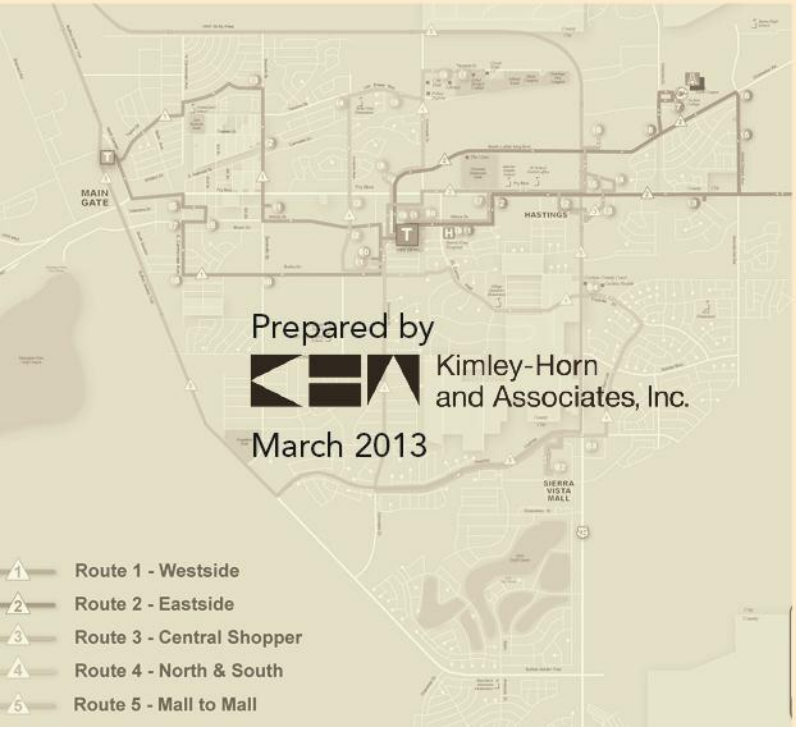
Sierra Vista

FINAL REPORT

Transportation Efficiency Study



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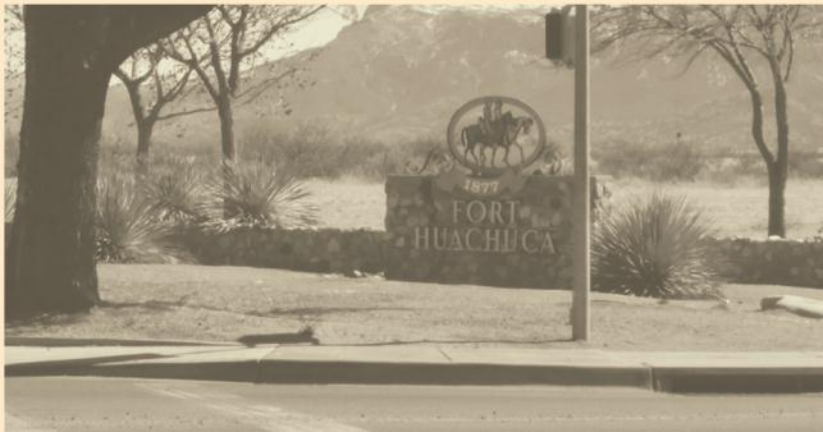
March 2013



Sierra Vista Transportation Efficiency Study

Final Report

Task Assignment: MPD 85-12

March 2013

Prepared for

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EXECUTIVE SUMMARY

The Arizona Department of Transportation awarded funding for the Sierra Vista Transportation Efficiency Study through the Planning Assistance for Rural Areas (PARA) program. The purpose of the PARA program is to assist rural counties, cities, towns and tribal communities in addressing a broad range of multimodal transportation planning issues related to roadways, transit, and non-motorized modes of travel.

The purpose of the Sierra Vista Transportation Efficiency Study was to develop reasonable, implementable, and community-supported strategies to reduce reliance on single-occupancy vehicle trips and expand transportation choices. Strategies were developed based on:

- Analysis of existing and future travel patterns, congested routes, major employer locations, and areas of future planned development.
- Review of travel reduction strategies that have worked well in other areas.
- Input from stakeholders who represented major employers, City staff, and others.
- Public input that was obtained through an online survey and at a public meeting.
- Analysis of a survey of commuting patterns of those who work in Sierra Vista, including Fort Huachuca.
- Analysis of regional travel data.

A Travel Reduction Plan (TRP) was developed that comprises strategies that have the potential to reduce reliance on SOV trips for the short- (0-5 years), mid- (6-10 years), and long-range (11-20 years) horizons. Recommendations include infrastructure (e.g., park-and-ride lots, transit amenities), operational approaches (e.g., new or improved vanpool and transit services), programmatic measures (e.g., trip reduction incentives, educational materials), and policies (e.g., development of a TDM ordinance or parking policies). The TRP also considers forecasted growth in the community and provides solutions that recognize the need for future economic growth and development while maintaining the need for resident quality of life and a multimodal transportation system that provides a variety of safe and efficient mobility options.

Throughout development of the TRP, the Study team engaged stakeholders including the City of Sierra Vista, Fort Huachuca, ADOT, elected officials, employers, business groups, and members of the public, leading to development of recommendations that are achievable, effective, and efficient.

The TRP focuses on the following categories of improvement strategies:

1. Bicycle infrastructure strategies.
2. Parking infrastructure and management strategies.
3. Pedestrian infrastructure improvements.
4. Vanpooling/ridesharing strategies.
5. Marketing and promotion of alternative travel modes.
6. Transit strategies.
7. Traffic flow strategies.

Specific strategies are recommended for each category, which are summarized in **Table 34**. Plan elements include goals and evaluation criteria, an implementation timeline, and capital and operating cost estimates.

Table ES-1. Travel Reduction Strategies

Category	Strategy
Bicycle Infrastructure Strategies	Enhanced bicycle parking facilities (bicycle racks at major employers and activity centers)
	Identify low speed bikeable routes on Fort Huachuca and develop new bicycle facilities.
	Bicycle sharing program, with particular focus on Fort Huachuca.
Parking Infrastructure/ Management Strategies	Park-and-ride lots at transit centers, commercial areas, urban fringe areas, and in communities surrounding Sierra Vista.
	Priority parking for carpools.
	Parking cash-out programs.
Pedestrian Infrastructure Improvements	Assess sidewalk deficiencies and develop an improvement plan.
	Implement safe routes to transit, schools and employers.
	Pedestrian crossings at traffic signals.
Vanpooling/Ridesharing	Develop regional carpool matching service.
	Promote vanpool service to Fort Huachuca.
	GERH programs.
Marketing and Promotion of Alternative Travel Modes	Subsidized transit passes for employees.
	Wider distribution of transit schedules.
	Wayfinding guides to selected locations.
	Distribution of state-developed bicycle and pedestrian educational materials.
Transit Strategies	Conduct Vista Transit Regional Five-Year Plan (2014-2018).
	Evening transit service.
	Shuttle service within Fort Huachuca.
	Vista Transit service to Fort Huachuca on weekday peak periods.
	Vista Transit service extension outside of City limits.
Traffic Flow Strategies	Traffic signal synchronization program.

1.0 PROJECT INTRODUCTION

The Arizona Department of Transportation awarded funding for the Sierra Vista Transportation Efficiency Study through the Planning Assistance for Rural Areas (PARA) program. The purpose of the PARA program is to assist rural counties, cities, towns and tribal communities in addressing a broad range of multimodal transportation planning issues related to roadways, transit, and non-motorized modes of travel.

The City of Sierra Vista Strategic Leadership Plan, 2011-2013[1] identifies five transportation goals and objectives based on the transportation and quality of life needs of the Sierra Vista community. Two of these goals and objectives address reducing reliance on single-occupancy vehicles:

1. Continue to pursue funding through Federal Highway Administration (FHWA) and Arizona Department of Transportation (ADOT) for implementing construction of multi-use paths identified in the City of Sierra Vista's Safe Bicycle and Pedestrian Routes Plan.
2. Survey commuting patterns of major employers in the community and analyze opportunities for reducing single-occupancy vehicle (SOV) trips.

The 2011 Safe Bicycle and Pedestrian Routes Plan set the foundation for achieving the first objective. The Sierra Vista Transportation Efficiency Study (hereafter, "Study") achieves the second objective by identifying opportunities to reduce reliance on SOV trips. Completion of this Study, coupled with implementation of the Safe Bicycle and Pedestrian Routes Plan, will help the City achieve their goal of providing the community a variety of safe and efficient transportation choices and improved quality of life, minimize the need for increased roadway capacity, and reduce congestion.

1.1 STUDY OBJECTIVES

The Study proposes reasonable, implementable, and community-supported recommendations to reduce reliance on SOV trips and provide the community with a variety of safe and efficient transportation choices. Study objectives included:

[1] City of Sierra Vista Strategic Leadership Plan, 2011-2013. Our Future Vistas, What's Ahead? Available at: http://www.sierravistaaz.gov/department/?fDD=4-0.

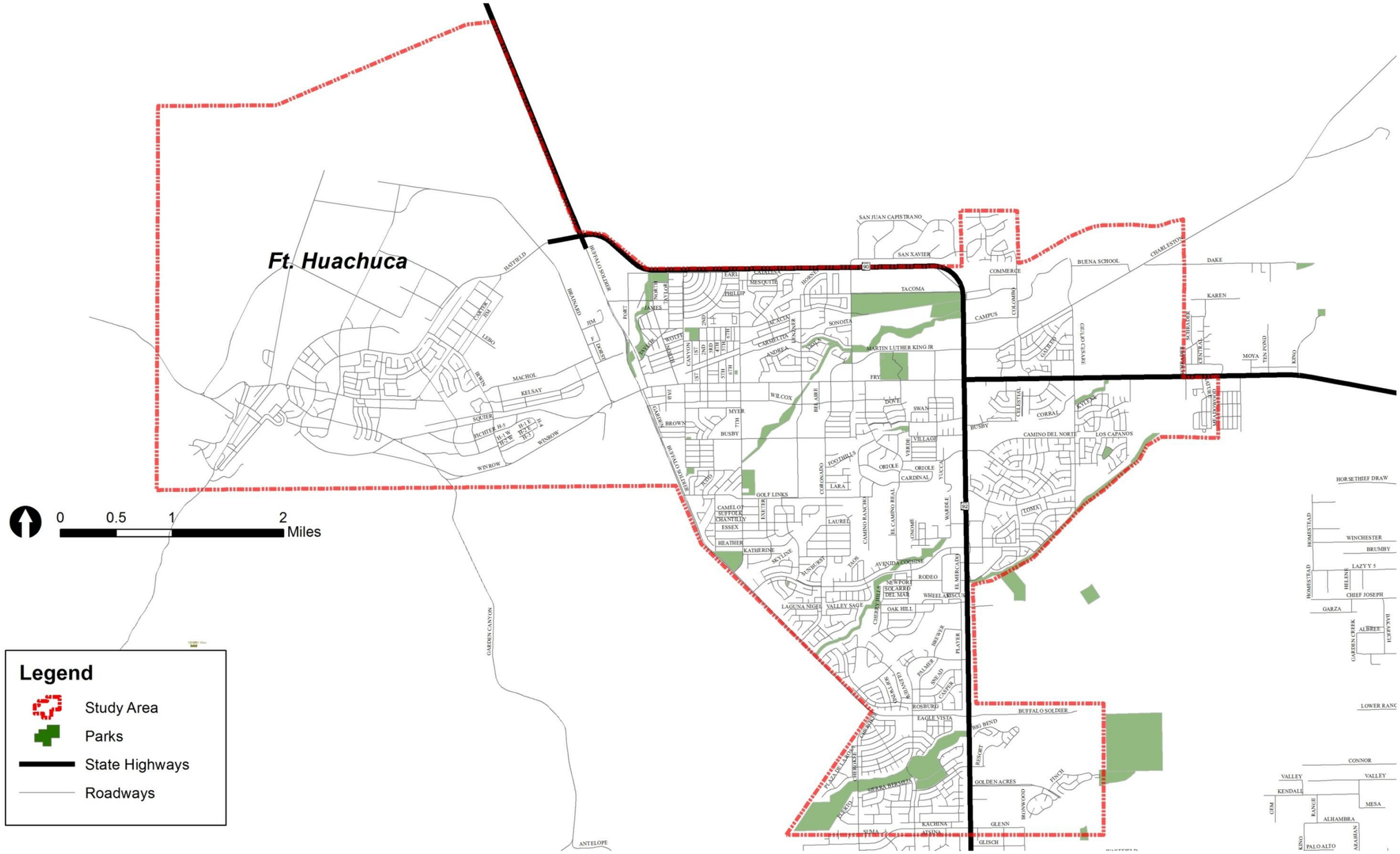
- A survey of commuting patterns of those who work in Sierra Vista, including Fort Huachuca.
- Analysis of opportunities for reducing SOV trips, increasing alternate mode usage, and reducing overall motor vehicle travel for commute trips.
- Development of a Travel Reduction Plan (TRP) that addresses the current and long-range transportation needs of the Sierra Vista community by identifying actionable transportation demand management (TDM) strategies. Recommendations include infrastructure (e.g., park- and- ride lots, transit amenities), operational approaches (e.g., new or improved vanpool and transit services), programmatic measures (e.g., trip reduction incentives, educational materials), and policies.

Throughout development of the TRP, the study team engaged stakeholders including the City of Sierra Vista, Fort Huachuca, ADOT, employers, business groups, and members of the public.

1.2 Study Area

The study area consists of the City of Sierra Vista, including Fort Huachuca. However, the study team recognizes that many employees who work within the City of Sierra Vista live in other communities, including Huachuca City, Bisbee, Benson, and as far away as Douglas and Tucson. Study recommendations address the needs of these individuals.

Figure 1. Study Area



Source: City of Sierra Vista, Arizona Department of Transportation

2.0 DEFINING A TRAVEL REDUCTION PROGRAM

A TRP identifies ways to reduce single-occupancy (driving in a personal vehicle alone) trips and vehicle miles traveled per capita. By encouraging people to ride the bus, vanpool, carpool, walk, bike, work from home, or compress their work week, a travel reduction program makes transportation better for the Sierra Vista area.

2.1 TRAVEL REDUCTION STRATEGIES

Travel reduction programs typically involve a range of strategies, examples of which are summarized in Table 1 (adapted from the Online TDM Encyclopedia, http://www.vtpi.org/tdm/tdm9.htm). A number of these strategies can be employer-based. Some common employer-based strategies are:

- Financial incentives to use alternate modes.
- Facilities and services such as bicycle, shower, and locker facilities; preferred parking for carpoolers; provision of vanpools; shuttles and car-sharing; and guaranteed ride home programs (allows a set amount for taxi rides home for unexpected events).
- Alternate work schedules/telecommuting that allow employees to reduce the number of commute trips or make trips during off-peak times.
- Wayfinding information advertised at the work place.

Table 1. Travel Demand Strategies[2]

Category	Description of Strategies
Alternative Work Schedules/Telecommuting	▪ Flexible and compressed work weeks. ▪ Telecommuting - strategies include working from home, video-conferencing, and use of satellite offices.
Bicycle Incentives	▪ Bicycle parking - provision of bicycle parking racks near businesses. ▪ Education programs - maps of bicycle routes. ▪ Improved safety for bicyclists - through traffic calming, streetscaping, and complete streets. ▪ Bicycle rentals - provision of bicycles by employers or other organizations to rent. Also can include bike-sharing programs. ▪ Integrating bicycle use with transit system - through racks on buses and transit stops in proximity to bike routes.
Car-Sharing	▪ Provides access to a shared fleet of vehicles.
Commuter Financial Incentives	▪ Reimbursements or subsidies - financial incentives to use alternate modes.
Company Travel Reimbursement Policies	▪ Company travel reimbursement policies - reimburse bicycle or transit mileage for business trips when these modes are comparable in speed to driving, rather than only reimbursing automobile mileage.
Guaranteed Ride Home	▪ Guaranteed ride home - provides an occasional subsidized

[2] Source: Online TDM Encyclopedia, Victoria Transport Policy Institute, http://www.vtpi.org/tdm/tdm9.htm

Category	Description of Strategies
	ride to commuters who may need a ride in case of an emergency or unexpected event.
Parking Strategies to Encourage use of Alternate Modes	▪ Remote parking - provide off-site or fringe parking facilities. ▪ Smart growth - encourage more compact, mixed, multimodal development to allow more parking sharing and use of alternative modes. ▪ Parking pricing - charge motorists directly and efficiently for using parking facilities. ▪ Unbundling parking costs - parking spaces are leased or sold separately for a rent or sale price. ▪ Preferential parking for carpools/vanpools. ▪ Park-and-ride lots. ▪ Parking cash-out - employees who do not drive to work are offered a cash value equal to parking costs. ▪ Parking enforcement and education.
Pedestrian Improvements	▪ Improve sidewalks, crosswalks, and paths - construction to connect gaps in sidewalk system, repairing broken sidewalk segments, and pedestrian crossing improvements. ▪ Universal design - transportation systems that accommodate people with disabilities and other special needs. ▪ Pedestrian oriented land-use and building design. ▪ Traffic calming - includes streetscape improvements, traffic speed reductions, and vehicle restrictions. ▪ Pedways - indoor urban walking networks that connect buildings and transportation terminals.
Ridesharing/Vanpooling	▪ Encouraging carpooling and vanpooling - carpooling typically uses a person's own vehicle. Vanpooling uses rented vans often supplied by employers, profit or non-profit organizations, or government agencies. As more people use these services, the chances of finding a suitable carpool or vanpool increase significantly. As a result, success depends on promotion programs that encourage a significant portion of potential users to register for possible participation. Financial incentives, such as employee subsidies, also increase participation.
TDM Marketing and Promotion	▪ Educational/marketing campaigns - promote benefits of using alternate modes (e.g., health and cost savings), and make employees aware of options available for commuting. ▪ Improved wayfinding - maps and other information on how to walk and cycle within an area. ▪ Promotion programs - to encourage carpooling/vanpooling; provide discounts and pricing strategies to make alternate modes more attractive.
Transit Encouragement Programs	▪ Improved transit service - including additional, more frequent, and more comfortable service. ▪ Improved transit stops and access to stops - including shelters, seating, transit user information and wayfinding guidance, and other amenities. Improve sidewalk system to reach stops. ▪ Transit-oriented development - mixed development occurs

Category	Description of Strategies
	within convenient walking distance of transit stations and stops. ▪ Reduced fares and discounts - examples include financial incentives to transit use and reduced or subsidized fares. ▪ More convenient payment systems - using electronic "smart cards." ▪ Improve rider information and marketing programs.
Wayfinding and Multimodal Navigation Tools	▪ Wayfinding and navigation tools - provide guidance on how to reach a worksite by walking, cycling, and transit.

2.2 Benefits of a Travel Reduction Program

Reducing SOV trips can have multiple benefits to the community and individuals. Examples of general benefits include:

- **Reduced congestion** – reducing the number of vehicle trips to their worksites will reduce demand on the road system.
- **Economic benefits** – a TRP helps commuters and their families save money by reducing gasoline consumption.
- **Reduced energy consumption** – a TRP can reduce energy consumption and air pollution through reduced vehicle miles of travel.
- **Increased safety** – less cars on the road means a reduced crash risk.
- **More time for other activities** – carpooling or using public transportation instead of driving alone gives individuals the opportunity to work; read; study; rest; phone/email/text family members, friends, or business contacts; or talk with fellow commuters during this time.

- **Reduced stress, improving health** – traffic and long commutes are a source of stress for many commuters; reducing stress was identified as the second greatest motivator for using alternative transportation. Increased walking and bicycling can improve physical fitness and reduce obesity rates, contributing to overall quality of life.

- **More effective use of the existing roadway system** – greater use of alternative modes will keep roads under capacity.

- **Improved regional access to jobs and services** – more travel-mode options and faster travel times for transit vehicles are important for people who do not drive or have access to a vehicle, or for those who simply choose to use an alternative form of transportation. In addition, businesses can recruit from a larger area by offering more options such as carpools and vanpools.

- **Fewer parking spaces needed** – more use of alternate modes reduces the demand for parking.

2.3 Experiences in Other Cities and Impacts

Employer-based programs are in effect in a number of urban areas. For example, in Maricopa County, Arizona, employers with more than 100 employees (at a single site) are required to participate in the Maricopa County Trip Reduction Program. Other cities that have developed TRPs were examined to identify best practices for TRPs. Although TRPs can vary widely among cities, some common best practices to enhance the use of alternate modes and decrease SOV trips are listed in **Table 2**.[3]

[3] Transportation Research Board Committee ABE 50-Transportation Demand Management, http://www.trb-tdm.org/

Table 2. Case Studies

Location	Population (2010 Census)	TDM Strategies	Results	Source
Bellevue, Washington	122,000	Strategies included HOV lanes; better use of park-and-ride lots; vanpool, ride-matching, and car-sharing services; and TRPs that target specific sites.	Prior results found that in downtown Bellevue, Washington, the drive alone commute rate fell by 30% from 1990 to 2000, falling from 81% driving alone to 57%.	Commute Trip Reduction Plan, 2008, City of Bellevue http://www.ci.bellevue.wa.us/pdf/Transportation/commute_trip_reduction_plan_revised.pdf
Boulder, Colorado	97,385	**Transit HOP service** - based on community input, the City launched the HOP service in 1994 to connect major activity centers. Buses come every 10 minutes or less. **Eco Passes program** - a discounted annual transit pass purchased by employers, students, and neighborhoods.	• 1990 - 15,100 daily transit riders. • 2010 - approx. 30,000 daily transit riders. • Journey to work by bus - 9.8 % (according to the 2009 American Community Survey). • 2011 - 69,425 passes available to neighbors, workers, and students.	Transportation to Sustain a Community – A Report on Progress, February 2012, City of Boulder Transportation Division http://www.bouldercolorado.gov/files/Transportation/Transportation_Report_on_Progress_2012.pdf
		Bicycle strategies • 95% of streets accommodate bicyclists. • Extensive shared-use path system. • All buses equipped with bike racks. • Two bike corrals - bike parking in former on-street parking. • B-Cycle - public bike sharing system. • Bike crossing signage and raised right-turn bypass islands to reduce bike/vehicle conflicts.	• 2009 12.3 % of residents made work trips by bike. • B-Cycle program had 1,153 members as of November 2011.	
		Pedestrian facilities – missing sidewalk links, repairing sidewalks, safer pedestrian crossings through use of HAWK pedestrian beacon signal.		
Cambridge, Massachusetts	105,162	Cambridge's Travel Demand Management Ordinance requires that developers reduce the drive alone rate for their development to 10% below the average rate for the census tract in which their development sits.	Although the ordinance applies only to new development and building expansions, by two years after the adoption of the ordinance, citywide drive alone rates had declined even as the state of Massachusetts experienced increasing drive alone rates.	

Location	Population (2010 Census)	TDM Strategies	Results	Source
Portland metropolitan area (including 25 cities and three counties)	1.5 million	• A coordinated marketing effort (e.g., Drive Less Save More campaign). • An employer outreach program. • A regional rideshare program. Between January 2009 and June 2011, Metro coordinated, on average, 19 vanpools and 147 riders-per-month. • A grant program that funds partner efforts (e.g., BTA Bike Commute Challenge, TMA's work with employers, local transportation options projects, TriMet's regional trip planner, and Sunday Parkways). • Transportation programs were in place at over 1,400 worksites. • In 2011, the Metro RTO program conducted its first RTO Travel and Awareness survey.	• The non-SOV mode split for employers working with the TriMet Employer Outreach program increased from 27.1% in 2009 to 38.5% in 2011. • In its fifth year, the Drive Less Save More campaign helped 222,000 people to reduce their car trips. • 51% of adults in the region recalled seeing, reading, or hearing a message about reducing car trips. • The TMA's worked with over 70,000 employees. • Transportation programs at worksites were up 27% from the last evaluation period. As a result of 2009-2011 Metro RTO investments, an estimated 83-123 million vehicle miles were reduced. • As of June 30, 2011, over 12,000 people were registered in the Carpool Match NW database. This indicates a 50% increase in carpool registrants since the 2008-2009 evaluation.	Regional Travel Options Program Evaluation, June 2012 http://library.oregonmetro.gov/files//appendix_d_rto_evaluation_2012.pdf
Pinal County, Arizona	375,770	The Pinal County Board of Supervisors approved a Travel Reduction Ordinance for Area A of Pinal County on December 13, 2000. This ordinance requires employers of 50 or more employees in Area A to provide information to the Pinal County Travel Reduction Program Administrator. Area A is located north of Arizona Farms Road and approximately 12 miles east of the Maricopa County line (Meridian Road). Key strategies include: • Carpools. • Vanpools. • Compressed workweeks. • Bicycling and walking.	Not available	Pinal County Employee Travel Reduction Program, 2008 http://pinalcountyaz.gov/Departments/AirQuality/Documents/Travel%20Reduction/Commuting%20Alternatives.pdf

Location	Population (2010 Census)	TDM Strategies	Results	Source
Burlington, Vermont	42,417	Proposed strategies include: • **Reduce community VMT** - reduce community VMT by 10% through a combination of travel substitutions (combining trips, telecommuting, walking and biking, ridesharing and carpooling, and using mass transit). • **Implement government alternative commuting program** - encouraging employees to commute through emissions-free modes (telecommuting, walking, and biking), as well as less impactful modes (carpooling, ridesharing, and mass transit). It would also include incentives such as a parking cash-out program. • **Reduce government VMT** - reduce government VMT by 10% through a combination of travel substitutions (combining trips, video conferencing and conference calling, walking and biking, ridesharing and carpooling, and using mass transit). • **Improve bicycle and pedestrian infrastructure** – integrating on-street bicycle and pedestrian facilities into all future infrastructure improvements to City streets. • **Design and implement a new Citywide Bike/Pedestrian Plan** - a comprehensive look at the City's existing bike/pedestrian infrastructure and designing and implementing necessary improvements.	Not available	City of Burlington Climate Action Plan, February 2012 www.burlingtonvt.gov/CAP/.../2012-DRAFT-Climate-Action-Plan/
Pasadena, California	137,122	The City has a Trip Reduction Ordinance, including the provision of preferential carpool/vanpool spaces equivalent to 10% of employee parking, bicycle parking facilities, and space for a transportation information display board. Owners must submit a TDM plan, which may include (but not be limited to) : 1. Private vanpool operation. 2. Transit and vanpool fare subsidies. 3. Pay parking for employees. 4. Provision of subscription bus services. 5. Alternative work hours. 6. Capital improvements for transit services. 7. Reduction of parking fees for carpools and vanpools. 8. Bikeway linkages to established bicycle routes. 9. Provision of an on-site employee transportation coordinator.	Not available	http://www.ci.pasadena.ca.us/Transportation/Transportation_Demand_Management/

Location	Population (2010 Census)	TDM Strategies	Results	Source
Denver, Colorado Region		• Promotion of alternatives to SOV travel. - Rideshare programs (also includes ridesharing programs to schools). - Transit (bus, light rail, and a new high capacity transit expansion plan). - Transit passes and pass subsidies. - Smart cards to allow passengers to buy and electronically load passes. - Transit amenities (shelters, signs and maps, car and bike sharing facilities and parking, accommodations for bicycles on transit vehicles, wireless capabilities for transit riders). - Pedestrian facilities. - Bicycle parking, Bike to Work Day, bicycle sharing programs. - Car-sharing. - High Occupancy Vehicle (HOV) and High Occupancy Toll (HOT) lanes. - Promotional and marketing campaigns. • Promotion of changes in work patterns. - Telework. - Compressed and flexible work schedules. • Incentives to encourage use of alternative modes. - Guaranteed ride home. - Pay as you drive insurance (links insurance to vehicle miles of travel). - Parking strategies. • Promote efficient land development designs. - Transit oriented development. - Pedestrian and bicycle connections. • Emerging strategies. - Real-time information. - Real-time ridesharing.	Not available	Denver Regional TDM Short Range Plan, (2012-2016) http://www.drcog.org/documents/FINAL%20Regional%20TDM%20Short%20Range%20Plan%20(2012-2016).pdf

3.0 RELATED STUDIES AND FINDINGS

A document review was conducted to determine recommendations and findings from existing and current studies and plans pertinent to the Sierra Vista area, including previous transportation plans, transit plans, and other related information. This information is summarized in **Table 3**.

Table 3. Studies and Findings

Study/Plan Title	Author	Date	Summary of Findings Related to Trip Reduction
Arizona Rural Transit Needs Study		5/2008	Identified Sierra Vista as a location for expanded local rural transit service, including implementing restructuring and longer span of service. It was noted that Sierra Vista was likely to become a new urbanized area following the 2010 census (Sierra Vista-Bisbee-Douglas urbanized area). The public transit system in Sierra Vista was listed as a high-service effectiveness system based on its passenger trips per vehicle hour. A top candidate for intercity service was a route between Bisbee-Sierra Vista-Benson.
Infrastructure Improvement Plan	TischlerBise	12/2011	This report is an update of the City's Infrastructure Improvements Plan and associated update to its development fees.
Land-Use Assumptions, City of Sierra Vista	TischlerBise	12/2011	Details current demographic estimates and future development projections. **2012** / **2032** **Population** 44,295 / 53,834 **Jobs** 18,832 / 21,650 **Vehicle Trips** 177,300 / 213,470
City of Sierra Vista Safe Bicycle and Pedestrian Routes Plan	Kimley-Horn and Associates	2011	This project developed: ▪ Sierra Vista Bicycle and Pedestrian Routes map. ▪ Identification of bicycle and pedestrian needs and deficiencies in the City of Sierra Vista. ▪ Recommended projects, programs, and studies to improve bicycle and pedestrian safety and comfort in the City. ▪ More pedestrian and bicycle access to Fry Boulevard was a key recommendation.

Study/Plan Title	Author	Date	Summary of Findings Related to Trip Reduction
SEAGO Region 2012-2016 Transportation Improvement Program	SEAGO	2011	Transportation Enhancement projects include: ▪ Coronado Multiuse Path, Carmelita to Tacoma. ▪ Avenida Del Sol Multiuse path, SR 90 to Camino Del Norte. ▪ Path to Higher Education, Charleston Wash-Colombo and Giulio Shared-Use Path. ▪ Savanna Springs Extension, East side of Buffalo Soldier Trail between Avenida Cochise and Golf Links Road Shared-Use Path. ▪ SUP Connectivity Project, Coronado Drive from Tacoma to SR90; Colombo Drive from Higher Education to Charleston; Giulio Cesare Avenue from Higher Education to Charleston Shared-Use Paths. Other projects: ▪ Wilcox Drive Pavement Replacement, 7th Street to Calle Portal. ▪ Traffic Signal at Avenida Cochise and Oakmont (obligated in 2011). ▪ City-wide sign replacement.

4.0 CURRENT CONDITIONS

4.1 DEMOGRAPHIC DATA

This section discusses demographic data that will be used to identify areas that are best served by travel reduction strategies. Demographic data was obtained from the 2010 United States (U.S.) Census, American Community Survey, and the Arizona Department of Administration - Office of Employment and Population Statistics.

4.1.1 POPULATION

In 2011, the population in Sierra Vista was estimated to be 45,098 persons according to the Office of Employment and Population Statistics. According to the 2000 census, the population was 37,775 in 2000. Between 2000 and 2010, the compound annual growth rate was 1.78%. Historic growth trends are shown in **Table 4**.

Table 4. Sierra Vista Population by Year

Year	Population
2011	45,098
2010 census	45,047
2005 estimate	41,349
2000 census	37,775

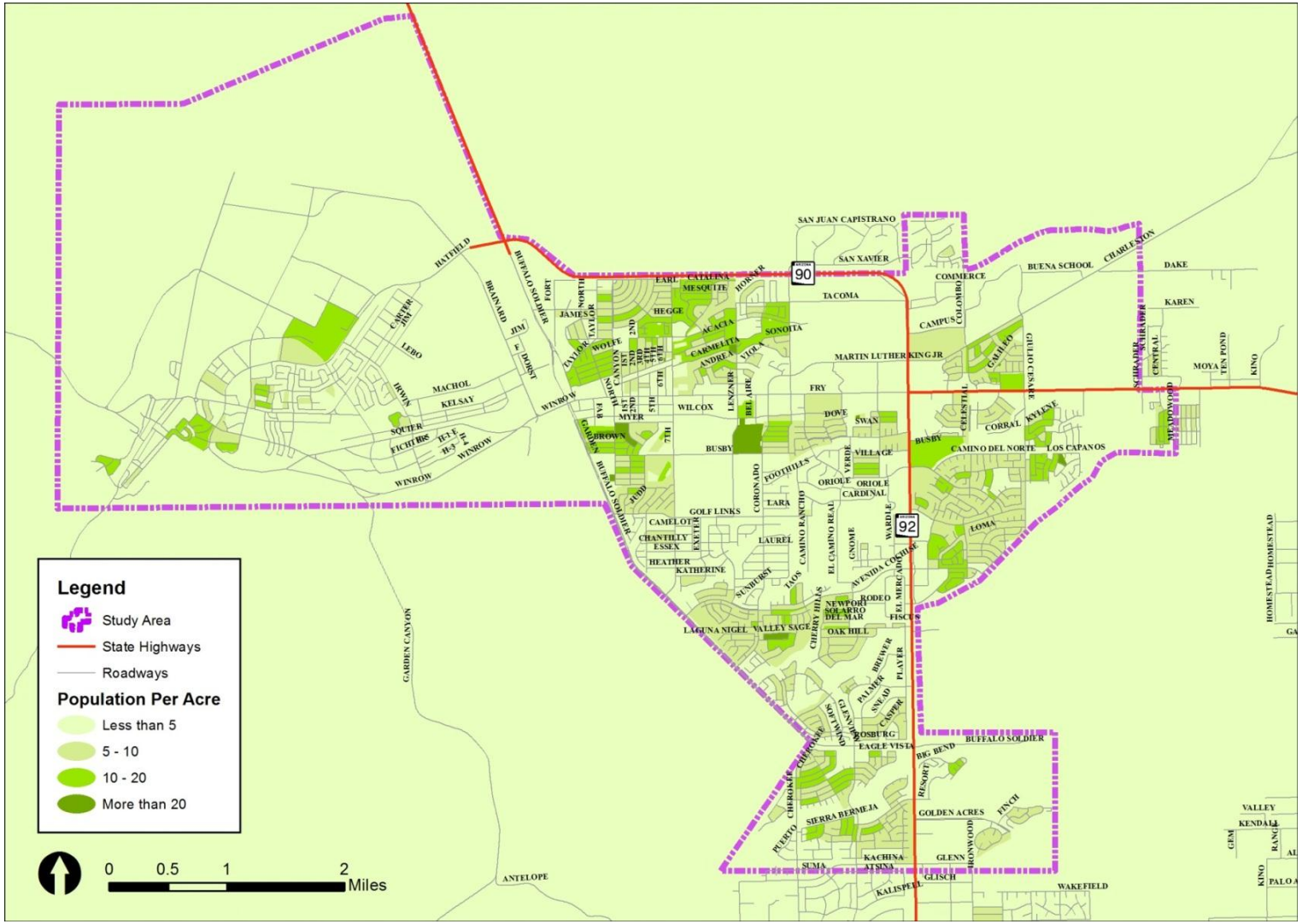
Population Density

In order to determine areas to focus efforts for trip reduction, it is important to see where population density is concentrated. **Figure 2** shows population density per acre. The darker green areas indicate denser areas of population. Although denser areas of development are located throughout the City, there are a cluster of denser developments in the area bounded by SR 90 to the north, Busby Road to the south, Buffalo Soldier Trail to the west, and Moorman Road to the east.

Age Distribution

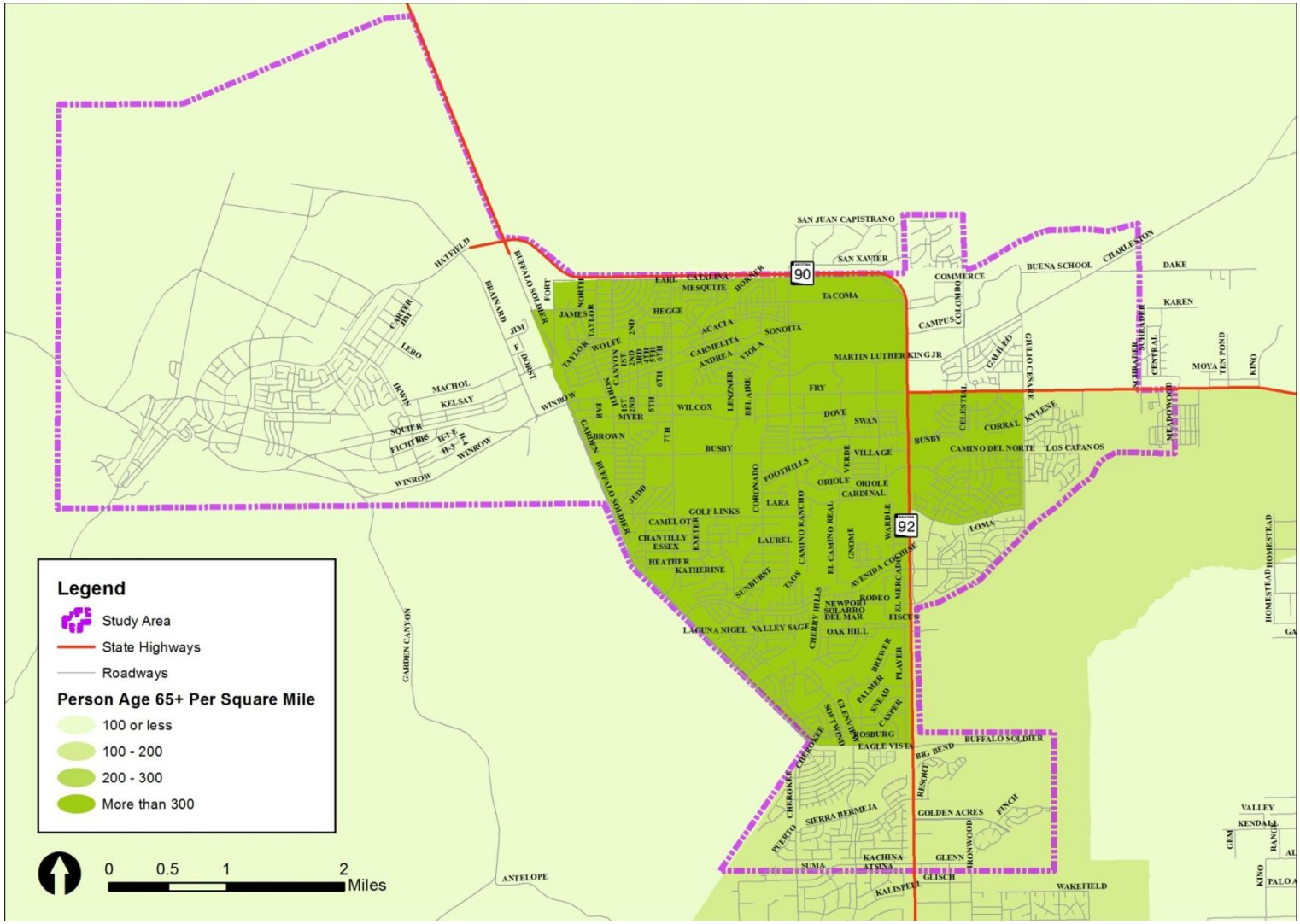
Transit and non-motorized forms of transportation enable populations that do not or cannot drive to have increased mobility. Populations that typically use the personal vehicle less frequently, cannot drive, or do not have vehicles are the elderly (65 years of age and older) and those too young to drive (children age five to 15). **Figure 3** and **Figure 4** show the population per square mile for both the elderly and the younger populations. As these figures show, both of these populations are found in the heart of the City. However, there is a higher concentration of younger populations in the northwest and east parts of the City.

Figure 2. Population Density



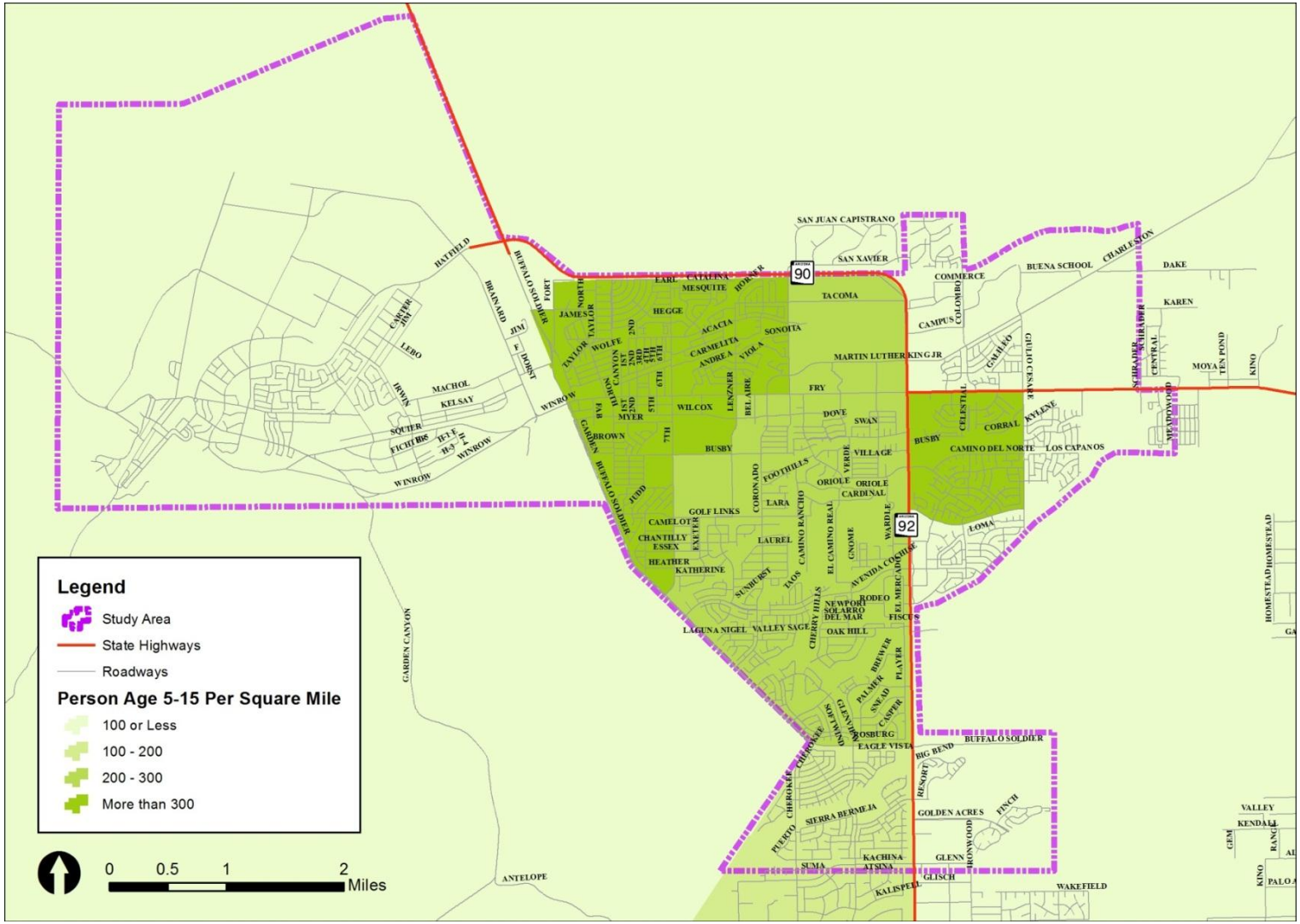
Source: U.S. Census, 2010

Figure 3. Density of Persons 65 Years of Age and Older



Source: U.S. Census, 2010

Figure 4. Density of Persons Five to 15



Source: U.S. Census, 2010

4.1.2 EMPLOYMENT

The 2011 Sierra Vista civilian labor force was estimated to be 20,423 persons, according to the Office of Employment and Population Statistics. According to the American Community Survey, the average commute time was 16 minutes.

Major Employers in Sierra Vista

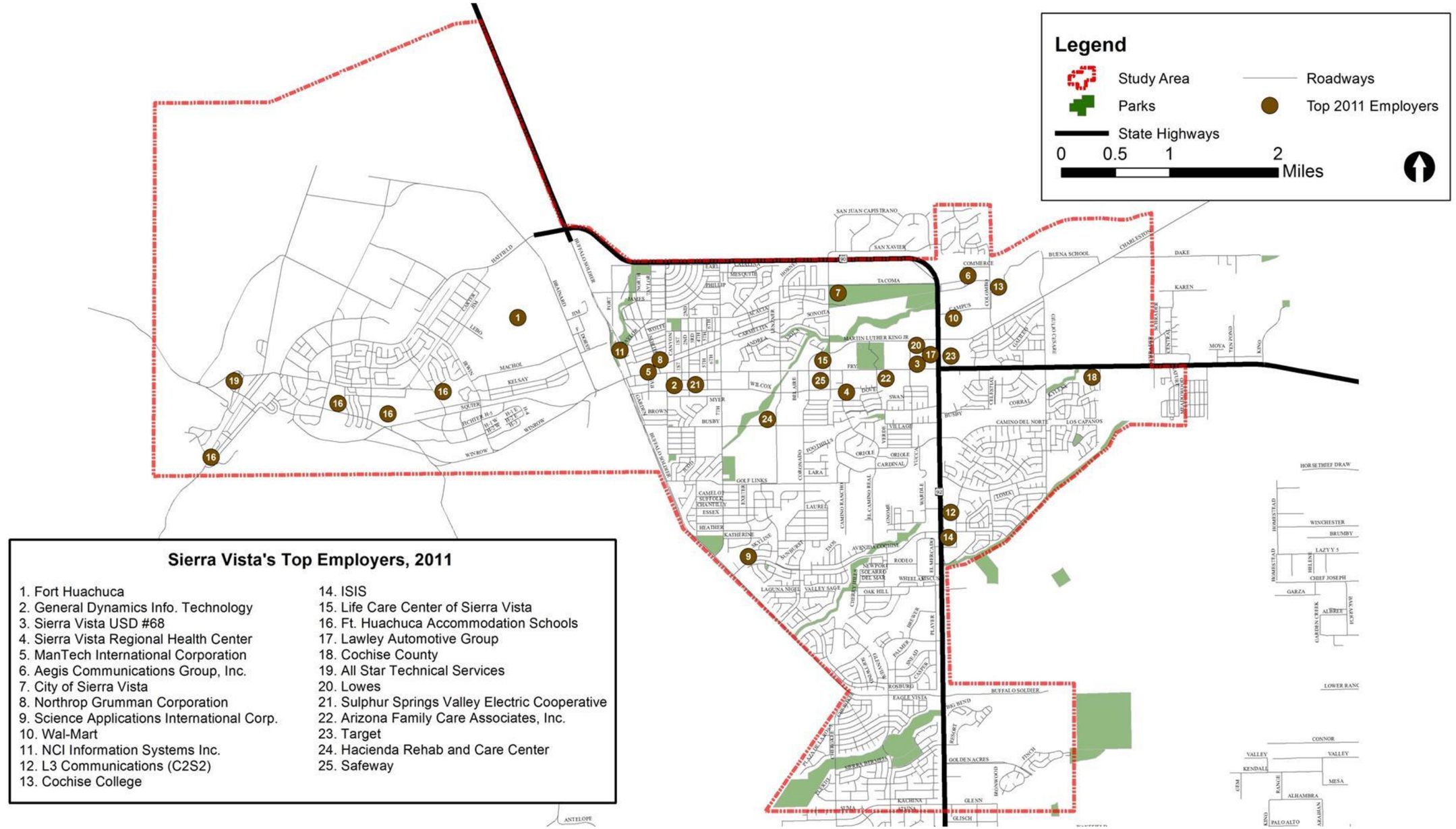
The study area includes 21 major employers of 100 employees or greater. The top 25 employers in terms of number of employees are listed in **Table 5**. The location of these employers is shown in **Figure 5**.

