit a few times. If it could be on Olympian Park round about both ways.
Shelter
Logical bus stops- route 4 with the changes is completely messed up.
Don't Know...A money changer.
Bus stop at Safeway.
Would like bench at Safeway and Shelter
Stops should be marked on system map. I recently moved to the area, have used public transport in many countries, easy to tell those who created this system have never used public transport. Everyone has been helpful and most riders have told me they had to ride all the lines, using a day of their lives, to understand where the stops are. Sometimes, I have witnessed parts of the route being neglected and thought-what if I were waiting there.Parts of the routes should never be skipped. Drivers are helpful, but the system doesn't link up well in order to transfer. I cannot work as late as I'd like on Saturdays and not of all on Sundays. I had to write in bus stops by hand on the map. Monthly passes are flimsy- I 'laminated" mine with wide clear tape. It's great this system is asking riders for improvement ideas. Thanks!
The bus schedules need to be updated with all streets and times. Example: Route 4 does not 1st Dorsey/Times
Mike F working Belly.
More buses per route.
Snack or drinks, great idea!
Cleaner bus and less bouncy
Go to my house
More stops along the routes.
Cleaner buses.
Expanded service bus run to San Juan twice a week. Have more shelters at bus stops with the rain. Need the Hughes bus stop back.
Passenger is disabled as well as a senior.
Be on time more.
Ramps for wheelchairs by stops.
A new route.
Cleanliness (some)
Streamline Rt 4 and Creative games.
None, you are doing an amazing job.
Passenger was 23 years old.
More on time.
Less lenience to rude disrespectful people.
On time more often.
Benches at all bus stops. I am disabled and most of the bus stops I use don't have a place to sit.
Some routes, stops, time tables need much overhaul, efficiency.
Everything is ok.
2 zone store at Rough and Ready
Take debit credit card.
Have more bus's go to Auburn
Easier to understand schedules-more detailed information.
One time consistently
Less jerking when stopping.
None
Calling out stops. Bell Repair.
Online trip calculator
Passenger is 19 (no where to put age if not a senior, youth, or disabled).
Would like to have all the old bus routes back. Route 2 and 3 separated.

"Rules of the Road" in all buses. Drivers should be stricter on teens. Teens should be kicked off for rudeness and swearing on the bus.

Gold Country LIFT Dial-A-Ride Survey Responses

Survey Questions 1 through 9 -- Total of 11 Passengers Surveyed

Q1. What time did you board the vehicle for this ride?

Time	Responses
Between 9:00-10:00 AM	3
Between 10:00-11:00 AM	4
At 1:10 PM	1
At 2:15 PM	1
At 4:15 PM	1
	10

Q2. What was your reservation time?

Time Between…	And….	Responses
9:30 AM	11:10 AM	2
9:45 AM		1
10:00 AM		1
10:20 AM		2
1:00 PM	3:45 PM	1
2:30 PM	3:15 PM	1
4:15 PM		1
		9

Q3. How far in advance did you call for ride?

Days in Advance	Responses
1 day	0
2 days	2
3 days	1
4 - 7 days	5
More than 7	0
Today	0
subscription trip	2
Total	10

Q4. I am taking this trip to go:

Trip Purpose	Responses
to work	1
to school	0
Recreation / Social Event	1
Shopping/Errands	1
Medical/Dental	5
Other	3
Total	11

Q5. Was there a vehicle you could have used instead of LIFT?

Answer	Responses
Yes	0
No	11
Total	11

Q6. Would you have been able to make this trip if LIFT was not available?

Answer	Responses
Yes	0
No	11
Total	11

Q7. How often do you usually use LIFT?

Answer Options	Responses
7days/wk	0
4-6 days/wk	2
2-3 days/wk	6
1 day/wk	2
A few times per month	0
1st trip	0
Total	10

Q8. What other buses, if any, do you use?

Transit Services	Responses
Gold Country Stage	1
Placer County Transit	0
Auburn Transit	0
Other (please specify)	0
Total	1

Q9. If you only use LIFT services, what is the reason?

Reason	Responses
Not aware of other services	0
Disability makes fixed route difficult	6
Bus stop too far from house	4
Other (please specify)	3
Total	13

Other Reasons:

Nothing else available for my purpose

convenience, cost

Using LIFT when needed with walker

Gold Country LIFT Dial-A-Ride Survey Responses

Survey Questions 10 through 15 -- Total of 11 Passengers Surveyed

Q10. What is the general location of your home?

Town/Area	Intersection	Responses
Nevada City	Zion/Searls	1
	East Main St	1
Rex Reservoir Rd	Rough and Ready	1
	Picadilly	1
Grass Valley	Brunswick & Old T	1
Old Tunnel Rd		1
Penn Valley	Mobile Home Park	1
Cedar Ridge		1
Memorial Park area	Colfax	1
Total		9

Q11. Do you use a wheelchair?

Answer	Responses
Yes	2
No	8
Total	10

Q12. Do you have a driver's license?

Answer	Responses
Yes	5
No	4
Total	9

Q13. I am…

Answer	Responses
A Senior Citizen (65+)	7
Disabled	4
Total	11

Q15. What improvements would you like to see?

Desired Improvements
1 Longer Saturday hours
2 Some drivers need to learn how to strap wheelchair in better.
3 Excellent staff & service
4 Sunday service
5 Would love Sunday rides to church
6 Work on Sunday
7 Nothing, doing great
4-6 days/wk
2-3 days/wk
1 day/wk
A few times per month
1st trip
Total