Table 5. List of Major Employers and Employee Size (2011)

Sierra Vista - Major Employers (2011)		
Rank	**Employer**	**Full-time Equivalent (FTE) Employees***
1	Fort Huachuca	9,039
2	General Dynamics Information Technology (GDIT)	950
3	Sierra Vista Unified School District #68	700
4	Sierra Vista Regional Health Center	641
5	ManTech International Corporation	493
6	Aegis Communications Group, Inc.	408
7	City of Sierra Vista	398
8	Northrop Grumman Corporation	390
9	Science Applications International Corp. (SAIC)	310
10	Wal-Mart	295
11	NCI Information Systems, Inc.	289
12	L3 Communications (C2S2)	205
13	Cochise College	178
14	ISIS	170
15	Life Care Center of Sierra Vista	158
16	Fort Huachuca Accommodation Schools	136
17	Lawley Automotive Group	132
18	Cochise County	129
19	All Star Technical Services	117
20	Lowe's	115
21	Sulphur Springs Valley Electric Cooperative	111
22	Arizona Family Care Associates, Inc.	91
23	Target	90
24	Hacienda Rehab and Care Center	83
25	Safeway	80

Source: Cochise College Center for Economic Research (CER)
***A full-time equivalent employee (FTE) equals one full-time employee or two part-time employees. For employees with multiple site locations, the number of FTE employees reflects only those employees reporting to work in Sierra Vista. The table includes only those employers who responded to CER's annual Top Employer survey.**

Figure 5. Major Employers



Source: Cochise College Center for Economic Research, 2011

Employment Density

Employment density is shown graphically in **Figure 6**.[4] As can be seen from the figure, key areas of employment density are located east of Buffalo Soldier Trail, between SR 90 and 7th Street, and in an area bounded by SR 92 to the west, Avenida del Sol to the east, Fry Boulevard to the north, and Snyder Boulevard to the south. Note that Ft. Huachuca is part of a very large census tract. Employment data at a more refined level (e.g., block or block group) is not yet available. As such, employment density appears to be very low on Ft. Huachuca when in fact there are a large number of employees on Ft. Huachuca.

Cochise College

Cochise College represents another significant traffic generator in the City of Sierra Vista. Cochise College draws students from both within and outside the City from Cochise, Santa Cruz, and Pima counties. **Table 6** lists the number of students that attend the Sierra Vista campus of Cochise College by their residential zip code.

Table 6. Cochise College Students by Home Zip Code

Zip Code	City	Number of Students from Zip Code that attend Cochise College, Sierra Vista Campus
85602	Benson	43
85603	Bisbee	53
85607	Douglas	48
85608	Douglas	5
85610	Elfrida	8
85611	Elgin	13
85613	Fort Huachuca	74
85615	Hereford/Palominas	226
85616	Huachuca City	111
85617	McNeal	13
85620	Naco	9

[4] 2006-2010 American Community Survey 5-Year Estimates, C24060: OCCUPATION BY CLASS OF WORKER FOR THE CIVILIAN EMPLOYED POPULATION 16 YEARS AND OVER - Universe: Civilian employed population 16 years and over

Zip Code	City	Number of Students from Zip Code that attend Cochise College, Sierra Vista Campus
85621	Nogales	12
85624	Patagonia	2
85625	Pearce	5
85626	Pirtleville	4
85630	Saint David	17
85635	Sierra Vista	956
85636	Sierra Vista	33
85637	Sonoita	3
85638	Tombstone	25
85641	Vail	6
85643	Willcox	13
85648	Rio Rico	4
85650	Sierra Vista	378
85670	Fort Huachuca	5
85710	Tucson	2
85748	Tucson	2
85756	Tucson	2

Commuting Trends

The aggregate number of vehicles used in commute is shown in **Figure 7**.[5] The areas with the largest number of vehicles used in commute trips is south of Busby Drive.

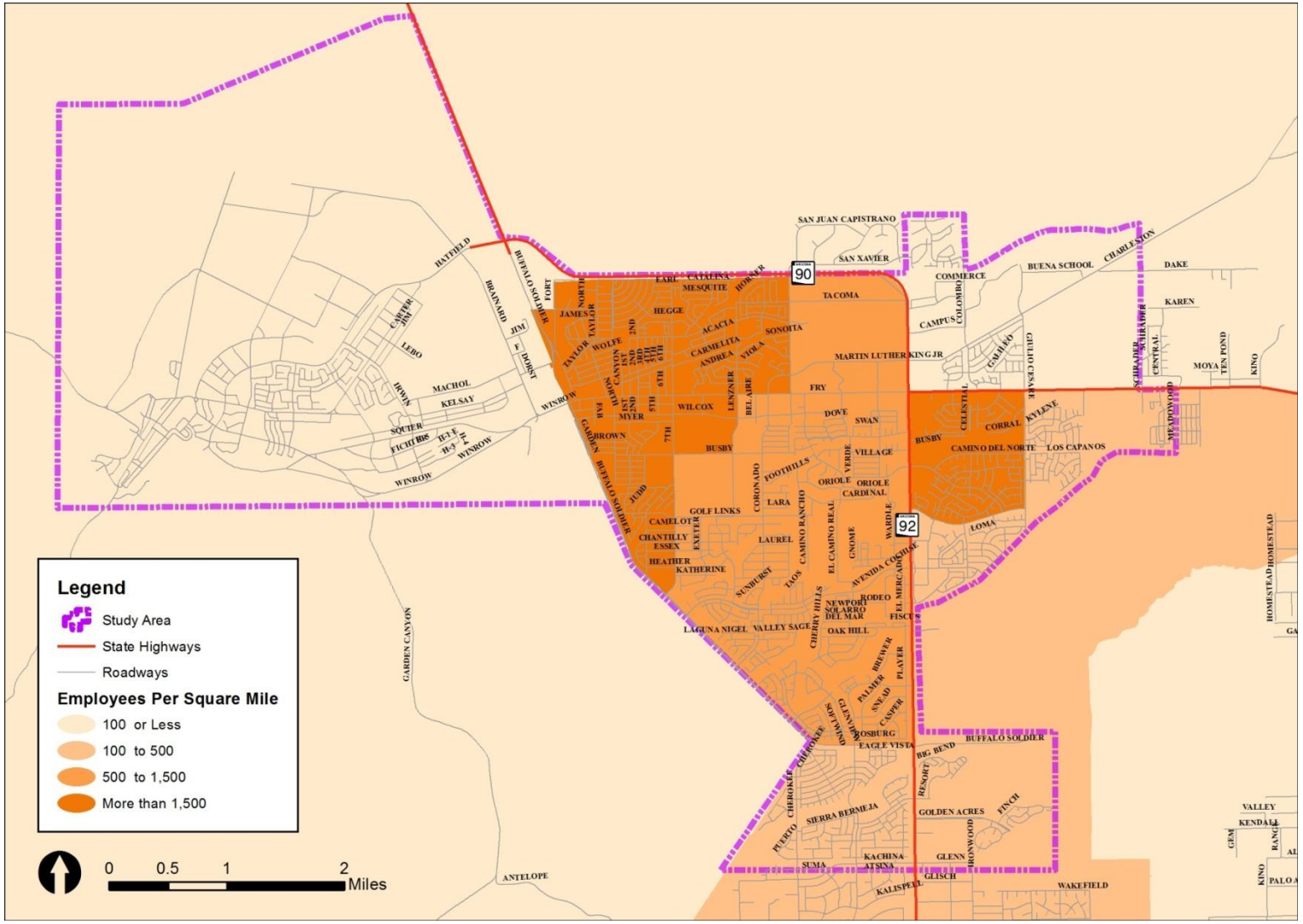
4.2 Existing Land-Use

The City of Sierra Vista has five land-use categories according to the Vista 2020 General Plan: residential, commercial, industrial, public, and open space. Residential land-uses are divided according to density. There are low-, medium-, and high-density residential area districts, each allowing for a certain number of dwelling units per acre. Commercial land-use category is divided into subcategories that include different types of commercial use and intensities. These subcategories are general commercial (GC), limited commercial (LC), office professional (OP), and neighborhood convenience (NC). Similarly, the industrial land-use category is also divided into subcategories of light industrial (LI), heavy industrial (HI), and industrial park (IP). Public land-uses include uses such as government facilities (city and county buildings), school sites, and city parks and recreation facilities. The open space land-use category identifies those lands that are precluded from development.

[5] 2006-2010 American Community Survey 5-Year Estimates, B08015: AGGREGATE NUMBER OF VEHICLES (CAR, TRUCK, OR VAN) USED IN COMMUTING BY WORKERS 16 YEARS AND OVER BY SEX - Universe: Workers whose means of transportation is car, truck, or van

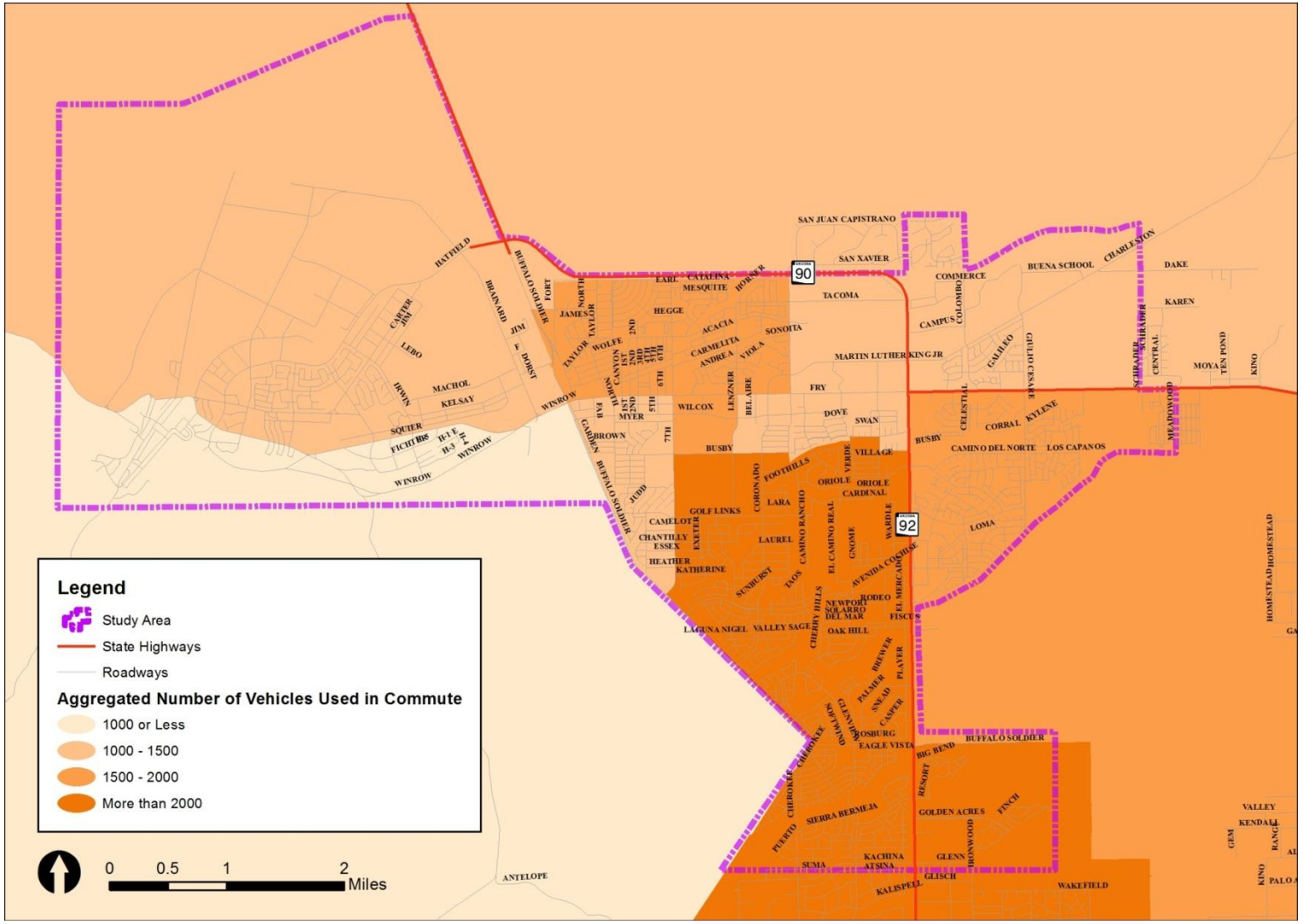
According to the Vista 2020 General Plan, the majority of commercial and high-density residential land-uses are focused along Fry Boulevard, SR 92, and SR 90. Low-density residential areas are located in the northern part of the City, north of SR 90, and the southeastern part of the City. There are also low-density residential areas around Golf Links Drive between 7th Street and SR 92 and from Busby Drive to Avenida Cochise. Public and open space land-uses are scattered throughout the City, but are mostly found in the northern portions. **Figure 8** depicts the land-use categories for the City of Sierra Vista as presented in the Vista 2020 General Plan.

Figure 6. Employment Density



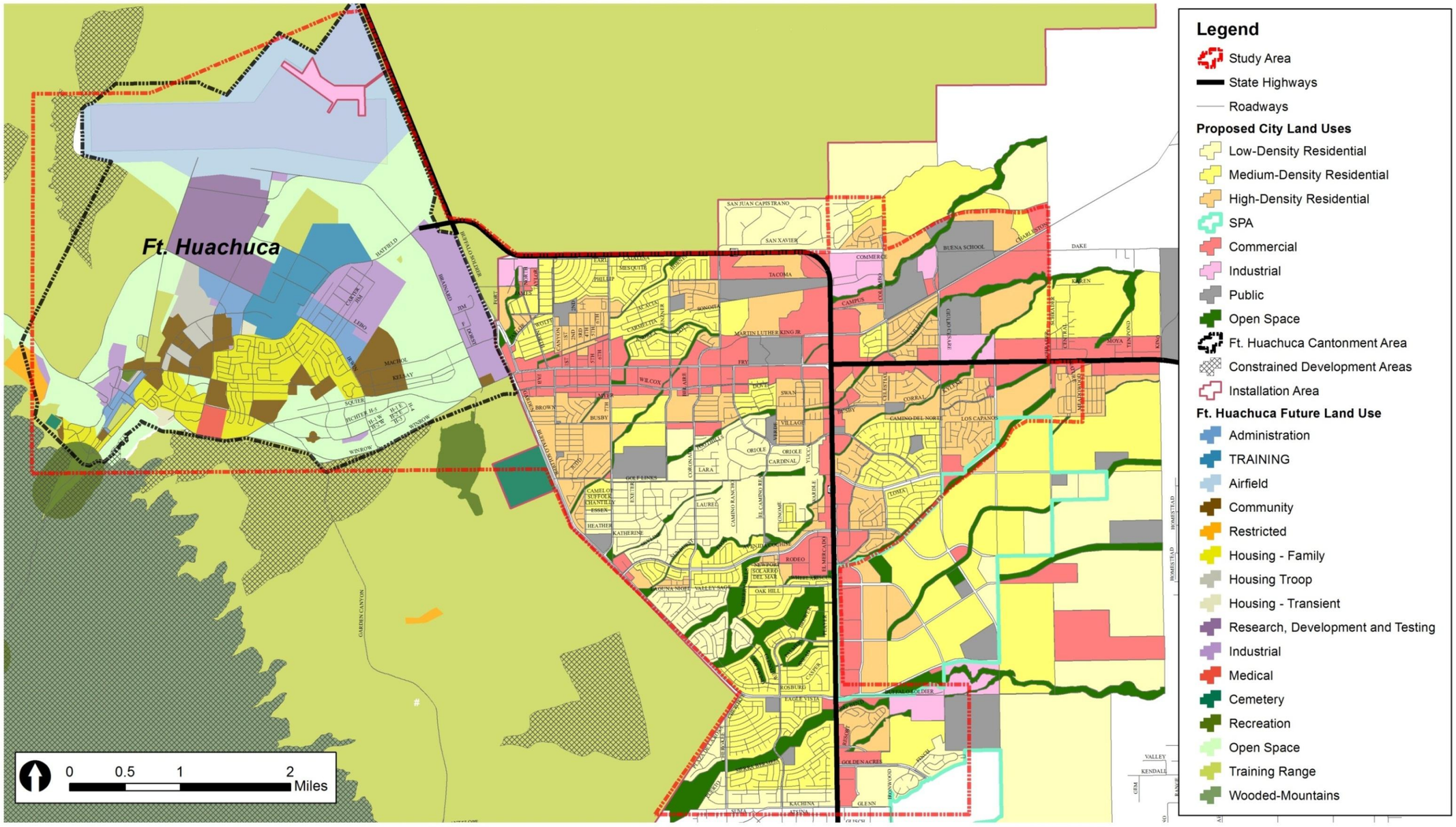
Source: U.S. Census, 2010

Figure 7. Aggregated Number of Vehicles Used in Commute



Source: U.S. Census, 2010

Figure 8. Land Uses



Source: City of Sierra Vista

4.3 TRANSPORTATION SYSTEM

4.3.1 STREET SYSTEM CHARACTERISTICS

A street inventory is provided in **Table 7**. This inventory provides street segments, lengths and widths, functional classifications, and pavement condition (where available). Roadway classification designations are City of Sierra Vista classifications and not Federal Functional Classifications.

Table 7. Street Inventory

Street	From	To	Through Lanes	Length (feet)	Width (feet)	Pavement Condition	Roadway Classification
Avenida Cochise	Buffalo Soldier Trail	Coronado Dr	2	3,693	56	Fine	Minor Arterial
Avenida Cochise	Coronado Dr	State Highway 92	2	7,780	48	Not available	Prin. Arterial
Avenida Cochise	State Highway 92	Via Riata	2	2,410	46	Not available	Minor Arterial
Avenida Cochise	Via Riata	Camino Montana	2	248	46	Not available	Minor Arterial
Avenida Del Sol	State Highway 90	End of Pavement	2	6,495	48	Coarse	Minor Arterial
Buffalo Soldier Tr N	State Highway 90	Fry Blvd	4	7,362	84	Weathered	Prin. Arterial
Buffalo Soldier Tr S	Fry Blvd	Cherokee Ave	4	10,108	74	Fine	Prin. Arterial
Buffalo Soldier Tr E	Cherokee Ave	State Highway 92	4	14,173	64	Fine	Prin. Arterial
Busby Dr	Carmichael Ave	Seventh St	2	2,615	35	Weathered	Local
Busby Dr	Frontage Rd	Carmichael Ave	2	1,120	24	Weathered	Collector
Busby Dr	Seventh St	Calle Del Norte	2	6,908	32	Coarse	Collector
Busby Dr	State Highway 92	End of Pavement	2	2,122	46	Weathered	Collector
Calle Del Norte	Quail Run Dr	Busby Dr	2	805	32	Not available	Local
Calle Del Norte	Busby Dr	End of Pavement	2	196	32	Not available	Local
Calle Mercancia	Hwy 92	El Mercado Loop	2	232	66	Weathered	Local
Calle Mercancia	Avenida Cochise	Hwy 92	2	2,518	38	Not available	Local
Calle Portal	Quail Run Dr	Fry Blvd	2	2,009	38	Not available	Local
Campus Dr	State Highway 90	Colombo Avenue	2	2,904	25	Weathered	Collector
Carmichael Ave	Nelson Dr	Danser Dr	2	436	18	Fine	Local

Street	From	To	Through Lanes	Length (feet)	Width (feet)	Pavement Condition	Roadway Classification
Carmichael Ave	Danser Dr	School Dr	2	1,919	38	Not available	Local
Carmichael Ave	Tacoma St	Whitton St	2	1,665	42	Coarse	Local
Carmichael Ave	Fry Blvd	Busby Dr	2	2,130	56	Weathered	Collector
Carmichael Ave	Busby Dr	Timothy Lane	2	1,350	30	Weathered	Local
Carmichael Ave	School Dr	Tacoma St	2	482	37	Not available	Local
Charleston Rd	State Highway 90	City Limits	2	12,214	42	Not available	Principal Arterial
Coronado Dr	State Highway 90	Carmelita Dr - End of New Pavement	2	3,287	46	Weathered	Minor Arterial
Coronado Dr	Carmelita Dr	Martin Luther King Dr	2	875	64	Weathered	Minor Arterial
Coronado Dr	Fry Blvd	Wilcox Dr	2	970	62	Fine	Minor Arterial
Coronado Dr	Wilcox Dr	Busby Dr	2	1,687	58	Fine	Minor Arterial
Coronado Dr	Busby Dr	Golf Links Rd	2	3,072	30	Weathered	Minor Arterial
Coronado Dr	Golf Links Rd	Avenida Cochise	2	4,028	62	Weathered	Minor Arterial
Coronado Dr	Avenida Cochise	Buffalo Soldier Trail	2	2,855	69	Fine	Minor Arterial
Coronado Dr	Martin Luther King Dr.	Fry Blvd	2	1,648	64	Weathered	Minor Arterial
El Camino Real	Fry Blvd	Foothills Dr	2	3,918	60	Not available	Collector
El Camino Real	Foothills Dr	End of City Pavement	2	1,732	44	Not available	Collector
First St	Denman Ave.	Fry Blvd	2	700	40	Fine	Local
First St	Theater Dr	Tacoma St	2	608	28	Fine	Local
First St	Fry Blvd	Wilcox Dr	2	743	40	Weathered	Local
First St	Busby Dr	Witt Dr	2	470	30	Weathered	Local
Foothills Dr	Coronado Dr	End of Pavement	2	1,368	44	Coarse	Local
Foothills Dr	El Camino Real	End of City Pavement	2	1,704	44	Weathered	Collector
Foothills Dr	State Highway 92	Snyder Blvd	2	4,785	46	Weathered	Collector

Street	From	To	Through Lanes	Length (feet)	Width (feet)	Pavement Condition	Roadway Classification
Frontage Rd	La Linda Way	Calle Mercancia	2	2,721	28	Weathered	Local
Fry Blvd	Buffalo Soldier Trail	Seventh St	4	4,715	65	Weathered	Minor Arterial
Fry Blvd	Seventh St	State Highway 90/92	4	10,565	65	Weathered	Principal Arterial
Golf Links Rd	Buffalo Soldier Trail	Seventh St	2	2,846	36	Weathered	Local
Golf Links Rd	Seventh St	End of City Pavement	2	5,296	38	Weathered	Collector
Giulio Cesare Ave	Charleston Rd	End of Pavement north	2	2,293	60	Fine	Minor Arterial
Giulio Cesare Ave	State Highway 90	Montebello Sub. Boundary	2	672	50	Weathered	Collector
Giulio Cesare Ave	Montebello Sub Boundary	Charleston Road	2	2,663	64	Weathered	Collector
Las Brisas Way	Lenzner Ave	Coronado Dr	2	2,400	46	Weathered	Local
Las Brisas Way	Coronado Dr	End of Pavement	2	500	68	Weathered	Local
Lenzner Ave	Fry Blvd	Las Brisas	2	3,274	50	Not available	Collector
Lenzner Ave	Las Brisas	Tacoma St	2	791	35	Fine	Collector
Lenzner Ave	Tacoma St	End of Pavement - north	2	724	41	Fine	Collector
Lenzner Ave	Fry Blvd	Busby Dr	2	2,645	48	Not available	Collector
Lenzner Ave	Busby Dr	Golf Links Rd	2	3,070	24	Not available	Collector
Martin Luther King	State Highway 90	Coronado Dr	2	6,031	48	Fine	Minor Arterial
North Garden Ave	Buffalo Soldier Trail	Taylor Dr	2	1,213	51	Weathered	Collector
North Garden Ave	Taylor Dr	Fry Blvd	2	1,348	64	Weathered	Collector
Quail Run Dr	Avenida Escuela	Hwy 92	2	1,160	40	Not available	Local
Quail Run Dr	Calle Del Norte	El Camino Real	2	498	32	-	Local
Quail Run Dr	El Camino Real	Calle Central	2	960	32	Not available	Local

Street	From	To	Through Lanes	Length (feet)	Width (feet)	Pavement Condition	Roadway Classification
Quail Run Dr	Calle Central	Calle Portal	2	860	38	Not available	Local
Quail Run Dr	Calle Portal	Avenida Escuela	2	1,370	24	Not available	Local
Saint Andrews Dr	State Highway 92	Mission Shadows Sub. Boundary	2	2,292	46	Not available	Collector
Saint Andrews Dr	Mission Shadows Sub. Boundary	Buffalo Soldier Trail	2	2,990	46	Not available	Collector
Saint Andrews Dr	Buffalo Soldier Trail	Raven Dr	2	1,570	46	Not available	Collector
Saint Andrews Dr	Raven Dr	Canyon De Flores	2	2,115	52	Not Available	Collector
Saint Andrews Dr	Canyon De Flores Dr	Kachina Trail	2	1,785	52	Not available	Collector
Seventh St	State Highway 90	Fry Blvd	2	5,320	62	Weathered	Minor Arterial
Seventh St	Fry Blvd	Wilcox Dr	2	850	62	Weathered	Minor Arterial
Seventh St	Wilcox	Savannah	2	3,291	63	Weathered	Minor Arterial
Seventh St	Savannah	Golf Links Rd	2	1,395	58	Weathered	Minor Arterial
Seventh St	Golf Links Rd	Buffalo Soldier Tr	2	3,535	62	Weathered	Collector
Snyder Blvd	State Highway 92	Avenida Del Sol	2	5,292	62	Not available	Minor Arterial
Tacoma St	Pfister Ave	Taylor Dr	2	1,212	26	Not available	Local
Tacoma St East	Second St	Third St	2	445	19	Not available	Local
Tacoma St	Taylor Dr	Carmichael Ave	2	680	30	Not available	Local
Tacoma St E	First St	Seventh St	2	1,009	28	Fine	Local
Tacoma St	Seventh St	Lenzner Ave	2	3,014	44	Not available	Local
Tacoma St	Lenzner Ave	Coronado Dr	2	2,335	35	Fine	Local
Tacoma St	Coronado Dr	End of Pavement	2	3,977	38	Not available	Collector
Theatre Dr	Carmichael Ave	First St	2	704	40	Coarse	Local
Town And Country Dr	Golf Links Rd	Picadilly Dr	2	3,084	40	Not available	Local
Town And Country Dr	Picadilly Dr	Avenida Cochise	2	1,065	44	Weathered	Local

Street	From	To	Through Lanes	Length (feet)	Width (feet)	Pavement Condition	Roadway Classification
Via Riata	Snyder Blvd	Avenida Cochise	2	1,938	46	Coarse	Collector
Via Riata	Avenida Cochise	Calle Chico	2	430	46	Coarse	Local
Via Riata	Paseo Arruza	Snyder Blvd	2	278	34	Not available	Local
Wilcox Dr	Buffalo Soldier Tr	Seventh St	2	5,018	46	Weathered	Minor Arterial
Wilcox Dr	Seventh St	Lenzner Ave	2	2,971	46	Fine	Minor Arterial
Wilcox Dr	Lenzner Ave	Coronado Dr	2	1,482	46	Fine	Minor Arterial
Wilcox Dr	Coronado Dr	El Camino Real	2	1,600	47	Weathered	Minor Arterial
Wilcox Dr	El Camino Real	Calle Portal	2	1,762	38	Not available	Collector
Source: City of Sierra Vista							

4.3.2 SHARED-USE PATH SYSTEM

Sierra Vista has an extensive shared-use path system. Shared-use paths exist at the following locations:

- Buffalo Soldier Trail from SR 90 Bypass to SR 92 (discontinuous).
- Lenzner Avenue from Town and Country Elementary to Wilcox Drive.
- Coronado Drive from Martin Luther King Parkway to Tacoma Street.
- Coronado Drive from SR-90 Bypass to just south of Carmelita Drive.
- Martin Luther King Parkway from Coronado Drive to SR 90 Bypass.
- Snyder Boulevard from Avenida Del Sol to SR 92.

- Snyder Boulevard from Via Riata to Avenida Del Sol (south side).
- Avenida Cochise from SR 92 to Coronado Drive.
- Cherokee Avenue, from Kachina Trail to Ramsey Canyon Road.
- Charleston Road, from Colombo Drive to Giulio Cesare Avenue.

On state routes, shared-use paths are located:

- SR 90 Bypass from Buffalo Soldier Trail to 7th Street.
- SR 90 Bypass from Charleston to Campus Drive.
- SR 90 from SR 90 Bypass to Colonia De Salud.
- SR 92 from SR 90 to Buffalo Soldier Trail (discontinuous).

Wash and park shared-use paths are located at:

- Eddie Cyr Park Loop (0.5 mile path).
- Soldier's Creek Park (0.7 mile path).
- Len Roberts Park (0.4 mile path).
- Tompkins Park (0.6 mile path).
- Coronado Crossings Trail (1.0 mile path).
- Woodcutters Linear Park (0.9 mile path).

Existing shared-use paths and bicycle facilities are shown in relation to major employers in **Figure 9**.

4.3.3 EXISTING BICYCLE FACILITIES

Sierra Vista offers bicyclists of all abilities a variety of facilities including:

- **Shared-use paths:** these are paved paths 8 feet to 12 feet wide which are separated from the street. These paths, which are shared with walkers, are suitable for slower bicycle speeds.
- **Bike lanes:** bike lanes are located on major streets with white edge line, 4 feet to 10 feet wide paved shoulder, and a speed limit of 25 mph or more.
- **Shared roadway:** selected bikeable streets with maximum speed limit of 35 mph for vehicles.
- **Key connecting streets:** streets that provide connectivity on popular recreational or commuting routes. May be appropriate for confident riders.

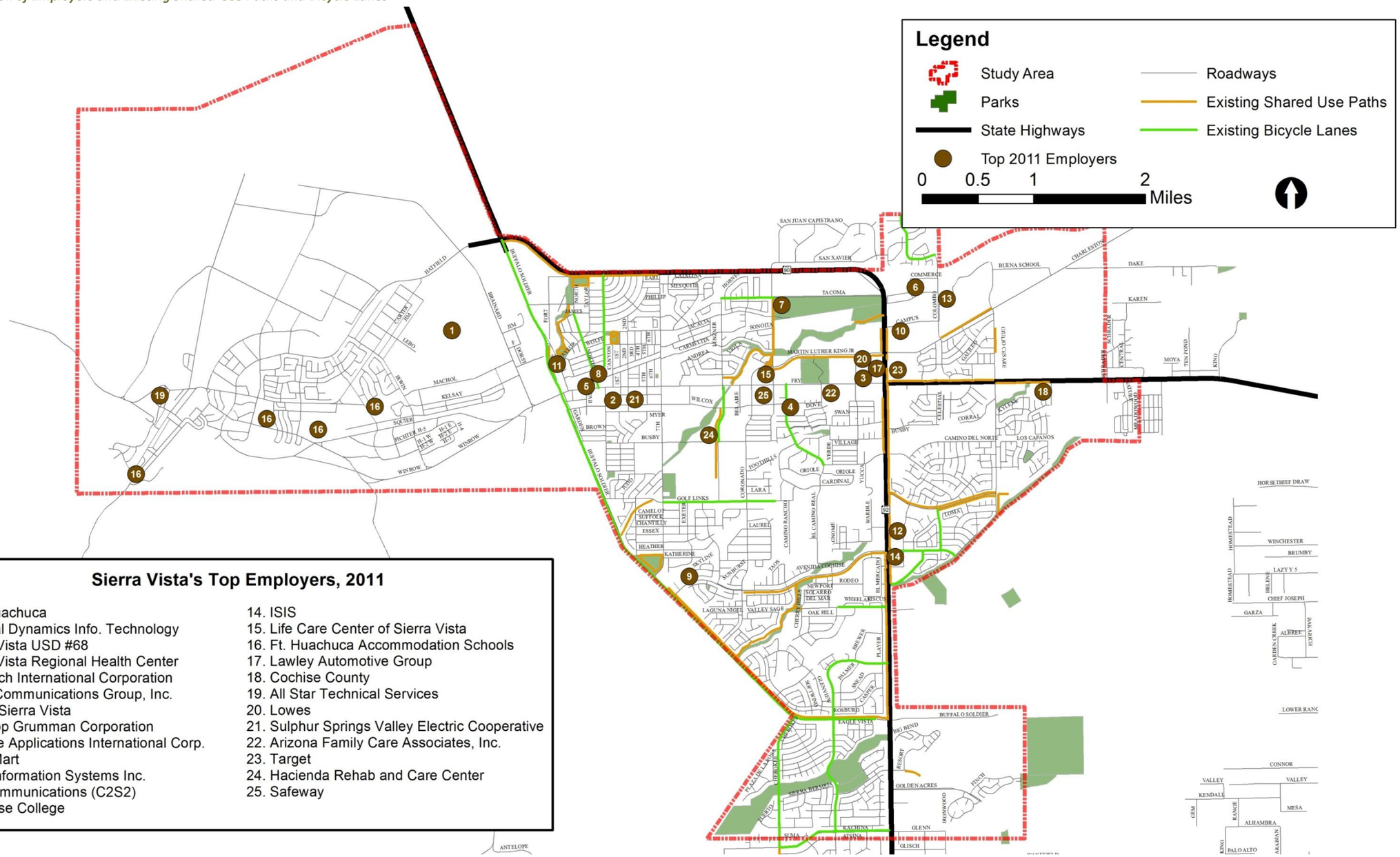
Existing bicycle routes and their location with respect to major employers are shown on **Figure 9**. **Figure 10** shows employment locations within a one quarter mile radius of bicycle facilities. **Figure 11** shows employment locations within a one quarter mile radius of shared-use paths.

4.3.4 IMPLICATIONS FOR TRP STRATEGIES

As part of this effort, an analysis was conducted to determine which major employment sites are connected to bicycle facilities and which are not. Employment sites which are not connected do not have a designated bicycle facility (shared-use paths for bicycle lanes) within a quarter mile of the site.

There are a number of major employers located on Fry Boulevard which do not have nearby access to bicycle lanes or shared-use paths between Buffalo Soldier Trail and SR 92. Additionally, there are employers north of Charleston and east of SR 90 who are not serviced by bicycle lanes, shared-use paths, or transit. Providing multimodal facilities on Fry Boulevard and in the area east of SR 90 and north of Charleston would enhance options for reducing work trips by SOV's.

Figure 9. Location of Employers and Existing Shared-Use Paths and Bicycle Lanes

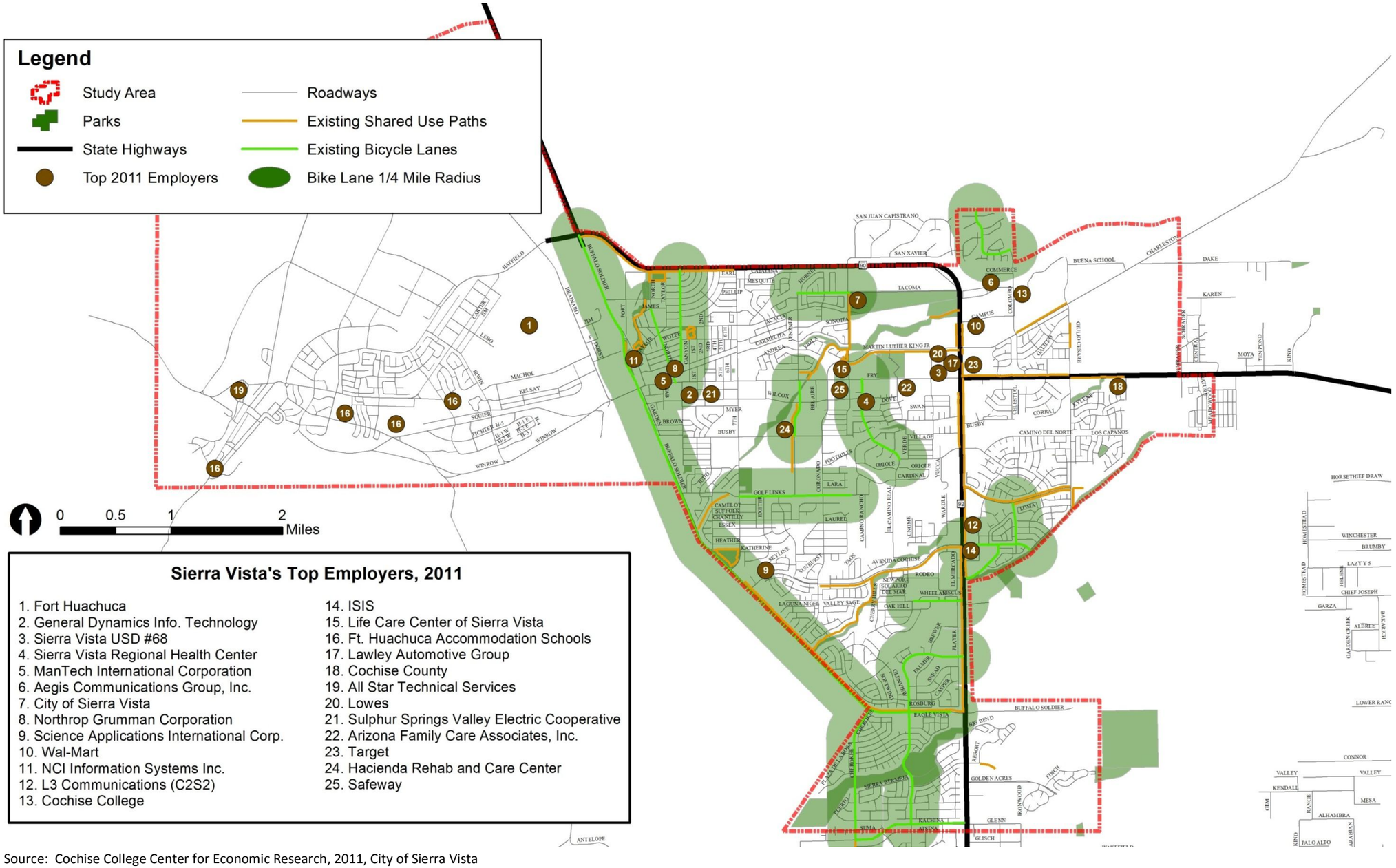


Sierra Vista's Top Employers, 2011

1. Fort Huachuca
2. General Dynamics Info. Technology
3. Sierra Vista USD #68
4. Sierra Vista Regional Health Center
5. ManTech International Corporation
6. Aegis Communications Group, Inc.
7. City of Sierra Vista
8. Northrop Grumman Corporation
9. Science Applications International Corp.
10. Wal-Mart
11. NCI Information Systems Inc.
12. L3 Communications (C2S2)
13. Cochise College
14. ISIS
15. Life Care Center of Sierra Vista
16. Ft. Huachuca Accommodation Schools
17. Lawley Automotive Group
18. Cochise County
19. All Star Technical Services
20. Lowes
21. Sulphur Springs Valley Electric Cooperative
22. Arizona Family Care Associates, Inc.
23. Target
24. Hacienda Rehab and Care Center
25. Safeway

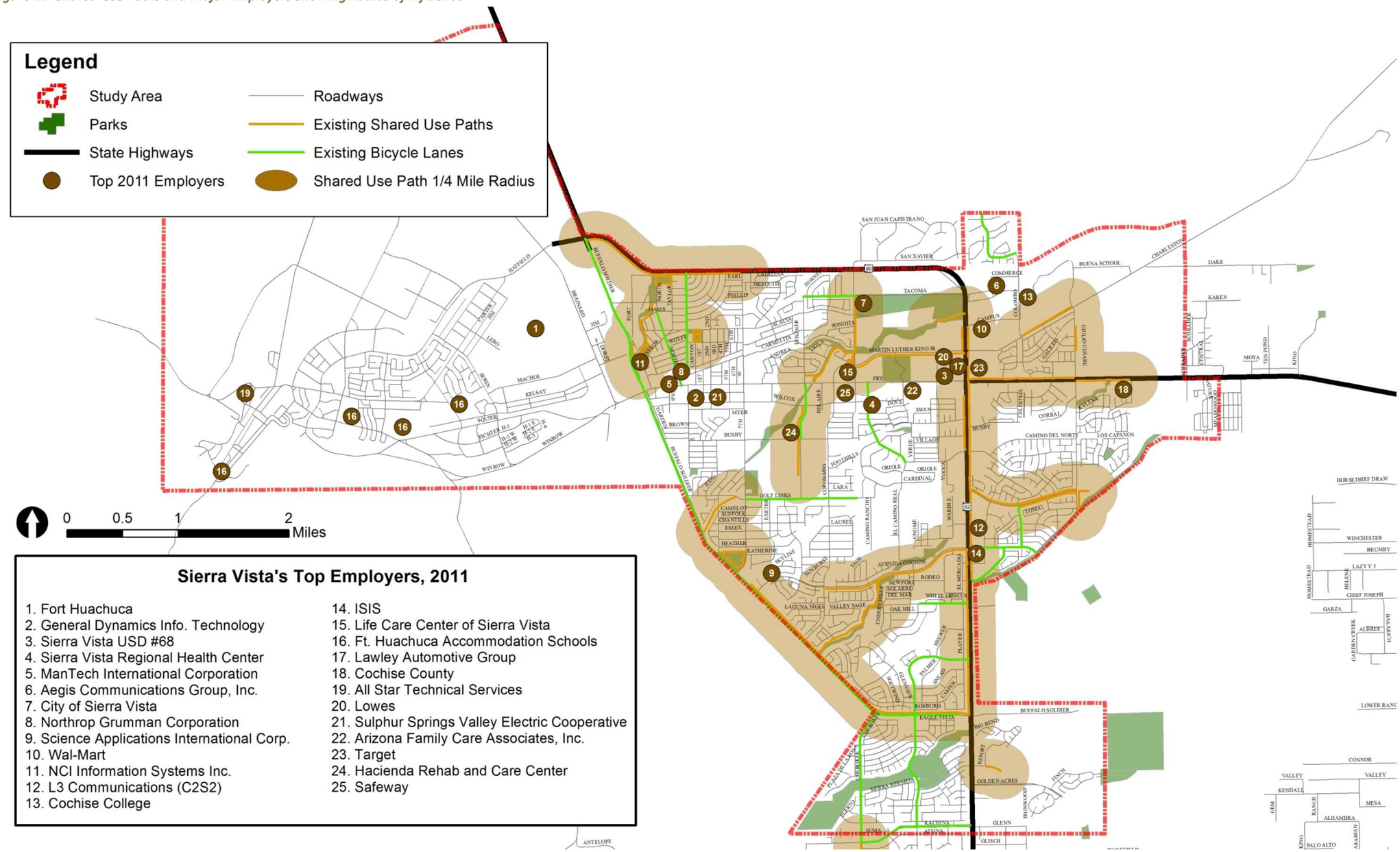
Source: Cochise College Center for Economic Research, 2011, City of Sierra Vista

Figure 10. Bicycle Facilities and Major Employers Showing Radius of Influence



Source: Cochise College Center for Economic Research, 2011, City of Sierra Vista

Figure 11. Shared-Use Paths and Major Employers Showing Radius of Influence



Source: Cochise College Center for Economic Research, 2011, City of Sierra Vista

4.4 TRANSIT SERVICE

Vista Transit is the public transit service in Sierra Vista. Vista Transit operates six fixed routes and a fleet of 13 vehicles in the City of Sierra Vista, including Fort Huachuca, as well as a paratransit service for people with disabilities. It is supported by FTA Section 5311 program funds and City general funds. Most routes operate Monday through Friday with service to various locations within the City limits. Weekday service is not provided to Fort Huachuca. There is one route that operates on Saturday that services Fort Huachuca. All routes converge at the Transit Center located at Wilcox Drive and Coronado Drive, where passengers can transfer to other routes. The City does not have any park-and-ride lots where people can travel to, park their personal vehicles, and take transit to finish their journey.

Fares for riding Vista Transit vary for different types of passengers.

- **Regular passengers** – basic, full ticket price passengers.
- **Senior citizens** – 65 years or older.
- **Citizens with disabilities**.
- **Students** – kindergarten through college.
- **Curbside-to-curbside service** – ADA Paratransit service.
- **Transfers/promotional rides** – children under five years of age, caregivers, transfer riders (no fare collected for these passengers).

Table 8 lists the fares for the Vista Transit system, which became effective on July 1, 2010.

Table 8. Base Fares

Ridership Type	Fare
Daily	
Regular Passengers	$1.25
Senior Citizens	$0.75
Citizens with Disabilities	$0.75
Students	$0.75
Curbside-to-Curbside Service	$2.00
Monthly	
Regular Passengers	$40.00

Ridership Type	Fare
Senior Citizens	$24.00
Citizens with Disabilities	$24.00
Students	$24.00
Book of 20 Tickets	
Regular Passengers	$25.00
Senior Citizens	$15.00
Citizens with Disabilities	$15.00
Students	$15.00
Curbside-to-Curbside Service	$40.00

Source: City of Sierra Vista, Vista Transit

4.4.1 BUS ROUTES AND STOPS

Table 9 summarizes the bus routes and stops for Vista Transit. Ridership data for the stops along each of the transit routes was collected by the bus drivers and then entered into a central database.

Table 9. Bus Route and Stop Inventory

Route	Stop Number	Location	Annual Number of Boarding Passengers*
1 – Westside (Runs every 30 minutes between 7am and 6pm)	1	Transit Center	4,136
	2	DES	2,384
	3	Quail Hollow/7th	3,831
	4	Hegge/7th	1,365
	4a	St. Andrew's Church	Data is unavailable
	5	North/Taylor	Data is unavailable
	6	N. Garden	5,006
	7	N. Garden/Whitton	
	8	Bartow/Carmichael	1,574
	9	2nd St./Wilcox	1,762
	10	Carmichael/Wilcox	4,203
	11	Busby/Carmichael	2,033
	12	Busby/7th	1,651
	Total Annual Passengers for Route 1		*27,946*
2 – Eastside (Runs every 30 minutes between 7am and 6pm)	1	Hospital	1,413
	2	Calle Portal/Fry	1,363
	3	Cloud 9	2,228
	4	County Probation/HWY 90	2,020
	5	Pete Castro Center	1,203
	6	Giulio Cesare/Charleston	333
	7	Cochise College	3,300
	8	San Pedro Apartments	1,610
	9	Transit Center	2,790
	Total Annual Passengers for Route 2		*16,260*
3 – Central Shopper (Runs every 30 minutes between 7am and	1	Safeway	2,198
	2	Hastings	1,414
	3	Food City	3,335

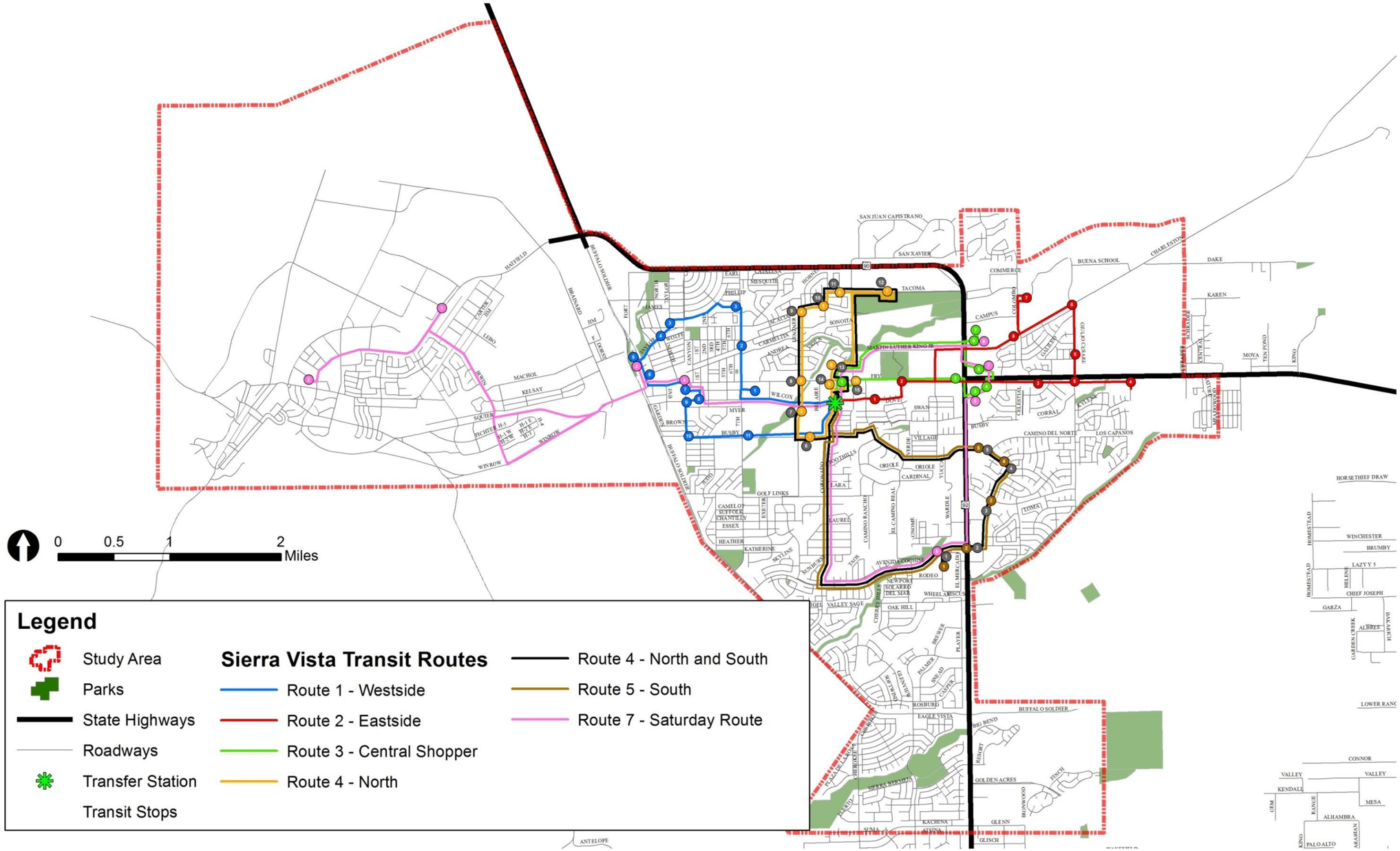
Route	Stop Number	Location	Annual Number of Boarding Passengers*
6pm)	4	Fry's	2,483
	5	Target	790
	6	Ross	1,755
	7	Wal-Mart	5,211
	8	Transit Center	3,445
	Total Annual Passengers for Route 3		*20,730*
4 & 5 – North and South			
4 – North (Runs every 30 minutes between 10am and 3pm. It is combined with the South Route between 7am and 10am and between 3pm and 6pm. When the route is combined it runs every hour)	6	Bonita Apartments	1,008
	7	Montego Bay Apartments	707
	8	S. Lenzner/Fry	403
	9	N. Lenzner/Tacoma	542
	10	Las Brisas	428
	11	Library	1,658
	12	EBC	561
	13	Kmart	615
	14	Safeway	2,011
	15	Moorman	22
	16	Transit Center	4,252
	Miscellaneous Stops Along the Route		492
	Total Annual Passengers for Route 4 and 5		*20,995*
5 – South (Runs every 30 minutes between 10am and 3pm. It is combined with the North Route between 7am and 10am and between 3pm and 6pm. When the route is combined it runs every hour)	1	Mall at Sierra Vista	3,652
	2	Avenida Cochise/HWY 92	739
	3	Paseo San Luis/Snyder	1,911
	4	Foothills/Las Palmas	413
	5	Foothills County Complex	1,581
7 – Military Intelligence Village (Runs every 30 minutes between 10:30am and 6pm on Saturdays only. There is no stop at N. Garden, stop #3, after 2:45pm)	1	Prosser Village	2,123
	2	PX	762
	3	North Garden	315
	4	Carmichael/Bartow	Data is unavailable
	5	Mall at Sierra Vista	818
	6	Food City	311
	7	Target	175
	8	Wal-Mart	330
	9	Transit Center	611
	Total Annual Passengers for Route 7		5,445

*Refers to boarding passengers and excludes transfers. Transfers skew the data because they are counted multiple times so they were excluded from the total number of passengers.
Source: City of Sierra Vista, Vista Transit

It should be noted that Route 4 (north route) and Route 5 (south route) are intertwined. Starting at 7am, the Route 4 driver covers both Route 4 and 5. At 10am the north and south routes split so that Route 4 and Route 5 are separate, with two separate drivers. At 3pm, the two routes are combined again, but the Route 5 driver is covering the whole north and south route.

The transit routes and stop locations are shown in **Figure 12**.

Figure 12. Transit Route and Stop Locations



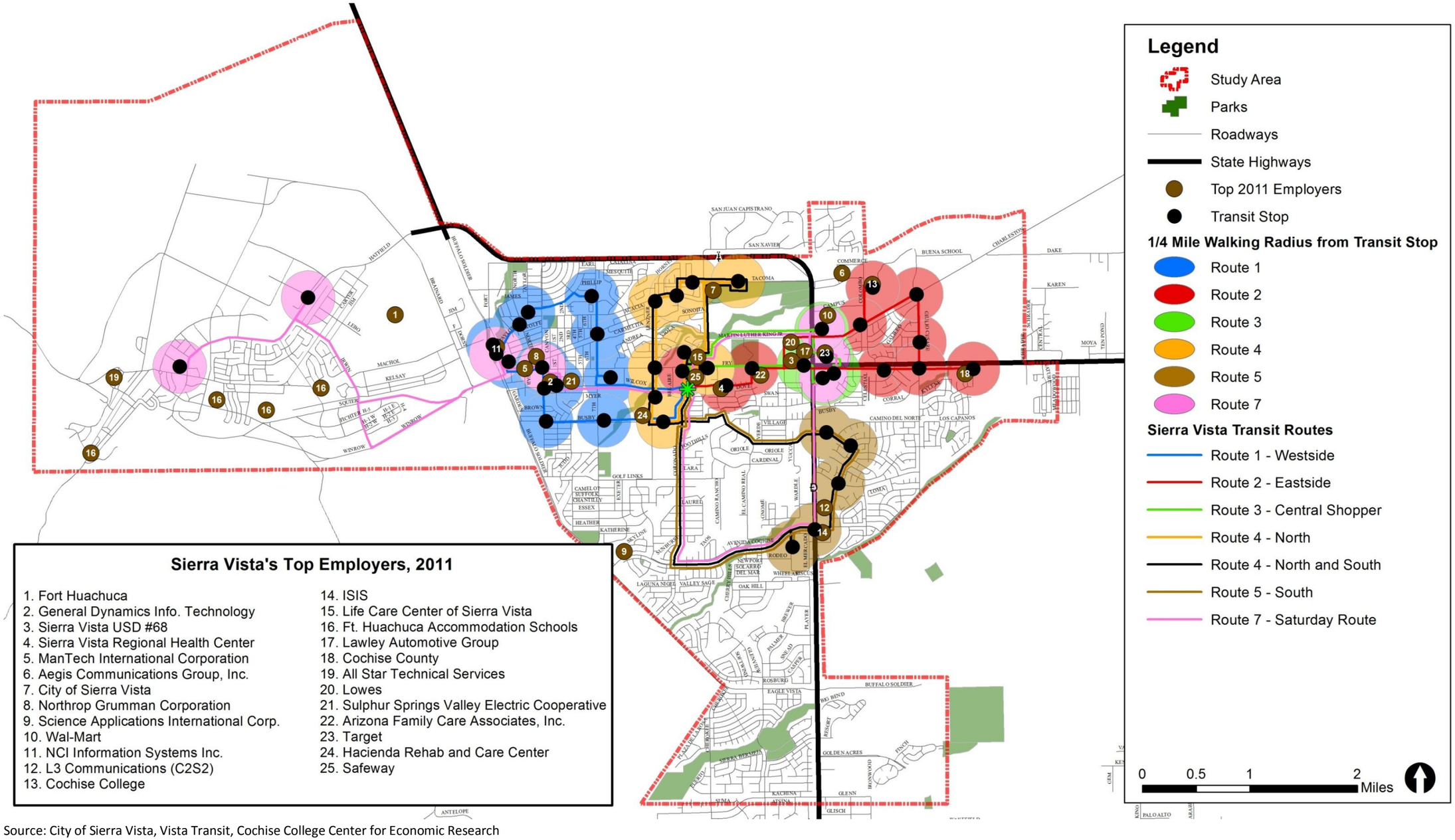
Source: City of Sierra Vista, Vista Transit

Proximity of Routes and Bus Stops to Major Employers

The walking distance to bus stops plays a role in determining whether or not to utilize transit. Most people will walk approximately one quarter mile, which equates to a five-minute walk at an average speed of three miles per hour, to a bus stop. To demonstrate which employers are served by transit and are within a comfortable walking distance from a transit stop, a walking radius of a quarter mile (five-minute walk) was applied around each bus stop, as shown in **Figure 13**. The walking radii are color-coded based on the transit route.

It should be noted that even though employers may fall within the quarter mile walking radius of a bus stop (or multiple stops), people are less inclined to walk even short distances if it is not a comfortable walk. Elements that help create a comfortable walk include pedestrian facilities such as sidewalks and lighting. Without room to walk or a feeling of security, people will opt to drive their personal vehicles rather than experience a certain level of discomfort. Connecting pedestrian facilities to the transit stops and employers can encourage more people to ride the transit system as opposed to using their personal vehicles to get to work.

Figure 13. Transit Route and Stop Locations with Quarter Mile Walking Radius



Sierra Vista's Top Employers, 2011

1. Fort Huachuca
2. General Dynamics Info. Technology
3. Sierra Vista USD #68
4. Sierra Vista Regional Health Center
5. ManTech International Corporation
6. Aegis Communications Group, Inc.
7. City of Sierra Vista
8. Northrop Grumman Corporation
9. Science Applications International Corp.
10. Wal-Mart
11. NCI Information Systems Inc.
12. L3 Communications (C2S2)
13. Cochise College
14. ISIS
15. Life Care Center of Sierra Vista
16. Ft. Huachuca Accommodation Schools
17. Lawley Automotive Group
18. Cochise County
19. All Star Technical Services
20. Lowes
21. Sulphur Springs Valley Electric Cooperative
22. Arizona Family Care Associates, Inc.
23. Target
24. Hacienda Rehab and Care Center
25. Safeway

Source: City of Sierra Vista, Vista Transit, Cochise College Center for Economic Research

Table 10 summarizes the information presented in **Figure 13** and lists which transit routes and stops service the top 25 employers in Sierra Vista. As some comments in **Table 10** will state, there are some stops that are counted as one. This is because multiple routes often utilize the same stops. Therefore, some employers are serviced by two transit routes, but one stop location near their place of business. For the purpose of determining how many stops are near a business, stops that are used by multiple routes were only counted once in **Table 10**.

Table 10. Transit Routes and Stops Servicing the Top 25 Employers in Sierra Vista

Rank	Employer	Route(s) Servicing Employer	Number of Stops within Quarter Mile of Employer Location	Stops Servicing Employer	Comments
1	Fort Huachuca	None	0	n/a	Transit Route 7 services Fort Huachuca, primarily serving soldiers and students (not employees). This route only runs on Saturdays and the stops (1 and 2) are located near student and soldier residential areas and the PX.
2	General Dynamics Information Technology	Routes 1 and 7	3	Route 1, Stop 7 Route 1, Stop 8 Route 1, Stop 9 Route 7, Stop 4	Route 1, Stop 7 utilizes the same stop location as Route 7, Stop 4; therefore, they are counted as one stop.
3	Sierra Vista Unified School District #68	Routes 2 and 3	1	Route 2, Stop 2	
4	Sierra Vista Regional Health Center	Route 2	1	Route 2, Stop 1	
5	ManTech International Corporation	Routes 1 and 7	2	Route 1, Stop 6 Route 1, Stop 7 Route 7, Stop 4	Route 1, Stop 7 and Route 7, Stop 4 utilize the same stop location; therefore, they are counted as one stop.

Rank	Employer	Route(s) Servicing Employer	Number of Stops within Quarter Mile of Employer Location	Stops Servicing Employer	Comments
6	Aegis Communications Group, Inc.	None	0	n/a	
7	City of Sierra Vista	Route 4	2	Route 4, Stop 6 Route 4, Stop 7	After 10am, the stop numbers are 11 and 12, respectively. The City building is at the edge of the quarter mile walking radius from both stops.
8	Northrop Grumman Corporation	Routes 1 and 7	1	Route 1, Stop 7 Route 7, Stop 4	Route 1, Stop 7 and Route 7, Stop 4 are the same stop location; therefore, they are counted as one stop.
9	Science Applications International Corp.	None	0	n/a	
10	Wal-Mart	Routes 3 and 7	2	Route 3, Stop 6 Route 3, Stop 7 Route 7, Stop 8	Route 3, Stop 6 and Route 7, Stop 8 utilize the same stop location; therefore, they are counted as one stop.
11	NCI Information Systems, Inc.	Routes 1 and 7	3	Route 1, Stop 5 Route 1, Stop 6 Route 7, Stop 3	
12	L3 Communications (C2S2)	Routes 4 and 5	2	Routes 4 and 5, Stop 2 Routes 4 and 5, Stop 3	After 10am, Route 4 utilizes the same stops as Route 5; therefore, they are counted together. L3 is on the edge of the quarter mile walking radius from both stops.

Rank	Employer	Route(s) Servicing Employer	Number of Stops within Quarter Mile of Employer Location	Stops Servicing Employer	Comments
13	Cochise College	Route 2	1	Route 2, Stop 7	
14	ISIS	Routes 4 and 5	1	Routes 4 and 5, Stop 2	After 10am, Route 4 utilizes the same stops as Route 5; therefore, they are counted as one stop.
15	Life Care Center of Sierra Vista	Route 4	3	Route 4, Stop 8 Route 4, Stop 9 Route 4, Stop 10	After 10am, the stop numbers are 13, 14, and 15, respectively.
16	Fort Huachuca Accom. Schools	None	0	n/a	
17	Lawley Automotive Group	Routes 3 and 7	2	Route 3, Stop 2 Route 3, Stop 5 Route 7, Stop 7	Route 3, Stop 5 and Route 7, Stop 7 utilize the same stop location; therefore, they are counted as one stop.
18	Cochise County	Route 2	1	Route 2, Stop 4	
19	All Star Technical Services	None	0	n/a	
20	Lowe's	Routes 2, 3, and 7	1	Route 3, Stop 2	Lowe's is on the edge of the quarter mile walking radius from Route 3, Stop 2.

Rank	Employer	Route(s) Servicing Employer	Number of Stops within Quarter Mile of Employer Location	Stops Servicing Employer	Comments
21	Sulphur Springs Valley Electric Cooperative	Route 7	2	Route 1, Stop 8 Route 1, Stop 9	Even though Route 7 passes this business, there are no stops on Route 7 that service it. However, the quarter mile walking radii from the two Route 1 stops encompass the business. Sulphur Springs is on the edge of the quarter mile walking radius from Route 1, Stop 9.
22	Arizona Family Care Associates, Inc.	Routes 2 and 3	1	Route 2, Stop 2	
23	Target	Routes 3 and 7	1	Route 3, Stop 5 Route 7, Stop 7	Both routes utilize the same stop location; therefore, they are counted as one stop.
24	Hacienda Rehab and Care Center	Route 4	2	Route 4, Stop 1 Route 4, Stop 2	After 10am, the stop numbers are 6 and 7, respectively.
25	Safeway	Routes 4 and 3	1	Route 4, Stop 9 Route 3, Stop 1	After 10am, the Route 4 stop is number 14. Both routes utilize the same stop location and therefore are counted as one stop.
Source: City of Sierra Vista, Vista Transit					

As the table on the previous pages show, most employers in Sierra Vista are serviced by multiple transit routes and at least one stop. Out of the top 25 employers, five employers are not serviced by transit.

4.4.2 COMPOSITION OF RIDERSHIP

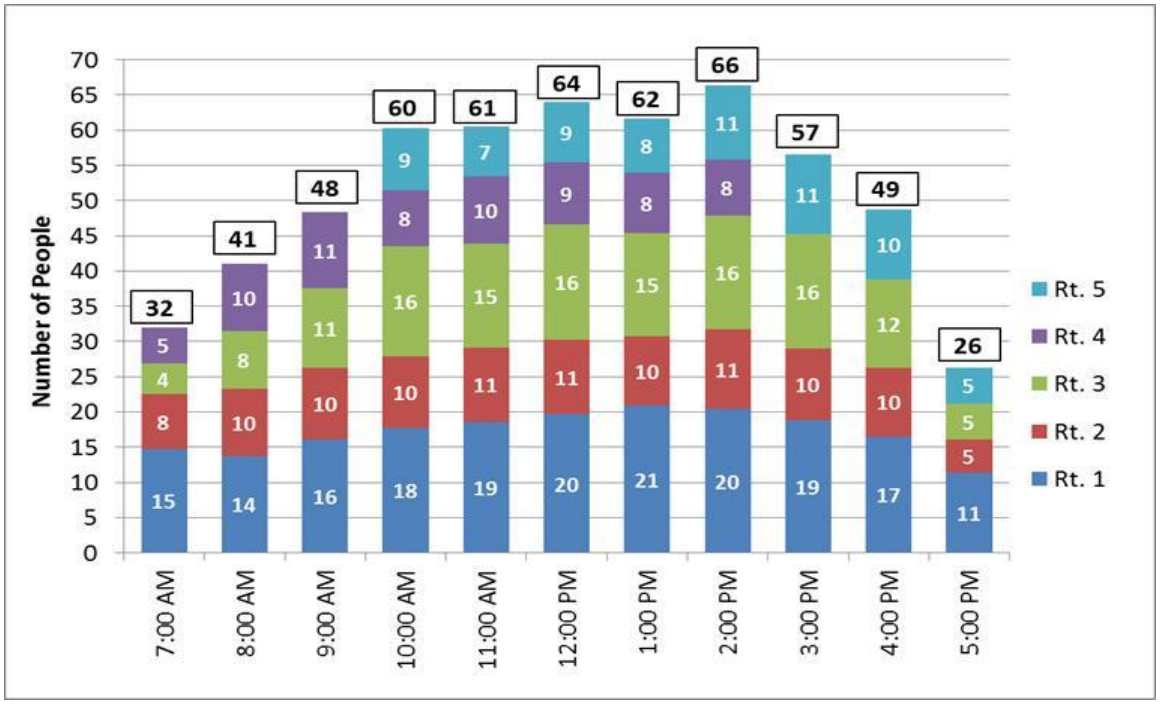
During their routes, bus drivers keep track of how many riders board the bus and the types of riders at each stop. **Table 11** presents ridership data collected between the beginning of October 2010 and the end of September 2011. Route 1 carries the most passengers with 190 daily passengers and 49,023 annual passengers. **Figure 14** illustrates the daily ridership for each hour and each route.

Table 11. Daily and Annual Ridership by Route

Route	Daily Number of Passengers	Annual Number of Passengers 2010/2011
Route 1	190	49,023
Route 2	106	27,238
Route 3	134	35,116
Route 4	69	17,742
Route 5	70	18,007
Daily Total	*569*	--
Annual Total	--	*147,126*

Source: City of Sierra Vista, Vista Transit

Figure 14. Average Daily Ridership by Time of Day



Source: City of Sierra Vista, Vista Transit

As **Figure 14** illustrates, the peak hour for the transit system is at 2pm with 66 riders. Ridership tapers off at 5pm with 26 riders. It should be noted that Route 5 shows no riders until 10am because it is combined with Route 4 until 10am. Similarly, Route 4 ends after 2 pm and becomes part of Route 5.

Table 12 lists passengers by passenger type on each route for the period between October 2010 and September 2011. The majority of transit riders are transfers with over 62,000 riders annually, followed by the basic rider, with over 43,000 riders annually. **Figure 15** depicts the percentage of passenger types using the Vista Transit system.

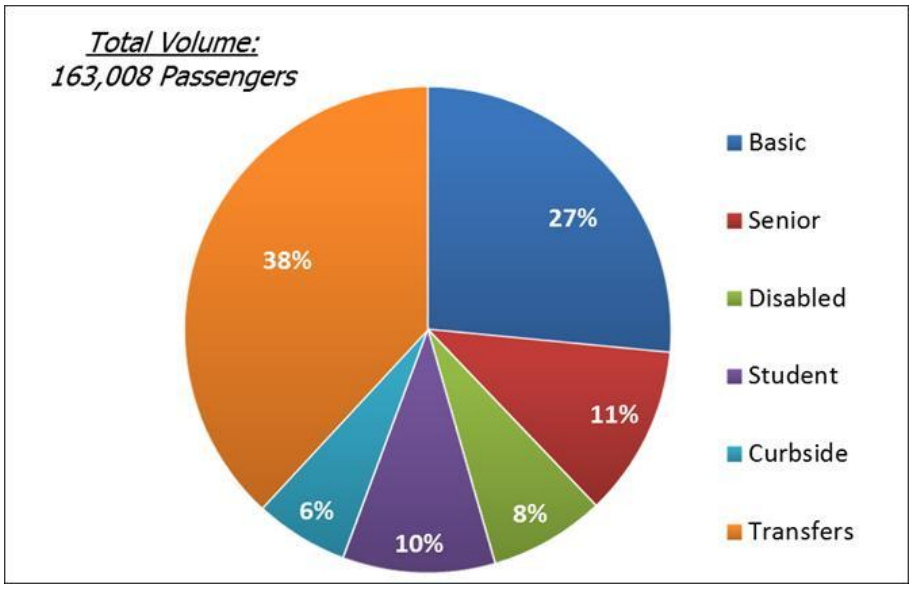
Table 12. Annual Passenger Type by Route (2010/2011)

Passenger Type	Route 1	Route 2	Route 3	Route 4	Route 5	Route 7	Para-transit Route 1	Para-transit Route 2	Para-transit Route 3	Total
Basic	16,005	6,269	9,799	3,551	3,268	4,151	45	34	43	**43,165**
Senior	5,085	1,892	5,071	3,780	2,275	354	6	0	7	**18,470**
Disabled	3,118	2,172	3,733	1,666	1,487	310	4	0	1	**12,491**
Student	3,689	5,869	1,781	1,551	3,211	402	8	2	24	**16,537**
Curbside	33	58	306	29	109	22	3,675	3,220	2,666	**10,118**
Transfers	21,093	10,978	14,426	7,165	7,657	206	81	149	123	**61,878**
Total	**49,023**	**27,238**	**35,116**	**17,742**	**18,007**	**5,445**	**3,819**	**3,405**	**2,864**	**162,659**

NOTE: The total value in this table is different from the total shown in **Table 11** because **Table 11** only accounts for Routes 1 through 5.

Source: City of Sierra Vista, Vista Transit

Figure 15. Vista Transit Ridership (2010/2011)



Source: City of Sierra Vista, Vista Transit

4.4.3 TRANSIT LEVELS OF SERVICE

Transportation professionals commonly employ level of service (LOS) ratings to communicate the quality of the transportation service provided from the perspective of the user. LOS indicators consider the speed, comfort, and convenience of the system. LOS ratings range from A (best) to F (worst). The level of service is from the passenger's point of view, not the transit operator or manager.

Currently, Vista Transit does not conduct formal LOS analyses on their system, but rely on public input from feedback forms which are available on the buses and at the transit center.

The *Transit Capacity and Quality of Service Manual – 2nd Edition* defines LOS as "designated ranges of values for a particular service measure, such as "A" (highest) to "F" (lowest), based on a transit passenger's perception of a particular aspect of transit service."[6] It should be noted that a LOS A is not always desirable. Jurisdictions may have a range of acceptable LOS, such as an overall LOS C, but allowing a LOS E during peak periods. The decision of where these thresholds for LOS fall are left to the judgment of the local agencies. The factors used to determine LOS for transit systems often includes the following:

Headway: the length of time between trips along the same bus route. Vista Transit has 30-minute headways for each route except Route 4. Route 4 has one-hour headways from 7am to 10am and again from 3pm to 6pm. In regards to headways, LOS is not adjusted based on the size of the city. The reason is that an hour long wait is the same regardless of the size of the city. **Table 13** presents the LOS for transit in regards to headways. As the table shows, based on headways, Vista Transit operates at a LOS D.

Table 13. Headway LOS

LOS	Avg. Headway(min)	Vehicles/Hour	Comments
A	<10	>6	Frequent service; therefore, passengers don't need schedules – little delay if the bus is missed.
B	10-14	5-6	Frequent service, passengers may consult schedules to minimize their wait time.
C	15-20	3-4	Maximum desirable time to wait if bus is missed.
D	21-30	2	Service unattractive to choice riders – requires riders to adjust their schedules to fit the bus schedule.
E	31-60	1	Service available during the hour.
F	>60	<1	Service unattractive to all riders.

Source: Transit Capacity and Quality of Service Manual – 2nd Edition

[6] Transportation Research Board, Transit Cooperative Research Program (TCRP) Report 100, Transit Capacity and Quality of Service Manual, 2nd Edition, (2003)

Hours of Service: the number of hours a day that transit service is provided. Vista Transit is in operation from 7am through 6pm (final runs start at 5pm and end around 6pm), therefore Vista Transit has 11 hours of service. **Table 14** presents LOS for transit in regards to hours of service. As the table shows, based on the hours of service, Vista Transit operates at a LOS E.

Table 14. Hours of Service LOS

LOS	Hours of Service	Comments
A	19-24	Night service provided – accommodates workers who don't work traditional shifts.
B	17-18	Late evening service provided – accommodates trips made for other purposes besides those for work.
C	14-16	Early evening service provided – provides some flexibility on when people can arrive at or leave work.
D	12-13	Daytime service provided.
E	4-11	Peak hour service only or limited midday service.
F	0-3	Very limited or no service.

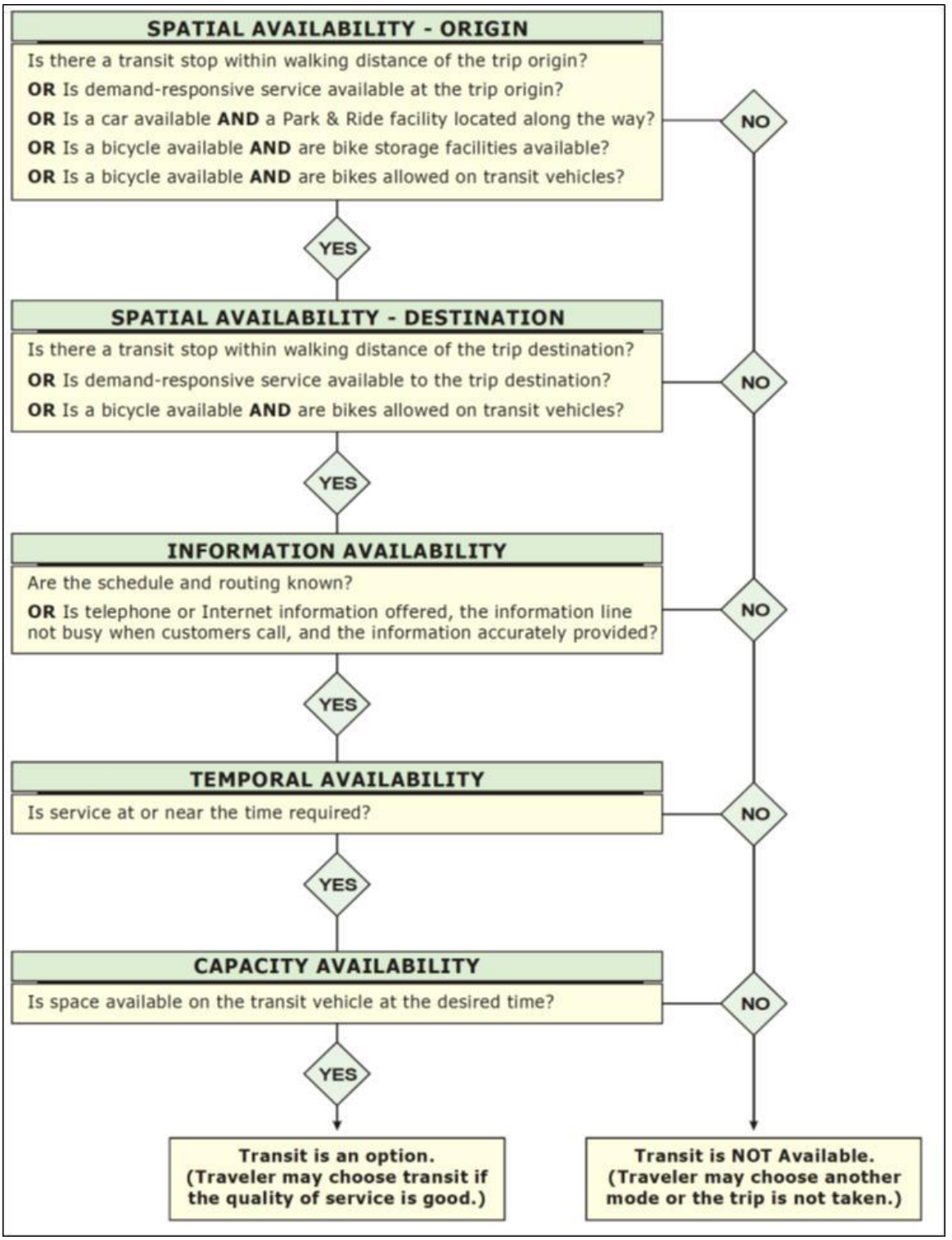
Source: Transit Capacity and Quality of Service Manual – 2nd Edition

Based on this preliminary review of the Vista Transit system, it operates between LOS D and LOS E. However, as stated previously, this is based on a general review of the system. Vista Transit does not currently have a method for evaluating level of service. Other performance measures that are more qualitative include the following factors:

Safety and Security	Likelihood that one will get in an accident or become the victim of a crime while using transit. High crime on transit is a common misconception among the public and is a strong factor for deterring people from using transit.
Maintenance	Vehicles that are not clean or well-maintained can deter people from taking transit.
Economic Impacts	How efficient is the system in terms of maintenance costs and revenues earned.
Availability	If routes are not present in certain parts of the City or if the transit system does not operate when people need it (e.g., people on an early or late night shift), it is unlikely that people will opt to take transit. Availability can also refer to how easily it is to obtain information about the transit system or whether there are bicycle facilities on the bus or access for citizens with disabilities.
Predictability	This refers to the timeliness of the buses, and knowing that the bus will be at the right stop at the right time each day.
Capacity	How many people the bus can hold. If people have to consistently stand on the bus they may be less inclined to take transit.
Travel Time	How long it takes to make a trip by transit compared to driving a personal vehicle.
Comfort and Convenience	Comfort levels can be improved with the provision of sidewalks, crossings, lighting, shelter, and seating at stops. Similarly, the walking distance to a stop can either encourage or deter a person from choosing transit. People will tend to walk up to one quarter mile to a stop.

Many of these performance measures can be obtained by forming and distributing a public survey not only to riders, but to the general public as well. A survey that focuses on obtaining this information will show the transit managers and operators how the transit system is perceived by the public. Availability is the most important factor in determining whether people will choose to take transit. There are many decision factors that are made in order to choose transit over a personal vehicle. **Figure 16** demonstrates a potential decision-making process to determine whether or not to use public transit.

Figure 16. Transit Use Decision-Making Diagram



Source: Transit Cooperative Research Program (TCRP) Report 100, Transit Capacity and Quality of Service Manual, 2nd Edition.

4.4.4 IMPLICATIONS FOR TRP STRATEGIES

The following transit needs were identified based on the summary of existing transit service:

- Fixed transit route south to the Canyon De Flores subdivision, east to Chaparral subdivision, and southwest to 7th Street and Buffalo Soldier Trail.
- Daily transit service to and from Fort Huachuca.
- More frequent transit service (e.g., half-hourly service) to the North and South Routes during peak periods (7am to 10am and 3pm to 6pm.).

4.4.5 VPSI SERVICE

VPSI operates several van pools to and from Sierra Vista. The VPSI vanpool service is used by persons who work in Sierra Vista but live in Tucson. VPSI owns the vans and provides insurance, maintenance and repairs, and license and registration to vanpool groups. The members are the drivers. Generally, the driver is responsible for picking up and dropping off passengers at the scheduled times each day, collecting passenger charges, sending the payment to VPSI, fueling the van, delivering the van for maintenance, reporting any accidents or incidents, and completing a simple monthly report. In exchange, the driver typically rides free. Each van is allowed up to five alternate drivers who are subject to the same criteria as the primary driver. If the primary driver is unavailable, one of the alternate drivers would drive the van. The VPSI vanpool program is a month-to-month arrangement. The driver is required to provide VPSI a written notice 30 days prior to termination.

Vanpooling is usually a successful option for people who have to commute 15 miles or more one way and have a relatively consistent schedule. Some employers offer a guaranteed ride home program when they know their employees participate in a vanpool. This allows people to have a ride home in the event of an emergency (child gets sick, etc.).

For people in the Sierra Vista area interested in joining or starting a new vanpool service, VPSI operates the military vanpool website where people at Fort Huachuca can find out about available vanpools and contact information. There are currently 13 vanpools coming to Sierra Vista from Tucson. In addition, the Department of Defense offers employees $125 per month to use towards vanpooling.[7]

4.4.6 SUMMARY OF EMPLOYEE ACCESS TO MULTIMODAL FACILITIES

Table 15 summarizes access to bicycle and transit facilities for each of the top 25 employers within Sierra Vista.

[7] http://www.militaryvanpool.com/Fort_Huachuca.html

Table 15. Summary of Multimodal Facilities Servicing Major Employers

	Employer	Within a Quarter Mile of a Bicycle Lane	Within a Quarter Mile of a Shared-Use Path	Within a Quarter Mile of a Bus Stop
1	Fort Huachuca			
2	General Dynamics Information Technology	X		X
3	Sierra Vista Unified School District #68		X	X
4	Sierra Vista Regional Health Center	X		X
5	ManTech International Corporation	X		X
6	Aegis Communications Group, Inc.			
7	City of Sierra Vista	X	X	X
8	Northrop Grumman Corporation	X		X
9	Science Applications International Corp.	X	X	
10	Wal-Mart		X	X
11	NCI Information Systems, Inc.	X	X	X
12	L3 Communications (C2S2)	X	X	X
13	Cochise College			X
14	ISIS	X	X	X
15	Life Care Center of Sierra Vista		X	X
16	Fort Huachuca Accommodation Schools			
17	Lawley Automotive Group		X	X
18	Cochise County		X	X
19	All Star Technical Services			
20	Lowe's		X	X
21	Sulphur Springs Valley Electric Cooperative			X
22	Arizona Family Care Associates, Inc.			X
23	Target		X	X
24	Hacienda Rehab and Care Center	X	X	X
25	Safeway	X		X

4.5 STAKEHOLDER INTERVIEWS

Stakeholders from the community were interviewed to solicit their input and feedback on transportation demand strategies in the Sierra Vista area. Stakeholders included representatives from elected officials, City staff, major employers, business groups, and other interest groups. There were 11 stakeholder interviews conducted and they are summarized below.

4.5.1 STAKEHOLDER INPUT

1. South Eastern Arizona Governments Organization (SEAGO) – Chris Vertrees, Transportation Planner

- **Perception of Sierra Vista Transportation Efficiency**
  In terms of congestion, Sierra Vista traffic is pretty good between 9am and 3pm. During the morning peak (6am-9am) and the evening peak (after 3pm), Fry Boulevard, Buffalo Soldier Trail, and SR 90 become congested from people trying to enter and exit Fort Huachuca. In the morning along Buffalo Soldier Trail, commuters sit through more than one traffic signal cycle at Coronado Drive, 7th Street, and Wilcox Drive. In the evenings the congestion isn't as significant.

- **Opinions on Implementing TDM Strategies for SEAGO Employees**
  SEAGO is a small organization, only employing eight people. There are no TDM strategies currently in place because they are so small. When they travel long distances as a group they carpool. Even though SEAGO itself is too small to really utilize any TDM strategies, they are supportive of trying to implement those strategies throughout the City with other employers. There may be an opportunity to create a separate page on their website where they can post information on any programs or strategies, and they would even support a site to match people for a carpool or vanpool system.

- **Concerns with Implementing TDM Strategies**
  - The City of Sierra Vista is small and people can get most places around the City in approximately 10 minutes. For this reason, it will be difficult to convince people to get out of their cars and use transit, carpool, or vanpool services. It would take people much longer to park and transfer to another vehicle than to continue driving to their destination.
  - People like the flexibility of a personal vehicle. Any TDM strategies will have to have a means of being flexible in the event that people's schedules change during the day unexpectedly.
  - Currently, the transit system only runs within the City limits and does not link up with other transit providers.
  - Many don't want to take public transit because they think it's dirty, has a higher potential for crime, etc. This stigma needs to be overcome.

- **Opportunities to Implement TDM Strategies**
  - Employees coming into Sierra Vista from further away may want to take advantage of some type of vanpool program or extended transit system.
  - There should be a joint effort between regional communities to expand the transit network.
  - There are a number of different population groups that are in Fort Huachuca that have different needs. The majority of people on the base are military personnel, students, civilians, and contractors. However there are a number of people who go to Fort Huachuca for other reasons. For instance, retirees from all over the region come to get their services. Even though there are so many different population groups, Fort Huachuca can encourage a vanpooling program easier than most employers.

2. **Council Member for the City of Sierra Vista – Tom Reardon**

- **Perception of Sierra Vista Transportation Efficiency**
  - There is a community-wide perception regarding public transit – it is unsafe and unclean, people who ride it are poor or made bad decisions in life, etc. There needs to be a way to dissolve this perception.
- **Opinions on Implementing TDM Strategies in Sierra Vista**
  - Nationally, the trend is that younger people want to be in urbanized areas. Transit would support that trend. Sierra Vista is on the brink of greatness, it just has to take the step. Fry Boulevard could be something like Scottsdale with places to walk to and things to do at night.
  - People in the community rely on public transit to get to school and work. There has to be options to serve these populations.
  - There needs to be an educational component to teach people about transi, break some of the negative perceptions, and make people comfortable using transit.
- **Concerns with Implementing TDM Strategies**
  - The jurisdictions throughout the region need to coordinate. The jurisdictions in the region don't generally think well together or pool their collective thoughts and visions to make progress in the County. The mayors in the region are in cooperation, they just need to be brought together to be able to start moving on some regional actions with regards to transit.
  - The current grant for the Sierra Vista transit system only allows the transit to run within the City limits. This limits the connectivity opportunities with other jurisdictions in the County.
- **Opportunities to Implement TDM Strategies**
  - Public transit systems can bring people in from around the region and Mexico to spend money in Sierra Vista. People come to Sierra Vista from Mexico for medical needs at the hospital and for shopping. Transit can be used to safely and efficiently encourage these people to come to the City to spend money.

- A potential park-and-ride location could be at Wal-Mart. There may be an opportunity to gain funding if the transit system is promoted as a "green" alternative.

- There is a need to get community buy-in by promoting transit as a way to save money with increasing gas prices and wear and tear on personal vehicles.

- Education would be needed. People would argue that they cannot use a park-and-ride because one day they may have to leave for a doctor's appointment or travel to a meeting. The educational component would be letting them know that using a park-and-ride isn't all or nothing. People can opt to drive to work one day when they know they have something on their schedule that requires their personal vehicle.

- Sierra Vista could coordinate with other jurisdictions and extend their grant to become a hub for the region. The system operates with 30-minute headways. The new grant will have to include a new route or an orbital route that connects the suburb communities to the existing transit routes to make transfers.

- A plan or a vision regarding public transit needs to be created and implemented incrementally. The plan should be implemented in phases so people have time to adjust and become accustomed to the system and to break their negative perceptions regarding transit. To achieve this, coordination needs to happen between the different groups. What does SEAGO need from the elected officials in Sierra Vista? What are Fort Huachuca's needs? How can each group help each other?

- The council members or other elected leaders need to actively stay on top of funding. This could mean going up to Phoenix and becoming familiar with the politicians. The elected leaders from the City should lobby senators and house representatives to make sure they are aware of needs in Sierra Vista and that FTA funds come through.

3. Safety Officer for Electronic Proving Ground (EPG) – Luz Chinea

- **Information About EPG**

  - EPG is a tenant of Fort Huachuca and is the prime test organization on the base. There are approximately 800 employees, but that is not constant and can be as low as 300. Their workforce consists of civilians, military, and contractors. On average, there are approximately 360 contractors and 130 civilians on Fort Huachuca for EPG at any given time. Some workers are there for only a few days or weeks at a time. EPG has two main buildings that house 200-300 of their employees. The remaining 500-600 employees are scattered throughout Fort Huachuca.

  - They use an alternate work schedule on Fridays. Due to testing regulations, 60% of their workforce has one Friday off and 40% has the next.

  - Their core hours are from 7am-4:30pm, but people work 8am-5:30pm, or earlier in the monsoon season when they need to be done by 3:30pm before the storms usually start.

- **Perception of Sierra Vista Transportation Efficiency**
  - The East Gate and Main Gate to get on Fort Huachuca are the main causes of congestion. At 5:45am, traffic is not bad. The worst time for traffic is between 7am and 8am. There is more congestion (10-20 minute delay) if they raise the threat level, perform sporadic inspections, if there aren't enough guards on duty, or if there is a crash.
  - Traffic from the Main Gate backs onto Fry Boulevard and Buffalo Soldier Trail.
  - There have been two fatalities at the East Gate; one involving a pedestrian and motorcycle and the other involving a left-turning vehicle and a through moving vehicle, causing a head-on collision.
  - There is a West Gate onto Fort Huachuca, but that is to serve people coming from Sonoita. There are very few people who use this gate and therefore it is a non-issue.
- **Opinions on Implementing TDM Strategies for EPG Employees**
  - Some EPG employees have access to government vehicles when they have to travel within or outside of Fort Huachuca for business, but they aren't allowed to use these vehicles for personal use, such as getting lunch. Therefore, people usually use their own vehicles for lunch. They carpool when they go to lunch as a group. However, most people only have 30 minutes for lunch; therefore, not many people take lunch breaks.
  - There used to be an internal bus service that went around Fort Huachuca that was heavily used, but it was stopped due to funding issues.
  - If TDM's are made available, people will use them so long as they are not complicated. The TDM strategies also have to be accessible, dependable, and there has to be an assurance that personal vehicles are safe if left somewhere like with a park-and-ride option.
  - A vanpool or shared vehicle program would be preferred over a park-and-ride and would be better used by those traveling longer distances. A park-and-ride is not flexible and would require a guaranteed ride home program for unforeseen emergencies that come up during the day.
  - Taxi service is not a good option in Sierra Vista because it is expensive.
  - Young people living in the north and northwest part of the City would be likely to use transit. If transit service is introduced to and around Fort Huachuca, it has to be dependable and well maintained (clean). It also has to be cost effective. The activity centers on Fort Huachuca are Greely Hall (large employment office), Thunder Mountain Activity Center, and PX (commercial shopping, food, and entertainment). Buses would use a separate lane at the gates.
- **Concerns with Implementing TDM Strategies**
  - Who is going to be responsible for running and maintaining the program?
  - Where will the funding come from?
  - Any transit program will require an agreement and will have to go through PAG.

- **Opportunities to Implement TDM Strategies**
  - People coming from Tucson to Fort Huachuca use a vanpool service as a form of commuting. The drivers change daily and they are picked up and dropped off at different locations around Fort Huachuca. It is organized by the individuals, not Fort Huachuca. There may be an opportunity to organize and/or promote a similar option for people coming from other areas outside of Sierra Vista.
  - A voucher could be provided for people using the vanpool service through the federal government.
  - Transit service during only peak hours may be more favorable and cost effective.
  - A bike sharing program could be introduced as part of a wellness program. It could be implemented at Fort Huachuca and supported by the tenants.

4. **Chief Safety and Security Officer for Sierra Vista Regional Health Center – Joe Renn**

- **Perception of Sierra Vista Transportation Efficiency**
  - Never sits at a light twice on the back roads in the City. However, the loop created by 90, 92, and Buffalo Soldier Trail has a lot of traffic lights that slow down the flow of traffic. There is minor congestion around 3pm when Fort Huachuca lets out.
  - They would like a light at Wilcox for the am and pm peak hours, when it is dangerous to cross. There is a mid-block crossing south, but it is not highly visible and therefore not safe either.
- **Opinions on Implementing TDM Strategies for Regional Health Center Employees**
  - Supportive of implementing ways to reduce the use of personal vehicles.
  - Their employees come from throughout the region, not just Sierra Vista.
  - There are no traffic flow issues near the Regional Health Center, but there is a parking issue. They moved services to the east campus to relieve building and parking space issues. The parking is about two blocks from the building. There is a shuttle bus service (12-15 passenger-capacity) during shift changes for employees from the parking lot to the building.
- **Concerns with Implementing TDM Strategies**
  - Personal habits and schedule differences (shifts at 7am, 3pm, and 11pm) make it hard to change to a new system.
  - Funding may be an issue. Where will the money come from? Will they have to match funds?
- **Opportunities to Implement TDM Strategies**
  - Provide incentives (tax exemptions, etc.) to encourage people to change their habits.
  - Would support a carpool or rideshare program if they knew how to team people up. People could volunteer information, similar to Craigslist, to match up rides. Internal

carpooling to the Regional Health Center would probably be more comfortable for employees.

- Another option could be to have the Health Center provide employees with bus passes for a negotiated rate. Will have to look at how many people are employed by the Regional Health Center.
- The transit service goes by the hospital on both sides, but they don't know how many people use it.
- The Health Center will support new programs or ideas. The programs will have to be voluntary and depends on how many people are interested. They would gladly provide more bike racks if needed.

5. Center Director for Aegis Communications Group, Inc. – Mike Gonzalez

- **Information About Aegis**
  - During their busy times there are approximately 300-500 employees at the call center.
  - 15% of their employees come from outside of Sierra Vista (Bisbee, Benson, Douglas, Huachuca City). Sierra Vista proper contains the majority of their employees. They can run a report to see where exactly their employees are coming from.
  - Approximately 75% of their employees drive alone. The rest walk, bike, or get dropped off.
  - Their parking lot gets very full and people park down the street.
- **Perception of Sierra Vista Transportation Efficiency**
  - Coming from Bisbee on 90 there is general congestion.
- **Opinions on Implementing TDM Strategies for Aegis Employees**
  - Make an investment in an incentive program (similar to Flagstaff's medical center where they provide bus passes to all employees).
- **Concerns with Implementing TDM Strategies**
  - People are too independent to simply offer incentives. They tried giving employees gas money as an incentive to carpool, but that eventually tapered off.
  - There is a new shift every hour, making carpooling, vanpooling, etc. hard to implement and coordinate. Their shifts cannot be coordinated by area (e.g., coordinating all Benson employees to start and end at the same time so they can vanpool) because there are employees with seniority who have worked towards selecting a particular shift. This coordination would also cause all of the people in one town to get the best or worst shift. It may not be seen as a fair way of assigning shifts in the eyes of the employees.
  - Their business is open from 6am to 11pm. The Sierra Vista transit system does not run that late.

- Concerned about cost and how much the employer will have to absorb. Would have to show that there are positive results associated with implementing TDM strategies to make it worth the cost.

- **Opportunities to Implement TDM Strategies**

  - Would prefer more bus stops closer to the building. Currently, the closest bus stop is approximately a 15-minute walk. Employees will use transit more if the stop is closer to their building and runs frequently. Perhaps a central parking location on Wilcox and a centralized stop near the Aegis building and other buildings in that area would service other employers in the vicinity well.

  - They would support TDM ideas and strategies, such as the provision of bus passes coupled with a guaranteed ride home program.

  - For Aegis, it is easier to implement TDM strategies within the City limits and not the outlying, regional area due to shift differences.

  - They have a close shared-use path but it does not come to their intersection. They could promote more bicycling to work. They currently have bike racks and would gladly install more if needed.

6. **Executive Director for the Chamber of Commerce – Amanda Baillie**

- **Perception of Sierra Vista Transportation Efficiency**

  - Sierra Vista has no traffic jams and you can get anywhere in town in approximately 10 minutes. However, they do need to provide more transportation options, especially in the Wilcox and Buffalo Soldier Trail area.

  - There are issues at Fort Huachuca gates. There was talk a few years ago about moving the Main Gate to Wilcox, but it was not financially reasonable. Additionally, the backup only lasts a few minutes between 7am and 8am, and there is always a different route that can be taken.

  - Improvements could be made to the taxi service. It is expensive and unreliable. As a result, there are few alternatives to drinking and driving, and people take more risks in that regard.

  - Businesses they work with are not concerned about transportation really.

- **Opinions on Implementing TDM Strategies for Chamber Employees**

  - Not aware of any incentive programs offered by other employers, but there is not a strong need with Chamber employees.

- **Concerns with Implementing TDM Strategies**

  - There needs to be an alternate to the north route in and out of Sierra Vista. When there is an accident, there is no alternative besides going out to Tombstone/Bisbee. Would be helpful to look for an alternative route north.

  - Getting people to use public transit is tough. Most people do not see other people using transit and this gives the perception that no one uses it. Perhaps the routes should go along main business and commercial corridors (Fry Boulevard).

- The Sierra Vista area is developed around the car. There aren't many places where you can park once and walk to multiple destinations.
- The carpool match program raises some concerns. Who has liability if there is an issue? Perhaps only match up people within the same company or women ride with women.

- **Opportunities to Implement TDM Strategies**
  - Transit is vital for the west side of town because of low income.
  - Commuters from Hereford, Benson, Vail, etc. may benefit from a vanpool service.
  - The Chamber could promote and advertise any strategy and related information but may not facilitate it. The role of the Chamber would be to connect businesses to transportation options.
  - Some soldiers are not allowed to have a car, so they use the Saturday transit route to come into the City.

7. **Transit Management Analyst for the City of Sierra Vista – Ryan Kooi**

- **Perception of Sierra Vista Transportation Efficiency**
  - There are parking concerns at the employment center near Aegis and the Health Center.
  - Fort Huachuca is the main congestion area. Friday evening service used to be provided but was stopped due to financial constraints. They have not tried implementing a regular weekday route to Fort Huachuca.
- **Opinions on Implementing TDM Strategies for City of Sierra Vista Employees**
  - There are currently a few employees who utilize the vanpool service from Tucson.
- **Concerns with Implementing TDM Strategies**
  - Can Fort Huachuca come up with a better system for checking ID's at the gates? For the Saturday bus route onto Fort Huachuca, the security guard gets on the bus to check ID's.
  - Every one or two months, there are new students without cars who do not know about their transit options. There needs to be a way to get them information about the City, the transit routes, and costs. It is also unclear what their needs are. Do they need to travel more places during the week? Where do they want to go? Finding out their needs will allow Sierra Vista Transit to create a better matched transit route for Fort Huachuca.
  - How to draw the line with the PARA transit and where it services.
- **Opportunities to Implement TDM Strategies**
  - They want to provide better transit service to Fort Huachuca. A park-and-ride and/or an express route may be an option for Fort Huachuca. The needs of those on Fort Huachuca need to be identified to determine effective routes and stops. The

goal would be to get the masses onto Fort Huachuca.; transportation once inside is a separate issue.

- A park-and-ride lot further south would capture those coming in from the south traveling longer distances. There have been many requests for transit service in the Canyon de Flores area, which is currently out of their service limits.
- Vanpool service is an option for those traveling longer distances. Another option would be some type of regional transit service.
- A shuttle service that runs inside Fort Huachuca may be beneficial. A circular route could be implemented on Fort Huachuca and to major employers around the City.

8. Vice President of ManTech Telecommunications and Information System Corp – Wallace Ricks

- **Information About ManTech**
  - Defense contractor with approximately 600 employees in Sierra Vista, most of which are on Fort Huachuca. Administrative personnel are at their office.
  - They mainly work with EPG and test IT systems.
- **Perception of Sierra Vista Transportation Efficiency**
  - Traffic flow at the gates was really hampered after 9/11 when restrictions were increased.
  - There are bad accidents at the East Gate intersection due to left-turning vehicles. Perhaps a delayed green light or an all red light for a few seconds before the new cycle would help clear the intersection. Another contributing factor is that there is no speed reduction approaching the East Gate on 90. The speed limit is still 55mph.
  - There are no good taxi services. Taxi's cater to Fort Huachuca service members and needs a bigger outfit.
  - There are only a few arteries in town.
- **Opinions on Implementing TDM Strategies for ManTech Employees**
  - There are currently no TDM strategies implemented at ManTech, but their employees did voice some concerns as described below:
  - Would like to see more transit service in the Mountain Ridge or Canyon de Flores areas, along Avenida Cochise and Coronado. This would benefit the elderly and kids in that area who cannot drive.
  - It would be helpful to have a transit service bring people to Fort Huachuca and stop at various locations.
  - The lights on Fry Boulevard need to be timed better. The only way to make all of the green lights is to go five to eight mph over the speed limit. Stopping at every light when doing the speed limit creates unnecessary traffic jams, wastes gas, and increases wear on brakes.

- **Concerns with Implementing TDM Strategies**
  - Employees move around during the day, creating a need to have a car on Fort Huachuca.
  - There are no bike lanes or shared-use paths on Fort Huachuca.
  - Walking on Fort Huachuca is not a feasible option because the buildings are so spread out.
  - Most of Fort Huachuca operates on a flex schedule. The problem is that it does not reduce the number of vehicles on the road.
  - Some of their employees do not have access to technology such as computers, which is necessary for telecommuting.
- **Opportunities to Implementing TDM Strategies**
  - Shuttle service may be beneficial that services a few nodes. Shuttle service on Fort Huachuca would be used if it was convenient and timely. The shuttle could operate like an airport shuttle service where getting on at one parking lot will take you to one location in the City and getting on at another location will take you to a different location. The old Wal-Mart or mall parking lot would be good locations for a park-and-ride.
  - A bike share program may get some use, but would have to take into consideration that people carry things with them to meetings. Professionals may not use it.
  - There are hourly employees on Fort Huachuca who don't typically leave their desk or building. This population may utilize a mass transit system. A park-and-ride system could be used to get this group onto Fort Huachuca.
  - Consider installing a gate at Wilcox to relieve traffic on Fry Boulevard.
  - Telecommuting is a viable option but it requires discipline.
  - Some of their employees from Tucson, Vail, and Sahuarita use the vanpool service and leave their cars in Sierra Vista so they can get around when there. This could be used for people coming from Tombstone and Sonoita as well. Have the shuttle cater to the entire Fort or City to get the most people it can to use the service.

9. Director of Emergency Services for Fort Huachuca – Dan Ortega

- **Information About Fort Huachuca Traffic Flow**
  - Delays on the base depend on the day of the week. Prior to the 9/11 attacks, there were no guards at the gates. After 9/11, they put guards at all of the gates, which caused delays. The West Gate is guarded but used rarely. The road to the West Gate is not well maintained. It is mostly used by those coming from Sonoita to get to Sierra Vista, cutting through Fort Huachuca. Sierra Vista has the closest hospital and shopping.
  - Between 2009 and 2010, they built shelter facilities for the gates. The East Gate became four inbound lanes and two outbound lanes, separated. At the Main Gate, the buildings to the right of the entrance are historical and could not be touched to

make room for improvements; therefore, it remained two lanes. To improve flow, they converted one outbound lane to an inbound lane.

- Students of the AMI School are in Sierra Vista for six to nine months, do not live on the base, and want to be near shopping and restaurants.
- Flow at the gates:
  - AMI students come on base at 6am and leave at 7am-7:15am.
  - Civilians come on base between 7am and 7:30am.
  - Around 8am the vendors (UPS, etc.), civilians, and soldiers come on base.
  - Between 7:15am and 8am there are more than 1,000 cars that come onto the base.
- The base could benefit from using alternative schedules.

- **Perception of Sierra Vista Transportation Efficiency**
  - People coming from Hereford often experience a one-hour commute due to traffic.
  - Many people go up to the East Gate to skip traffic at the Main Gate.
  - There is one left turn at the Main Gate that can be backed up for two or three light cycles.
- **Concerns with Implementing TDM Strategies**
  - EPG, one of the larger employers, has access to government vehicles for their trips. The only time they use their personal vehicles is when they are going to lunch. However, most EPG employees only have 30 minutes for lunch, which means they do not move around the base much.
  - The people working at Fort Huachuca make good salaries and it will be hard to get them to use a bike for transportation. Probably only 2% of all people at Fort Huachuca will ride a bike.
  - There are no bike lanes or shoulders on the roads in the base. Additionally, the roads are very narrow.
- **Opportunities to Implement TDM Strategies**
  - There are many contract workers who come onto the base that might benefit from transit service during the week.
  - If transit service were provided during the week, it would be treated the same as the Saturday transit service that comes onto the base. It would probably be a very seamless process, but if the guard notices something wrong with the vehicles (e.g., broken tail light, etc.) or if the vehicle looks suspicious, it will take longer to inspect the bus. Otherwise, it would not be a problem to add transit service to the base.
  - In 2004, there was bus service from Sierra Vista to the base, but it was stopped because they found that service members did not use it. There was also a shuttle

that went around the base that was stopped for the same reason. However, Fort Huachuca was a lot smaller then and had fewer contractors.

- A circulator or vanpool service might work if it stopped in different locations around the base. Within the base, people can use government vehicles. Often times, if they do not have access to a government vehicle, they do not need to go anywhere.
- The current vanpool group organizes it and they get dropped off at different locations around the base. They pay a monthly fee and are linked together through the vanpool company (VPSI in this case). They will add another van if needed.
- Currently vanpool service is from Tucson, but it could be useful from Hereford, which has boomed and many employees commute from there. Often times it is a one-hour commute from Hereford during the morning and evening peaks due to traffic.
- The Target, mall, old Wal-Mart, and/or new Wal-Mart may be good locations for a vanpool to meet up.

10. NETCOM Human Resources Operations, Fort Huachuca – Chris Ladra

- **Information About NETCOM**
  - They operate on flextime where they have every other Friday off.
- **Perception of Sierra Vista Transportation Efficiency**
  - [Did not discuss]
- **Opinions on Implementing TDM Strategies for Fort Huachuca Employees**
  - They do have the option to telework throughout the base, and they are promoting it, but not many people do it.
  - There are no bike lanes connecting to Fort Huachuca, especially down Fry Boulevard. More bike lanes and bike parking at locations is needed.
- **Concerns with Implementing TDM Strategies**
  - The Sierra Vista shuttle bus is used on Saturdays, but this does not benefit the workforce.
  - Most people live within 10 minutes of the base and it takes 10-15 minutes to get on the base; therefore, it will be hard to get people out of their personal vehicles for those living within the City. There may be more luck with those coming to Sierra Vista from outside of the City.
  - May not be cost-effective to do a shuttle service within the City. It will not get people out of their personal vehicles.
  - Visitors to Sierra Vista will be hard to get out of their personal vehicles. Most rent a vehicle when they visit and fuel is not so high as to deter them from renting. It also reduces their travel time to have their own vehicle.
- **Opportunities to Implement TDM Strategies**

- For employees on Fort Huachuca, it is cheaper to take the van service from Tucson because the army reimburses employees who do so.
- Since most people only travel short distances to get to work, the best opportunity to get people out of their personal vehicles would be to provide bike infrastructure so people can bike instead of drive.
- There are many cyclists in Sierra Vista; therefore, more bike infrastructure is needed to connect facilities throughout the City.
- The lights should be timed better throughout the City to improve flow.
- Shuttle service may be beneficial for the servicemen who do not have personal vehicles.
- Transit should service target populations better (low income and higher density areas).

11. Senior Civil Engineer for City of Sierra Vista – Sharon Flissar

- **Perception of Sierra Vista Transportation Efficiency**
  - Travel in Sierra Vista is very efficient. It takes about 15 minutes to get anywhere in town.
  - The biggest traffic problems come from Fort Huachuca during periodic security checks. There is more than enough capacity to store vehicles at the East Gate, but the Main Gate has significant problems. When Fort Huachuca performs security checks out of the ordinary, traffic backs up significantly.
  - The area south of Sierra Vista, in unincorporated areas, is growing.
- **Concerns with Implementing TDM Strategies**
  - People do not have an incentive to stop using their personal vehicles when it only takes 10-15 minutes to get anywhere in the City.
  - People are very attached to their personal vehicles. People south of the City are wealthier and it will be harder to convince them to take transit. Therefore, service to that part of the City is probably not needed.
  - Wealthier people will not use transit because it has a low income stereotype.
  - There are challenges to providing multiuse pathways along Fry Boulevard. First, the City can only apply for two per year¬—one state and one local project. The other challenge is the right-of-way on some of the roads. Adding a bike lane would be helpful.
  - There is no opportunity for reducing lane widths.
- **Opportunities to Implement TDM Strategies**
  - Fort Huachuca is in a position to be an initiating factor. It could place a restriction on the base as to who can drive, encouraging alternative forms of transportation or TDM strategies. If the base employs some restrictions, a difference could be made.

- A park-and-ride lot could be beneficial near Wal-Mart or Aegis.
- The City should continue to expand bike and pedestrian paths.
- Focus on the LEED process. Part of the process is to restrict parking and give more opportunities for carpool and vanpool parking. The Federal Government supports LEED and this could be a way to initiate the process.

4.5.2 SUMMARY OF KEY ISSUES FROM STAKEHOLDER INTERVIEWS

- The City of Sierra Vista is small and people can travel to most places in the City in approximately 10 minutes. For this reason, it will be difficult to convince people to get out of their personal vehicles and use transit, carpool, or vanpool services. It would take people much longer to park and transfer to another vehicle rather than continue driving to their destination.
- A large obstacle to overcome is the perception that public transit and other alternate forms of transportation is for less affluent people. The community perceives transit as being only for those who cannot afford a personal vehicle.
- Commuters come to Sierra Vista from all over Cochise County, as well as from Pima County and Santa Cruz County. Employers would like to see linkages between transit systems and these outlying areas.
- Vanpooling has been a successful alternative to the personal vehicle for those traveling to Sierra Vista from Tucson. Employees coming into Sierra Vista from further away may want to take advantage of some type of vanpool program or extended transit system. There should be a joint effort between regional communities to expand the transit network.
- Fort Huachuca is the largest single traffic generator in the City. The East Gate and Main Gate to get on the base are the main causes of congestion. Congestion is observed at the entrances to Fort Huachuca particularly during the am peak period, impacting traffic on SR 90, Fry Boulevard, and Buffalo Soldier Trail. The delay time varies depending on fluctuating events at Fort Huachuca (e.g., increased checks due to high security alert, vehicle crashes, random searches, etc.). The worst time for traffic is between 7am and 8am. There is more congestion (10-20 minute delay) if the threat level is raised, sporadic inspections are performed, there is a lack of guards on duty, or if there is a crash.

- People like the flexibility of a personal vehicle. Any TDM strategies will need to be flexible in the event that people's schedules change during the day unexpectedly.
- If TDM's are made available, people will use them if they are uncomplicated. The TDM strategies also have to be accessible, dependable, and there has to be an assurance that personal vehicles are safe if left in large lots (e.g., park-and-ride lots).

- Bicycle and pedestrian facilities to support alternative mode usage need to be developed.
- There are many cyclists in Sierra Vista; therefore, more bike infrastructure is needed to connect facilities throughout the City.

5.0 FUTURE CONDITIONS

5.1 PROJECTED DEMOGRAPHICS

This section presents an overview of projected demographics in Sierra Vista. Projected population and employment data is presented.

Population and employment data was acquired from Woods & Poole Economics, Inc. - an independent firm specializing in long-term demographic and economic projections. Population and employment data was obtained for five-, 10-, and 20-year projection periods and compared against the existing population and employment data.

Working Paper No. 1B (Travel Survey) demonstrated that people commute to Sierra Vista from throughout Cochise County. The demands on the Sierra Vista transportation system are impacted by or will impact surrounding communities in the region and are not limited to the geographic confines of the City. As such, data presented is for the Sierra Vista-Douglas Micropolitan Statistical Area. A micropolitan area is a geographic entity based around an urban area with a population of 10,000 to 49,999. The City of Sierra Vista is the urban area for the Sierra Vista-Douglas Micropolitan Statistical Area, which encompasses the whole of Cochise County.

5.1.1 POPULATION ESTIMATES AND PROJECTIONS

The population estimates and projections for the Sierra Vista-Douglas area are presented below in **Table 16**. This data was obtained from Woods & Poole, and includes 2010 U.S. Census population data. The base year for the estimate and projections in **Table 16** is 2010 and includes residents, military persons stationed in the area, and institutionalized persons. Populations above 65 years, 15 years and under, and those with incomes less than $20,000 are also included in the table. These populations are typically more reliant on alternative modes of transportation and not a personal vehicle.

Sierra Vista and the surrounding areas are projected to increase in population. As a result, the demands on the transportation system in the greater Sierra Vista area will also increase.

Table 16. Sierra Vista-Douglas Micropolitan Population Projections

	2010	2013	Five-Year (2018)	10-Year (2023)	20-Year (2033)
Total Population	131,789	138,830	150,860	163,060	187,420
Population Over 65 Years	22,765	26,130	31,660	37,410	46,220
Population 15 Years and Under	26,669	28,140	30,870	33,600	37,970
*Number of Households with Incomes less than $20,000**	11,100	11,300	11,400	10,600	8,800
***Poverty varies by household size. The average household size in the Sierra Vista-Douglas area is 2.46 persons per household. The U.S. Census Bureau defines the poverty threshold for families of that size as between approximately $15,000 and $20,000 (http://www.census.gov/hhes/www/poverty/data/threshld/index.html).** **Source: Woods & Poole Economics, Inc. (2012)**					

5.1.2 EMPLOYMENT PROJECTIONS

Employment is another component of understanding demands on the transportation system. **Table 17** presents employment projections for five-, 10-, and 20-year planning horizons. Employment is projected to increase in the private, government, and farm sectors.

Table 17. Sierra Vista-Douglas Micropolitan Population Projects

	2010	2013	Five-Year (2018)	10-Year (2023)	20-Year (2033)
Total Employment	59,200	60,500	65,900	71,860	85,760
Farm Employment	1,920	1,880	1,950	2,010	2,120
Private Non-Farm Employment	57,200	42,200	47,000	52,370	65,120
Federal Civilian Government Employment	5,220	5,110	5,190	5,260	5,350
Federal Military Employment	4,950	4,740	4,770	4,790	4,820
State and Local Government Employment	6,800	6,570	7,000	7,440	8,350
Source: Woods & Poole Economics, Inc. (2012)					

5.2 Future Land Use

Vista 2020, the City's general plan, identifies future land use and growth areas to accommodate the rising population and employment that will occur over the next 20 years in the area. **Table 18** projects the number of households for the five-, 10-, and 20-year planning horizons for the Sierra Vista-Douglas area.

Table 18. Sierra Vista-Douglas Micropolitan Housing Projections

	2010	2013	Five-Year (2018)	10-Year (2023)	20-Year (2033)
Total Population	131,789	138,830	150,860	163,060	187,420
Persons per Household	2.46	2.43	2.38	2.37	2.43
Total Number of Households	51,040	54,450	60,240	65,190	79,130
Source: Woods & Poole Economics, Inc. (2012)					

As the table shows, the number of households are projected to increase from 51,040 (2010) to 79,130 (2033). The *Vista 2020* plan addresses where this growth, along with employment growth, will be directed within Sierra Vista. According to the Growth Element of the *Vista 2020* plan, there are four areas within the City where growth will likely occur:

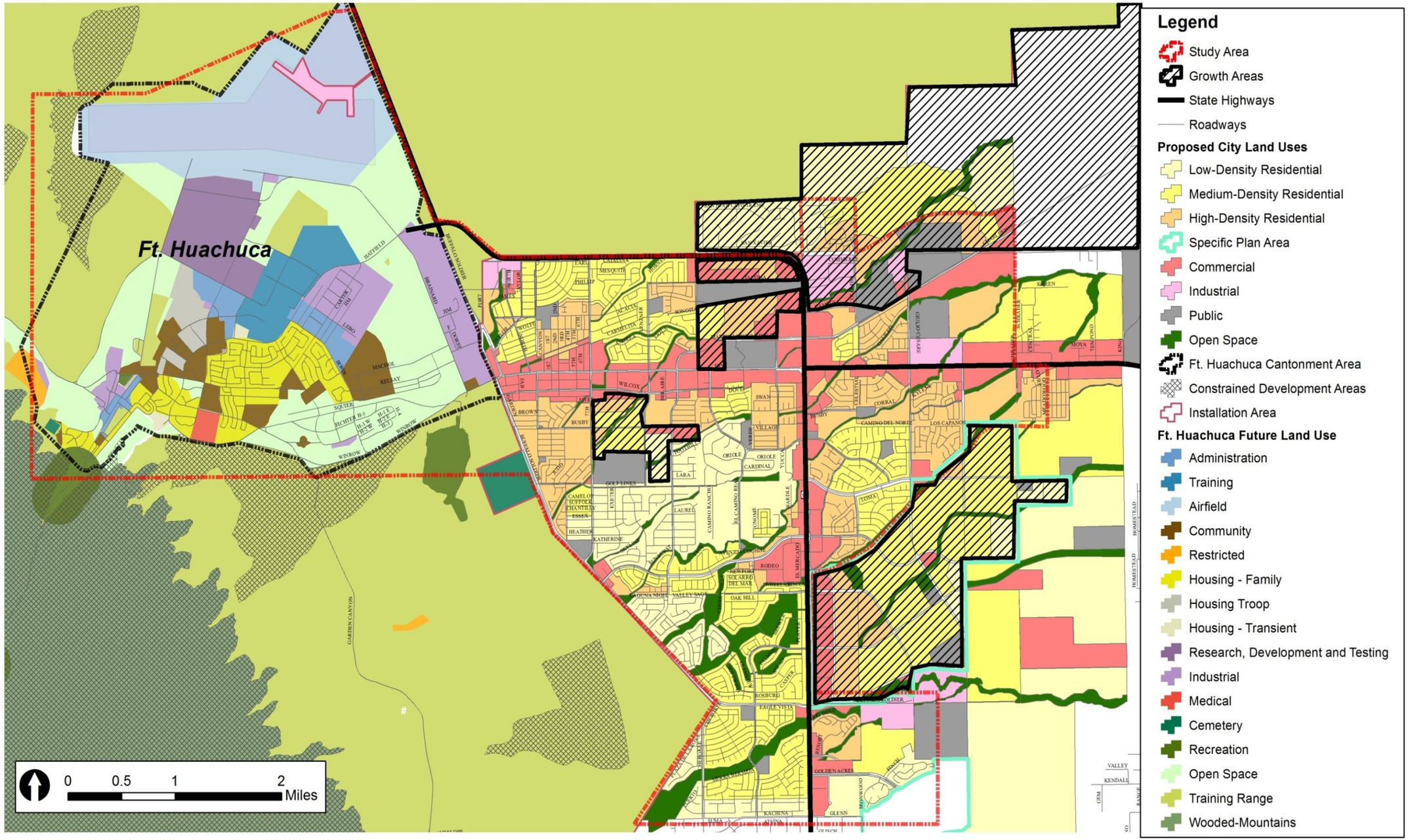
- Two sections of State Trust Land (560 total acres [240 acres in Section 2 and 320 acres in Section 36]) – the City has already invested in infrastructure in these locations, such as a main sewer line and the new transit center. Both sections are expected to develop with a mixture of land uses and multiple zoning designations. The *Vista 2020* plan states that this development pattern is designed to reduce sprawl. Greater infill development will encourage the use of transit and other modes of transportation.
- Land owned by Castle and Cooke Arizona, Inc. – land uses in this area will be a mixture of residential, open space, commercial, and industrial uses.
- Land owned by Bella Vista Ranches – land uses in this area will be a mixture of residential, open space, commercial, and industrial uses.

As the City grows in these and other areas, they will strive to encourage retention of open space, pursue infill development where appropriate, and encourage multimodal transportation systems.

The Economic Development Element of the *Vista 2020* plan discusses economic growth within the City. As shown in Working Paper No. 1A, Fort Huachuca is the largest employer in Sierra Vista. However, the *Vista 2020* plan encourages non-military-related economic growth while continuing to support Fort Huachuca. To encourage a diverse economy, the *Vista 2020* plan calls for support of educational, industrial, and business institutions and creating incentives for businesses to thrive.

Land uses, as designated by the *Vista 2020* plan, are shown in **Figure 17**.

Figure 17. Future Land Use and Growth Areas



5.3 FUTURE TRAVEL DEMANDS

This section analyzes future travel demand for two transportation modes - roadway and transit. Travel demands are estimated for five-, 10-, and 20-year planning horizons.

5.3.1 ROADWAY TRAVEL DEMAND

Future roadway travel demands on major roadways for 2013, 2023, and 2033 in the Sierra Vista area were estimated using historic growth rates. Travel demand modeling results from the statewide *Building a Quality Arizona* study were also reviewed and is described in the following section.

BqAZ Travel Projections and Major Corridors

In 2007 and 2008, a long-range planning process for the entire state was undertaken and is known as *Building a Quality Arizona (BqAZ).* For planning purposes, the state was divided into subareas that were called framework areas. The Sierra Vista area was part of the Eastern Arizona Framework Study Area.

A traffic model was developed to identify corridors throughout the state that are overcapacity now or may reach overcapacity in the future. Future years 2030 and 2050 were tested against the base network, which included known committed projects added to the existing roadway network. In the Sierra Vista area, this included widening Charleston Road from two to five lanes. East of Sierra Vista, the model network included widening SR 90 to five lanes from Central Avenue to Moson Road. The model network is comprised of the major roadways serving eastern Arizona. The majority of these roadways are state facilities, including 35 state routes or interstate facilities. Additionally, the model network included local regionally significant roadways.

The modeled regional roadway network for the Eastern Arizona Framework Study Area consisted of a combination of state routes and local regionally significant roadways. In the Sierra Vista area, the network included the following roadways:

- SR 90.
- SR 92.
- Fry Boulevard.
- Charleston Road.
- Buffalo Soldier Trail.
- 7th Street.
- Coronado Drive.

Within the Eastern Arizona Framework Study Area, the model network for 2005 and 2030 are nearly the same. The difference between the two networks is that 2030 includes committed projects, which added capacity or additional lanes to a handful of roadways. This includes roadway widening projects on SR 92 and SR 90.

The *Final Report* for the *2010 Statewide Transportation Planning Framework* (2010) recommended that future 2050 transportation improvements in the Sierra Vista area include widening or upgrading SR 90 and SR 92 and providing intercity bus service between Sierra Vista, Benson, Tombstone, Bisbee, and Douglas. The report also recommended a major transit center in Sierra Vista.

Future Travel Demand Projections Using Growth Rate Projections

ADOT generates estimates of 20-year traffic growth on state routes. These segment-by-segment traffic volume forecasts and annual growth rate projections were developed through a regression analysis of historical vehicle travel activity at various levels of aggregation. Future highway capacities, demographics, and other socio-economic inputs were not used to calculate them.

The estimates are shown in **Table 19**. The average annual growth rate for traffic volumes used for SR 90 varies from 1.01 to 1.022. On SR 92, the average annual growth rate varies from 1.013 to 1.028. An average of these growth rate estimates were used to develop future travel demand volumes for the five-, 10-, and 20-year planning horizons (2013, 2023, and 2033, respectively) for other arterial roadways in Sierra Vista.

A planning level capacity analysis was conducted to determine road segments that were over-capacity and likely to be congested in the future. The future traffic projections were compared to generalized service volumes at LOS E. Road segment capacity was assumed to be LOS E, which is defined in the Highway Capacity Manual 2010 as "characterized by unstable operations and significant delay." The generalized service volumes depend on factors such as the posted speed limit, the k-factor, the d-factor, and assumed signal spacing and number of access points per mile. Since this is a variable among the different corridor segments, a range of values was used to estimate the service volumes at LOS E:

Number of Lanes	Service Volume Range for LOS E (vehicles per day)
Two lanes	14,900 to 19,900
Four lanes	28,400 to 37,900

Segments of SR 90, SR 92, and Fry Boulevard exceeded the planning level service volumes at LOS E, as summarized below (and as shaded in **Table 19**).

Road	Segment	Forecast Years
SR 90	Charleston Road to SR 92	2023, 2033
SR 92	SR 90 to East Foothills Drive	2013, 2023, 2033
SR 92	East Foothills Drive to Snyder Boulevard	2013, 2023, 2033
SR 92	Snyder Blvd to Avenida Cochise	2023, 2033
SR 92	Buffalo Soldier Trail to Glenn Avenue/Kachina Trail	2033
Fry Boulevard	Coronado Drive to Moorman Avenue	2033
Fry Boulevard	El Camino Real to Calle Portal	2033

It should be emphasized that this analysis is for general planning use and a more detailed analysis would be required to make decisions on specific design features of the road.

Table 19. Annual Average Daily Traffic Projections

Route	Start	End	Annual Average Daily Traffic, 2010	Average Annual Growth Rate	2013 Traffic Projection	2023 Traffic Projection	2033 Traffic Projection	Over or Under Capacity*
7th Street	Buffalo Soldier Trail	Golflinks Road	7,100	1.02	7,300	7,300	9,000	Under
	Golflinks Road	0.4 miles north of Golflinks Road	7,100	1.02	7,300	7,300	9,000	Under
	0.400 miles north of Golflinks Road	Busby Drive	7,100	1.02	7,300	7,300	9,000	Under
	Busby Drive	0.7 miles north of Golflinks Road	8,501	1.02	8,800	9,700	10,700	Under
	0.700 miles north of Golflinks Road	Wilcox Drive	7,993	1.02	8,240	9,100	10,100	Under
	Wilcox Drive	Fry Boulevard	8,538	1.02	8,800	9,700	10,800	Under
	Fry Boulevard	Carmelita Drive	8,734	1.02	9,000	10,000	11,000	Under
	Carmelita Drive	Tacoma Street	7,547	1.02	7,800	8,600	9,500	Under
	Tacoma Street	Phillip Drive	6,433	1.02	6,600	7,300	8,100	Under
Coronado Drive	Avenida Cochise	Golflinks Road	6,847	1.02	7,100	7,800	8,600	Under
	Golflinks Road	Busby Drive	6,847	1.02	7,100	7,800	8,600	Under
	Busby Drive	Wilcox Drive	6,847	1.02	7,100	7,800	8,600	Under
	Wilcox Drive	Fry Boulevard	6,847	1.02	7,100	7,800	8,600	Under
	Fry Boulevard	Moorman Avenue	7,643	1.02	7,900	8,700	9,700	Under
	Moorman Avenue	Tacoma Street	7,346	1.02	7,600	8,400	9,300	Under
	Tacoma Street	SR 90	7,645	1.02	7,900	8,700	9,700	Under

*Capacities were determined using HCM 2010 techniques. Capacities for a four-lane principal arterial are 34,500 vehicles-per-day-ranges for LOS E.

Source: http://www.azdot.gov/mpd/data/acknowledgement.asp
Notes: Future AADT = Current AADT X ((1 + AAGR) ^ n), Where n = number of years beyond current year

5.3.2 FUTURE TRANSIT DEMAND

This section summarizes transit demand estimates and recommendations for future transit improvements from transit studies performed over the last five years. The most recent of these is the *SEAGO Transportation Coordination Plan*, completed in April 2012. The goal of the study was to coordinate the efforts of both public and private transit providers in the SEAGO region for the purposes of policy development, decision making, and investments needed to create greater efficiencies, build capacities, and address gaps in service.

Within the SEAGO region, which encompasses Cochise, Santa Cruz, Graham, and Greenlee counties, there are four fixed-route transit services – one each in Benson, Bisbee, Douglas, and Sierra Vista (all in Cochise County). There are no fixed-route systems in Santa Cruz, Graham, or Greenlee counties. The report identified connector services between communities as a crucial general public transit need, specifically between:

- Douglas, Bisbee, and Sierra Vista.
- Huachuca City and Sierra Vista.
- Tombstone and Sierra Vista.

These potential intercity transit service routes are shown in **Figure 18**. Other transit needs identified are summarized in **Table 20**. Only the needs that have relevance to this Study are included in the table.

Figure 18. Recommended Intercity Transit Routes from SEAGO Transportation Coordination Plan (2012)

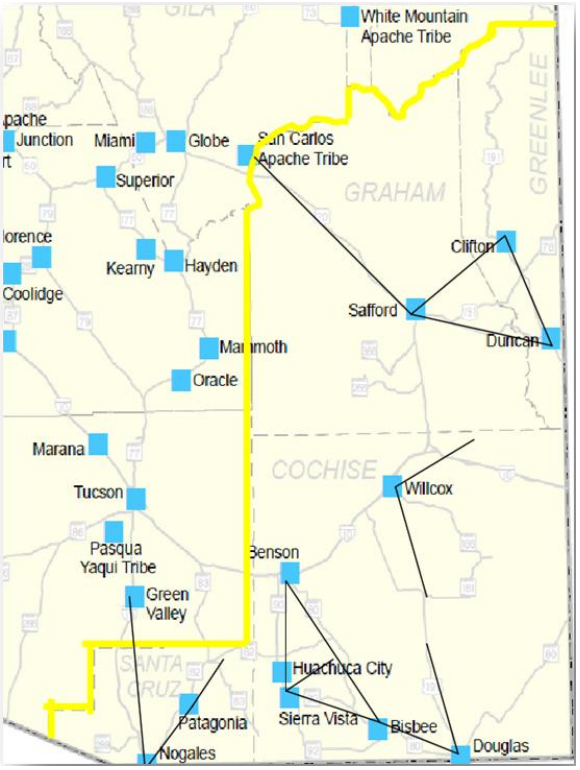


Table 20. Recommendations from SEAGO Transportation Coordination Plan (2012)

Priority Area	Recommendation
Priority 1 – Communications	Centralized regional mobility management that includes ride management and dispatch for intercity and interagency riders.
	Mobility management for Cochise County.
Priority 2 – Efficiencies/Administrative	Bus pass reader — a system for tracking riders within a service area and particularly to track riders using multiple services across areas.
Priority 2 – Efficiencies/Capital	Bus pass readers to track ridership and transfers between organizations.
Priority 3 – Improved Service	Review of routes and hours of operations to improve rider access when most needed.
	Effective marketing to underserved populations and enhanced trip planning.
	Improved "How to Ride" information with greater outreach.

Transit Demand Estimates

Transit demand estimation for the Sierra Vista area was based on a methodology used in both the *Vista Transit Five-Year Plan (2008)* and the *ADOT Rural Transit Needs Study*. This methodology is based on the Arkansas Public Transportation Needs Assessment (APTNA) model, which estimated passenger trip rates for three groups based on ridership survey data:

- The average trip rate for persons age 60 and over is 6.79 one-way passenger trips/person annually.
- The average trip rate for persons with disabilities under age 60 is 4.49 one-way passenger trips/person annually (census data reported this for under age 64).
- The average trip rate for persons living in poverty under age 60 is 20.50 one-way passenger trips/person annually (census data reported this for under age 64).

The populations listed above are likely to rely on transit for everyday travel.

These passenger trip rates were used to estimate potential travel demand for the Sierra Vista-Douglas area using U.S. Census data, summarized in **Table 21**. Future transit demand was estimated using the population growth rate between 1990 and 2010, which is a 1.74% compound annual growth rate.

Data for the Sierra Vista-Douglas Micropolitan area was used because data for the three previously referenced groups could be found at that level. Additionally, even though Vista Transit does not operate beyond the boundaries of the City, many stakeholders identified a desire to expand the transit system beyond the boundaries to create a region-wide transit network. Therefore, it is important to understand the demand at the regional level.

Table 21. Transit Demand Forecast for Sierra Vista-Douglas Micropolitan Area

Transit Demand Variables	2012	2012 Transit Demand, One-way Passenger Trips Annually	2013 Transit Demand, One-way Passenger Trips Annually	2023 Transit Demand, One-way Passenger Trips Annually	2033 Transit Demand, One-way Passenger Trips Annually
Persons over age 60*	33,877	230,030	234,030	278,090	330,450
Persons with a disability under age 64 **	13,370	60,030	61,080	72,580	86,240
Persons living below poverty level under age 64**	10,390	213,000	216,700	257,500	305,980
Total	**57,673**	**503,060**	**511,810**	**608,170**	**722,670**

*Source: Woods & Poole Economics, Inc. (2012)
**Source: 2007 3-Year Estimates, ACS U.S. Census Data, B18002 (Sex by Age by Disability) and B15004 (Poverty Status in the Past 12 Months)
Note: Future population demand = Current population demand X ((1 + AAGR) ^ n), Where n = number of years beyond current year

As indicated by **Table 21**, growth trends within the area clearly indicate a significant increase in each of these populations. The 2012 transit demand for these population groups in the Sierra Vista-Douglas Micropolitan area is 503,060 passenger trips annually, and could increase to 722,670 passenger trips annually in the next 20 years. In addition to these trends, the *Vista Transit Five-Year Master Plan* also highlighted a number of issues affecting transit demand, such as the following:

- Service to Fort Huachuca is difficult to estimate. Fort Huachuca provides training with classroom sessions generally ranging from six weeks to six months and with a student population that is mainly young adults. In addition to being a transient population, the military recommends that the students do not bring private automobiles to the area. Therefore, this is a very transit-dependent population. Providing transit from the post to shopping/restaurants/recreation may be an important opportunity. Vista Transit management has consistently responded to this need by cooperating with Fort Huachuca personnel to determine and provide effective service times and routes.

- Sierra Vista has significant State Trust Land areas within the City limits. Approximately 560 acres of undeveloped State Land Trust holdings were identified. This issue, addressed in *Vista 2020*, Growth Element, is the target of pointed strategies to develop specific area plans, encourage retention of open space, promote cost efficient and effective public infrastructure, update master land use plans, encourage multimodal transportation systems, and coordinate with Cochise County on growth issues within a Joint Planning Area. The coordination and support of current and expanded Vista Transit services will be important to the success of this effort to manage growth.

- Aging adults and development add to the challenge of serving new developments that are adjacent to Sierra Vista. Currently, the service area is defined by the City limits.

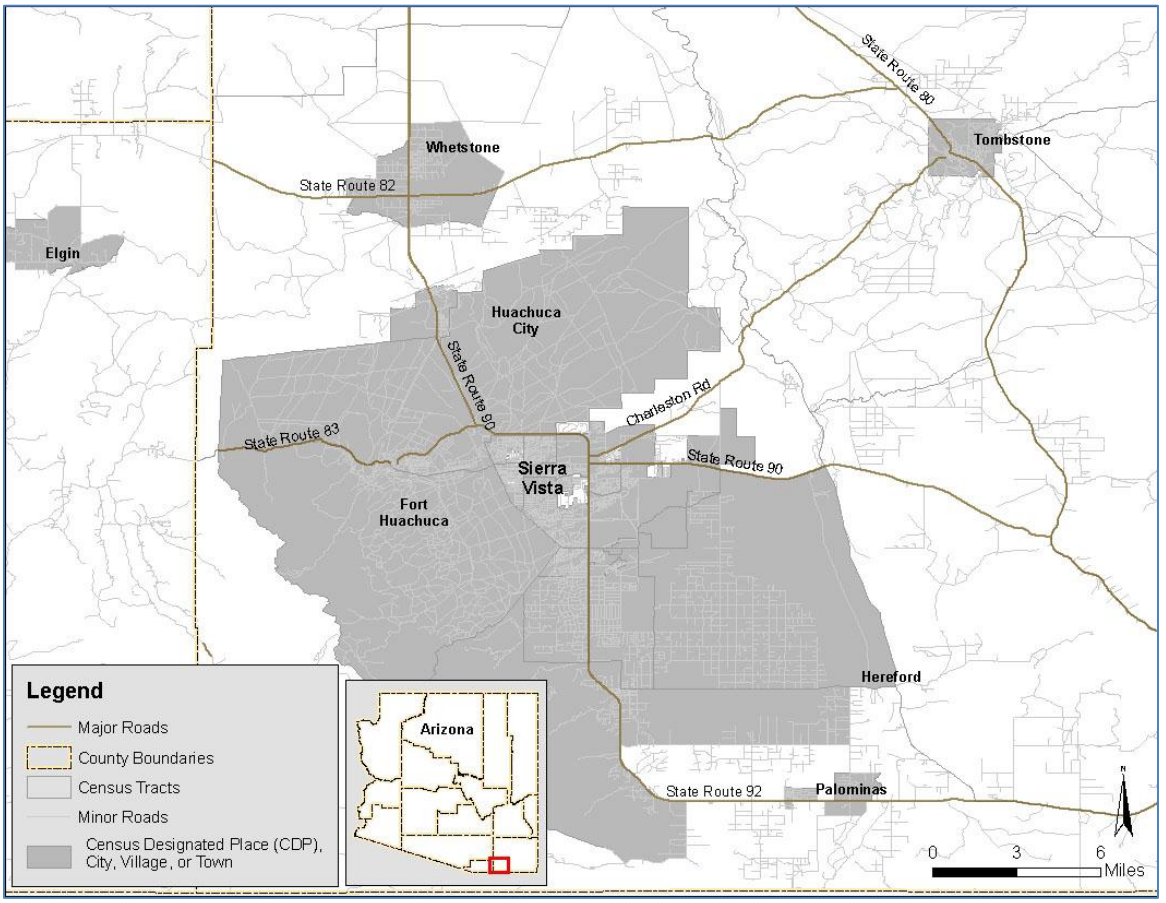
several developments, specifically the Vista View Resort, are actively lobbying both Cochise County and the City for service.

6.0 SURVEYS

6.1 EMPLOYEE TRANSPORTATION SURVEY

A Sierra Vista Employee Transportation Survey was conducted for this Study. The purpose of the survey was to capture 24-hour travel information and demographics from 400 employees of businesses and organizations in the City and Fort Huachuca. The project team recognized that a significant number of people commute into Sierra Vista from outside City limits, thus the employee survey universe of participants was not limited to City residents, but to those who work for employers within the City. **Figure 19** presents a map of the survey region.

Figure 19. Travel Survey Study Area



6.1.1 EMPLOYEE TRAVEL SURVEY RESULTS

The findings represented the results of 322 valid and complete employee surveys (unweighted), expanded to represent 20,490 employees (weighted) within the Study area.

Trip Origins and Destinations

The survey results confirmed an origin-destination flow pattern similar to what one would expect from a travel survey conducted amongst employees of business organizations in Sierra Vista. The survey results found that a large majority of morning (am) trips are centrally-located within the City itself. Mid-day or evening (pm) trips tended to be made from Sierra Vista or Fort Huachuca to other urban areas.

AM Peak Travel

A closer analysis of am peak travel reveals that 61% of am peak trips originate within Sierra Vista (111 trips of 182 am peak trips [unweighted]), while 26% of am peak trips originated in Sierra Vista Southeast (48 of 182). Other urban areas with originating am peak travel were Whetstone (5 of 182) and Douglas (1 of 182). Nearly all am peak trips ended in Sierra Vista, with just 3% (5 of 182) having a destination in Whetstone. This is shown graphically in **Figure 20**.

There were 191 trips made during the mid-day. Of those, 87% originated in Sierra Vista. Two percent of mid-day trips originated in Tucson and four percent originated in Whetstone. One trip was made from Flowing Wells to Tucson. Similarly, common mid-day destinations were Sierra Vista (81%), Sierra Vista Southeast (6%), and Tucson (3%). Lastly, 383 trips were made during the pm peak. Most travel (86%) was within Sierra Vista. Trips from Sierra Vista to Sierra Vista Southeast accounted for 18% of pm peak travel. This is shown graphically in **Figure 21**.

Figure 20. Trip Origin - Destination Flow: AM Peak Travel

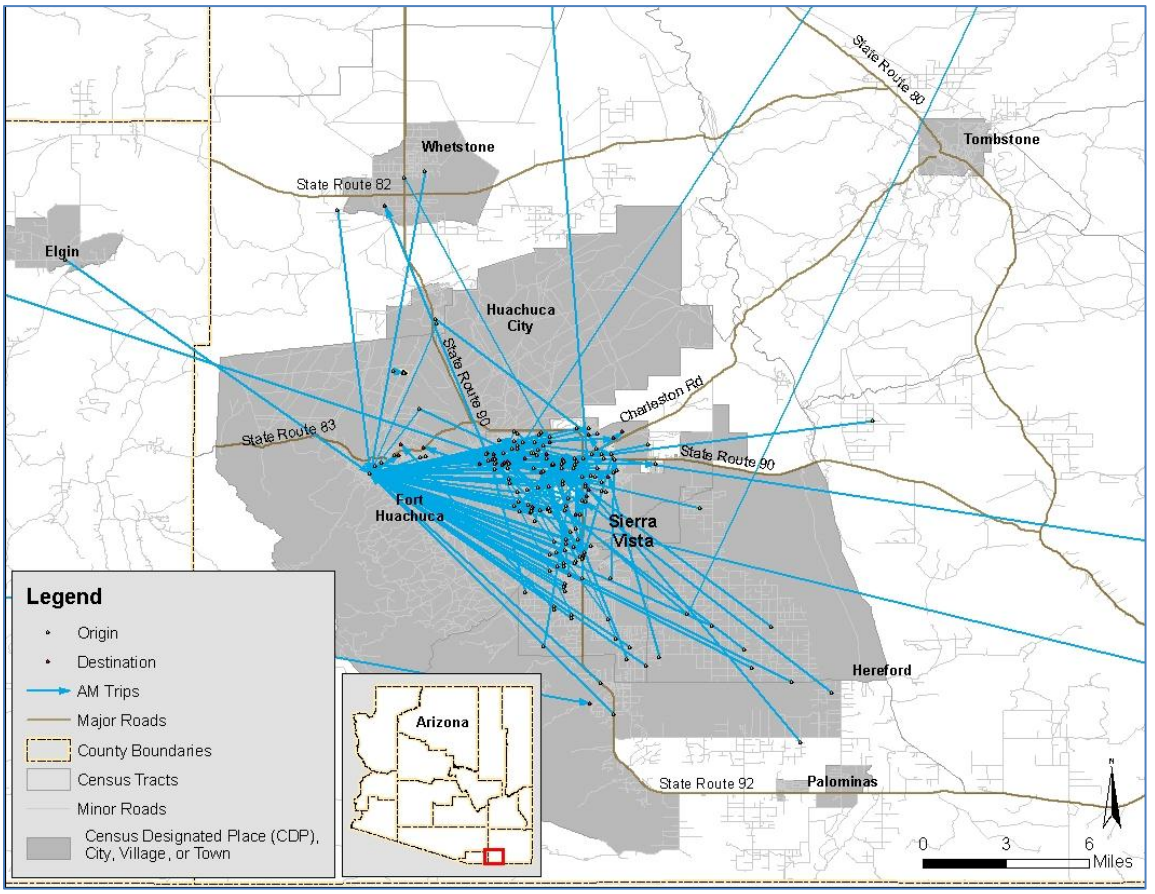
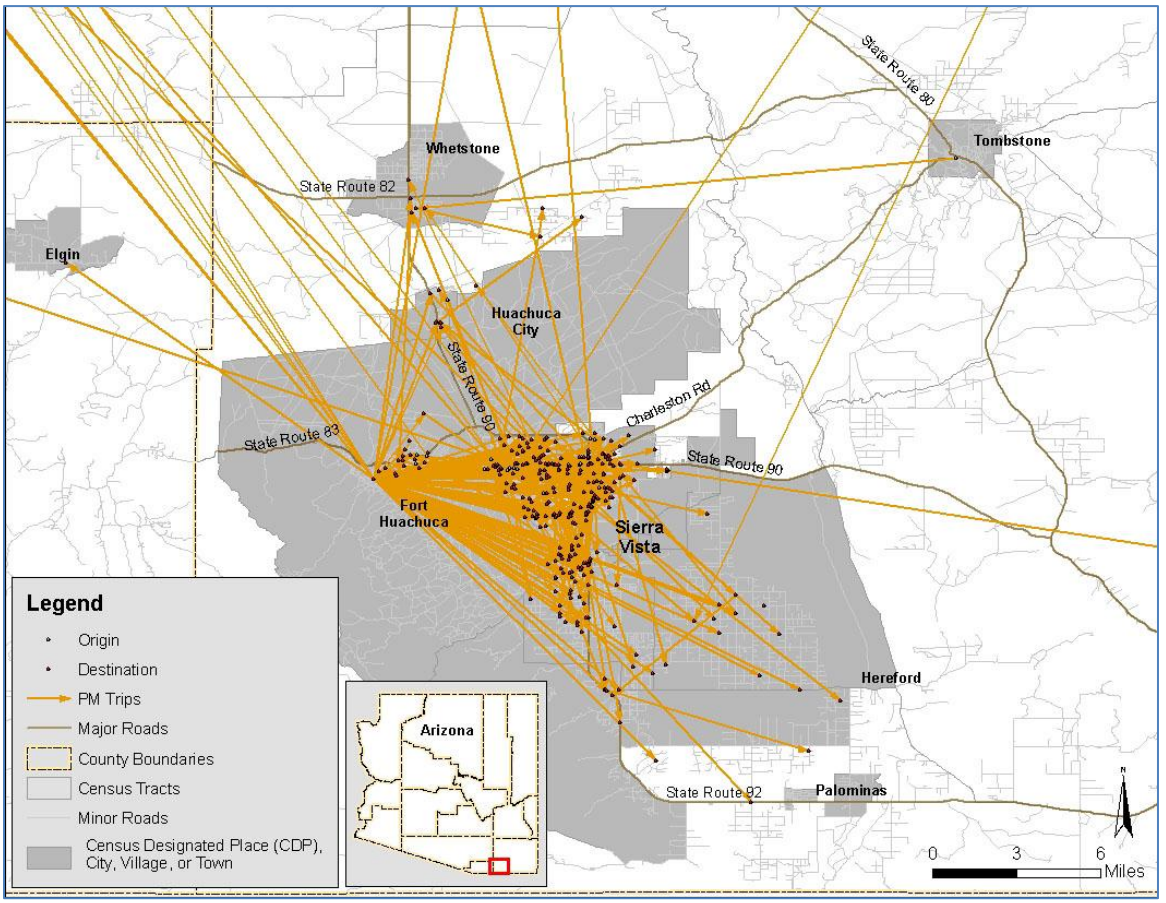


Figure 21. Trip Origin - Destination Flow: PM Peak Travel



Satisfaction with Transportation Services and Suggestions for Improvements

In addition to providing demographic and travel information, survey participants were asked to provide feedback related to their satisfaction with existing transportation services, their concern about congestion, and their interest in improved transportation programs. This section summarizes the response to these questions.

When asked whether they agreed with this statement, "I am satisfied with the availability and conditions of existing facilities for alternative transportation (e.g., walking/biking/public transit) options in Sierra Vista and surrounding area," most respondents indicated that to some degree they agree (53% either strongly or slightly agree). Fewer than 13% of respondents strongly disagree with that statement.

Respondents were then asked about their satisfaction with the services provided by Vista Transit. Most indicated they are not familiar with Vista Transit (61%), while a large percentage indicated they are very satisfied (14%).

Nearly 40% of respondents say that congestion is not a big concern of theirs, while over 15% say that it is a "very big concern."

The survey listed a variety of transportation programs and participants were asked whether they would be interested in using one or more of them if implemented and/or improved in Sierra Vista and the surrounding area. The results are presented in **Table 22**.

Table 22. Distribution of Interest in Transportation Programs

Transportation Programs	Count	Percent of Respondents
Carpool	3,820	19%
Vanpool	1,934	9%
Guaranteed ride home	3,008	15%
Car sharing	1,403	7%
Bike sharing	1,272	6%
Bike lockers (secure bike parking)	3,551	17%
Park-and-ride lots	3,770	18%
Prefer not to answer	8,814	43%
Total	**27,581**	**-**

The last question of the survey asked participants to provide suggestions for improving alternative transportation options, improving Vista Transit, or improving local roadways and highways in an open-ended text box. Of the 322 completed surveys, 166 participants provided open-ended feedback. The feedback received varied widely from recommendations to improve the timing of traffic lights, to adding transit availability to/from Fort Huachuca, to improving bike infrastructure in the north and east sections of Sierra Vista and in Fort Huachuca. There was also positive feedback, including this comment from a participant: "In the last 10 years the City has made drastic improvements in City transportation. I love the options for the elderly."

6.2 Public Outreach Survey Results

A public outreach survey was conducted online[8] by ADOT during November and December 2012, requesting input on commuter travel habits and the efficiency of the transportation system in Sierra Vista. The target audience for the survey was the general public – persons living and working in the Sierra Vista area. The survey consisted of six transportation-related questions, one question on age, and one optional question asking persons to provide contact information for study updates, if they desire.

A total of 355 responses were received. The survey results indicated that the majority of respondents normally travel to work in their private vehicle (92%). The majority of respondents felt that congestion was either not an issue or it was an issue but not a big concern (86%).

When asked how strongly they agreed with the statement, "I am satisfied with the availability and conditions of existing facilities for pedestrians and bicyclists in Sierra Vista and the surrounding area," approximately 52% of respondents either strongly or slightly agreed.

[8] http://www.azdot.gov/MPD/Systems_Planning/SierraV.asp

When asked "How satisfied are you with the services provided by Vista Transit, the Sierra Vista public transit system?" the majority of respondents (60%) were not familiar with the transit system. Approximately 24% of respondents were either very satisfied or slightly satisfied with the system.

When asked to indicate which, if any, of the following transportation programs they would be interested in using if they were available and/or improved in Sierra Vista and the surrounding area, respondents were most interested in bicycle improvements (50% of respondents) and pedestrian improvements (44% of respondents).

There were 132 responses to open-ended Question 6, which asked for other suggestions for improving alternative transportation (e.g., walking, bicycling, and public transit) options in Sierra Vista and the surrounding area, suggestions for improving Vista Transit, or suggestions for improving the conditions of local roadways and highways. Detailed responses to this question are provided in **Appendix C**.

A summary of the survey responses is provided as follows:

1. How do you normally travel to and from work or school?

Answer Options	Response Percent	Response Count
Walk	1%	5
Bicycle	3%	12
Other non-motorized travel method (e.g., wheelchair, mobility scooter, skateboard, etc.)	0%	0
Private vehicle	92%	326
Taxi/hired car	0%	0
Rental car	0%	0
Private shuttle (SuperShuttle, employer, hotel, etc.)	less than 1%	1
Other private transit	1%	5
Vista Transit	1%	3
Other public transit	1%	3
	answered question	**355**
	skipped question	**0**

2. Do you feel that traffic congestion is a concern in Sierra Vista and the surrounding area?

Answer Options	Response Percent	Response Count
Yes, congestion is a very big concern	14%	50
Yes, congestion is an issue, but not a big concern	44%	155
No, congestion is not a concern	42%	150
	answered question	**355**
	skipped question	**0**

3. How strongly do you agree with the following statement: I am satisfied with the availability and conditions of existing facilities for pedestrians and bicyclists in Sierra Vista and the surrounding area?		
Answer Options	Response Percent	Response Count
Strongly agree	24%	84
Slightly agree	29%	102
Slightly disagree	19%	66
Strongly disagree	16%	57
I am not familiar with existing facilities for pedestrians and cyclists in Sierra Vista	13%	46
	answered question	355
	skipped question	0

4. How satisfied are you with the services provided by Vista Transit, the Sierra Vista public transit system?		
Answer Options	**Response Percent**	**Response Count**
Very satisfied	9%	32
Slightly satisfied	15%	53
Slightly dissatisfied	7%	25
Very dissatisfied	9%	31
I am not familiar with Vista Transit	60%	214
	answered question	**355**
	skipped question	**0**

5. Please indicate which, if any, of the following transportation programs you would be interested in using if they were available and/or improved in Sierra Vista and the surrounding area. Please check all options that apply.

Answer Options	Response Percent	Response Count
Bicycle improvements (e.g., bike lanes, bicycle parking, bicycle racks on buses)	50%	144
Parking facilities, including park-and-ride lots	29%	84
Pedestrian improvements (e.g., sidewalks, pathways, crossings)	44%	128
Organized carpool program	24%	68
Organized vanpool program	18%	52
Guaranteed ride home program (provides a ride home in case of emergency to those who use alternatives modes of transportation to travel to and from work)	25%	72
Employer-sponsored car sharing program	20%	57
Employer-sponsored bike sharing program	7%	20
Expanded transit service (routes and times)	34%	98
Other (please specify)	9%	25
answered question		**288**
skipped question		**67**

6. If you have any other suggestions for improving alternative transportation (e.g., walking, bicycling, public transit) options in Sierra Vista and the surrounding area, suggestions for improving Vista Transit, or suggestions for improving the conditions of local roadways and highways, please provide those in the box below (500 word maximum).

Answer Options	Response Count
	132
answered question	**132**
skipped question	**223**

7.0 REGIONAL TRAVEL ANALYSIS DATA

Travel patterns within the tri-county region of Pima, Cochise, and Santa Cruz counties were analyzed between August 21 and September 13, 2012 using data provided by AirSage, a wireless information and data provider.

Travel within Sierra Vista (where the work location and the home of the employee are both in Sierra Vista) produced the highest number of trips. The following were consistently found to be the top five origins and destinations for work-based trips to and from Sierra Vista:

1. Whetstone/Huachuca City
2. Bisbee, Hereford
3. Tucson
4. Douglas
5. Tombstone

Additional analysis was completed of origins that had a common destination of Fort Huachuca. **Table 23** provides a summary of data during key commuting periods. The data shows that the vast majority of daily trips to Fort Huachuca originate in the City of Sierra Vista. Other destinations with a high number of trips include Hereford, Huachuca City, Tucson, and Benson. These origins represent opportunities for regional commuting services such as carpools or vanpools.

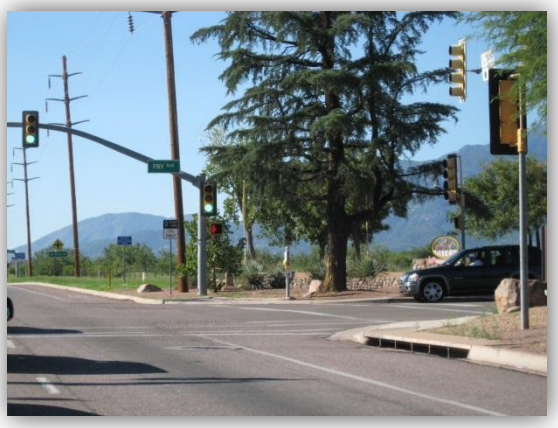
Table 23. Most Frequent Trip Origin Locations with Destination at Fort Huachuca

Origin		Average Number of Trips to Fort Huachuca		
City/Town	Zip Codes	Daily	AM (6-10am)	PM (3 to 7pm)
Benson	85602	394	192	55
Bisbee	85603	188	83	35
Fort Huachuca	85613	14,908	3,001	3,518
Hereford	85615	1,227	652	124
Huachuca City	85616	1,464	663	218
Sierra Vista	85635, 85650	14,976	6,454	2,232
Southeast Tucson/Vail	85706,85707,85708,85710, 85730,85741,85747,85748, 85756	522	256	70
Tombstone	85638	163	71	40
Tucson (includes southeast Tucson and Vail areas)	85619,85701,85704,85705, 85706,85707,85708,85710, 85711,85713,85714,85716, 85718,85719,85723,85726, 85730,85737,85741,85742, 85743,85745,85746,85747, 85748,85749,85750,85756, 85757	911	401	136

8.0 TRAVEL REDUCTION PLAN

8.1 OVERVIEW

This chapter proposes reasonable, implementable, and community-supported recommendations to reduce reliance on SOV trips and provide the community with a variety of safe and efficient transportation choices. Throughout development of the TRP, the Study team engaged with the project stakeholders, including City of Sierra Vista staff, Fort Huachuca personnel, ADOT staff, elected officials, employers, business groups, and members of the public. The strategies focus on providing more travel options for employees and making the public aware of the travel options that are available.



The strategies, summarized in **Table 24** and detailed further in Sections 8.2 through 8.10, were developed based on the review of current conditions, future conditions, the Employee Transportation Survey, and input from the public that was received through the public survey and at a public meeting held on February 7, 2013. Input from the public meeting is further described in **Chapter 9**.

The travel reduction strategies are organized into the following categories:

- Bicycle infrastructure strategies.
- Parking infrastructure and management strategies.
- Pedestrian infrastructure improvements.
- Vanpooling/ridesharing strategies.
- Marketing and promotion of alternative travel modes.
- Transit strategies.
- Traffic flow strategies.

Table 24. Travel Reduction Plan Strategies

Section/ Reference	Category	Strategy	Description/Comment
8.2.1	Bicycle Infrastructure Strategies	Enhanced bike parking facilities.	Suggested locations include major employers such as Sierra Vista Regional Health Center, Aegis Communications, Fort Huachuca, and the Sierra Vista Transit Center.
8.2.2		New bicycle facilities.	In addition to the bicycle facilities as recommended in the *2011 City of Sierra Vista Safe Bicycle and Pedestrian Routes Plan*, bicycle lanes are recommended on primary roadways on Fort Huachuca. Identification of low speed/low traffic volume streets on Ft. Huachuca to serve as alternative routes to main roadways for bicyclists is recommended.
8.2.3		Bicycle sharing program.	A bicycle sharing program could be introduced at major buildings on Ft. Huachuca. Adequate facilities (e.g., bicycle lanes) would first be required in order to make this program effective.
8.3.1	Parking Infrastructure/ Management Strategies	Park-and-ride lots.	
8.3.2		Priority parking for carpools.	Priority parking for carpools is most effective at congested locations or buildings with limited or large parking lots (such as at Fort Huachuca, Aegis, and Sierra Vista Regional Health Center).
8.3.3		Parking cash-out programs.	This program is employer-based and allows employers to pay their workers an IRS-qualified deduction for not driving/parking at the work site.
8.4.1	Pedestrian Infrastructure Improvements	Assess sidewalk deficiencies and develop an improvement plan and an ADA Transition Plan.	An improvement plan will assess sidewalk needs, crosswalks, and paths including gaps in sidewalks, broken sidewalk segments, pedestrian crossing improvements, curb ramps at intersections, and other

Section/ Reference	Category	Strategy	Description/Comment
			safety measures as necessary to satisfy the Americans with Disabilities Act (ADA). The *Safe Bicycle and Pedestrian Plan* recommended a sidewalk inventory and implementation plan be conducted, as well as an ADA Transition Plan.
8.4.2	Pedestrian Infrastructure Improvements (continued)	Implement safe routes to transit, schools, and employers.	Seek funding to complete projects near high-priority pedestrian areas. Eligible activities under MAP-21's Transportation Alternatives Program (TAP) include construction, planning, and design of pedestrian and bicycle facilities and the Safe Routes to School program (SRTS) including: • Infrastructure-related projects – planning, design, and construction of projects that will substantially improve the ability of students to walk and bicycle to school. • Non-infrastructure-related activities to encourage walking and bicycling to school. • Safe Routes to School coordinator.
8.4.3		Pedestrian crossings at traffic signals.	Assess and update pedestrian signal timing at traffic signals.
8.5.1	Vanpooling/Ridesharing	Develop regional carpool matching service.	A carpool matching service could be handled by a regional agency such as SEAGO or the planned Metropolitan Planning Organization (MPO).
8.5.2		Promote vanpool service to Fort Huachuca.	This strategy involves promoting vanpool benefits and services available and providing incentives for persons using a vanpool. This strategy focuses on utilizing resources available through the Fort Huachuca Public Affairs Office.
8.5.3	Vanpooling/Ridesharing	Implement Guaranteed Emergency Ride Home (GERH)	GERH programs provide commuter assurance they will

Section/ Reference	Category	Strategy	Description/Comment
	(continued)	programs.	not be stranded when taking transit or other alternatives; this is often mentioned as a need when implementing a vanpool/ridesharing service.
8.6.1	Marketing and Promotion of Alternative Travel Modes	Subsidized transit passes for employees.	
8.6.2		Wider distribution of transit schedules.	Increase web presence for Vista Transit and wider distribution of schedules and transit information through smartphone and web applications.
8.6.3		Wayfinding guides to selected employment and commercial locations.	This strategy proposes maps and other information on how to walk and cycle to specific employment locations.
8.6.4		Distribution of ADOT-developed bicycle and pedestrian educational materials.	ADOT develops several educational booklets and brochures for free distribution. In addition, the City of Sierra Vista produced a bicycle map as part of the *2011 Sierra Vista Safe Bicycle and Pedestrian Routes Plan*.
8.7.1	Transit Strategies	Conduct Vista Transit Regional Five-Year Plan.	Serves as an update to the current five-year plan, which was completed in 2008.
8.7.2		Evening transit service.	Goal would be to implement evening transit service incrementally.
8.7.3		Shuttle service within Fort Huachuca.	Reinstitute shuttle service on Fort Huachuca, with connections to Vista Transit.
8.7.4		Vista Transit service to Fort Huachuca on weekday peak periods.	Could coordinate with a future Fort Huachuca shuttle service.
8.7.5		Vista Transit service extension outside city limits.	This strategy includes new transit service to areas outside of the current service boundary and eventual intercity bus service.
8.8.1	Traffic Flow Strategies	Develop a traffic signal synchronization program to regularly assess timing and update as appropriate.	Ideally, traffic signal timing plans should be reviewed at a minimum of once every three years.

8.2 Bicycle Infrastructure Strategies

Sierra Vista is a bicycle-friendly community with an extensive network of shared-use paths, bicycle lanes, and shared roadways. Bicycle infrastructure strategies in this plan focus on encouraging more people to use bicycles as an alternative to vehicle trips to work. In 2011, a *Safe Bicycle and Pedestrian Routes Plan* was completed, which focused on general bicycle and pedestrian needs within the City (not including the Fort Huachuca area). Maps showing existing facilities and proposed projects are provided in **Appendix A**. Strategies which draw from this plan are noted, where applicable.

Bicycle-related improvements drew support in both the employee survey and the public outreach survey conducted for this project. The employee survey noted the following bicycle-related responses when respondents were asked which programs they would use if implemented:

- Bike lockers (secure bike parking) – 17% of respondents.
- Bike sharing – 6% of respondents.

Specific comments on bicycle improvements from both surveys included:

- Extend and add bike trails/lanes/paths and provide more connectivity.
- Provide better maintenance of bike lanes and shoulders.
- Provide bike lanes on and connecting to Fort Huachuca, particularly from the Main Gate and East Gate. The gates were mentioned as areas where bicyclists need to share the lanes with vehicles.
- Support for multi-use paths in general.

In the public outreach survey, 50% of respondents indicated they would be interested in using bicycle improvements if they were available. A review of comments on specific locations for bike lanes indicated that most of the comments were addressed in the *Safe Bicycle and Pedestrian Routes Plan*.

This TRP focuses on improvements in Fort Huachuca and areas outside the Sierra Vista city limits and strategies focused on encouraging greater use of bicycles for work trips. These include:

- Enhanced bike parking.
- New bicycle facilities.
- Bike racks on Vista Transit buses.
- Bike sharing program at Fort Huachuca and Vista Transit Center.

8.2.1 ENHANCED BIKE PARKING FACILITIES

Description

Secure bicycle parking is an essential element in a multimodal transportation system. In addition to preventing theft, secure bicycle parking can improve aesthetics of sidewalks and building sites. In the absence of secure parking, people may lock their bicycles to any stationary objects such as trees, fence posts, or sign posts. These random locations may interfere with pedestrian movement or even vehicular traffic flow.

Secure bicycle parking areas can encourage the use of bicycles to travel to work destinations. As mentioned above, 17% of employee travel survey respondents indicated they would use bicycle parking or secure bike parking. In addition, a number of stakeholders representing employers mentioned that vehicle parking areas sometimes get full; therefore, bicycle parking can be an inexpensive strategy to increase overall parking supply. Providing secure bicycle parking could encourage bicycle trips to work. Input from Fort Huachuca staff indicated that more bike racks are needed, particularly near housing areas.

The Sierra Vista Land Development Code, Section 151.09.005, Cycle Parking, states that in all new multi-dwelling and commercial developments, there shall be sufficient areas established to provide for parking of motorcycles, mopeds, and bicycles. Such areas shall be clearly defined and reserved for the exclusive use by motorcycles, mopeds, and bicycles. Secure bicycle racks shall be provided. The code does not state how many bicycle parking spaces/racks should be provided. Many communities establish bicycle parking requirements in relation to the total number of vehicle parking spaces (e.g. 1:10).

Covered bicycle parking should be required at locations where bicycles may be left for longer periods of time: apartments, schools, places of employment, and transit stops. They may also consist of bicycle lockers.

Bicycle parking should also be required at all public facilities, incorporated into roadway and streetscape projects, and should be an integral part of both new development and redevelopment projects.

Implementation Recommendations

Recommended locations for bicycle parking facilities are summarized in **Table 25**.

Table 25. Recommended Locations for Bicycle Parking Facilities

Location	Type of Facility	Comments
Major employers such as Fort Huachuca, Sierra Vista Regional Health Center, and Aegis Communications.	Bicycle racks, including covered bicycle parking at employers.	Both Aegis and SVRHC currently have bicycle racks. An interview with company representatives indicated that more bike racks could be provided if needed. Very few bicycle racks are located on Ft. Huachuca. An issue is lack of bike lanes or shared-use paths. Bicycle racks are particularly needed near housing areas.

Resource/Cost Requirements

Bicycle parking may be provided in floor-, wall-, or ceiling-mounted (inside of buildings) racks and should meet the following requirements:[9]

- Hold the bicycle frame, not just a wheel.
- Accommodate a wide range of bicycle frame types, sizes, and wheel sizes.
- Allow the frame and both wheels to be secured.
- Can be used with a U-shaped shackle lock.
- Is covered with material that will not chip the paint of a bicycle that leans against it.
- Does not have hazards, such as sharp edges.

Bicycle racks vary in cost depending on the specific type of bicycle rack, but generally are in the range of $400 –– $800 for a rack holding eight to ten bicycles.

Implementation Time Frame/Responsibility

Installing new bicycle racks is a low-cost strategy to increase bicycle ridership. Bicycle racks at private facilities (e.g., employers, stores, etc.) should be the responsibility of the property owner.

Goals and Targets

The long-term goal is to ensure that secure bicycle parking is provided at all commercial and multi-residential developments. A short-range goal is to conduct an inventory of bicycle parking at all major employers (100 employees and above) and install bicycle parking where it is not currently available.

8.2.2 NEW BICYCLE FACILITIES

As mentioned previously, the *2011 City of Sierra Vista Safe Bicycle and Pedestrian Routes Plan* resulted in a prioritized plan to expand the existing bicycle network, construct new shared-use paths, and implement shared roadway projects. Specific comments that were received in both the employee travel survey and public outreach survey within the City appeared to be addressed by the *Safe Bicycle and Pedestrian Routes Plan*. It should be noted, however, that this plan did not include the Fort Huachuca area or areas outside the Sierra Vista city limits.

[9] http://www.vtpi.org/tdm/tdm85.htm, accessed December 6, 2012

The street system within Fort Huachuca includes narrow streets that currently do not include space for bicycle lanes or wide paved shoulders. Distances can be lengthy from the Main and East Gates to common areas. For example, it is 3.4 miles from the Fort Huachuca Main Gate at Fry Boulevard to the intersection of Smith Avenue with Hatfield Street. Input from Fort Huachuca staff indicated that it would be desirable to provide bicycle lanes as a longer-term strategy; however, funding for improvements are limited (additional funding requires approval from Congress).

> *Identify low speed, low traffic volume streets to serve as bicycle route alternatives to primary roadways on Fort Huachuca.*

A short-term strategy is to identify a network of low speed and low volume local streets to serve as bike route alternatives. These may require new minor street connections to primary roadways.

Description

Key travel reduction strategies with respect to bicycle facilities include the following:

- Implement recommendations in the *2011 Safe Bicycle and Pedestrian Routes Plan*. Prioritize bicycle lanes or signed shared roadways and way-finding on streets that serve major employers. Examples include Enterprise Way and Industry Drive.
- Construct shoulders on major roadways on Fort Huachuca to provide bicycle lanes, as funding becomes available. Projects with an estimated cost over $750,000 require congressional approval.
- Identify, sign with wayfinding signage, and promote low speed, less traveled roadways that can be used as bicycle routes on Fort Huachuca.

Implementation Recommendations

Implementation recommendations were developed based on a review of potential facilities that can serve Fort Huachuca and other major employers not addressed in *the 2011 City of Sierra Vista Safe Bicycle and Pedestrian Routes Plan*. These recommendations are shown in **Table 26**.

Table 26. Strategies for New Bicycle Facilities

Street or Location	From	To	Facility/Study Type	Length (Miles)	Major Employers Served by Facility
Fort Huachuca	To be determined	To be determined	Analysis is needed to determine network of bicycle routes on base; network may consist of local street alternatives to primary routes.	N/A	Fort Huachuca

Street or Location	From	To	Facility/Study Type	Length (Miles)	Major Employers Served by Facility
Industry Drive	SR 92	Colombo	Bike lane or signed shared roadway	0.42	Aegis Communications and Northrop Grumman Aerospace
Enterprise Way	Industry Drive near SR 92	Industry Drive	Bike lane or signed shared roadway	0.31	Aegis Communications and Northrop Grumman Aerospace
Winrow Avenue	Fry Boulevard	Hatfield Street	Bike lane	3.4	Fort Huachuca
Hatfield Street	SR 90	Winrow Avenue	Bike lane	3.0	Fort Huachuca

Resource/Cost Requirements

The cost of installing a bike lane can range from $5,000 to $50,000 per mile depending on the condition of the pavement, right-of-way required, the need to remove and repaint lane lines, the need to adjust signalization, and other factors. It is most cost efficient to create bike lanes during street reconstruction, street resurfacing, or during original construction.[10]

Identification of low speed routes on Fort Huachuca is a relatively low cost strategy that can be accomplished in a short-term time frame.

Implementation Time Frame/Responsibility

The projects on Fort Huachuca require coordination with Fort Huachuca personnel to determine feasibility, potential time frame, and funding sources. Assessment of low speed routes to serve as bicycle routes and development of a more detailed plan to construct shoulders for bike lanes on higher speed routes are a short-range goal. Construction of bicycle facilities on base would be a mid-range goal.

The projects on City streets that connect to major employers are a mid-range goal and would be the responsibility of the City of Sierra Vista. These projects require further study to determine the best approach to provide bike facilities and to determine funding.

Goals and Targets

Short-range goals are to identify a network of existing, bikeable streets within Fort Huachuca and to develop a plan, cost estimate, and identify funding sources to provide bike lanes at Fort Huachuca.

[10] http://www.bicyclinginfo.org/bikesafe/countermeasure.cfm?CM_NUM=11

A mid-range or long-range goal, depending on funding availability, is to construct the bike facilities on Fort Huachuca and to implement recommendations from the *2011 Safe Bicycle and Pedestrian Routes Plan*, with priority on providing bicycle access to major employers. Bicycle facilities on Enterprise Way and Industrial Drive (signed with way finding) are examples.

8.2.3 BIKE SHARING PROGRAM

Description

Bike sharing programs offer people an easy and healthful option for traveling, typically for short urban trips. A bike sharing program typically provides one or more central locations to rent bicycles, helmets, locks, and other safety equipment. Key benefits to bike sharing include:

- Eases traffic congestion.
- Improves employee health and wellness.
- Promotes alternative modes of transportation.
- Saves time parking a vehicle.
- Helps air quality.

Bike sharing programs typically have one or more rental stations, each with a fleet of bikes. They often have stations at public transit stations. Key elements of a bike sharing program are:

- Bike sharing stations – structures that hold the automated customer kiosk and docks that dispense and store the bicycles. Users collect and drop bikes, often using smart cards that contain the user's registration or payment information. Bikes are secured using an electronic lock mounted on the bike. The customer calls the telephone number given on the bike and gets by voice the four-digit unlock code, which is typed into the bike's touch screen to release the bike.
- Docks – a mechanism that retains a bicycle in an upright, locked position until released by the user.

Technology advances have improved these programs. Bikes should be distinctive, designed for easy city use, and be clearly branded to increase their visibility. Bikes typically come with full fenders, chain guards and, in some cases, bike locks. Most bikes come equipped with a Global Position System (GPS) unit, Radio Frequency Identification (RFID) tag, or other types of tracking mechanisms. This function is typically used in fleet management and retrieval of lost or stolen bikes, which remains a common problem despite anti-theft technology.[11]

Implementation Recommendations

Implementation recommendations include development of a bike sharing program that is focused on Ft. Huachuca.

[11] Bike Sharing in the United States: State of the Practice and Guide to Implementation, September 2012

Stakeholder interview results indicate that employees frequently travel between buildings within the base. A bike sharing program will provide enhanced mobility for employees that are part of a vanpool and who may need to travel throughout the base during the day. A bike sharing program could be incorporated as part of a wellness program. The program will serve major buildings on Ft. Huachuca and student housing. If the program is successful, it could be expanded to the City.

Resource/Cost Requirements

Costs for bike sharing programs vary widely, depending on how the program is structured. At the University of Arizona in Tucson, a bicycle sharing program was started with 10 bicycles at a cost of $3,000 to $4,000, which included bikes, locks, racks, and other miscellaneous items. The bicycles are checked out from cashier's offices at two university parking garages. The range of costs for procuring the equipment and installing each bike sharing station is shown in **Table 27**. These costs represent sophisticated systems in large urban areas. A simplified bike sharing program could be established for approximately $500 per bicycle, if the bicycle checkout could be integrated into an existing office or central location.

Table 27. Equipment and Operating Costs for Bike Sharing Stations of Various Sizes

Station Size (Docks)	Bikes	Equipment and Installation (Includes Bikes)	Approximate Annual Operating Costs
11	6	$35,000 to $40,000	$12,000 to $15,000
15	8	$45,000 to $48,000	$18,000 to $21,000
19	10	$53,000 to $58,000	$24,000 to $28,000

Source: Bike Sharing in the United States: State of the Practice and Guide to Implementation, September 2012

A combination of federal, state, and local government funding, in addition to private sources and membership and usage fees, are currently being used by existing programs. Funding can come from revenues generated by users. Use of advertising and/or sponsorship is also an option.

Implementation Time Frame/Responsibility

A summary of time frames and responsibilities follows:

Location	Time frame	Responsibilities
Fort Huachuca	Mid-range	Fort Huachuca with cooperation/funding from major employers would operate this program.

Goals and Targets

An initial goal is to obtain grant funding and then implement the bicycle sharing system, dependent on funding. The program could start with three to four bicycles to build demand.

8.3 PARKING INFRASTRUCTURE/MANAGEMENT STRATEGIES

Parking management programs are one of the most effective TDM measures an employer can implement to reduce SOV travel. Parking infrastructure/management programs include:

- Park-and-ride lots.
- Preferential parking for carpools/vanpools.
- Parking cash-out programs (a cash benefit given to employees).

8.3.1 PARK-AND-RIDE LOTS

Park-and-ride lots consist of parking facilities at areas such as transit stations, commercial areas, and urban fringe areas. They provide a location for persons to transfer to a carpool, vanpool, transit system, or other mode of travel. Park-and-ride lots support ridesharing, public transit usage, and parking management. Potential locations for park-and-ride locations mentioned by stakeholders and survey respondents include the following:

- Large commercial locations, such as Wal-Mart, Sierra Vista Mall, etc.
- Vista Transit Center.
- Ramsey Canyon Road and SR 92 intersection area (would need to be constructed in coordination with a transit connection to the center of Sierra Vista and Fort Huachuca).
- Bisbee, to facilitate carpools to Fort Huachuca.
- Schools near bus stops so parents can drop children off and take the bus.
- A park-and-ride lot to serve community events, since parking at the Veteran's Memorial Park is limited.
- A park-and-ride lot south of the Vista Transit service area for area residents to access the bus service. A potential location is the Sierra Vista Mall.

Potential park-and-ride locations that were indicated by the home location of employee survey respondents include:

- Hereford – 8% of respondents.
- Huachuca City – 5% of respondents.
- Bisbee – 1% of respondents.

As mentioned in Chapter 1, travel patterns within the tri-county region of Pima, Cochise, and Santa Cruz counties were analyzed. The following were found to be the top five origins and destinations for work-based trips, based on AirSage analysis of cell phone data:

1. Whetstone/Huachuca City
2. Bisbee
3. Tucson
4. Douglas
5. Tombstone

A further analysis of trip origins to Fort Huachuca indicated that the vast majority of trips to Fort Huachuca originate in the City of Sierra Vista. Other destinations with high numbers of trips include Hereford, Huachuca City, Tucson, and Benson. This data indicates that potential park-and-ride locations should be investigated in Whetstone/Huachuca City, Bisbee, Benson, Tucson, Hereford, Douglas and Tombstone, as well as in the City of Sierra Vista itself. These areas are shown in **Figure 22**.

Description

Park-and-ride facility design depends on the size, function, and location of the facility. Types of park-and-ride lots include the following:[12]

- Informal park-and-ride lots – as the name denotes, these are transit stops or carpool locations that develop on an ad-hoc basis.
- Joint-use park-and-ride lots – these take advantage of extra parking spaces at a publicly- or privately-owned facility.
- Park-and-pool lots – typically smaller facilities used for carpools.
- Suburban park-and-ride lots – located at the urban fringe, used for commuters parking for more long-haul trips.
- Transit center – providing a park-and-ride lot at the Vista Transit Center can potentially increase ridership.
- Peripheral lots – placed at the edge of an activity center to provide additional inexpensive parking alternatives to on-site parking.

[12] Florida DOT, Transit Facility Handbook, 2007, page 87.

Implementation Recommendations

The first step is to identify potential sites and conduct a feasibility study to provide more detailed cost estimates, agreements needed, funding, and maintenance responsibilities. Priorities are within the city itself, the Huachuca City/Whetstone area, Hereford, and Tucson based on regional travel patterns.

Resource/Cost Requirements

Resource and cost requirements are to be determined, depending on the type of park-and-ride facility, by whether it is part of an existing lot or a new facility requiring right-of-way and construction.

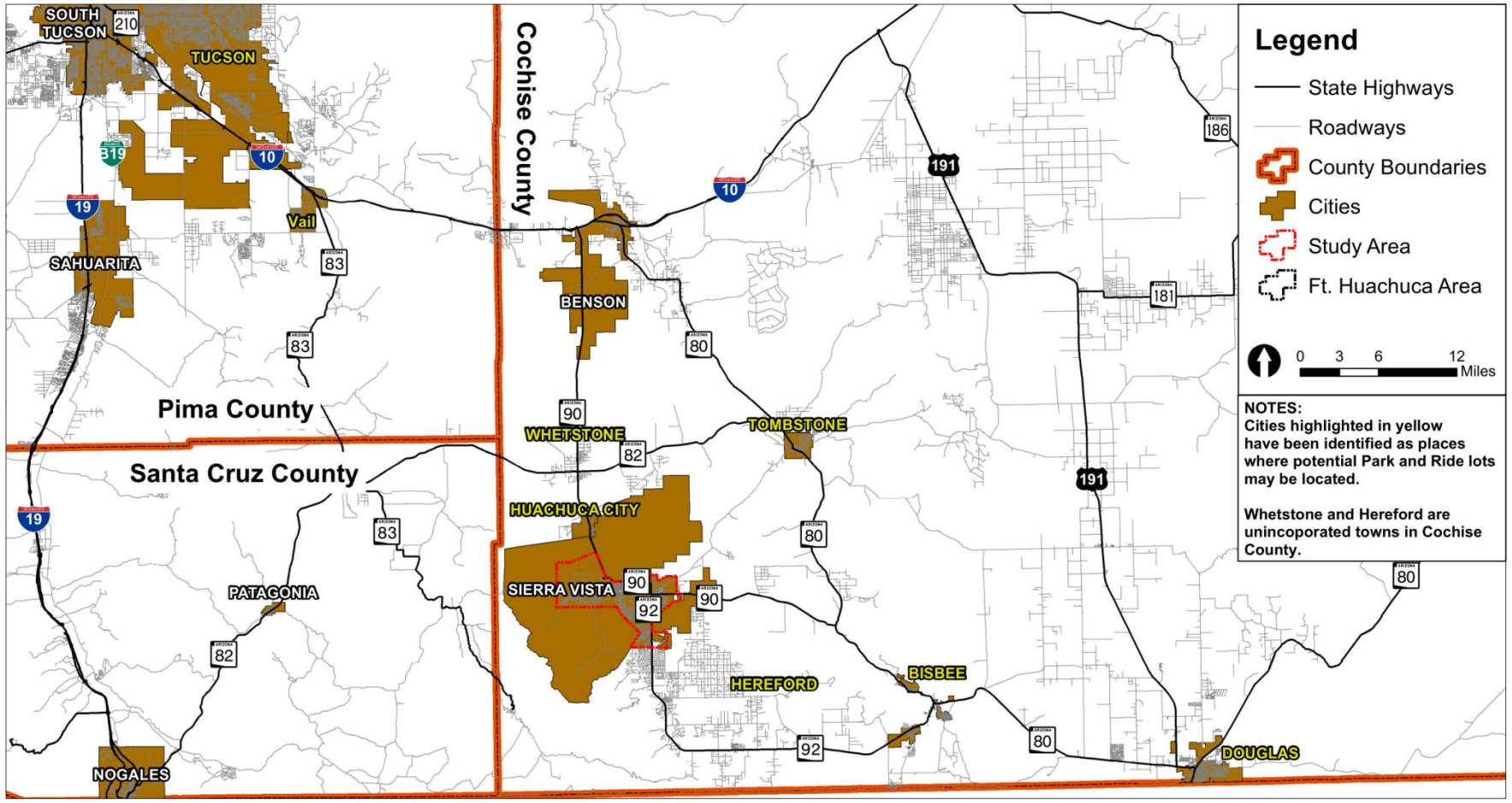
Implementation Time Frame/Responsibility

The implementation time frame would range from short-range to long-range, as the park-and-ride system is expanded. The responsibility for this would fall upon the City of Sierra Vista and regional partners, depending on lot locations. Other partners include private businesses, if the park-and-ride facilities are located within existing lots.

Goals and Targets

A short-range goal is to conduct a feasibility study of potential sites. Mid- and long-range goals are to implement one or more park-and-ride lots throughout the region.

Figure 22. Potential Areas for Park-and-Ride Lots



8.3.2 PRIORITY PARKING FOR CARPOOLS

Description

This strategy provides marked, preferential parking spaces for carpool users. It encourages the use of carpools by providing parking in a preferred location, such as near the workplace entrance or shaded spots. This strategy encourages the formation of carpools, especially where parking is at a premium.

Implementation Recommendations

A number of stakeholders mentioned that their parking lots are typically full—employers such as Fort Huachuca, Aegis Communications Group, and the Sierra Vista Regional Health Center. This strategy would work at almost any large employer, and it is a relatively low cost strategy.

Resource/Cost Requirements

This strategy requires identifying and dedicating a number of parking spaces that are signed as "reserved for carpool." The number of parking spaces reserved is typically two or three, or more depending on the size of the employer and parking lot. These spaces are marked by signs. Signing and installation costs are typically inexpensive (less than $500).

Implementation Time Frame/Responsibility

Implementation time frame for this strategy is short-range. Employers are responsible for reserving and providing signage for parking spaces; however, the City of Sierra Vista, perhaps in coordination with SEAGO, should lead an education effort describing the advantages of priority parking for carpools and how to promote the program to employees.

Goals and Targets

An initial goal for this program is to designate a staff person responsible for developing a letter to send to major employers outlining the advantages of preferential carpool parking, and then follow up to determine interest in implementing this strategy. Targets for this program would be to incrementally increase the number of carpool parking spaces over time.

8.3.3 PARKING CASH-OUT PROGRAMS

Description

Employers offering free parking to employees can implement parking cash-out programs, which involve offering employees a choice to either keep a parking space at work or accept a cash payment and give up the parking space.

Cash-out programs are an effective means of allocating scarce parking or managing a growing demand for more parking. In addition, there are tax benefits for employers and employees.[13] Employers may provide workers with up to $125 per month in tax-free transit and vanpool benefits, per limitations under IRS Section 132(f)(2)(A) *Qualified Transportation Fringe Benefits for Vanpools (Commuter Highway Vehicles) and Transit Passes*. The monthly limitation under Section 132(f)(2)(B) regarding the fringe benefit exclusion amount for qualified parking is $240. Commuters can receive both the transit and parking benefits (up to $365 per month). Private employers can allow employees to use pretax dollars to pay for transit passes, vanpool fares, and parking but not for bicycle benefits. A summary of tax benefits for vanpools, as well as transit and qualified parking, is provided in **Appendix B**.

Parking cash-out programs benefit employees because they allow employees to choose whether or not to continue driving alone. Employees perceive these programs as fair since nobody is forced to stop driving or give up free parking, but those who do are rewarded financially. Although any employer who pays for parking can implement parking cash-out, it works best for employers who lease, rather than own, parking. The payment for parking cash-out varies, depending on the employer and location.

Implementation Recommendations

The resource: *Parking Cash-Out: Implementing Commuter Benefits as One of the Nation's Best Workplaces for Commuters* (U.S. Environmental Protection Agency, March 2005) provides a guide for employers on implementing a parking cash-out program. Steps include:

- Analyzing current parking conditions and policies.
- Determining how to structure a program – how much cash to offer in lieu of a parking space and would it be feasible to offer a transit option.
- Obtaining management approval.
- Working with payroll to set up appropriate payroll codes.
- Developing a process for employees to elect their commuter benefit.
- Publicizing and implementing the program.

Resource/Cost Requirements

There are two potential costs to the employer: additional payroll taxes and cash-out payments to employees who give up their parking space. Because the parking cash-out benefit paid to employees is considered additional salary, the employer's payroll taxes will increase. The cost is variable depending on the number of participants and the cash-out benefit provided.

Implementation Time Frame/Responsibility

Implementation steps include developing material to explain the program to employers and following up to determine if they have questions or need help in developing the program. The responsibility for

[13] National Center for Transit Research, http://www.nctr.usf.edu/programs/clearinghouse/commutebenefits/

providing informational materials lies with a City or regional staff person. The cash-out program would be administered through individual employers. This program would span short-, mid-, and long-range time frames.

Goals and Targets

The goal is to develop materials to explain the program, disseminate it to major employers, and assist in developing parking cash-out programs.

8.4 Pedestrian Infrastructure Improvements

8.4.1 Assess Sidewalk Deficiencies and Pedestrian Facility Needs and Develop an Improvement Plan and an ADA Transition Plan

The *2011 Sierra Vista Safe Bicycle and Pedestrian Routes Plan* identified the need for a comprehensive sidewalk inventory and identification of existing sidewalk gaps. In addition, it was recommended that providing sidewalks should be considered in all new development and street reconstruction. A summary of sidewalk and pedestrian needs was identified in the *2011 Safe Bicycle and Pedestrian Routes Plan*, but this was not a comprehensive listing and did not include the Fort Huachuca area. In addition, an ADA Transition Plan was recommended to be developed.

Description

This strategy involves conducting a sidewalk inventory to identify gaps in sidewalks and developing a phased improvement plan to improve sidewalks, crosswalks, and paths and provide safe crossing facilities. In addition, an ADA Transition Plan should be conducted. The improvement plan would assess sidewalks, crosswalks, and paths including gaps in the sidewalk system, broken sidewalk segments, pedestrian crossing improvements, curb ramps at intersections, and other safety measures. The ADA Transition Plan is intended to achieve the following:[14]

- Identify physical obstacles that limit the accessibility of facilities to individuals with disabilities.
- Describe the methods to be used to make the facilities accessible.
- Provide a schedule for making the access modifications.
- Identify the public officials responsible for implementation of the Transition Plan.
- The Transition Plan is required to be updated periodically until all accessibility barriers are removed.

[14] ADA Transition Plans, A Guide to Best Management Practices, May 2009, NCHRP Project Number 20-7 (232).

Implementation Recommendations

Implementation steps include undertaking a sidewalk inventory and improvement plan and an ADA Transition Plan.

Resource/Cost Requirements

The budget for a sidewalk inventory and improvement plan and an ADA Transition Plan is approximately $100,000.

Implementation Time Frame/Responsibility

This Study would be undertaken by the City of Sierra Vista. The time frame for the plan is short-range. Improvements recommended in the plan would be phased over short-, mid-, and long-range time periods.

Goals and Targets

An initial goal is to develop a funding source for the plan. This could potentially be funded under the ADOT Planning Assistance for Rural Areas (PARA) program. The next goal would be to conduct the Study. Future goals would be to implement the results of the Study.

8.4.2 IMPLEMENT SAFE ROUTES TO TRANSIT, SCHOOLS, AND EMPLOYERS

This project is a follow-up to the previous sidewalk inventory project and involves construction to complete high-priority pedestrian projects, particularly those involving safe routes to schools, transit facilities, and major employers.

Description

Based on the findings of the sidewalk inventory, this project would implement high-priority sidewalk projects. Examples include gaps in the sidewalk system and safe crossing facilities.

Implementation Recommendations

Specific project improvements are dependent on the findings of the sidewalk inventory and improvement plan.

Resource/Cost Requirements

The anticipated cost for this project is dependent on the findings of the sidewalk inventory.

Implementation Time Frame/Responsibility

The implementation time frame includes short-, mid-, and long-range time periods. This work would be undertaken by the City of Sierra Vista.

Goals and Targets

A goal is to apply for funding under the MAP-21 Transportation Alternatives funding for high-priority projects. Eligible activities under the Transportation Alternatives Program include construction, planning, and design of pedestrian and bicycle facilities and the SRTS program, including:

- Infrastructure-related projects – planning, design, and construction of projects that will substantially improve the ability of students to walk and bicycle to school.
- Non-infrastructure-related activities to encourage walking and bicycling to school.
- SRTS coordinator.

8.4.3 PEDESTRIAN CROSSINGS AT TRAFFIC SIGNALS

Description

This strategy is to better synchronize traffic signal timing for pedestrians. A number of comments to synchronize the traffic signals in general were received. Specific locations for updates to signal timing include:

- SR 90 Bypass leading to the Fort Huachuca East Gate.
- SR 92 between Fry Boulevard and the SR 90 Bypass.
- Fry Boulevard, particularly between Buffalo Soldier Trail and 7th Street.

According to the *2012 National Traffic Signal Report Card*, reviewing and updating the timing and operational aspects of signalized intersections on a regular basis is important, especially where changes in traffic volumes and/or adjacent land uses have occurred since the last review. To properly time traffic signals for pedestrians, the engineer must consider pedestrian counts as well as vehicle counts, and survey the land uses near the intersection to see if there are any special considerations such as a larger than usual number of students or persons that may need extra crossing time (e.g., people in wheelchairs). Traffic signal coordination is one of the more vital aspects of traffic signal control because it ensures that motorists are able to travel through multiple intersections along a corridor with minimal stops and short delays.

Implementation Recommendations

This strategy involves a review of the traffic signal timing plans during peak periods on key commuting routes, particularly those leading into and out of Fort Huachuca.

Resource/Cost Requirements

This strategy involves staff time to review and modify traffic signal timing. It would be the responsibility of the City of Sierra Vista (on City streets) and ADOT (on state routes).

Implementation Time Frame/Responsibility

This strategy would be conducted periodically in short-, mid-, and long-range time periods.

Goals and Targets

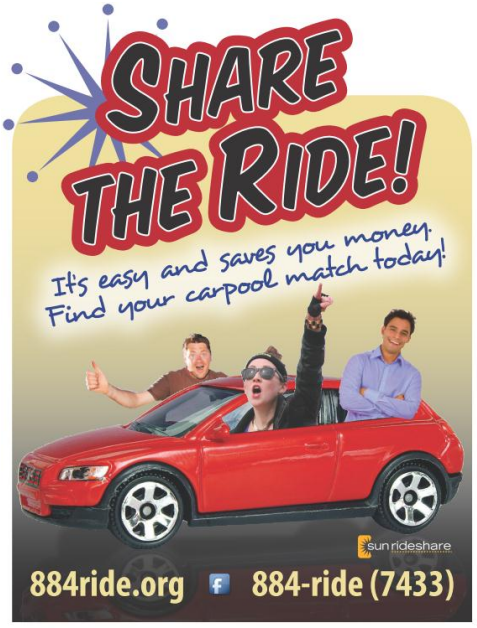
Per recommendations in the *2012 National Traffic Signal Report Card*, the goal is to review and update traffic signal timing every three years.[15]

8.5 VANPOOLING/RIDESHARING

Carpools consist of two or more persons driving together in a privately-owned vehicle. Vanpooling generally uses rented vans, in which the operating costs are typically shared among members.

The results of the employee survey conducted for this Study indicated interest in carpool and vanpool programs if they were implemented in Sierra Vista and the surrounding area:

- 19.6% of respondents would be interested in using a carpool.
- 10.6% of respondents were interested in using a vanpool.



In addition, the public outreach survey results indicated that 23% of respondents were interested in using a carpool if it was available, and 18% of respondents would be interested in using a vanpool if it was available.

Strategies discussed in this section include:

- Develop regional carpool matching service.
- Promote vanpool service to Fort Huachuca – high priority areas include Hereford, Whetstone, and Tucson based on AirSage data.

8.5.1 DEVELOP REGIONAL CARPOOL MATCHING SERVICE

Description

A web-based program can facilitate rideshare matching by providing participants with potential commute partners and connecting them with other rideshare program services and information. Newer, real-time ridematching software programs are also now available on mobile/smartphone platforms (e.g., as an app) and significantly increase the flexibility with ridesharing.

[15] 2012 National Traffic Signal Report Card, http://www.ite.org/reportcard/TechnicalReport.pdf, page 16.

More recently, dynamic ridematching services have emerged that are aimed at facilitating the formation of carpools in "real-time." Unlike traditional ridesharing, dynamic ridematching does not require commuters to commit to a single carpool with fixed routes and schedules; rather, it facilitates the matching of drivers and riders at the time of (during or directly prior to) the taking of a trip, based on availability of seats and a common origin-destination pattern. The primary enabler of dynamic ridematching is smartphone technology, which leverages GPS and other integrated applications in the software (e.g., cashless payment, incentives and rewards tracking, and user ratings/crowdsourcing). While these services greatly expand options for commuters, they do not modify the basic dynamics of pre-arranged carpools, which still require substantial coordination among participants and severely constrain schedule flexibility.

Implementation Recommendations

Larger ridematching programs use computerized partner matching systems that take into account each commuter's origin, destination, schedule, and special needs. Smaller programs may simply match potential partners by hand or use ride notice boards. The National Center for Transportation Research website[16] provides links to various types of ridematching systems, including free systems. There are ride share applications that are both web and cell phone based. Best practices, as excerpted from http://www.vtpi.org/tdm/tdm34.htm, include:

- Ridesharing should be implemented as part of a comprehensive TDM program.
- Ridesharing programs should include ridematching services and other commuter financial incentives.
- Ridematching services should cover a large geographic area (such as an entire region) in order to create the largest possible pool of users.
- Transportation agencies, businesses, and employees should all be involved in planning rideshare programs.
- Provide incentives to attract and retain rideshare users, such as mileage-points and vehicle insurance discounts.

Resource/Cost Requirements

Rideshare program costs consist primarily of administration expenses. The cost of ridematching software is variable, and free programs are available. The service will need to be promoted to make people aware that it is available (an example promotional poster is shown on the previous page).

Implementation Time Frame/Responsibility

This service would best be developed through a regional agency, such as SEAGO or the planned MPO. This program would span short-, mid-, and long-range time frames.

[16] http://www.nctr.usf.edu/programs/clearinghouse/ridematching-software/

Goals and Targets

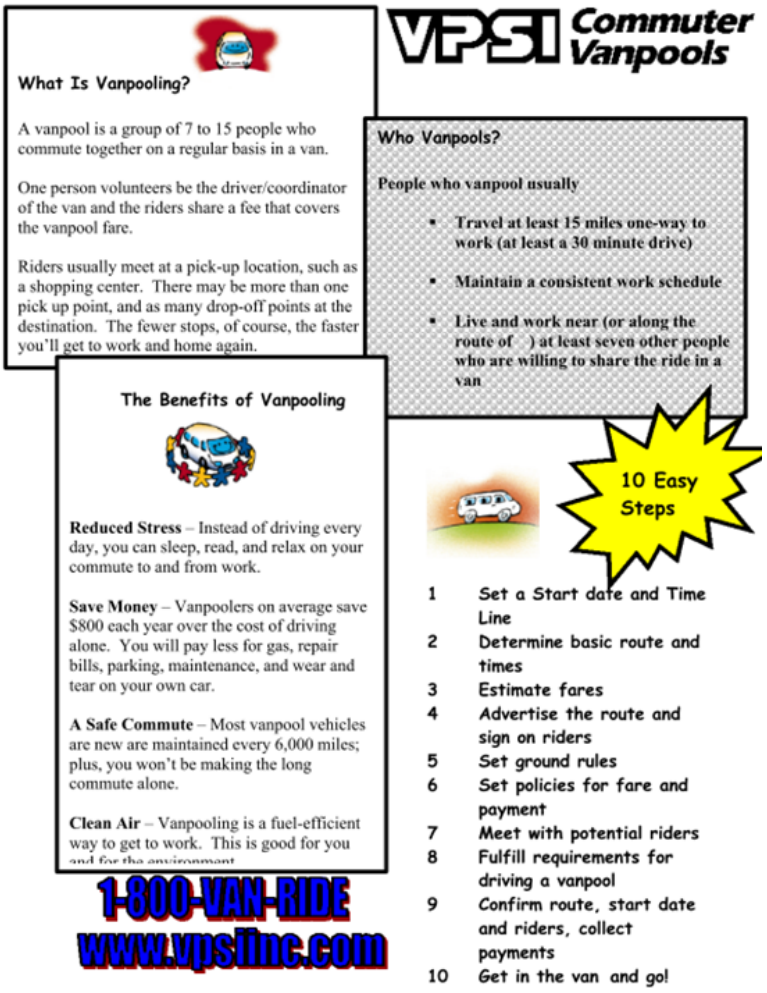
Goals for this plan are to identify an organization to host a rideshare matching service, identify the best software to use for the service, implement a rideshare and vanpool matching system, and advertise the system within the next five years. Mid- and long-range goals are to continue the program, adding participants each year.

8.5.2 PROMOTE VANPOOLING SERVICE TO FORT HUACHUCA

Currently a VSPI vanpool serves commuters traveling between Fort Huachuca and Tucson—this can be expanded to other areas of Cochise and Pima counties. Fort Huachuca staff has indicated that parking is tight on the base, and it would be beneficial to increase carpooling. According to the VSPI website[17] the Pima-Cochise Commuters, Inc. (PCCI) is a non-profit corporation founded in 1971 to provide transportation for employees who live in Tucson and work in the Fort Huachuca/Sierra Vista area. They operate nine vehicles with several stops around Fort Huachuca, supporting both eight and nine hour workdays. Some employers offer a commuter subsidy (federal government) that pays two-thirds of the cost.

The highest number of peak period trips to Fort Huachuca from areas outside of Sierra Vista was from Hereford, Huachuca City, Tucson, and to a lesser extent, Benson, Bisbee, and Tombstone.

[17] http://www.vpsiinc.com/Home/SubSubMenu.asp?MMID=1&SMID=10&SSMID=1006&OID=220



Description

This strategy involves promoting vanpool services to employees of Fort Huachuca, which is Sierra Vista's largest employer, through promoting information about vanpool services such as the VPSI service. Examples of promotional material are shown above.

Implementation Recommendations

Implementation recommendations include coordinating with the Fort Huachuca Public Affairs Office to disseminate information about vanpooling using base resources, such as:

- Fort Huachuca local television station (channel 99).
- Local radio.
- Huachuca Scout newspaper.

New residents and employees to the base could be provided this information as part of their orientation to Fort Huachuca.

Resource/Cost Requirements

Providing information about vanpooling is a relatively low cost strategy, as it would cost $1,000 or less to post fliers and information online. Administrative costs are also involved; however, these costs could be minimized by using the resources of the Fort Huachuca Public Affairs Office.

Implementation Time Frame/Responsibility

Initial implementation involves determining a person to lead the dissemination of information on vanpool resources and benefits to employees. This could be done online or by posting informational fliers on base.

Goals and Targets

An initial goal is to identify a staff person to serve as a resource for vanpooling. This program would continue over short-, mid-, and long-range time periods.

8.5.3 GUARANTEED EMERGENCY RIDE HOME PROGRAM AT SELECTED EMPLOYEE SITES

One of the barriers that prevent some employees from taking transit, ridesharing, walking, or bicycling to work is the fear they will not be able to get home quickly in the event of a personal emergency, such as picking up a sick child from school or working unscheduled overtime. GERH is a service provided by employers to commuters who regularly vanpool, carpool, bike, walk, or take transit. It provides them with a reliable ride home when an emergency arises. GERH programs tend to be low cost ways to encourage use of a vanpool, carpool, or other alternate mode, especially if a company only "fills in" coverage for areas not covered under a broader regional program.

In the employee survey conducted for this project, approximately 15% of respondents indicated they would be interested in using this program if it were available.

Description

Under the GERH program, the employer provides the ride home by cab, rental car, or bus at no cost to the employee. Individual employers may establish GERH programs. Usually the employer will pay for the employee's ride home via taxi or rental car when transit or vanpool services are unavailable. Another option is for this program to be administered by a central agency, such as the City of Sierra Vista, Vista Transit, SEAGO, or the planned MPO. Typically, an employee will only qualify for GERH if one of the following situations occurs:

- A serious problem occurs at their child's school or daycare center.
- An immediate family member has an emergency and they are unable to wait for the normal ride home.
- They have to work mandatory unscheduled overtime.
- Their home or property is damaged by burglary, fire, etc.
- They get sick at work and can't wait for the normal ride home.

- Their carpool/vanpool driver has to leave work early because of an emergency or must work unscheduled overtime and they have no other way to get home.

Implementation Recommendations

Implementation steps to develop this program through the workplace include:[18]

1. Find funding – GERH programs are funded by a wide variety of sources. Grants from state departments of transportation have been used to sponsor ride programs.
2. Establish guidelines – this involves determining who will be eligible for an emergency ride home. Some criteria suggested by the Emergency Ride Home Toolkit include:
    - Commuters must pre-register for the service.
    - Commuters must participate in a rideshare program.
    - Commuters must buy a weekly or monthly transit pass.
    - Commuters must rideshare, bike, walk, or take transit a minimum number of days.
3. Create systems to provide rides – most programs issue vouchers to commuters that they give to the ride provider (most often a taxi or rental car company) as payment. The ride provider submits the voucher with a billing invoice for payment. Other programs ask commuters to first pay for the ride out of pocket and then apply for reimbursement.
4. Register and educate commuters – registering employees who are eligible for an emergency ride home is an opportunity to verify eligibility and create a tracking database.
5. Manage the program – suggestions from the Emergency Ride Home Toolkit include combining commuter registration with outreach for other services such as rideshare enrollment or transit pass purchases, providing online registration, providing vouchers online for registries so that employees can print one when they need it, and posting post-ride surveys to gather feedback.
6. Marketing – use regular program announcements and bulletins to spread the word about the program.

Resource/Cost Requirements

Costs to create and manage a GERH program can vary, but are typically relatively inexpensive. **Table 28** below provides some examples from a 2002 survey of 45 GERH programs.[19]

[18] Emergency Ride Home Toolkit, http://www.bestworkplaces.org/resource-center/emergency-ride-toolkit/
[19] Todreas, Ian, Emergency Ride Home: A Survey of Programs and Issues, December 2002, http://www.bestworkplaces.cutr.usf.edu/erhkit/files/step-1/erh_researchsum_508.pdf,

Table 28. Usage Rates and Costs for GERH Programs from 2002 Survey Data

	Geographic Coverage of GERH Program		
	Urban	Urban/ Suburban	Suburban/ Rural
Administrative Burden (minutes/week per 100 commuters)	10	15	15
Usage Rates (rides/year per 100 commuters)	3	6	6
Approximate Cost ($/commuter per year)	$2	$5	$5

Source: Todreas, Ian, Emergency Ride Home: A Survey of Programs and Issues, 2002

Implementation Time Frame/Responsibility

This program can be regionally- or employer-based. It would be coordinated with a rideshare, vanpool, bicycle, or transit incentive program.

Goals and Targets

A goal is to have one or more of these programs operating at large employers over the next five years.

8.6 Marketing and Promotion of Alternate Travel Modes

The focus of marketing, according to the TDM Encyclopedia,[20] is to "determine consumer needs and preferences, creating appropriate products, providing useful information about products to consumers, and promoting their use." Strategies to promote the use of alternative modes described in the TRP include:

- Subsidized transit passes for employees.
- Wider distribution of transit schedules.
- Wayfinding guides to encourage the use of alternate modes to travel to work for targeted locations.
- Distribution of educational materials to inform and educate bicyclists, pedestrians, and motorists about rules of the road, laws, and safety.

The need for marketing the transit system was particularly emphasized in the responses to the public outreach survey question "How satisfied are you with the services provided by Vista Transit?" 60% of the 349 respondents to that question indicated

> *60% of public outreach survey respondents were not familiar with Vista Transit.*

[20] TDM Marketing, TDM Encyclopedia, Victoria Transport Policy Institute, December 2011, http://www.vtpi.org/tdm/tdm23.htm

they were not familiar with Vista Transit.

8.6.1 SUBSIDIZED TRANSIT PASSES FOR EMPLOYEES

Description

This strategy involves free or discounted transit passes to encourage employees to use public transportation to commute to and from work. This can also be supplemented by a GERH program, described in **Section 5.1**. Another option is for employers to provide passes as an optional fringe benefit, deducting the expense from the worker's paycheck but buying the pass with pre-tax income. More information on tax advantages is provided in **Appendix B**.

Implementation Recommendations

It is recommended that larger employers with limited parking that are located close to Vista Transit routes consider this program. Examples include Sierra Vista Hospital (located on Route 2), Cochise College (located on Route 2), City of Sierra Vista (located on Route 4), and others. An advocate from Vista Transit would need to approach businesses to consider this program, or a marketing effort would need to be implemented to establish this program.

Should transit service be established to Fort Huachuca, this would be an excellent way to stimulate transit demand.

Resource/Cost Requirements

Currently, a monthly Vista Transit pass costs $40. Therefore, employee costs can be variable, depending on the number of passes subsidized and the level of subsidy. The results of the employee survey indicated that none of the respondents were traveling by bus. There is room for a meaningful increase in the number of people who utilize transit to work.

Implementation Time Frame/Responsibility

This program, with the support of Vista Transit, could begin in the short-term. The responsibility for this program would ultimately lie with employers, but initial information about this program would be provided from Vista Transit.

Goals and Targets

A goal would be to have one or more large employers establish a subsidized transit pass program within the short-term. This program would continue over mid- and long-range time periods.

8.6.2 WIDER DISTRIBUTION OF TRANSIT SCHEDULES

Comments were received on both the employee transportation survey and the public transportation survey on the need for more information about Vista Transit routes and schedules. Examples of these comments are:

- "Publish Vista Transit information more."

- "Published schedules for Vista Transit would be a start."

Description

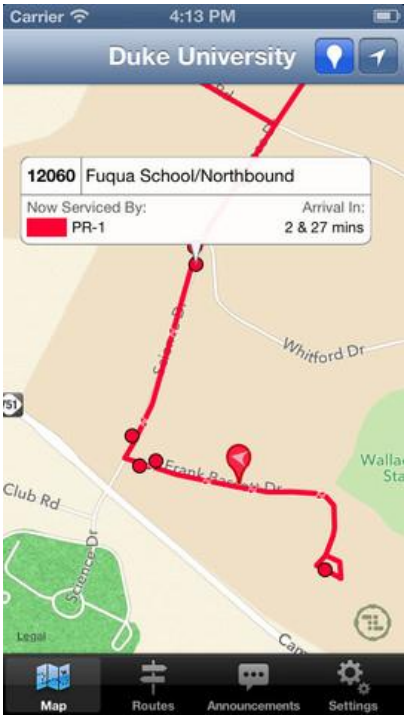
Currently, the Vista Transit website, http://www.vistatransit.org, has a downloadable transit route map and schedule that is easy to read and follow. There is a link to the Vista Transit route information on the left of the Vista Transit website page that leads to both an individual and system-wide map. This strategy involves website enhancements and wider distribution of transit schedules to businesses and public facilities.

Implementation Recommendations

Website Enhancements:

Recommendations for enhancements to the Vista Transit website (http://www.vistatransit.org) include the following:

- Install navigation links directly to the route maps on the home page of the Vista Transit website, rather than having to click through twice to get to a route map.
- Consider adding a trip planner function to the website. The transit trip planner applications prompt users to input origins and destinations to generate routes between points using available transit services. For example, the Northern Arizona Intergovernmental Public Transportation Authority uses Google Transit on their website. Residents and visitors can now visit the transit website to plan their next bus ride. An easy to follow screen allows riders to input their starting point and destination. Google Transit then provides a detailed map of the route, bus stop location, alternative departure and arrival times, and fare information.
- Use search engine optimization to ensure the Vista Transit System weblink appears first when "Vista Transit" is searched online. Also, the website address, www.sierravistaaz.gov/department/?fDD=14-0, shows up on the Google search engine, rather than www.vistatransit.org, although they both go to the Vista Transit website.



Other Transit Schedule Distribution Recommendations:

- Distribute hard copies of the transit schedule at key locations such as major employers located on routes. Develop smartphone applications for Vista Transit, such as the TransLoc application, which provides real time maps and arrival times. The application provides riders with arrival predictions, routes, and schedules, and provides a view of buses moving in real time online. Shown to the right is an example of the app information for the iPhone.

Resource/Cost Requirements

This strategy includes administrative costs for website enhancements and printing costs for transit schedules. It is estimated that costs for printing the transit schedules is approximately $3,000 for 5,000 copies.

Implementation Time Frame/Responsibility

Website enhancements and printing transit schedules would be an ongoing process over short-, mid-, and long-range time periods. Implementation of Google Transit and smartphone applications should be accomplished in the short-term.

Goals and Targets

A goal is to distribute transit schedules to the top 25 employers in Sierra Vista and implement Google Transit (or other online applications) and smartphone applications. Website enhancements will be provided periodically over short-, mid- and long-term time frames.

8.6.3 WAYFINDING GUIDES TO SELECTED LOCATIONS

Wayfinding is defined as "signs, maps, and other graphic or audible methods used to convey location and direction to travelers." This strategy includes promoting options for multimodal travel to major employers. The City has already taken a step toward this through their publication of the City of Sierra Vista Safe Bicycle and Pedestrian Route Map.

Description

A wayfinding guide is a document that provides concise, customized information on how to access a particular destination by various travel modes, such as walking, cycling, and public transit. A wayfinding guide typically includes:

- A map of the area showing the destination, major roads, nearby landmarks, bus stops, and recommended cycling and walking routes.
- Information about transit service frequency, fares, first and last runs, and public transportation schedules, if possible.
- Information on how to reach the destination from major transportation terminals (e.g., Vista Transit Center, Tucson International Airport, Sierra Vista Airport, etc.).
- Availability of bicycle facilities, including secure bike parking.

Wayfinding guides can be in the form of a map, brochure, internet page, or part of an information packet. An overall wayfinding guide for City bicycle and pedestrian facilities is the City of Sierra Vista Safe Bicycle and Pedestrian Route Map. This guide can be enhanced to include transit information.

Implementation Recommendations

Develop and distribute a multimodal access guide to Fort Huachuca, the Sierra Vista Regional Health Center, and Cochise College. Update the City of Sierra Vista Safe Bicycle and Pedestrian Route Map to include transit route information. The map can be reprinted to increase distribution.

Resource/Cost Requirements

Depending on the format of the guide, whether it is web-based or print media, the cost can vary. An estimated budget is $10,000.

Implementation Time Frame/Responsibility

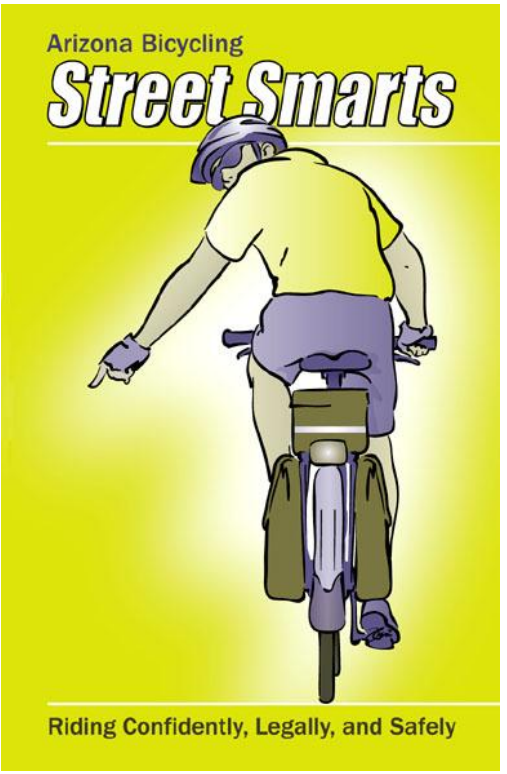
This is a short-range strategy. The responsibility for this strategy would be the City of Sierra Vista.

Goals and Targets

The goal is to produce travel guides to Fort Huachuca, Sierra Vista Regional Health Center, and Cochise College within the next five years.

8.6.4 DISTRIBUTION OF STATE-DEVELOPED EDUCATIONAL MATERIALS

The State of Arizona has developed several multimedia materials to inform and educate bicyclists, pedestrians, and motorists about the rules of the road, laws, and safety. The material is geared towards all age groups and is available through the Arizona Bicycle and Pedestrian website, http://www.azbikeped.org/education.html.



Description

Available educational materials include:

- Arizona Bike Users map.
- Arizona Bicycling Street Smarts booklet.
- Share the Road, A Guide for Bicyclists and Motorists.
- Sharing the Road with Pedestrians, a Guide for Pedestrians and Motorists.
- "Be a Roll Model" – report, how-to guide, safety campaign materials, and public service announcements.

Implementation Recommendations

Post links to these materials from the City of Sierra Vista website.

Resource/Cost Requirements

This is a very low cost strategy and involves administrative time to update the City's website.

Implementation Time Frame/Responsibility

This is a short-range strategy that would be the responsibility of the City of Sierra Vista.

Goals and Targets

The goal is to provide a web link to this educational information through a posting on the City's website.

8.7 TRANSIT STRATEGIES

Transit strategies were developed from a number of sources, including discussions with stakeholders, input from the transportation survey conducted online, and the employee travel survey. Transit strategies discussed in this section include:

- Update Vista Transit Five-Year Regional Transit Plan.
- Evening transit service.
- Shuttle service within Fort Huachuca.
- Vista Transit service to Fort Huachuca on weekdays.
- Vista Transit Service extension outside of City limits.

A map of Vista Transit routes is shown in **Figure 23** for reference.

8.7.1 VISTA TRANSIT REGIONAL FIVE-YEAR PLAN (2014-2018)

Description

The *Vista Transit Five-Year Plan (2008)* addresses community goals for transit service in Sierra Vista and strategies to accomplish improvements to be implemented over a five-year period. The Plan, last updated in 2008, requires an update in 2013 to address transit service and needs in Sierra Vista for the time period 2014 – 2018. The plan update is particularly important as Sierra Vista transitions to establishment of a new MPO. Transition to the MPO will impact funding sources and processes utilized by Vista Transit. A five-year plan update is needed to address requirements associated with MPO designation. The transit plan should also establish a long-term vision for Vista Transit.

The five-year plan update provides a forum to evaluate current Vista Transit routes, make changes as appropriate based on input received during development of the *Sierra Vista Transportation Efficiency Study*, and other public and stakeholder input that will be received during a transit plan update process. Sections 8.2 to 8.5 describe potential service changes that could be explored further in the transit plan update.

Implementation Recommendations

It is recommended that the *Vista Transit Regional Five-Year Plan* be updated in collaboration with the new MPO. The plan update should include significant emphasis on regional transit needs within the new MPO boundary. The plan should also consider service plan changes as described in sections 8.2 to 8.5, and steps to implement travel demand management strategies as recommended elsewhere in this document such as regional carpool/vanpool matching services. The plan should also establish a long-term vision for Vista Transit.

Resource/Cost Requirements

Costs to develop the new five-year plan can range from $50,000 to $250,000. Opportunities to fund the new plan may be available through the ADOT PARA Program.

Implementation Time Frame/Responsibility

It is recommended that the new plan be updated within the next 12 to 18 months.

Goals and Targets

The plan update is a short-term goal.

Figure 23. Vista Transit Route Map

8.7.2 EVENING TRANSIT SERVICE

Description

This strategy involves providing evening transit service on selected routes. It is based on input received from the public outreach survey conducted in November and December 2012. Requests included evening transit service until 9pm, particularly on Route 2, which services Cochise College. Currently, the last run for each transit route begins at:

> *"I think buses should run at least until 9pm because most people study or work until late."*
> *-Survey respondent*

- Route 1: Westside – 5:30pm.
- Route 2: Eastside – 5:30pm.
- Route 3: Central Shopper – 5:30pm.
- Route 4: North – 2:30pm (this segment of Route 4 serves the northern part of Route 4 between 10am and 3pm at 30-minute headways).
- Route 4: North and South – 5:30pm (this segment of Route 4 serves the northern and southern segments of Route 4 from 7am to 10am and from 3pm until 6pm with one-hour headways).
- Route 5: South – 3:00pm
- Route 7: Saturday Route – 5:00pm

Implementation Recommendations

Initially, evening service could be implemented on two routes:

- Route 2: Eastside – serves Cochise College, the Sierra Vista Regional Health Center, San Pedro Apartments, Pete Castro Center, and the Transit Transfer Center.
- Route 5: South – serves the Sierra Vista Regional Mall, Foothills County Complex, and the Vista Transit Center.

Resource/Cost Requirements

Operating costs for extending transit service for a four-hour period on one bus route is estimated at $70/hour[21] *1040 hours per year (assuming four hours of operations, five days per week) = $72,800/year.

Implementation Time Frame/Responsibility

Depending on funding availability, evening transit service could be developed incrementally. This strategy would be phased over short-, mid-, and long-range time frames. The responsibility for this service would be through Vista Transit, run by the City of Sierra Vista.

[21] Based on operating cost per hour for transit service in the Yuma area.

Goals and Targets

The short-range goal is to implement evening transit service on two routes in the next five years. A mid-range goal is to provide evening service on all transit routes as warranted.

8.7.3 SHUTTLE SERVICE WITHIN FORT HUACHUCA

Shuttle service within Fort Huachuca was a request on employee surveys and stakeholder interviews.

Examples of comments were:

- "I work at Black Tower on Fort Huachuca (near the West Gate). If a transit serviced my work location with a few different pick-up and drop-off times available, I would use it."
- "If there were a closer bus stop to my house and a bus stop at the JITC (Building 57305) where I work on Fort Huachuca with reasonable hours for pick up, I would consider taking the bus."

Employees that work in Fort Huachuca frequently need to travel between buildings, which can involve significant distances. A shuttle service also could reduce vehicle travel during lunch times. A prior shuttle service operated within Fort Huachuca and there are still bus shelters on base. A discussion with a Fort Huachuca representative indicated that a shuttle using an electric vehicle was tried, but the speeds (top speed of 25 mph) discouraged use of the shuttle on higher-speed base streets. A shuttle service within the base that connected to the Vista Transit system would encourage a reduction in SOV trips.

Description

A shuttle service would run on a continuous basis during the week, making stops at key activity points on the base. Initially, the service could run five days per week. Stop locations could include residential areas, schools, PX, Health Center, and work-related locations. Electric cars could be used if a system of lower-speed streets were identified.

Implementation Recommendations

A Fort Huachuca shuttle would run on a continuous basis throughout the work day.

Resource/Cost Requirements

Typical costs to develop a shuttle service:

- Cost to further define route and costs: $20,000.
- Capital cost to purchase a shuttle bus: $140,000.
- Bus shelters and signs: $20,000.
- Marketing costs to advertise service: $2,000.
- Operating cost: Assume $70 operating cost per hour * 2080 hours per year (assuming eight hours of operation, five days per week) = $145,600/year. Costs would escalate per year, depending on inflation, gas costs, etc. For example, the Yuma County

Intergovernmental Transit Authority (YCIPTA) estimates an annual increase of 3.5% per year in operating costs.

Implementation Time Frame/Responsibility

This service is dependent on funding availability. It is assumed that it would be implemented in a mid-range time frame. The responsibility would be through Fort Huachuca, perhaps in partnership with Vista Transit.

Goals and Targets

An initial short-range goal is to plan the service and develop funding and anticipated farebox revenues if a fare is charged.

The subsequent goal would be to begin and continue the shuttle service, perhaps in partnership with Vista Transit. Depending on funding constraints, this may be a limited service, or perhaps a limited service in partnership with Vista Transit.

8.7.4 VISTA TRANSIT SERVICE TO FORT HUACHUCA ON WEEKDAY PEAK PERIODS

> *"Increase City transit to Fort Huachuca; should be some kind of partner subsidy that the post can supply."*
> *-Survey respondent*

Currently, Vista Transit provides Saturday transit service to Fort Huachuca. It links Prosser Village and the PX on base to commercial locations such as the Sierra Vista Mall, Food City, Target, and Wal-Mart. The service runs on half-hour headways from 10:30am to approximately 5pm (last run begins). Stakeholders and survey respondents indicated a need to provide transit service from Sierra Vista into Fort Huachuca during the weekday. Fort Huachuca has approximately 9,000 employees – by far the largest employer in the area. The next largest employer, General Dynamics Information Technology, has 950 employees. Providing transit service to the base on weekdays was a recommendation of the 2012 SEAGO Transportation Coordination Plan and was also suggested by stakeholders and survey respondents.

Description

This service would facilitate commuter trips between residential areas within the City to Fort Huachuca. Further analysis is required to determine the specific routing.

Implementation Recommendations

Coordination with Fort Huachuca is required to determine options for routing, stops, service times, and the potential to link this service to a future on-base shuttle. An initial option is to provide peak period commuter service initially, perhaps from 7:00am to 9am and 4pm to 6pm.

Resource/Cost Requirements

Minimum costs to implement a new transit route include:

- Further define route and costs and obtain public input on the route: $50,000.

- Capital cost to purchase a shuttle bus: $140,000.
- Bus shelters and signs: $20,000.
- Update bus schedules: $20,000.
- Marketing costs to advertise service: $20,000.
- Operating cost: Assume $70 operating cost per hour * 1040 hours per year (assuming four hours of operations, five days per week) = $72,800/ year. Costs would escalate per year, depending on inflation, gas costs, etc. For example, the YCIPTA estimates an annual increase of 3.5% per year in operating costs.

Implementation Time Frame/Responsibility

This is a more costly strategy and is likely to be implemented in a mid- to long-range time frame. The responsibility for this service would be through Vista Transit, perhaps with a subsidy from Fort Huachuca.

Goals and Targets

A short-range goal is to develop a plan with more detailed costs for this service, working with Fort Huachuca and obtaining input from the public. Mid- to long-range goals are to initiate service.

8.7.5 VISTA TRANSIT SERVICE EXTENSION OUTSIDE OF CITY LIMITS

Currently, Vista Transit provides transit service within the City limits only due to funding constraints. This strategy would look at opportunities to provide transit service outside of the City limits. *The 2012 SEAGO Transportation Coordination Plan* identified needs for connecting intercity transportation service in three areas from Sierra Vista:

- Connecting service between Douglas, Bisbee, and Sierra Vista.
- Connecting service between Huachuca City and Sierra Vista.
- Connecting service between Tombstone and Sierra Vista.

> *Public transit is not available in the County, which limits use in the areas where some employees reside – thus limiting the use of public transportation in our community.*
> *-Survey respondent*

The report also indicated that identified unmet needs include adding a fixed-route service south to the Canyon De Flores subdivision, east to Chaparral subdivision, and southwest to 7th Street and Buffalo Soldier Trail.

Suggestions for route extensions from surveys conducted for this Study included:

- Commuter transit service from Sierra Vista to Fort Huachuca (per AirSage data findings).
- Commuter transit service from Whetstone and Huachuca City to Fort Huachuca (per AirSage data findings).
- Commuter transit service from Hereford to Fort Huachuca (per AirSage data findings).
- Canyon de Flores subdivision area.

- Coronado Crossing.

Description

This strategy involves development of bus service to areas outside of the City limits and intercity transit services.

Implementation Recommendations

Implementation recommendations are to develop a route plan and schedule and potential funding sources to extend transit service initially to these areas:

- Canyon de Flores subdivision.
- Chaparral subdivision.

Another goal, per the *SEAGO Transportation Coordination Plan (April 2012)* is to implement an intercity bus service between Sierra Vista and:

- Bisbee and Douglas.
- Huachuca City.
- Tombstone.

Resource/Cost Requirements

Implementation costs are to be determined, depending on the specific route and hours of operation. Regional coordination is needed to determine specific routes and funding sources. These services would likely become a responsibility of Vista Transit.

Implementation Time Frame/Responsibility

The implementation time frames are:

- Short-range: planning of routes, services, and regional partners.
- Mid-range: implementation of one or more routes outside of the City limits.
- Long-range: implement additional intercity services.

The responsibility would likely be Vista Transit with funding support from regional partners.

Goals and Targets

In the short-term, develop a route plan and schedule and identify additional funding sources to extend transit service initially to these areas:

- Canyon de Flores subdivision.
- Chaparral subdivision.

Other short-range goals include working with SEAGO or the planned MPO to develop an implementation plan and identify funding for intercity bus service.

Mid-range goals are to implement one or more routes outside of the City limits. In the long-term, additional intercity services should be developed.

8.8 Traffic Flow Strategies

8.8.1 Traffic Signal Synchronization

Description

This strategy is to better synchronize traffic signal timing in the am and pm commuting period. A number of comments to synchronize the traffic signals in general were received. Specific suggestions for updates to signal timing include:

- SR 90 Bypass leading to the Fort Huachuca East Gate.
- SR 92 between Fry Boulevard and the SR 90 Bypass.
- Fry Boulevard, particularly between Buffalo Soldier Trail and 7th Street.

According to the *2012 National Traffic Signal Report Card*, reviewing and updating the timing and operational aspects of signalized intersections on a regular basis is important, especially where changes in traffic volumes and/or adjacent land uses have occurred since the last review. Traffic signal coordination is one of the more vital aspects of traffic signal control because it ensures motorists are able to travel through multiple intersections along a corridor with minimal stops and short delays.

Implementation Recommendations

This strategy involves a review of the traffic signal timing plans during peak periods on key commuting routes, particularly those leading into and out of Fort Huachuca.

Resource/Cost Requirements

This strategy involves staff time to review and modify traffic signal timing. It would be the responsibility of the City of Sierra Vista (on City streets) and ADOT (on state routes).

Implementation Time Frame/Responsibility

This strategy would be conducted periodically in short-, mid-, and long-range time periods.

Goals and Targets

Per recommendations in the 2012 National Traffic Signal Report Card, the goal is to review and update traffic signal timing every three years.[22]

[22] 2012 National Traffic Signal Report Card, http://www.ite.org/reportcard/TechnicalReport.pdf, page 16

8.9 Summary of Cost Requirements

Planning-level operating and capital costs for the TRP strategies are summarized in **Table 29**.

Table 29. Summary of Costs for Travel Reduction Strategies

Strategy	Capital Costs	Operating Costs/Year
Bicycle Infrastructure Strategies		
Enhanced Bike Parking Facilities	$2,400 (assumes four new bike racks holding 10 bikes each). Cost does not include installation.	Minimal maintenance costs.
New Bicycle Lanes, Shared-Use Path, and Shared Roadway Strategies	Analyze low speed bikeable routes on Fort Huachuca. Initially, a design plan and construction cost estimate should be developed at the location identified in this report.	To be determined.
Bike Sharing Program	Approximately $500 per bicycle.	Variable, depending on how the program is administered.
Parking Infrastructure/Management Strategies		
Park-and-Ride Lots	Variable – need a feasibility study to determine specific costs depending on whether the park-and-ride lot is part of an existing parking lot or new construction.	Dependent on facility chosen.
Priority Parking for Carpools	$2,500 for five reserved carpool signs, plus installation costs.	Not applicable.
Parking Cash-Out Programs	Variable – dependent on the cash-out reimbursement chosen and how it is administered.	Dependent on how program is administered.
Pedestrian Infrastructure Improvements		
Assess Sidewalk Deficiencies and Pedestrian Facility Needs and Develop an Improvement Plan and an ADA Transition Plan	Approximately $100,000 for the assessment and ADA Transition Plan.	Not applicable.
Implement Safe Routes to Transit, Schools, and Employers	Variable – costs are dependent on the findings of the *Sidewalk Improvement Plan Study*, above.	To be determined.
Pedestrian Crossings at Traffic Signals	Staff time to analyze signal timing plans.	Dependent on extent of analysis – conduct every three years.
Vanpooling/Ridesharing		
Develop Regional Carpool Matching Service	Variable – dependent on how the program is administered and what software is chosen for the matching. Carpool matching programs vary in cost – some are free.	Dependent on how the program is administered.

Strategy	Capital Costs	Operating Costs/Year
Promote Vanpooling Service to Fort Huachuca	Variable – dependent on the methods used to distribute the information.	Administrative costs.
GERH Program at Selected Employee Sites	Variable – dependent on how the program is administered.	Dependent on how the program is administered and how many commuters are participating.
Marketing and Promotion of Alternate Travel Modes		
Subsidized Transit Passes for Employees	Variable – dependent on the number of passes distributed and the level of subsidy.	Dependent on the number of passes distributed and the level of subsidy provided by the employer.
Wider Distribution of Transit Schedules and Development of Web-Based and Smartphone Applications	$3,000 for approximately 5,000 printed schedules. There will be additional costs for website enhancements. Smartphone applications and web-based applications such as Google Transit to be determined.	Transit schedules and the Vista Transit website will need to reprinted periodically as the schedule changes.
Wayfinding Guides to Selected Locations	$3,000 for approximately 5,000 guides.	None.
Distribution of State-Developed Education Materials	Minimal cost – provide link to material on City website.	None.
Transit Strategies		
Vista Transit Regional Five-Year Plan (2014-2018)	$50,000 to $250,000 (to fund a plan update study).	
Evening Transit Service	None.	Approximately $73,000 per year, per route.
Shuttle Service within Fort Huachuca	Cost to further define route and additional costs: $50,000. Capital cost to purchase a shuttle bus: $140,000 (less if existing electric vehicles are used). Bus shelters and signs: $20,000. Marketing costs to advertise service: $2,000.	Approximately $146,000 per year.
Vista Transit Service to Fort Huachuca on Weekdays	Cost to further define route and obtain public input on the route: $50,000. Capital cost to purchase a shuttle bus: $140,000. Bus shelters and signs: $20,000. Costs to update bus schedules: $20,000. Marketing costs to advertise service: $20,000.	$73,000 per year, assuming the route operates for peak period (four hours per day).
Vista Transit Service Extension Outside of City Limits	Variable – dependent on specifics of route extensions.	Dependent on specifics of route extensions.
Traffic Flow Strategies		
Traffic Signal Synchronization	Staff time to analyze signal timing plans.	Dependent on extent of analysis – conduct every three years.

8.10 Implementation Timeline

The travel reduction strategies identified in Chapters 2 through 9 will address critical short-, mid-, and long-term needs. These strategies are prioritized into the following time periods:

- Short-range strategies (implemented between one to five years) – provided in **Table 30**. Short-range strategies are typically lower cost strategies that could reasonably be expected to be funded within 5 years.
- Mid-range strategies (implemented between six to 10 years) – provided in **Table 31**. Mid-range strategies are typically a continuation of strategies in the short-range time frame, or implementation of strategies designed earlier.
- Long-range strategies (implemented between 11 to 20 years) – provided in **Table 32**. Long-range strategies are a continuation of those established in earlier time frames and also include strategies that are at a higher cost and more complex.

Table 30. Short-Range TRP Strategies

Strategy	Element
Enhanced bike parking facilities.	Install bike racks at four locations.
Identify low speed bikeable routes on Fort Huachuca and develop costs and funding sources for future bike lanes within Fort Huachuca and serving major employers.	Develop design plans and costs.
Vista Transit Regional Five-Year Plan (2014-2018).	Update the *2008 Vista Transit Five-Year Plan*.
Park-and-ride lot location studies.	Develop locations for park-and-ride lots.
Priority parking for carpools.	Coordinate with large employers and begin implementation of priority carpool parking program.
Establish parking cash-out program.	Establish program.
Assess sidewalk deficiencies and develop improvement plan.	Develop improvement plan/ADA Transition Plan.
Assess signal timing for pedestrians at traffic signals in conjunction with traffic signal synchronization.	Review and modify signal timing as required on commuter routes in conjunction with traffic signal synchronization.
Implement safe routes to transit, schools, and employers.	Construct short-term pedestrian projects based on improvement plan.
Develop regional carpool matching service.	Could consider in Vista Transit Regional Five-Year Plan update.
Promote vanpooling service to Fort Huachuca.	Assign responsibility for this work and begin promotion.
Guaranteed Emergency Ride Home program.	Implement program on a regional basis.
Subsidized transit passes for employees.	Establish program.
Wider distribution of transit schedules.	Enhance website and distribute more transit schedules.
Wayfinding guides for larger employers.	Develop and distribute guides.
Distribution of state-developed educational materials.	Provide web links to state-developed materials.

Strategy	Element
Evening transit service.	Expand service hours on one to two weekday transit routes.
Shuttle service within Fort Huachuca.	Develop plan and identify funding source and responsibilities to initiate weekday service.
Vista Transit service to Fort Huachuca on weekday peak periods.	Plan for service to base.
Vista Transit service extension outside of City limits.	Plan specific routes, funding sources, and partners.
Traffic signal synchronization.	Review and modify signal timing as required on commuter routes.

Table 31. Mid-Range TRP Strategies

Strategy	Element
Enhanced bike parking.	Install bike racks at four locations.
Construct bike lanes within Fort Huachuca.	Construct bike lanes depending on funding availability.
Construct bike lanes on Enterprise Way and Industry Drive.	Construct bike lanes depending on funding availability.
Bike sharing program.	Implement at two locations.
Park-and-ride lot.	Establish one or more park-and-ride lots.
Priority parking for carpools.	Coordinate with employers to implement one or more priority parking spaces for carpools.
Parking cash-out program.	Establish at one or more locations.
Implement safe routes to transit, schools, and employers.	Construct short-term pedestrian projects based on improvement plan.
Guaranteed Emergency Ride Home program.	Continue program on a regional basis.
Carpool matching service.	Continue program on a regional basis.
Promote vanpooling service to Fort Huachuca.	Continue to distribute information on the program.
Subsidized transit passes for employees.	Continue program at one or more locations.
Wider distribution of transit passes.	Continue to enhance website presence and print and distribute more transit schedules.
Evening transit service.	Expand service hours on all weekday transit routes.
Shuttle service within Fort Huachuca.	Initiate weekday service.
Vista Transit service to Fort Huachuca on weekday peak periods.	Initiate service to Fort Huachuca.
Vista Transit service extension outside of City limits.	Implement service on one or more routes.
Traffic signal synchronization.	Review and modify signal timing as required on commuter routes.

Table 32. Long-Range TRP Strategies

Strategy	Element
Enhanced bike parking.	Install bike racks at four locations.

Park-and-ride lot.	Establish one or more park-and-ride lots.
Priority parking for carpools.	Coordinate with employers to implement one or more priority parking spaces for carpools.
Parking cash-out program.	Establish at one or more locations.
Implement safe routes to transit, schools, and employers.	Construct short-term pedestrian projects based on improvement plan.
Guaranteed Emergency Ride Home program.	Continue program on a regional basis.
Carpool matching service.	Continue program on a regional basis.
Promote vanpooling service to Fort Huachuca.	Continue to distribute information on the program.
Subsidized transit passes for employees.	Continue program at one or more locations.
Wider distribution of transit passes.	Continue to enhance website presence and print and distribute more transit schedules.
Evening transit service.	Continue evening service hours on all weekday transit routes.
Shuttle service within Fort Huachuca.	Continue weekday service.
Vista Transit service to Fort Huachuca on weekday peak periods.	Continue service to base.
Vista Transit service extension outside of City limits.	Continue services and establish new intercity routes.
Traffic signal synchronization.	Review and modify signal timing as required on commuter routes.

8.11 Monitoring and Evaluation

Table 33 summarizes key goals and implementation steps for each strategy.

Table 33. Goals and Evaluation Criteria

Strategy	Goals	Evaluation Criteria
Bicycle Infrastructure Strategies		
Enhanced Bike Parking Facilities	▪ Short-range – install bike rack at four locations. ▪ Mid-range – install bike rack at four locations. ▪ Long-range – install bike rack at four locations.	Whether installation occurs.
New Bicycle Facilities	▪ Short-range – identify low speed bike routes on Fort Huachuca, feasibility studies, and design of future bike lanes. ▪ Mid-range – install bike lanes on Fort Huachuca and locations in Sierra Vista.	
Bike Sharing Program	▪ Mid-range – implement program at 2 locations.	Whether the program is implemented.
Parking Infrastructure/Management Strategies		
Park-and-Ride Lots	▪ Short-range – conduct feasibility study. ▪ Mid-range – implement park-and-ride lot at one or more locations. ▪ Long-range – implement park-and-ride lot at one or more locations.	Short-range – whether one or more park-and-ride lots are implemented.
Priority Parking for Carpools	▪ Short-range – develop and disseminate information to major employers on establishing priority carpool parking. ▪ Mid-range – work with employers to implement priority parking spaces. ▪ Long-range – work with employers to implement priority parking spaces.	The number of locations with priority parking for carpools.
Parking Cash-Out Programs	▪ Short-range – provide information to employers on program. ▪ Mid-range – work with employers to implement program. ▪ Long-range – work with employers to implement program.	Number of employers implementing this program.
Pedestrian Infrastructure Improvements		
Assess Sidewalk Deficiencies and Develop an	▪ Short-range – conduct study and develop plan.	Completed plan.

Strategy	Goals	Evaluation Criteria
Improvement Plan	▪	
Implement Safe Routes to Transit, Schools, and Employers	▪ Short-range – construct projects per improvement plan. ▪ Mid-range – construct projects per improvement plan. ▪ Long-range – construct projects per improvement plan.	Number of sidewalk projects implemented.
Pedestrian Crossings at Traffic Signals	▪ Short-range – review and update pedestrian signal timing plan on commuter routes every three years. ▪ Mid-range – review and update pedestrian signal timing plan on commuter routes every three years. ▪ Long-range – review and update pedestrian signal timing plan on commuter routes every three years.	Updated signal timing plans.
Vanpooling/Ridesharing		
Develop Regional Carpool Matching Service	▪ Short-range – develop and begin a regional program. ▪ Mid-range – continue program. ▪ Long-range – continue program.	Development and continuation of program.
Promote Vanpooling Service to Fort Huachuca	▪ Short-range – coordinate with Public Affairs Office to distribute information on vanpooling. ▪ Mid-range – continue program. ▪ Long-range – continue program.	Designation of coordinator.
Guaranteed Emergency Ride Home Program at Selected Employee Sites	▪ Short-range – develop a regional- or employer-based guaranteed ride home program. ▪ Mid-range – continue program. ▪ Long-range – continue program.	Establishment and continuation of program.
Marketing and Promotion of Alternate Travel Modes		
Subsidized Transit Passes for Employees	▪ Short-range – promote purchase of transit passes to employers. ▪ Mid-range – promote purchase of transit passes to employers. ▪ Long-range – promote purchase of transit passes to employers.	Number of employers subsiding transit passes.
Wider Distribution of Transit Schedules	▪ Short-range – print and distribute transit passes and improve online web presence; implement Google Transit and smartphone apps. ▪ Mid-range – print and distribute transit passes and improve online web presence. ▪ Long-range –print and distribute transit passes and improve online	Number of page views and increased ridership figures.

Strategy	Goals	Evaluation Criteria
	web presence.	
Wayfinding Guides to Selected Locations	▪ Short-range – develop and distribute guides to Fort Huachuca, Regional Health Center, and Cochise College. ▪ Update Safe Bicycle and Pedestrian Route Map to include transit routes.	Guides provided via the internet or hard copies.
Distribution of State-Developed Education Materials	▪ Short-range – provide website links to materials.	Website links.
Transit Strategies		
Vista Transit Regional Five-Year Transit Plan (2014-2018)	▪ Short-range – conduct and complete Vista Transit Regional Five-Year Plan to update the existing 2008 Plan.	Completion of Plan update.
Evening Transit Service	▪ Short-range – provide evening transit service on two routes. ▪ Mid-range – provide evening transit service on all weekday routes. ▪ Long-range – continue evening transit service on all weekday routes.	Provision of evening transit service.
Shuttle Service within Fort Huachuca	▪ Short-range – plan service and identify funding. ▪ Mid-range – implement service. ▪ Long-range – continue service.	Provision of shuttle service.
Vista Transit Service to Fort Huachuca on Weekday Peak Periods	▪ Short-range – plan service and identify funding. ▪ Mid-range – implement service. ▪ Long-range – continue service.	Provision of weekday service to Fort Huachuca.
Vista Transit Service Extension Outside of City Limits	• Short-range – plan and implement service extensions to two subdivision areas. • Mid-range – plan and implement intercity service. • Long-range – plan and implement additional intercity service.	Provision of new services.
Traffic Flow Strategies		
Traffic Signal Synchronization	▪ Short-range – review and update traffic signal timing plan on commuter routes every three years. ▪ Mid-range – review and update traffic signal timing plan on commuter routes every three years. ▪ Long-range – review and update traffic signal timing plan on commuter routes every three years.	Updated signal timing plans.

9.0 PUBLIC INPUT ON TRAVEL REDUCTION STRATEGIES

A public meeting was held on February 7, 2013 from 5:30pm until 7:30pm at the Windemere Hotel, 2047 State Route 92, in Sierra Vista. The meeting had an interactive format where people could stick dots on strategies that they preferred. Some members of the public used a different color dot to denote strategies that they did not like. A formal presentation on the project was given, with a question and answer session afterward. A comment form was also provided for people to provide their opinions in writing about the strategies. A *Public Involvement Summary Report* was prepared to document the results of the public outreach and it is provided in **Appendix C**.

10.0 CONCLUSIONS

This study has developed reasonable, implementable, and community-supported recommendations to reduce reliance on SOV trips and expand transportation choices. Travel reduction strategies were developed based on:

- Analysis of existing and future travel patterns, congested routes, major employer locations, and areas of future planned development.
- Review of travel reduction strategies that have worked well in other areas.
- Input from stakeholders who represented major employers, City staff, and others.
- Public input that was obtained through an online survey and at a public meeting.
- Analysis of a survey of commuting patterns of those who work in Sierra Vista, including Fort Huachuca.
- Analysis of regional travel data.

A TRP was developed that comprises strategies that have the potential to reduce reliance on SOV trips for the short- (0-5 years), mid- (6-10 years), and long-range (11-20 years) horizons.

Recommendations include infrastructure (e.g., park-and-ride lots, transit amenities), operational approaches (e.g., new or improved vanpool and transit services), programmatic measures (e.g., trip reduction incentives, educational materials), and policies (e.g., development of a TDM ordinance or parking policies). The TRP also considers forecasted growth in the community and provides solutions that recognize the need for future economic growth and development while maintaining the need for resident quality of life and a multimodal transportation system that provides a variety of safe and efficient mobility options.

Throughout development of the TRP, the Study team engaged stakeholders including the City of Sierra Vista, Fort Huachuca, ADOT, elected officials, employers, business groups, and members of the public, leading to development of recommendations that are achievable, effective, and efficient.

The TRP focuses on the following categories of improvement strategies:

8. Bicycle infrastructure strategies.
9. Parking infrastructure and management strategies.

10. Pedestrian infrastructure improvements.
11. Vanpooling/ridesharing strategies.
12. Marketing and promotion of alternative travel modes.
13. Transit strategies.
14. Traffic flow strategies.

Specific strategies are recommended for each category, which are summarized in **Table 34**. Plan elements include goals and evaluation criteria, an implementation timeline, and capital and operating cost estimates.

Table 34. Travel Reduction Strategies

Category	Strategy
Bicycle Infrastructure Strategies	Enhanced bicycle parking facilities (bicycle racks at major employers and activity centers)
	Identify low speed bikeable routes on Fort Huachuca and develop new bicycle facilities.
	Bicycle sharing program, with particular focus on Fort Huachuca.
Parking Infrastructure/ Management Strategies	Park-and-ride lots at transit centers, commercial areas, urban fringe areas, and in communities surrounding Sierra Vista.
	Priority parking for carpools.
	Parking cash-out programs.
Pedestrian Infrastructure Improvements	Assess sidewalk deficiencies and develop an improvement plan.
	Implement safe routes to transit, schools and employers.
	Pedestrian crossings at traffic signals.
Vanpooling/Ridesharing	Develop regional carpool matching service.
	Promote vanpool service to Fort Huachuca.
	GERH programs.
Marketing and Promotion of Alternative Travel Modes	Subsidized transit passes for employees.
	Wider distribution of transit schedules.
	Wayfinding guides to selected locations.
	Distribution of state-developed bicycle and pedestrian educational materials.
Transit Strategies	Conduct Vista Transit Regional Five-Year Plan (2014-2018).
	Evening transit service.
	Shuttle service within Fort Huachuca.
	Vista Transit service to Fort Huachuca on weekday peak periods.
	Vista Transit service extension outside of City limits.
Traffic Flow Strategies	Traffic signal synchronization program.

APPENDIX A – BICYCLE AND PEDESTRIAN PLAN MAPS

CITY OF SIERRA VISTA SAFE Bicycle and Pedestrian ROUTES PLAN

TASK ASSIGNMENT MPD 31-10

Shared Use Path
Paved 8 ft to 12 ft wide path, separated from street. Watch for equestrians, pedestrians and dogs. Suitable for slower bicycle speeds.

Bicycle Lane
On major street, with white edge line, 4 ft to 10 ft wide paved shoulder, speed limit 25 mph or more.

Shared Roadway
Selected bikable streets with maximum speed limit of 35 mph for vehicles. Appropriate for designation as a bicycle route with signage.

Study Area
Parcels
Roadways

Existing Facilities
Shared Use Paths
Bicycle Lanes

Proposed Projects
Shared Use Paths
Bicycle Lanes
Sidewalk Improvements
Shared Roadway
General Plan Shared Use Path

Public Schools

1. Carmichael Elementary School
2. Huachuca Mountain Elementary School
3. Village Meadows Elemantary School
4. Pueblo Del Sol Elementary School
5. Buena High School
6. Apache Middle School
7. Bella Vista Elementary School
8. T&C Elementary/Joyce C. Clark Middle School

Updated: May 17, 2011

Figure 9 - Existing Facilities and Proposed Projects

Northern Study Area

0 0.25 0.5 1 Miles

CITY OF SIERRA VISTA

SAFE Bicycle and Pedestrian ROUTES PLAN

TASK ASSIGNMENT MPD 31-10

Shared Use Path
Paved 8 ft to 12 ft wide path, separated from street. Watch for equestrians, pedestrians and dogs. Suitable for slower bicycle speeds.

Bicycle Lane
On major street, with white edge line, 4 ft to 10 ft wide paved shoulder, speed limit 25 mph or more.

Shared Roadway
Selected bikable streets with maximum speed limit of 35 mph for vehicles. Appropriate for designation as a bicycle route with signage.

Northern Study Area

Southern Study Area

Study Area
Parcels
Roadways

Existing Facilities
Shared Use Paths
Bicycle Lanes

Proposed Projects
Shared Use Paths
Bicycle Lanes
Sidewalk Improvements
Shared Roadway
General Plan Shared Use Path

Public Schools

1. Carmichael Elementary School
2. Huachuca Mountain Elementary School
3. Village Meadows Elemantary School
4. Pueblo Del Sol Elementary School
5. Buena High School
6. Apache Middle School
7. Bella Vista Elementary School
8. T&C Elementary/Joyce C. Clark Middle School

Updated: May 17, 2011

Figure 10 - Existing Facilities and Proposed Projects

Southern Study Area

0 0.25 0.5 1 Miles

APPENDIX B – SUMMARY OF COMMUTER TAX BENEFITS

Table B-1. Summary of 2012 Commuter Tax Benefits

	Transit	Vanpool	Qualified Parking	Qualified bicycle commuting reimbursement
Incentive Levels	Up to $125/month for transit expenses.	Up to $125/month for vanpool expenses.	Up to $240/month for parking at or near an employer's worksite, or at a facility from which employee commutes via transit, vanpool, or carpool.	Up to $20/qualified bicycle commuting/month. This exclusion for qualified bicycle commuting reimbursement includes any employer reimbursement during the 15-month period beginning with the first day of the calendar year for reasonable expenses incurred by the employee during the calendar year.
Employer Tax Benefit	Employers give their employees up to $125/month to commute via transit, get a tax deduction, and save over providing same value in gross income. Or employers allow employees to use pre-tax income to pay for transit and employers save on payroll tax (at least 7.65% savings) or a combination of both up to statutory limits.	Employers give their employees up to $125/month to commute via vanpool, get a tax deduction, and save over providing same value in gross income. Or employers allow employees to use pre-tax income to pay for vanpooling and employers save on payroll tax (at least 7.65% savings) or a combination of both up to statutory limits.	Employers give their employees up to $240/month for qualified parking, get a tax deduction, and saves over providing same value in gross income. Or employers allow employees to use pre-tax income to pay for qualified parking and employers save on payroll tax (at least 7.65% savings) or a combination of both up to statutory limits.	Employers reimburse their employees up to $20/month for qualified bicycle commuting. According to the IRS, "Generally, you can exclude qualified transportation fringe benefits from an employee's wages even if you provide them in place of pay. However, qualified bicycle commuting reimbursements do not qualify for this exclusion."
Employee Tax Benefit	Employee receives up to $125/month tax free for transit or vanpool or employee pays for commute benefit with the pre-tax income and saves on income tax or a combination of both.	Employee receives up to $125/month tax free or employee pays for commute benefit with the pre-tax income and saves on income tax or a combination of both.	Employee receives up to $240/month tax free for qualified parking or employee pays for commute benefit with the pre-tax income and saves on income tax or a combination of both.	Employee reimbursed up to $20/month for reasonable expenses related to commuting by bicycle.

Source: National Center for Transit Research, http://www.nctr.usf.edu/programs/clearinghouse/commutebenefits/

APPENDIX C – PUBLIC INVOLVEMENT SUMMARY REPORT

Final Public Involvement Summary
City of Sierra Vista Transportation Efficiency Study
Planning Assistance for Rural Areas (PARA)

March 2013

Prepared by
HDR Engineering, Inc./InfraConsult, LLC
6900 E. Camelback Road, Ste. 800
Scottsdale, AZ 85251

In cooperation with
Arizona Department of Transportation

Contents

Appendixes

1.0 Introduction

The City of Sierra Vista Strategic Leadership Plan, 2011-2013 identifies five transportation goals and objectives based on the transportation and quality of life needs of the Sierra Vista community. Two of these goals and objectives address reducing reliance on single-occupancy vehicle trips. This study will identify opportunities to make the existing transportation system and resources work better and more efficiently, minimize the need for increased roadway capacity, and reduce congestion. The study will propose reasonable, implementable, and community-supported recommendations to reduce reliance on single-occupancy vehicle trips and provide the community with a variety of safe and efficient transportation choices. This will be achieved by:

- Conducting a survey of commuting patterns of those who work in Sierra Vista, including Fort Huachuca (Figure 1: Study Area Map)
- Analyzing opportunities for reducing SOV trips, increasing alternate mode usage, and reducing overall motor vehicle travel for commute trips
- Developing a Travel Reduction Plan (TRP) that addresses the current and long-range transportation needs of the Sierra Vista community by identifying actionable transportation demand management (TDM) strategies

The TRP will recommend TDM and traffic management strategies that have the potential to reduce reliance on SOV trips for the short-range (0-5 years), mid-range (6-10 years), and long-range (11-20 years) horizons.

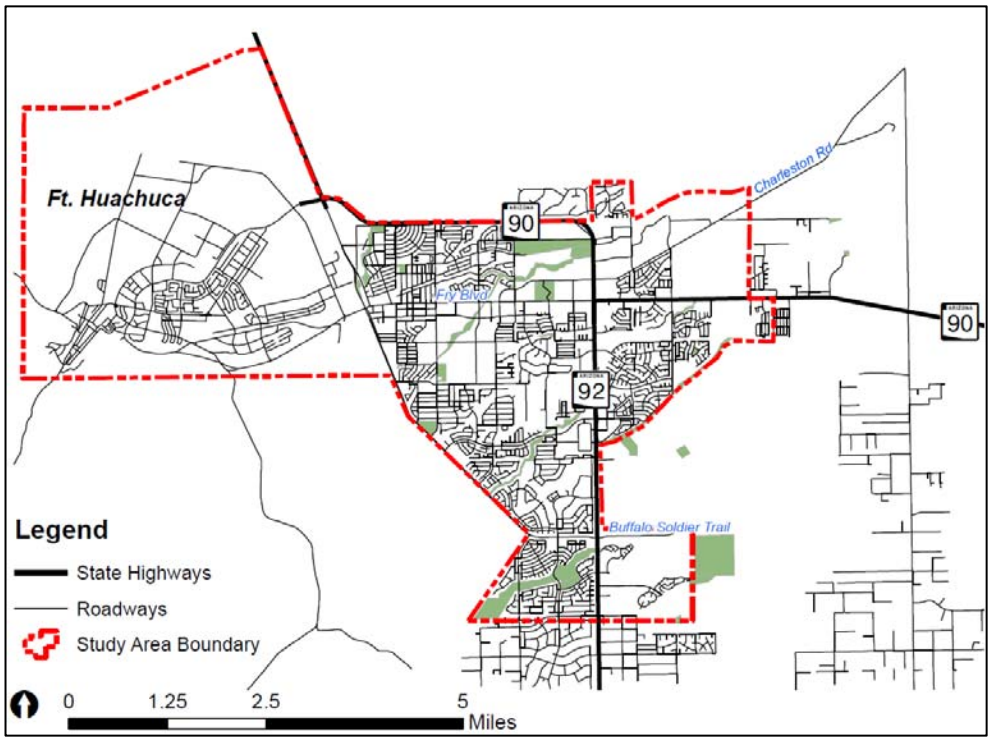


Figure 1: Study Area Map

2.0 Phase One Public Involvement

2.1 Survey Monkey

For the first phase of public involvement, a survey was created by the study team using Survey Monkey, which is an online survey tool, which was used to disseminate study information and get input from the public. The survey consisted of eight questions, which asked City of Sierra Vista area residents to offer their opinions on current and future public transit conditions and suggestions for improvement. The survey also asked questions to capture the demographics of respondents. (The questions and associated responses are listed below.) The survey was available for public comment from November 23 to December 21, 2012.

Announcement of the survey was emailed to 1,106 of the email addresses from the ADOT study database. In addition, notification of the survey was sent to 186 of the email addresses from the City of Sierra Vista contact database. The email addresses comprised area media outlets, local public safety divisions, Cochise County officials, City of Sierra Vista officials, study stakeholders, and ADOT contacts from the Sierra Vista Safe Route Study and State Route 90 Study. The email addresses who received notification of the survey are included in this document (Appendix A).

Listed below are the Survey Monkey questions and associated public responses.

1. How do you normally travel to and from work or school?

Answer Options	**Response Percent**	**Response Count**
Walk	1.4%	5
Bicycle	3.4%	12
Other non-motorized travel method (wheelchair, mobility scooter, skateboard, etc.)	0.0%	0
Private vehicle	91.9%	327
Taxi / hired car	0.0%	0
Rental car	0.0%	0
Private shuttle (SuperShuttle, employer, hotel, etc.)	0.3%	1
Other private transit	1.4%	5
Vista Transit	0.8%	3
Other public transit	0.8%	3
Total		**356**

2. Do you feel that traffic congestion is a concern in Sierra Vista and the surrounding areas?

Answer Options	**Response Percent**	**Response Count**
Yes, congestion is a very big concern	14.0%	50
Yes, congestion is an issue, but not a big concern	43.5%	155
No, congestion is not a concern	42.4%	151
Total		**356**

3. How strongly do you agree with the following statement: I am satisfied with the availability and conditions of existing facilities for pedestrians and bicyclists in Sierra Vista and the surrounding area?

Answer Options	Response Percent	Response Count
Strongly agree	23.6%	84
Slightly agree	28.9%	103
Slightly disagree	18.5%	66
Strongly disagree	16.0%	57
I am not familiar with existing facilities for pedestrians and cyclists in Sierra Vista	12.9%	46
Total		**356**

4. How satisfied are you with the services provided by Vista Transit, the Sierra Vista public transit system?

Answer Options	Response Percent	Response Count
Very satisfied	9.3%	33
Slightly satisfied	14.9%	53
Slightly dissatisfied	7.0%	25
Very dissatisfied	8.7%	31
I am not familiar with Vista Transit	60.1%	214
Total		**356**

5. Please indicate which, if any, of the following transportation programs you would be interested in using if they were available and/or improved in Sierra Vista and the surrounding area. Please check all options that apply.

Answer Options	Response Percent	Response Count
Bicycle improvements (bike lanes, bicycle parking, bicycle racks on buses)	50.2%	145
Parking facilities, including park-and-ride lots	29.1%	84
Pedestrian improvements (sidewalks, pathways, crossings)	44.3%	128
Organized carpool program	23.5%	68
Organized vanpool program	18.0%	52
Guaranteed ride home program (provides a ride home in case of emergency to those who use alternatives modes of transportation to travel to and from work)	24.9%	72
Employer-sponsored car-sharing program	19.7%	57
Employer-sponsored bike-sharing program	6.9%	20
Expanded transit service (routes and times)	34.3%	99
Other (please specify)		25
Total		**289**

6. If you have any other suggestions for improving alternative transportation (e.g. walking, bicycling, public transit) options in Sierra Vista and the surrounding area, suggestions for improving Vista Transit, or suggestions for improving the conditions of local roadways and highways, please provide those in the box below.

Answer Options	Response Count
(see Appendix B for Survey Monkey Comment Summary)	132
Total	**132**

7. What is your age?

Answer Options	Response Percent	Response Count
Under 16	0.6%	2
16 - 24	7.0%	25
25 - 64	82.0%	292
65 and above	10.4%	37
Total		**356**

8. Optional: Please provide your email address to receive updates on this study.

Answer Options	Response Percent	Response Count
Name	76.0%	73
City/Town	85.4%	82
ZIP	89.6%	86
Email Address	91.7%	88
Total		**96**

3.0 Phase Two Public Involvement

A public meeting was held on February 7, 2013, with the comment period from February 7–14. The following information includes the information and presentations provided during the meeting, as well as a summation of comments received from participants and responses from the project team.

3.1 Press Release

A press release (Appendix C) announcing the February 7, 2013, public meeting was developed and sent on January 22 to the survey email notification list. On January 23, the press release was emailed to City of Sierra Vista and Cochise County government officials.

3.2 Newspaper Display Notices

Newspaper display notices announcing the public meeting were published in the *Fort Huachuca Scout* on January 25 and February 1, 2013 and in the *Sierra Vista Herald* on January 31 and February 6, 2013. The newspaper display notices are attached (Appendix D).

3.3 Public Meeting

One public meeting was held on Thursday, February 7, 2013, from 5:30 to 7:30 p.m. at the Windemere Hotel and Conference Center in Sierra Vista, Arizona. The purpose of the meeting was to present information on the study and provide an opportunity for the public to ask questions and submit comments. Twenty nine members of the general public attended the public open house meeting. A copy of the completed sign-in sheets is attached (Appendix E).

The meeting included display boards identifying six travel demand management categories: bicycle infrastructure, marketing/promotion of alternate travel routes, parking, pedestrian infrastructure, transit, and vanpooling/ridesharing. A copy of the display boards is attached (Appendix F). On each of the category boards, several strategies were listed, detailing options. Meeting attendees were each given six blue dots and asked to place them on the exhibit boards showing the strategies which they preferred. A concern was raised that people should also have the opportunity to place dots on the strategies that they did not want considered. Because of this, several citizens posted white dots to the meeting boards showing their opposition to strategies. (The white dots were not part of the study criteria and are not included in the rankings, which are based on attendee preference.) The results are listed in the table below.

Strategy	Category	Dots in Support
Pedestrian crossing at traffic signals	Pedestrian Infrastructure	14
New bicycle facilities	Bicycle infrastructure	9
Park-and-ride lots	Parking	8
Bicycle sharing program	Bicycle infrastructure	7
Promote vanpooling to Fort Huachuca	Vanpooling/ridesharing	7
Wider distribution of Vista Transit schedule information	Marketing/promotion of alternate travel modes	6
Assess sidewalk deficiencies and develop an improvement plan	Pedestrian Infrastructure	5
Develop regional carpool matching service	Vanpooling/ridesharing	5
Distribute bicycle and pedestrian educational materials	Marketing/promotion of alternate travel modes	5
Implement safe routes to transit, schools, and employers	Pedestrian Infrastructure	5
Vista Transit service to Fort Huachuca	Transit	5
Guaranteed emergency ride home program	Vanpooling/ridesharing	4
Subsidized transit passes for employees	Marketing/promotion of alternate travel modes	4
Enhanced bike parking facilities	Bicycle infrastructure	3
Shuttle service–Fort Huachuca	Transit	3
Vista Transit service extension	Transit	3
Evening transit service	Transit	2
Parking cash-out program	Parking	2
Priority parking for carpools	Parking	2
Produce and distribute way-finding guides	Marketing/promotion of alternate travel modes	2
Vista Transit five-year plan update	Transit	1

A brief PowerPoint presentation showing the study purpose, strategies, regional travel data, next steps, and contact information was shown to the meeting attendees. A copy of the PowerPoint presentation is attached (Appendix G). Following the presentation, there was also a question-and-answer session where the public asked questions to members of the study team or made comments regarding the study or area transportation issues.

3.4 Website

During the course of this study, a website was developed and maintained so that the public had access to the latest information. The study web address, www.azdot.gov/SierraV, was advertised on all informational materials. After the public meeting, the exhibit boards, PowerPoint presentation, and comment sheet were made available on the website.

3.5 Public Comments

Comment forms were distributed to meeting attendees at the public meeting. Meeting attendees were encouraged to complete and submit comments to the study team by February 14, 2013. A total of 10 comment forms were returned at the meeting (Appendix H).

The comment sheet asked responders to offer comments on the following topics: bicycle infrastructure, parking, pedestrian infrastructure, vanpooling/ridesharing, marketing/promotion, and transit. Additional general comments could also be submitted. Below are the responses, categorized by topic.

Bicycle Infrastructure

Public Question/Comment	Response
There needs to be bike racks at public (city/county) facilities, event sites, parks, and grocery stores. There should be additional bike lanes for routes to popular parks, canyons, and other sites. Rumble strips should only be located at the adjacent lane marker, and not across the entire shoulder.	Your comment has been noted in the project record.
The best place for a cyclist is in a dedicated bike lane. Fort Huachuca would have more cyclist commuters if they would have bicycle facilities available. Bicycle lanes are the most cost effective solution to address area congestion.	
Sierra Vista already has the entire bicycle infrastructure that is needed for this area. There is no need for anything additional. (3 responses)	
Bicycle parking facilities should be provided by the retailer, not the government.	
Who pays for these improvements, the taxpayers?	Funding opportunities will be identified when considering project implementation.

Parking

Please consider having a park-and-ride lot where the public can board an airport shuttle. The cost of the shuttle ride should be offered at a reasonable cost.	Your comment has been noted in the project record.
Please consider the parking cash-out program for urban areas.	
This is overkill for Sierra Vista. I don't see much need for this. Why are you doing this transportation study in such a small town? (3 responses)	
I have no comment regarding parking, since I don't carpool.	
I believe Sierra Vista has sufficient parking.	

Pedestrian Infrastructure

Please do not consider law enforcement cameras. There is one on Cochise Avenue and Highway 92, which is almost causing accidents. When the light changes, people slam on their brakes because they are afraid of getting a ticket for running a red light. At this intersection, drivers also have to look before they pull out in the intersection, even on a green light.	Your comment has been noted in the project record.
There are many multiuse paths that need connecting routes. For example, Buffalo Soldier Trail from Avenida Cochise to Fry Road. Some multiuse paths are only on one side of the street. That is the case at Highway 92 between Fry and Buffalo Soldier Trail.	
Three foot sidewalks are too small! So much so that it is difficult for two average-sized individuals to walk past each other on these walkways. In addition, the streets are too narrow causing those on bikes or scooters to ride on the sidewalks. This situation is awful. (2 responses)	
I don't see there being any problems that currently exist with the sidewalks. Stop this government overkill!	
Please look into traffic light synchronization in general. Roadways that should be checked immediately are Buffalo Soldier Trail, Highway 90, Highway 92, and Ary Boulevard. (4 responses)	
Illuminate pedestrian and bicycle crosswalks on both sides of the street. The lights would be best located directly over the crosswalk.	

It seems that people will never be able to walk to work given the distance one might need to travel and the time it would take.	Your comment has been noted in the project record.

Vanpooling/Ridesharing

The study should consider a ride sharing option to the Tucson International Airport via shuttle van. This should be offered at limited intervals, such as four times a day (morning, noon, afternoon, evening).	Your comment has been noted in the project record.
This should be an Individual's choice whether to drive him or herself or vanpool. The individual should be allowed to choose.	
This should only be considered for Fort Huachuca. There is no need for this in Sierra Vista.	
There should be incentive programs so that people will want to car/vanpool to and from Fort Huachuca.	
I have no interest in vanpooling/ridesharing.	
This is needed to cut single-occupancy vehicle trips to places other than work.	

Marketing/Promotion

People don't use Vista Transit now and I hear it advertised daily on the radio. So route and stop information is advertised and people know where they can get the information.	Your comment has been noted in the project record.
There needs to be support of the local bicycle advocacy group. The League of American Bicyclists may be able to provide league cycling instructors who can offer a cycling traffic safety course for residents of Sierra Vista and Cochise County.	
Marketing/promotion efforts would be overkill.	
Good luck talking people into riding the Vista Transit buses.	
Area bike routes should be published in the Sierra Vista Herald.	
I don't feel marketing is necessary.	
Do not subsidize transit passes for employees.	
There should be a wider distribution of the Vista Transit bus schedules.	

There should be a wider distribution of bicycle and pedestrian education materials.	Your comment has been noted in the project record.
Provide information of the lesser known activity locations in Sierra Vista (not just common places like the library) that buses pass or where other transportation can be provided.	

Transit

There should be a service for the elderly (similar to one Los Angeles does) that provides for a fixed cost (e.g. $2 or $5), for a roundtrip ride across Sierra Vista, or between the City and Bisbee (and other local communities).	Your comment has been noted in the project record.
There should be an area shuttle service to Tucson International Airport at a reasonable price.	
The Vista Transit buses are not used.	
There needs to be better advertising or information on the Vista Transit bus routes and schedules.	
Sierra Vista could use a Dial-A-Ride system because there are a high number of elders in Sierra Vista and Cochise County.	
The only thing needed is for Vista Transit to use existing buses and provide extended evening service.	
I rarely see anyone riding the large Vista Transit buses, which use too much fuel. No one is riding these expensive buses!	
There needs to be bus routes on Fort Huachuca and other hubs that connect to Sierra Vista bus routes.	
The bus routes should be extended outside of city limits.	
Area transit service should be driven by public demand. The market will determine the evening transit service availability and routes.	
The number of bus stops should be increased in order to increase the volume of people riding the Vista Transit buses.	
Bus stop shelters should be enclosed. This would encourage bus usage since people wouldn't be subject to the weather when waiting for the bus to arrive.	

There should be a monthly bus pass available or there should be an option where bus riders can "hop on/hop off" without having to continually pay the regular fare. This way *the errands people normally do on the way home from work would be possible to be done using transit.* (3 responses)	Your comment has been noted in the project record.

General Comments

Employers should offer flexible work hours. This would reduce the required trips employees would be making.	Your comment has been noted in the project record.
Most work-related trips seem to be within Sierra Vista so this seems like the place to concentrate efforts.	
Low-speed vehicles should be required to use secondary routes in order to decrease traffic congestion.	
Seeing as this study is looking at future area growth (five years and above), Sierra Vista should consider adding charging stations for hybrid and electric vehicles to "plug in" for refueling.	
Sierra Vista's population is aging. There needs to be consideration of this when developing future area strategies.	
Bicycle paths should be designed away from, not parallel to, main roads and highways.	
When I heard Sierra Vista was concerned about traffic congestion, I couldn't believe it. The people promoting this study must have never visited Los Angeles or the San Francisco Bay area. Those areas have traffic. When I visit the San Francisco Bay area, two or three times a year, I always joke about how nice it will be to return to Sierra Vista where we don't have a traffic problem.	
Some streets should have flashing red traffic lights at certain times and intersections (e.g. Highway 92 and Cherokee Road). A flashing red traffic light would be very effective here on Sunday mornings.	
I do not think Sierra Vista needs an ADOT study. I think Sierra Vista can solve its local traffic light synchronization issues, while any lights operated by the state can be sequenced by ADOT.	

I do not see Sierra Vista's population growing. This is because there are water supply issues and the U.S. government is shrinking the military, which will decrease the amount of people in Fort Huachuca.	Your comment has been noted in the project record.

After the PowerPoint presentation at the public meeting, the attendees had various comments and asked the study team numerous questions. These comments, questions, and associated ADOT responses are as follows.

Transit Service

Public Question/Comment	**Response**
Sierra Vista doesn't need any more buses; however, there are not enough area bus stops. I feel this would make more people want to ride the bus. If necessary, use smaller buses to save money.	Your comment is noted in the project record.
Enclose the bus stops so that people waiting for the bus are not subject to bad weather. I have seen people waiting for the buses in the rain. I wouldn't want to do that.	
There aren't enough bus stops. From where I live, I would need to drive my vehicle to get to a bus stop.	
There needs to be better signage at each bus stop so that riders know which buses service that particular stop and the route that each bus takes.	
There needs to be a park-and-ride where people can catch a bus going into Fort Huachuca. If this is currently being done, please publicize where this park-and-ride is located.	
Sierra Vista has large buses, but not many people use them. The City spends too much money on these buses. Instead, the City should purchase smaller buses and increase the routes. Anyway, start with small buses and grow as you go.	
Can private companies be utilized to provide transit service?	Yes this is an option. The City of Sierra Vista will make this implementation decision.
I would ride the bus more, but I usually take care of errands on my way home from work. Riding the bus would be more attractive if there was a way that I didn't have to pay each time I get back on the bus after making multiple stops.	Vista Transit currently offers a monthly pass (unlimited rides) for interested parties. The monthly cost for this pass is $40 or $24 for senior citizens, disabled citizens, and students.
If Sierra Vista made a monthly pass for bus use available, more people would be inclined to ride.	

Sierra Vista buses are empty. I also rarely see anyone waiting at a bus stop. The City says that 180,000 people ride the bus each year. I don't think this is accurate. Does any one know why we have all these buses and no one rides them?	Comment noted in project record.

Funding

Public Question/Comment	Response
Does the City get anything, such as tax revenue, from this study?	No funding is generated as a result of completing this study.
Is funding for this potential project a separate issue?	Funding to support any strategy will need to be identified when considering project implementation
How much does this study cost?	The budget for this study is $265,000.
How much of this project's budget is federally funded versus state funded?	This study is 100 percent Federally funded.

Traffic Lights

Public Question/Comment	Response
A green right turn arrow would be beneficial to facilitate traffic movement on corresponding green left arrows in the opposite direction.	Your comment has been noted in the project record.
Sierra Vista has too many traffic lights. Also, some traffic lights change when there are no vehicles waiting to travel in that direction. There needs to be traffic sensors that only have traffic lights change when traffic is waiting at an intersection.	
On traffic signals, yellow light duration is timed according to the posted speed limit for the roadway. The City traffic engineers are the ones who set and control this timing. The minimum timing for a yellow light is three seconds. I feel that there are yellow light durations less than this three second minimum. The City needs someone to check the timing of these lights, who is not a retired police officer.	
This study doesn't address traffic light synchronization. Can this be something that is reviewed? When can this happen?	Traffic light synchronization is an element that will be addressed as part of this study.

Purpose and Need

Public Question/Comment	Response
If the price of gasoline goes to $4 a gallon, Sierra Vista will see an increase in people wanting to use alternate forms of transit.	Your comment has been noted in the project record.
Why are you doing this study?	The City of Sierra Vista Strategic Leadership Plan, 2011-2013 identifies five transportation goals and objectives based on the transportation and quality of life needs of the Sierra Vista community. Two of these goals and objectives address reducing reliance on single-occupancy vehicle trips. To address the two goals, the City requested planning assistance from ADOT to make the existing transportation system and resources work better and more efficiently, minimize the need for increased roadway capacity, and reduce congestion. The study will propose reasonable, implementable, and community-supported recommendations to reduce reliance on single-occupancy vehicle trips and provide the community with a variety of safe and efficient transportation choices.
I have visited the San Francisco Bay area, which has a great deal of traffic congestion. I haven't seen anything near those traffic levels in Sierra Vista. I also haven't seen any increase in the area's population. Why are you doing this study?	

Safety

Public Question/Comment	Response
I was driving my car on Snyder Road approaching Highway 92 and I almost hit a child who was bicycling on a multiuse path and crossing the roadway. Sierra Vista needs to be more pedestrian friendly–the intersections are currently too dangerous.	Your comment has been noted in the project record.
Sierra Vista needs to better consider the needs of the area's elderly.	
Area drivers are not used to being careful while driving near pedestrians. They need to be better trained.	

Fort Huachuca

Public Question/Comment	Response
Once you enter through the gates of Fort Huachuca, multimodal transit is unsafe. The streets are too narrow so when I ride my bicycle there, I use the sidewalk.	Your comment has been noted in the project record.
The most difficult thing with alternate transportation options with Fort Huachuca is that people there work a variety of schedules.	

Fort Huachuca tends to drive traffic. How much coordination has been done with them? It seems that money can address security issues.	A Fort Huachuca representative participated on the study technical advisory committee and provided input on the Fort's impact and opportunities to improve the efficiency of the transportation system.

Sidewalks

Public Question/Comment	Response
In some areas of Sierra Vista, such as next to Fry Boulevard, the sidewalks are only three feet wide. If there were wider sidewalks, more people may be more inclined to walk or bicycle on them.	Your comment has been noted in the project record.
I prefer multiuse paths instead of sidewalks for pedestrians and bicyclists to use. Sidewalks only allow a width of four feet, while multiuse paths allow for more space. In addition, the asphalt used for the multiuse paths is less expensive than the cement used for the sidewalks.	

Miscellaneous

Public Question/Comment	Response
There needs to be better illumination at crosswalks, especially busy intersections such as at Highway 90 and Buffalo Soldier Trail.	Your comment has been noted in the project record.
Red light cameras cause more accidents than intersections that do not have them.	
When you cross a street in Sierra Vista, it is difficult to get halfway across before the flashing red hand asking the pedestrian to stop comes on.	
What is the parking cash out program?	This program is employer-based and allows employers to pay their workers an IRS-qualified deduction for not driving/parking at the work site.
Bicycle routes seem to be parallel with the area highways and streets. Is there any consideration with designing these routes away from the dangerous intersections?	In the Sierra Vista Safe Bicycle and Pedestrian Routes Study (2011), strategies for making bicycle travel safer at intersections were proposed, such as signalized intersection equipped with video detection for bicyclists, warning signage, and improved bicycle lane striping at right turn lanes. Future planned bicycle lanes will continue to be a mix of on-street and off-street shared use paths. It is important to plan and design these routes with intersection crossings in mind.

Slide four of the PowerPoint presentation shows that Southeast Tucson/Vail had 522 average daily trips to Fort Huachuca. A few lines down on the slide, it shows Tucson (includes Southeast Tucson and Vail areas) is 911 average daily trips to Fort Huachuca. Is this a discrepancy in the reporting?	The 522 average trips is a subset of the 911 average daily trips. These data were presented in order to show that the majority of trips from the Tucson area are coming from Southeast Tucson/Vail region.

Following the meeting, four individuals emailed their comments to the project team. The comments were as follows.

Public Question/Comment	**Response**
There are way too many street lights on the major thoroughfares in town. The City seems to think the solution to every problem is another street light. BST and Hwy 92 (+ bypass) should be like freeway travel, with no stop lights. That's the purpose of a "bypass." Please don't let us end up like Tucson, where you can't get anywhere without driving on a city arterial.	Your comment has been noted in the project record.
Hwy 92 south of Fry started out years ago having the right idea with frontage roads and Hwy access only at major intersections. This was a brilliant idea that no one continued to use as the businesses built southward on Hwy 92. That is something City planners should go back to working on. The frontage roads are the right idea. That would help alleviate some of the traffic problems.	
Having two traffic lights at WalMart is ridiculous. One is adequate. Two are totally unnecessary. They are too close together to need two signal lights. That's both on Hwy 92 and Charleston Rd.	
Last, but not least, the timing of the signal lights is a HUGE problem. You can't drive the speed limit on Fry or Hwy 92 and successfully hit green lights. As a matter of fact, if you go the speed limit, you will hit more red lights than green. That is bad for gas mileage and conservation as well as traffic flow. Someone from the City needs to get the lights timed correctly.	
Program amber (yellow) lights to be longer.	
In order to make intersections flow more smoothly and safely, program the left hand turn signal (green arrow) to come on before the green light. (The green arrow currently comes on after the green light).	

Public Question/Comment	Response
For pedestrian safety; do not allow right hand turns on red at the following intersections: Highway 92 and Fry Blvd., Highway 90 and Charleston Rd./MLK Pkwy., Fry Blvd. and Calle Portal (Veterans Memorial Park). Install "NO TURN ON RED" signs.	Your comment has been noted in the project record.
Lower the speed limit on Charleston Road between Highway 90 and Fighting Colt Drive to 35 MPH. This road is mostly used by inexperienced teen drivers going to and from Buena High School and Cochise College.	
Lower the speed limit on Fry Blvd./Highway 90 between Buffalo Soldier Trail and Giulio Cesare to 35 MPH.	
Lower the speed limit of Martin Luther King Parkway to 35 MPH. This is a narrow and curvy road.	
For safety, especially for teen and senior drivers, Install red and green left turn arrows where there are currently green only left turn arrows. The most dangerous intersection in this regard is Highway 92 and Foothills Rd, this intersection requires a red and green turn arrow because there are dangerous blind spots.	
Install a traffic light at Highway 90 and the exit of Fry's Food Store.	
Install a traffic light at Wilcox Avenue and El Camino Real (near the hospital).	
Install a concrete divider on Highway 90 between the East Gate of Fort Huachuca to Huachuca City.	
Do away with the center turn lane on Highway 92. Install a center divider and "jug handles" at some of the intersections for left hand turns (while there is still land available to construct jug handles). Then install "KEEP RIGHT PASS LEFT" signs along Highway 92. This will improve the flow of traffic.	
Provide public transportation south to the Hereford Post Office. Increase the size of the Hereford Post Office parking lot for commuter parking.	

Public Question/Comment	Response
Bicycle Infrastructure: safe, cooperative biking should be facilitated. One way to enhance this is to ensure that residents/visitors know the multi-use path rules through education and signage (see attached sign example). As you can see from the attached sign with is used by the Park Service, hikers have precedent over bikers - the same type of signage should be included on the multi-use paths in Sierra Vista. Enhanced bike parking facilities where the usage supports it would be helpful.	
Parking: Designated parking for cars would be a useful concept where you park to get into/off a shuttle to key Ft Huachuca locations, such as Greely Hall. For example, people could drive to the Sierra Vista Mall (and the old Wal Mart) and park in the SE corner (or another underused area) to take a shuttle to/from Greely Hall. On Ft Huachuca there should be priority parking for carpool vehicles.	
Pedestrian Infrastructure: Traffic signal synchronization was discussed for Hwy 92, but it should also be used on major city streets such as Fry Blvd. We also need to educate people about pedestrian lights, as some meeting attendees did not know what the red stick man really meant.	Your comment has been noted in the project record.
Vanpooling/Ridesharing: There used to be busses from Bisbee, for instance. Based upon the traffic studies vanpooling from Benson, Tombstone & Bisbee and perhaps other surrounding towns should be facilitated. In addition as mentioned earlier, people should have the option of driving to the Sierra Vista Mall (and the old Wal Mart) and park in the SE corner (or another underused area) to take a shuttle to/from Greely Hall.	
Marketing/Promotion: I support the educational efforts for bikes, pedestrians and carpoolers. Bus usage will not reach a critical mass in the foreseeable future, so I would market alternates such as bikes, pedestrians and carpools. I would also use the bus savings to support charitable and private transportation for those that cannot drive.	

Public Question/Comment	Response
Transit: I support shuttle service to Fort Huachuca for workers and on the weekends for soldiers (shuttle to SV Mall, Wal Mart and stop or two on 7th St), but not a bus/transit service. The transit service only survives because of grants/Federal subsidies and will not reach a critical mass in the foreseeable future. Why not better use these monies to support charitable and private transportation (e.g., subsidized cab rides for the needy) for those that cannot drive and shuttle services.	Your comment has been noted in the project record.
NO u-turns on Hwy 92.	
Right turn arrows with left turn arrows at Buffalo Soldier Trail/Highway 90 and the bypass, east gate.	
Painted lines to make people turn into the proper lane at intersections.	
Put in connecting streets to get rid of one way in and one way out of neighborhoods.	

Appendix A Phase One, Survey Monkey Email Address Notification

Survey Email Address Notification (ADOT)

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abby.zeitlin@gmail.com	gpresto@corraldesigngroup.com	mike.luna@swgas.com
abdullah.rana@hotmail.com	Gr8day2shop@q.com	mike.rapp@citcomm.com
achavalj@gmail.com	grammaruth@cis-broadband.com	mike.riffe@empire-cat.com
acline@cityofbisbee.com	grantc0419@yahoo.com	mike252.6578@GMAIL.COM
acrawford@azdot.gov	greenacresaz@msn.com	mikefinn@ameco.com
acuraz@yahoo.com	greg@precisionheavyhaul.com	mikeliznewcomb@aol.com
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adam.thrasher@sierravistaaz.gov	Groundhogday2011@gmail.com	mistyagain@msn.com
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adot@timtait.com	hank_kenski@kyl.senate.gov	mlnapier@earthlink.net
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alabor@penhall.com	highways@cochise.az.gov	mprice@wrmeadows.com
alauve@azdot.gov	hohstadtm@gmail.com	mquiroz@cityofbenson.com
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amy.marshall@usps.gov	info@canyonrose.com	munsey.samantha@gmail.com
amy.togue@compass-usa.com	info@freshfrommexico.com	murray.c.adams@dhs.gov
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angela.moncur@us.army.mil	info@letsonlofthotel.com	n7ck@cox.net
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annkothlow@whitecap.net	irene.zuniga@sierravistaaz.gov	news@silverbelt.com
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Appendix B Phase One, Survey Monkey Comment Summary

Public Comment Responses to Question 6 in Survey

Walking might be improved if sidewalk placement was more prevalent. Many places, such as the "surrounding area" and the old parts of town, do not have sidewalk at all, forcing pedestrians to use the roadway for their pathway. I'm anticipating being able to bicycle to town once I have time after I retire, but it appears dangerous to bicycle along SR 92; I'd have to go over to the bike path on Stafford/Cherokee. There doesn't seem to be any emphasis on improvements for my side of the highway - the low rent side of the highway, as we say. There is a convenience store at Camino Segundo & one in the works at Ramsey Canyon & SR 92, but no sidewalks in the area.
Definitely, improve the public transit system. If more people had the system avaiable to them, they would not have to always be driving to work or school. Thus, there would be less congestion on the roadways and interstates. People would also feel more encouraged to use less gas in order to get their destination.
A Flashing Light Crosswalk for the area by Circle K on Highway 90.
Many people in Sierra Vista work on Ft. H. . It would be nice to be able to ride a bicycle to work. It does no good for Sierra Vista to have nice bicycle lanes even up to the gates of the Fort, and then have NO suitable bicycle lanes on the Fort. I don't know how you convince the Army to spend money for bike lanes, but they are needed, if you don't want to spend the rest of your life as somebody's hood ornament! This is a safety issue, not one of convenience!
More trees to provide some relief from the heat and sun on walking/biking paths. I don't find it comfortable to walk between 8 am and 6 pm in the warm months (which is most of the year here). Subtle lighting along the paths (even solar powered lights) for safety after dark; water fountains placed occasionally along the path so walkers/bikers do not get dehydrated should they not have, or run out of water. An occasional 911 call box for emergencies (not everyone has or takes their cell phones with them).
I occasional use Vista Transit as my household only has one car and my nephew regularly uses it to get home from school. Not being able to use buss 5 after 3pm (he gets off at 3pm) is frustrating as he has to take the longer route home. Also, if he has wrestling practice, which gets off at 5pm, coming home from Berean Academy (he catches the buss at Cochise College) means that he misses the route at the trsf station that takes him closes to home. We live near Paseo San Luis.
I'm from a town with a lot of bicycle riders and a lot of wide bike trails. People just enjoyed being outside more because they weren't frantic about being so close to the road. I think placing more sidewalks in areas that aren't congested with stores would be nice.
There's a concern at the corner of columbo and charleston, needs crossing guards too many accidents with kids walking to and from school at that light especially.
Create/delineate more bike lanes on E. Fry, Wilcox, Busby and 7th. Paint more bike lanes particularly on 92 from Three Canyons to just North of Hereford Road. Complete and fine tune bike paths on BST, bypass and Coronado. Enforce the three foot separation law between bikes and cars. Do a better job of keeping debris off bike lanes. Publicize each improvement.
anything to help us get to tucson where the jobs are
It is very difficult to bicycle down Fry Blvd due to traffic congestion. The city has excellent bike paths around town, but none along Fry, which is the busiest part of town.
I would like to see the bike paths extended beyond Buffalo Soldier trail down along Highway 92. I often ride my bike from Hereford into town. The bike path is nice once I reach town. Also a bus stop farther down 92 that even only came in the morning and night would be helpful for helping with commuting.
I would recommend establishing seperate bicycle and walking paths between Sierra Vista and Bisbee via Hwy 92 (in close proximity to 92 but not part of the road). Establish a futuristic transportation system along Hwy 92 from Bisbee to Sierra vista. An automated electric train that ran hourly with very low fares would encourage people to leave their cars behind.
A bicycle path on both sides of 92 would be great.

Coordinate, get County, State, and Federal officials to promote an improved Moson Road loop around to reduce Highway 92 and Buffalo Soldier only north/south route.
Begin Implementing the projects listed in the S.V. Safe Bicycle and Pedestrian Routes Plan., particularly marking bike lanes on recommended streets. When streets are repaved/sealed, consider adding bike lanes when pavement striping is performed as part of the projects. Designate and identify bike routes across town with signs. Provide pedestrian crossings at 1/4-mile intervals on Fry Blvd., SR-92, and SR-90 east of SR-92. Provide pedestrian safety islands at controlled intersections on Fry, SR-90, and SR-92. Install "Be Alert for Bycycles" signs on appropriate streets.
The Transit needs to come out into the southern portion of Sierra Vista, Possibly as far as Ramsey and Hwy 92. There are a lot of people who would use the transit system if it was available in our area too
Evening bus service to Cochise College
Having an pair evening transit runs would allow poeple to take a bus to go shopping or evening classes after work without having to take their car.
I haven't ever used the Sierra Vista Transit System because I live in Hereford and it doesn't reach that area.
Figure out a way to force cyclists to follow the traffic laws and not ride like renegades who own the road!
Stricter monitoring of bicyclists. There are problems with bicyclists riding on the line on the highway and not utilizing the space on the shoulder. This causes problems with passing vehicles because they are forced to move over on order to avoid hitting the bicyclists and this causes problems when there is rush hour traffic. Along with this issue, bicyclists are forced to ride on the sidewalks where there are no bicycle lanes. With the improvement of bicycle lanes, proper enforcement needs to be applied to keep bicyclists off the sidewalks.
Putting rumble strips BETWEEN bike lanes and auto lanes. I see too many drivers drifting over into the bike lane, increasing the risk of an accident and putting cyclists at danger. The rumble strip doesn't need to be terribly wide, just enough to make a noise. The other thing is to put reflective "dots" between the driving and cycling lanes. That will also wake up drivers.
Extend the Brown Canyon bypass trail that borders the South side of the Fort all the way to BST.
There is an attitude within the city that once the completion of the shared use paths will give cyclist a safe place to ride. “The Dilemmas of Bicycle Planning” and the City of Phoenix street transportation department “2007 Bicycle Collision Summary” detail how riding on a sidewalk is MORE DANGEROUS than sharing the road. In Sierra Vista both the shared use path and the sidewalk access the street at the same location. Both, the Pedestrian and Bicycle Information Center recommend “Shared use paths are an addition, and complimentary, to the roadway network” and AASHTO Guide for the Development of Bicycle Facilities notes “shared use paths should not be used to preclude on-road bicycle facilities but to supplement a system of on-road bike lanes, wide outside lanes, and paved shoulders. With the development of the shared use path in Sierra Vista there has been a conscious effort to ignore the development of bike lanes. This over site has led to a more dangerous place to ride.
I think buses should run until at least until 9 pm because most people study or work until late. I also think normal buses should function on Saturday. There are strips along coronado dr. that don't have a sidewalk or even any light, so walking is very dangerous at night.
On question one where I marked other private transit, that means an employee-arranged carpool from Bisbee. You should have a carpool option available to check. The current Sierra Vista bike paths are good! A regular bus to and from Bisbee would be good. I gather such a bus has never been financially viable. It would have to accommodate teaching hours. p.s. This survey would not submit using Chrome. I am retrying with Firefox.
Just keep up the good works as of now; you're all doing a great job, congrats!

I would mostly just like to see far more bicycle and pedestrian-friendly paths and/or lanes. The bus service seems good, but it would be even better if the service was expanded both in terms of times it runs and how far out it goes. Many individuals at the place I work live in Hereford and are limited in using the bus because it doesn't go that far out. Others also have mentioned they wished the bus ran later so they could take advantage of evening classes, events or nightlife.
Road conditions are fine. SV will need another bypass soon if it continues to grow.
I don't think that congestion is as serious a problem as the poor driving habits of our citizens. I witness one red-light infraction every day during my daily commute. I think there should be more enforcement of red-light infractions.
The last time we suggested the traffic was moving to fast. The city or state upped the speed. So now the street is less safe. I'm not sure it's worth giving a correct opinion.
Do not let the city run it. The only instance of this, just off of Hwy 90 south of the Shell station, they restricted the road to two lanes to put in a worthless bike lane instead of making the road four lanes as it is just south of this boondoggle. This was a total waste of money that will have to be torn out once the road finally gets widened to four lanes. Incompetence reins at cityhall.
I do ride my bike to work in the summer months. I also bike for exercise and recreation. I have had some issues with being cut off or almost hit by cars. I try to be extra-vigilant while riding, but I always use bike paths when they are available because I am always worried. Terry Brown's death terrified me.
The bus service in this city is horrible. The routes are minimal, the hours/days are lacking, and the connections to get around between routes is a pain. The whole thing needs to be reworked. Bicycle & pedestrian joint paths are frequently only on one side of a road and it can be a great deal of distance until there is a cross-walk for someone to get to the other side if they need to. This is very frustrating and it often leads to people running into busy streets to get across. More crosswalks would be excellent as well as shared paths on both sides of the streets (this is especially needed on the 90 and 92 areas). Additional crosswalks should have the light options - Where a pedestrian or cyclist hits a button and the stop signs light up so cars know someone is crossing rather than a pedestrian begin crossing and essentially hope the driver will know they're in the crosswalk. More lighting around the shared paths for early mornings and nights is seriously needed as well.
I am a cyclist and realize that funds are tight but I do not ride as much as I would like because the shoulders in my area (Hereford) are quite narrow and bumpy. I realize I can ride on the left of the white line but choose not to if I can avoid it.
Extend a bike path from Tacoma East to the bypass. It would also be nice to extend the road (Tacoma) out this far.
I purposely avoid driving on Fry Boulevard. I know that the most accidents occur on Fry.
Extend the times all buses run, especially bus 5
Bus line should be two way. For example. I live by village meadow school and to get to corner of foothills and 92 I would have to take a bus and go to bus station and then get on another bus to get to foothills and 92 but to go from foothills and 92 I can get on a bus and go there directly. I should be able to go both ways without going to bus station.
The bus doesn't travel to Ramsey Canyon so it is of no use to me. That and I do not always work in SV as my main duty station is outside of SV. Part of the problem with SV is we are a destination-oriented town. There aren't enough stores grouped together where you can park and walk to all. You have to continually get back in your car and drive to your next destination.
Connecting all of the existing bike paths.
A county-wide light rail system
Buses need to run in both directions rather than doing loops. I avoid the bus because I don't want to ride all the way around the loop either coming or going on my trip.
Stop trying to throw "alternative transportation" down our throat. Instead, why doesn't someone sync all the traffic lights so we don't race from light to light to light constantly.

I would like to see a proper bike path built on Hwy 92 from Sierra Vista to Bisbee. I would also like a Vista Transit route on Hwy 92 from Sierra Vista to Bisbee with stops at the major intersections in-between and connections with the existing transit system in both cities. Finally, I would like an increased level of service available in Bisbee to match the service currently available in Sierra Vista.
Less lights and more traffic circles. Bike path from Cherokee on the Fort side of Buffalo Soldier Trail to the main gate would make a safer bike path and would be more convenient than riding on Buffalo Soldier Trail. Bus service to south Sierra Vista/Hereford could reduce some of the traffic congestion on Highway 92.
Although I don't use them personally, I understand from other people that sometimes the connections between parts of the pathways are not good.
If we could get Fort Huachuca to provide bike lanes/bike paths/multi-use paths on the installation, I believe that more people would be willing to ride bicycles to work. I know that I would strongly consider riding a bike to work but it is definitely too dangerous to ride a bike on post at this time.
I appreciate the new efforts to provide safe bicycle and pedestrian trails throughout Sierra Vista, however, old trails and sidewalks need to be upgraded. Ideally, there should be a curb and shoulder between the road and trails/sidewalks for bicyclist and pedestrian safety. The sidewalk along Fry Blvd is way too close to that busy street with just a curb separating it. Also, I realize it may be a case of numbers, but it seems like the only solution to increased traffic that the City utilizes is the installment of new stoplights. And some of the sensors are way too sensitive to side street traffic. I (and 10 other cars on average) end up coming to a screeching halt for one person to make a right turn. Every 2 miles. This wastes gas and creates pollution. I have often thought about what kind of public transportation would benefit Fort Huachuca employees, especially people who live throughout the valley. Park-and-rides would be nice. I have thought about a rail system. Expanded SVT routes. The problem is schedules, drop-off/pick up points, and what to do in emergencies like when a child in daycare needs to be picked up due to illness. I've also thought about another gate (or two) to Fort Huachuca - which would create some logistical strategy and budget planning for the post - such as a South Gate for all the traffic coming from south of Coronado/BST and another North Gate for traffic coming from north of Huachuca City. These are probably not logistically or financially feasible for the Fort, but one can dream as they sit at their 8th stoplight in 5 minutes...
Eliminate right turn on red in high accident areas. Increase the time for the changing of traffic lights so that you do not need to come to an abrupt stop from 55 mph to 0. Increase the time that the opposite light changes so that all the idiots who run lights have a lesser chance of causing an accident.
There needs to be a reliable bus service between Sierra Vista and Tucson.
I have concern over the road conditions of roads within city limits, but outside of typical travel areas, such as Lazy Y5, which is probably the worst road in the entire city area. Please help that area!
Enforce the speed laws both excess and slow drivers in left lane. Change speed limit on Highway 92 between town and Glenn road to 45 mph. No one drives much faster than that when you have people in the left lane violating the speed law driving 10 and under. Make the medium solid except for turn lanes into roads. Drivers use the center lane to pass when drivers are excessively slow on the highway in both lanes. By the grace of God, you have been lucky that there are so few fatal accidents. The way some people drive, phones hanging off ears while turning in major intersections and other such distractions, scare the tar out of me.
extend multi-use paths or bike lanes onto FT Huachuca, through the main gate and East gate up onto main post
Avenida Cochise is a prime example of a bike path / multi-use path. First, the path is in need of repair. Second, if you're riding a bicycle east towards SR 92, there is a multi-use path available. However, if you're riding west and want to travel on the same side of the road as the traffic, you have to ride on the sidewalk. With regard to multi-use paths, you guys need to bring them up to AASHTO and MUTCD standards. You also need to put in traffic control devices when the paths meet major intersections. I can't tell you how many times I see bicycle riders travel from the path into the crosswalks traveling the wrong way, against the no-walk indicator. Drivers looking to turn right do not see the approaching bicyclist on their right because the drivers are looking to the left.

It would be great if the bike lanes and paths connected better and not leave you on a busy road with no lane.
larger shoulder from walmart to avenida cochise.
I work at the Black Tower on Ft. Huachuca (near the West gate). If a transit service serviced my work location with a few different pick-up and drop-off times available, I would use it.
The worst area is on highway 90, between Huachuca City and the East Gate. It's a straight stretch, but I worry about vehicles coming over in our lane all the time. Can they put a median or something separating the vehicles?
Pave Buffalo Soldier Trail, East of Hwy. 92. Then I could ride my motorcycle to work. It would be a win win all around.
Please make Sierra Vista safer for bikers and walkers by providing bike and pedestrian paths.
Since parachuting from a hot air balloon to my office is not an option, I have none, unless X-Wings have been invented as of yet.
I would recommend increasing the hours of operation for the transit. I have limited vision and rely on Vista Transit exclusively for transportation. My only problem is that they don't operate far into the late afternoon/evening or at least I can't get them to come to my stop.
I'm handicapped. I need more crossing ramps. It's scary to bail off the edge of these half witted rounded off "curbs" the city fathers and mothers allowed in the past.
Sierra Vista is just fine. We are not a big city. We do not need our money spent on these Agenda 21 ideas.
Vista Transit needs to expand their hours of operation after 1730 hours. This will accommodate patrons who work later, go to the local community college evening classes, Fort Huachuca soldiers can use the transport after hours as well. More stops on the fort at the major facilities like JITC, NETCOM, EPG to encourage more working professionals to use the transit system.
More multi use path's.
Bike riders are not staying inside the bike lanes on dangerous highways like Hwy 92. More education needed.
Enforce the use of bike paths and get the bikes off the road on places like BST. S Cherickee were there is a bike path that many don't use but instead try and compete will vehicles a a road that is already to small.
Remove the newly installed traffic light at Avenida Cochise Ave. and Oakmont Drive. It's a nuisance.
I live in Huachuca Mountain Village, just south of the city. I would use public transit to get to town if it were available. Also, I'd like to see a bicycle/pedestrian path on Yaqui, between Cherokee and Calle Encina. I bicycle that route on the street with non-existent shoulder, and at certain times it is very dangerous.
I see the transit bus go by every day that is empty or nearly empty. It seems to me that this is a big waste of money that could be much better used to keep our roads in better condition.
Maintain the streets we have-BUT NO NEW TAXES (like SSVEC that U snuck by many voters); Vista Transit does not carry enough citizens to make it of any value; and the city refused to consider propane buses 10 years ago.
synchronize the traffic lights! And an all stop for left hand turn light needs to be fixed.
So many traffic lights are just a block or two apart. If I'm on Fry Blvd. and a one car approaches on the side street, the light turns almost immediately. I feel that this is some of the problems with traffic flow. Also, on slow mornings (Saturday/Sunday) why can't traffic signals just blink until, say 7:30 or 8 a.m. Not at all intersections obviously, but there definitely are some that don't need a working light early in the morning, or for that matter, later in the evening. Came home from a trip about 8 p.m. and had to wait by the East Gate for the light to turn and there wasn't one car in any direction. Definitely a huge waste of gas while sitting waiting for a light with NO traffic on the road.
Start actually ticketing people that randomly change lanes without warning that leave less than 6 feet in between vehicles at speeds of 55 mph or higher, as this is one of the main reasons I refuse to drive on Buffalo Soldier Trail unless I have to. Have police actually do their jobs instead of simply showing up after a accident to ticket whoever they can simply to collect money for the courts.

I'd like to see bike lanes on roads (rather than the multiuse paths) because when there are 'multiuse' paths vehicle drivers get angry that cyclists are on the road. Yet, it's very dangerous for cyclists to use the multiuse paths because vehicle drivers pull out onto the paths and block them while waiting to enter a road. Unless a cyclist is going the speed of a pedestrian, they're risking a lot being on the multiuse paths. While our multiuse paths are nice, you still have too many people failing to understand 'keep to the right' making it dangerous for pedestrians and cyclists to share the lane. (And I'm a vehicle driver, not a cyclist, but I can sure see how bad things are for folks on bikes!)
Is it possible to expand the service to Schrader road?
Begin to strongly enforce traffic rules for cyclists. They take advantage of the system and create problems for vehicles in their wakes. Thus causes the "slinky effect" and increasing congestion.
Educate cyclists to look around and see if there is a nice multi-use path 10 ft from the road they're on, and if there is, tell them to actually use it instead of blocking traffic on roads with little or no shoulder.
Get bikes off Fry Blvd as they are a hazardc with no bike paths. They do NOT ppay attention!
Once there was a survey done for putting a light at Synder and HWY 92. Revisit that option. Some days the traffic is too busy for the people making a left turn onto HWY 92, and when the platoon of cars are barreling down the road, that would help everyone to peacefully get into the flow of traffic. AND, on HWY 90 between Huachuca City and the East could have some sort of dividers on that stretch of road. Several states have that wire with poles to keep vehicles from just drifting into the on coming traffic. That improvement could help drivers stay focused on switching lanes.
Ft Huachuca generates a lot of traffic on Fry Blvd and the bi-pass, almost all of the cars have single occupants. Park and ride lots, bus service to the Fort along with an incentive program would help traffic 90%. Traffic enforcement on Fry Blvd is not a transit issue but would help reduce accidents etc. I would like to see the speed of vechiles stay within the posted limit, it would be easier to walk down Fry if you didn't have vechiles speeding over 40 miles an hour so close to the sidewalk.
Improving "walking" access to major areas with dedicated pedestrian lanes would ensure a "safer" commute for walkers.
Ticket pedestrians and bicyclists for illegal activities such as crossing against the crosswalk sign or bicyclists on wrong side of road. This is very dangerous especially during darkness.
When walking and bicycling paths are developed walkers and byclist should use these areas instead of the main roadway.
See comment #5 above..... Make an hourly (if possible) shuttle commute from Nickville area to Ft Huachuca. Parking must be available and a schdule maintained.
See number 2. More travel options for military/soldiers to off base shopping and attractions.
Unless there are REAL penalties for hitting and killing cyclists and pedestrians, they will remain second class and manifestly endangered users of the public roadways. Families and individuals will not use this mode of transportation as the penalty can be permanent injury or death. Increasingly distracted drivers are an incredible and increasing danger to all users of the public roadways.
I would like to see signage on the south side of state route 90 east between Fry Blvd and Avenida del Sol for pedistrians and bikes that they must use the paved multi use path on the North side of state route 90. I see pedistrians walking as well as bicyclists along the shoulder of the east bound side and I know there have been a number of accidents and even deaths. There is a wonderful multi use path on the north side but people don't use like they should. Maybe the local law enforcement could stop the pedistrians and bicyclists and educate them about using the multi use path or even a violation could be imposed for people not using the path only using the shoulder of the road.
Low-Speed Vehicle promotion and access
Connect the existing bike lanes and trim the weeds along the bike trails and roads so the goat heads don't pop bike inner tubes or tires.
More city-wide inter connecting bicycle/pedestrian multi-use paths. Make Fry Blvd a single lane slow speed artery with the center portion a bicycle/pedestrian multi-use zone (from Hwys 90 & 92 intersection to BST).

Improving / widening the shoulder on Highway 90 between Sierra Vista and Bisbee would be beneficial to cyclists.
Everytime I am out and about I see the transit buses and they are never more then 3 people in them. I do not believe the transit bus system is needed in sierra vista.
The mulit-use path system is disjointed but improving. A better network would make it easier to walk and bike to stores and city ammenities.
Multi-use paths only continue to be beneficial if they are maintained. Too often, a new multi-use path is built, then left to deteriorate over time.
I have no interest in using public transit or bicycles. I walk for pleasure not to travel miles to work or shop. Build the places people work closer to their homes and stop putting them all in the same area. Retail, Government contractor and business clusters make more sense than staking them up side by side or along the same travel path. We build neighborhood schools for a reason, why not business clusters. Plan your city like you would if you had to live in it because you do. We look like everywhere USA with all the same dumb P&Z formats.
The linear PARK ended up being a funny joke since all the city did was build a couple of parking lots and called the place a park. No maintenance has ever been done and the nothing makes it a park except for the sing in the parking lot area on Cherokee.
I don't see that there is any 'pinch point' for traffic in town. There isn't any traffic in town, except maybe at the gate at 8:00 a.m., so there is nothing to try to mitigate. The bus doesn't seem to be that convenient, but there aren't that many customers, so it's tough to make it convenient if nobody is going to pay to ride it unless the city wants to fund it and frankly the city probably has better things to do with its money. My husband and I work across the parking lot from each other, but we take separate cars because he has to go to the post most days and I have to go to the bank at least every other day, so we can't carpool, even though we'd like to. The only suggestion I can make is to provide a stop to shopping and the hospital area for the new low-income senior housing that is going in on BST.
I've noticed that some intersections have blind spots because of fences, shrubbery, trees or signs. Could there possibly be (or maybe there already is) an ordinance that would have a 20 or 30 foot set back from the adjacent street on a corner lot of anything that is higher than three feet from the curb?
PARK AND RIDE FACILITY NEAR RAMSEY AND HWY 92 WITH BUS CONNECTION TO CENTER OF SIERRA VISTA AND THE FORT.
Greater emphasis on bicycle and pedestrian safety. Strict adherence to driving without distractions (texting). Police enforcement of violators
The bus service could better understand its *potential* customers. High school students cannot get to the public library very easily for after school study sessions. I personally commute from Bisbee, along with many others from Bisbee and Douglas. That's where a ride service or vanpool would be beneficial.
Now is the time to widen Fry Blvd. before you grow like Tucson did and now Tucson is always under construction
I love the multi-use paths and walk/run/bicycle on them frequently. If the route incompassed the City, I'd use it continuously. Virtually nobody uses Vista Transit. I don't have the answer, but how do you get more untilization out of this service? Riding the bus would certainly eliminate some of the congestion on the roads.
All roads, when repaired, should have bike lanes added since so many people use bicycles for transportation. A program similar to adopt-a-highway should be implemented to adopt a bike path for maintenance (sand removal, rock removal, litter removal purposes), and users should be encouraged to run it and assume at least partial responsibility for the bike lanes.
HIre some good people at ADOT Research Dept. Whoever wrote this, isn't very good. I ran one of the leading research groups in the US and know good research from bad. This is bad!!!
The reason I worry for bicyclists is because I see motorists not abide by solid lines. They use bike lanes to make turns if a car is in their way. Also, distracted by cell phones and just can't stay in their lane. Speed limits on BST and 90 By-pass are mere suggestions. I almost get run over & I am in a car. I would NOT ride a bicycle on these roads.

I assume there would be shuttle services from park and ride areas to major areas of the City.
I think a car pool or shuttle would be very appropriate for those traveling from Sierra Vista to another city. Many times individual folks drive themselves to Bisbee, Benson, Douglas, or even Tucson every day for work when they could make use of either a park and ride, carpool, or shuttle service. Within the city of Sierra Vista, I do not perceive this as a problem.
Fix all the traffic signals.
I love the expanded system of multi-use paths. I think it needs more advertising. I still see a fair amount of bicycle traffic on Fry, when they could easily and more safely go on the mutli-use path along MLK.
I believe there has been more than enough money spent on added sidewalks and bike paths. There are very few people who use these to justify the expense to all. The focus needs to be on repair, improvement, and expansion of current roads.
The bus system is a waste of money. Hardly anyone is on the busses. The system is poorly designed and doesn't serve those who could use it, such as the residents of Vista View Resorts on Highway 90.
Give bicycle multi use paths priority over cars at intersections. Enforce violations of the rights and safety of bicyclists and pedestrians. Establish a Sierra Vista/Cochise County bicycle/pedestrian fund that people may leave their estate to when they die, or may donate to for a tax deduction.
My comment about right turn lanes in number 2 applies for this question.
Published schedules for vista would be a start. Service from one end of town to the other that could be accessed on Fry Blvd so as to NOT HAVE TO GO TO THE BUS DEPOT to transfer for a simple trip from say Carmelita area to the college and back. Service linking Benson and Tucson is highly desirable even if only run twice a day or on a reservation basis.
Suggest expanded transit services to include rural routes that stop at Fort Huachuca and some of the major employers in the area.
More & wider bike lanes, and expansion/lengthening existing bike paths. Coronado was recently resurfaced & painted w/o bike lanes, what the heck?????
Multi-use paths need to be linked and completed. Bike paths or marked bike lanes are needed on all major roads and streets in the area. Special attention is needed on South Highway 92, Charleston Road, Moson Road, Hereford Road, Ramsey Road, and Highway 90.
We are pretty small. I don't see a real need for park and ride or other transportation sharing. The bus system is good for those who drive, and the multi-use paths are fabulous for walkers or bikers. There are still some segments that need to be completed, but we have a great pathway system. Carpooling is appropriate for people to organize within their own workplaces, provided folks live near one another..
Designated crossings at the major intersections for bicycles would improve safety. There are a lot of bike riders, and these crossings are dangerous. Both my children have been hit by cars while on their bikes and crossing in a crosswalk.
A. Complete the bike/pedestrian path on Hwy 92 South. Ticket bicyclist that use the street/highway where a bike/pedestrian trail is provide, but for some stupid reason, they would rather ride in a street with no shoulder (S. Cherokee Ave). B. Fort Huachuca employers have been hit hard by goverment cuts and other reductions. Bad time to ask them to provide empoyer-sponsored anything. C. Vista Transit appears to be a waste of money. I've never seen a full bus...normally see 0 to 4 riders.
What would be a big help with the road would be for some of the rough intersections to be smooth out and fixed. some of the intersections are rought when you try to make a turn.
I do not use public transportation, nor do I walk, bicycle, run or have use for such facilities, however, I am grateful for others to be able to benefit from these useful and beneficial modes of moving thru our City. I am a still-working real estate agent & must use my personal vehicle daily not only to go to work & return home, but all throughout the day. I would liked to have had a block to check that said as much.

This is a small city - I never wait through more than one light at an intersection. I find traffic here to be a piece of cake. I do however, wonder about our transit system. It often doesn't run on holidays, certainly does come out to the area where I live - just outside city limits, the services for Fort Huachuca are severely limited by my standards - it just does not seem to be much of a transit system. I believe that if I were able to use the service that I would at least a few days a week.
The bicycle paths are fantastic and I travel on them every week for exercise. It would be even better if there were more.
If funding was available (grants, etc.), a light rail system similar to the Mesa / Tempe area would be great. Otherwise, more and newer model buses for more comfortable rides and more convenient routes / timing to attract additional riders.

Appendix C Phase Two, Meeting Press Release

Local input wanted on study to address traffic congestion in Sierra Vista

Public meeting scheduled for Feb. 7 on Sierra Vista Transportation Efficiency Study

The City of Sierra Vista and the Arizona Department of Transportation will host a public meeting Feb. 7 to receive input for an ongoing study to identify options for improving traffic flow by reducing the number of motorists who drive alone to work or school.

The Sierra Vista Transportation Efficiency Study has completed surveys of workers at the city's major employers and of the general public to better understand how people commute. Information gleaned from these surveys is being used to develop a Travel Reduction Plan for the city.

The study team will provide updated information on the results of the surveys and share information on preliminary options for addressing traffic congestion in Sierra Vista over the next 20 years through programs designed to meet short-, medium- and long-term needs.

The meeting is scheduled for 5:30 p.m. until 7:30 p.m. at the Windemere Hotel, 2047 State Route 92 in Sierra Vista. The formal presentation is scheduled for 5:45 p.m. with a question and answer session afterward.

Members of the study team, comprised of planners from the City of Sierra Vista and ADOT, will be available to answer questions and computers will be provided to allow attendees to participate in a new survey. Display boards and hand-out materials will also provide information on the study, which began in June 2012.

The federally funded study, administered by ADOT, was initiated by the city as part of a Strategic Leadership Plan, which identified five transportation goals to meet quality of life needs in the community.

For more information about the study, visit http://www.azdot.gov/SierraV, or contact ADOT Project Manager Mark Hoffman at mhoffman@azdot.gov or by phone at (602) 712-7454.

Appendix D Phase Two, Newspaper Display Notices

Please Join Us

SIERRA VISTA TRANSPORTATION EFFICIENCY STUDY PUBLIC MEETING

PROJECT INFORMATION

ADOT and the city of Sierra Vista are working together on the Sierra Vista Transportation Efficiency Study to identify ways to reduce single-occupancy trips for work and school in Sierra Vista. The study has documented existing conditions and identified future conditions and needs, and it will recommend traffic reduction plans for 5-, 10- and 20-year time frames. When complete, this plan will serve as a blueprint to help guide the development, funding and implementation of traffic reduction plans for the city of Sierra Vista.

CONTACT INFORMATION

Mark R. Hoffman, ADOT Project Manager
MHoffman@azdot.gov
602.712.7454
azdot.gov/SierraV

Comments can also be submitted by:

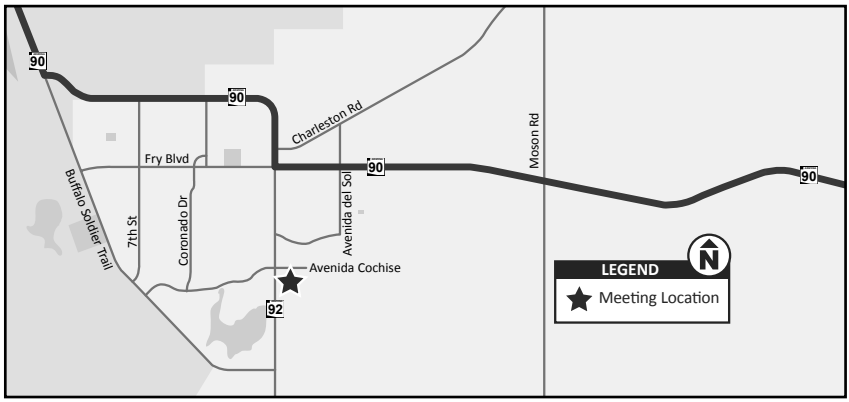
- Mail: 6900 E. Camelback Rd., Suite 800
  Phoenix, AZ 85251
- Phone: 480.399.4443
- Email: Michael.Book@hdrinc.com

FOCUS OF THIS MEETING

- Provide updated information on study survey results and preliminary ideas for a Traffic Reduction Plan for the city of Sierra Vista.
- Receive public comment on commuter needs and habits to assist the study team with finalizing recommendations for short-, medium- and long-range approaches to reducing traffic congestion.

Date: Thursday, Feb. 7, 2013
Time: 5:30 to 7:30 p.m.
Brief presentation at 5:45 p.m.
Location: Windemere Hotel and
Conference Center
2047 State Route 92
Sierra Vista, AZ 85635

Pursuant to Title VI of the Civil Rights Act of 1964 and the Americans with Disabilities Act (ADA), ADOT does not discriminate on the basis of race, color, national origin, age, gender or disability. People who require a reasonable accommodation based on language or disability should contact C. T. Revere at 520.705.3574 or CRevere@azdot.gov. Requests should be made as early as possible to ensure the state has an opportunity to address the accommodation.



ADOT

azdot.gov/SierraV
13-008

Please Join Us

SIERRA VISTA TRANSPORTATION EFFICIENCY STUDY PUBLIC MEETING

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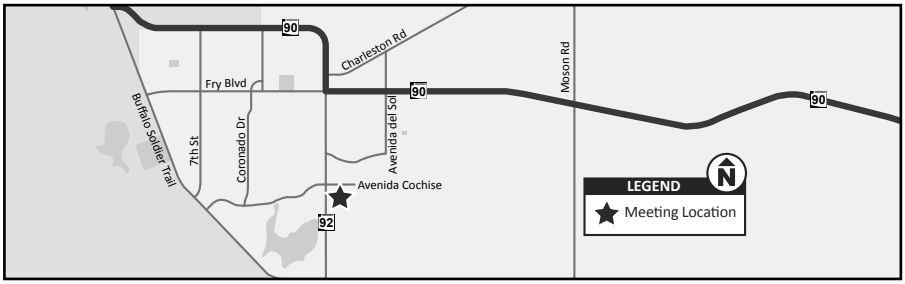

ADOT

azdot.gov/SierraV
13-008

Appendix E Phase Two, Meeting Sign-in Sheets

PUBLIC SIGN-IN SHEET

Sierra Vista Transportation Efficiency Study

Public Meeting
Thursday, February 7, 2013 - 5:30 to 7:30 PM
Windemere Hotel and Conference Center, 2047 State Route 92 Sierra Vista, AZ 85635

Please Print

	Name	Organization	Address, City, ZIP Code	Telephone	Email
1.	Jim Lindemann	Golden Acres H.O.A	3691 Finch Circle	378-6991	
2.	Gwen Calhoun	City of Sierra Vista	1011 N. Coronado	458-3315	gwen.calhoun@sierravistaaz.gov
3.	Tom Crosby	City of Sierra Vista	1011 N Coronado	559-5613	tomskydog@juno.com
4.	Barney McGill	Citizen of Sierra Vista	3812 Solarro Drive	458-1967	bmg-ri@hotmail.com
5.	Kalet Johann Kiyaba				
6.	Jacqueline O'Connor				
7.	Jere Fredenburgh	citizen TEA Party			jcfred@jcdx2.com
8.	Ryan Kool	City of Sierra Vista	1045 Calle Cirano	227-1653	ryan.kool@sierravistaaz.gov
9.	PAUL R DAVID	ADOT STAFF DISTRICT	2082 E. HWY 70	928 651 5800	pdavid@azdot.gov
10.	Sandra Richardson				
11.					
12.					
13.					
14.					
15.					

Completion of this sign-in sheet is completely voluntary and helps the project team keep an accurate record of meeting attendees. Under state law, any identifying information provided above will become part of the public record and, as such, must be released to any individual upon request.

ADOT ARIZONA DEPARTMENT OF TRANSPORTATION

CITY OF SIERRA VISTA ARIZONA

PUBLIC SIGN-IN SHEET

Sierra Vista Transportation Efficiency Study

Public Meeting
Thursday, February 7, 2013 - 5:30 to 7:30 PM
Windemere Hotel and Conference Center, 2047 State Route 92 Sierra Vista, AZ 85635

Please Print

	Name	Organization	Address, City, ZIP Code	Telephone	Email
1.	Mary Mueller		3724 Miller St Sierra Vista, AZ 85650	520-378-2652	mary2983@cox.net
2.	Cecil Emery		2799 Glengarry 85650	378-1426	
3.	Robert Weissler		9230 S. Bryerly Dr, Hereford AZ 85615	520-803-0794	weissler@aves.org
4.	Marie Wagner		3786 Glengarry Way SV #2 85650		srmarie42@yahoo.com
5.	Larry Saunders		1601 Paseo San Luis SV		LSAUNDERS@KEGTUSD.COM
6.	Joanne Daley		POBox 2498 SV. 85636	520-459-3714	jcdaley1@yahoo.com
7.	Alexander "Sandy" Kunzer		4969 S. Laredo Pass SV 85650	520-805-8490	SBKunzer@theriver.com
8.	Richard Cayer		401 Giulio Cesare SV 85635	520 458 5775	richard.cayer@sierravistaaz.gov
9.	Danielle Smith	Huachuca Shuttle Taxi	3987 Fitzgerald Loop SV 85635	(520) 678-1702	huachucashuttle@hotmail.com
10.					
11.					
12.					
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14.					
15.					

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ADOT ARIZONA DEPARTMENT OF TRANSPORTATION

PUBLIC SIGN-IN SHEET

Sierra Vista Transportation Efficiency Study

Public Meeting
Thursday, February 7, 2013 - 5:30 to 7:30 PM
Windemere Hotel and Conference Center, 2047 State Route 92 Sierra Vista, AZ 85635

Please Print

	Name	Organization	Address, City, ZIP Code	Telephone	Email
1.	JOE KRAPS	COSU P&Z COMMISSION			JOEANDGALE@COX.NET
2.	STEVE SCHEUMANN				SSCHEUMANN@COX.NET
3.	Winston Wting				WSwriting@g.com
4.	Joe & Karen Black		1216 Cardinal Ave		roadwhite@cox.net
5.	David Gilcrest	Self	1625 Via Cuerno		dlgilcrest@msn.com
6.	D. MARK SPENCER	COCHISE CITY TEA PARTY	2160 E FRY BLVD #340 SV AZ 85635		Mark.spencer@reagan.com
7.	Thomas Armstrong	Cochise Bicycle Advocates	2411 Cherry Hills Dr		CochiseBicycleAdvocates@gmail.com
8.	DeWayne Rearsley	Self	2373 Mission Dr		dewayne@cox.net
9.					
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15.					

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ADOT ARIZONA DEPARTMENT OF TRANSPORTATION

CITY OF SIERRA VISTA ARIZONA

Appendix F Phase Two, Meeting Display Boards

Welcome

Sierra Vista Transportation Efficiency Study
Public Meeting
February 7, 2013

Bicycle Infrastructure

Strategies	Description	Place Your Dots Here!
Enhanced bike parking facilities	Additional or new bike racks at major employers	
New bicycle facilities	Per *2011 City of Sierra Vista Safe Bicycle and Pedestrian Routes Plan* and on Fort Huachuca	
Bicycle sharing program	Implement at Fort Huachuca and potentially other locations	

Parking

Strategies	Description	Place Your Dots Here!
Park-and-Ride lots	Parking areas for commuters using the bus or a vanpool/carpool	
Priority parking for carpools	Preferential parking spaces for carpool users	
Parking cash-out program	Employers reimburse employees for using transit, and vanpools tax benefits for both employer and employee	

Pedestrian Infrastructure

Strategies	Description	Place Your Dots Here!
Assess sidewalk deficiencies and develop an improvement plan	An improvement plan will assess sidewalk needs, crosswalks, and paths and other safety measures as necessary to satisfy the Americans with Disabilities Act	
Implement safe routes to transit, schools, and employers	Projects near high-priority pedestrian areas, such as schools	
Pedestrian crossing at traffic signals	Assess and update pedestrian signal timing	




Vanpooling/Ridesharing

Strategies	Description	Place Your Dots Here!
Develop regional carpool matching service	Service matches participants with potential commute partners	
Promote vanpooling to Fort Huachuca	Promoting information about vanpool services	
Guaranteed Emergency Ride Home (GERH) program	Program provides commuters, using alternate modes, a ride home when they have a family emergency, illness, or need to work late	

Marketing/Promotion of Alternate Travel Modes

Strategies	Description	Place Your Dots Here!
Subsidized transit passes for employees	Discounted transit passes to encourage employees to use public transportation	
Wider distribution of Vista Transit schedule information	Web improvements and wider distribution of schedules	
Produce and distribute way-finding guides	Maps/information on where to walk, cycle to specific employment locations	
Distribute bicycle and pedestrian educational materials	Distribute ADOT and City maps and brochures	

Transit

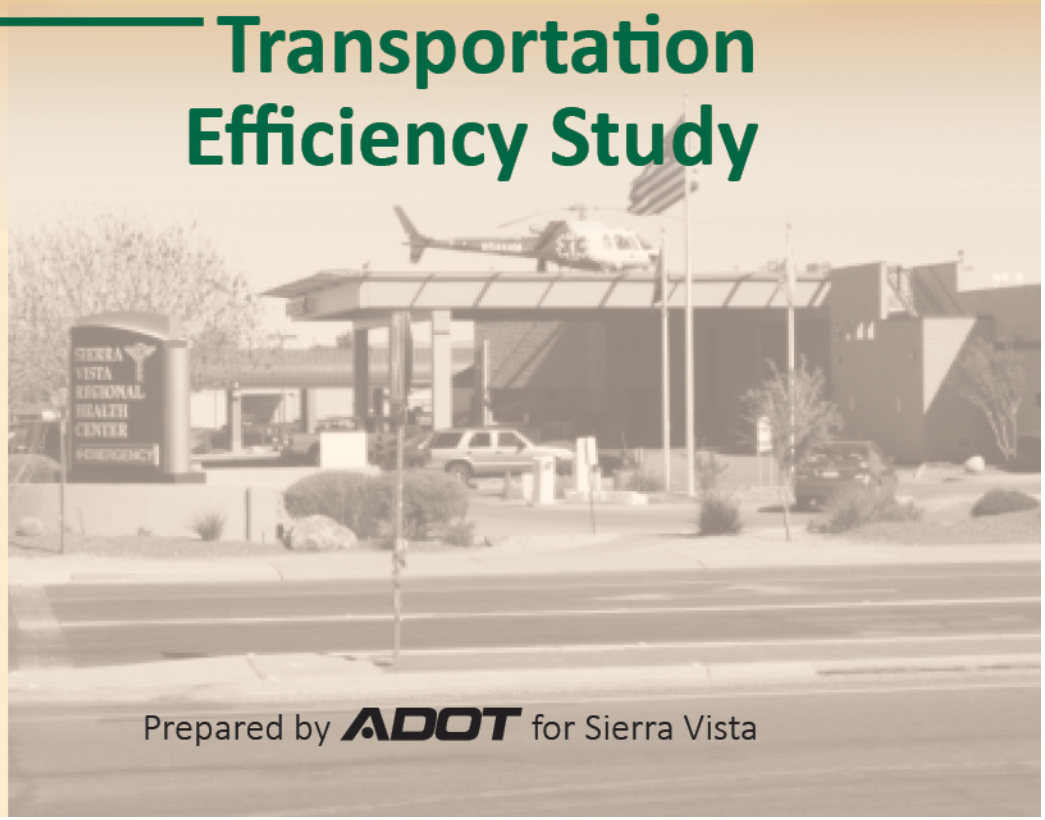
Strategies	Description	Place Your Dots Here!
Vista Transit Five-Year Plan Update	Update plan to address transit service and needs for 2013-2018	
Evening transit service	Provide evening transit service hours	
Shuttle service – Fort Huachuca	Reinstitute shuttle service within Fort Huachuca	
Vista Transit service to Fort Huachuca	Provide weekday peak period transit service to Fort Huachuca	
Vista Transit service extension	New transit service to areas outside the City limits	

Appendix G Phase Two, Meeting PowerPoint Presentation

Sierra Vista

Transportation Efficiency Study

January 2013



Prepared by ADOT for Sierra Vista

Project Purpose

- Identify opportunities to reduce reliance on single-occupancy vehicle trips
- Provide residents with transportation choices that are safe and efficient
- Improve the quality of life of Sierra Vista residents and visitors

How Strategies were Developed

- Interviews and Surveys
- Travel Data
- Research and Analysis

Regional Travel Data

Trip origins with destinations at Fort Huachuca:

Origin	Average Number of Trips to Ft. Huachuca
City/Town	Daily Trips
Benson	394
Bisbee	188
Hereford	1,227
Huachuca City	1,464
Sierra Vista	14,976
Southeast Tucson/Vail	522
Tombstone	163
Tucson (includes southeast Tucson and Vail areas)	911

Top 5 origins and destinations for work-based trips to and from Sierra Vista:

- Whetstone/Huachuca City
- Bisbee/Hereford
- Tucson
- Douglas
- Tombstone

Display Boards

- **Strategy Boards:**
  - Bicycle Infrastructure
  - Parking
  - Pedestrian Infrastructure
  - Vanpooling / Ridesharing
  - Marketing / Promotion of Alternate Travel Modes
  - Transit

We want your input!

- Your opinions about proposed strategies are important to the study
- Place dots on the strategies that you prefer
- Fill out comment forms

Next Steps

- **Finalize Travel Reduction Plan Strategies and Prepare Final Report**

Summer 2012	Fall 2012	Winter 2012/2013	Spring 2013
• Identify current conditions • Conduct stakeholder interviews	• Perform employee travel survey • Future conditions	• Online public survey • Develop draft strategies • Present strategies to public	• Finalize plan and prepare final report

Contact Information

Mark Hoffman
Arizona Department of Transportation
206 S. 17th Avenue, MD 310B
Phoenix, AZ 85007
Phone: 602-712-7454
mhoffman@azdot.gov

Brent Crowther
Kimley-Horn and Associates
333 East Wetmore Road, Ste. 280
Tucson, AZ 85705
Phone: 520-352-8626
brent.crowther@kimley-horn.com

Project website: http://www.azdot.gov/sierrav

Questions?

Appendix H Phase Two, Returned Comment Forms and Emails

Sierra Vista Transportation Efficiency Study Public Meeting
Thursday, February 7, 2013 - 5:30 to 7:30 PM
Windemere Hotel and Conference Center
Comment Form

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment Bike racks at public (city/county) facilities, event sites, parks, grocery stores.
Additional bike lanes to popular parks, canyons, sites.
Rumble strips adjacent lane marker, not across entire shoulder.

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program)

Comment Desire a park-and-ride lot to catch an airport shuttle that is offered at a reasonable cost.

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment How about ridesharing to the airport (Tucson Int'l) with a shuttle van? Discrete intervals (morning, noon, afternoon, evening)...

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

Comment

Transit: (evening transit service; shuttle service – Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment A service for the elderly (like Los Angeles Access) that provides for a fixed cost (e.g. $2 or $5) a roundtrip ride across the city of Sierra Vista, or between the city and Bisbee (and other local communities).
Airport (Tucson Int'l) shuttle at a reasonable price, see above.

Additional Comments:

Contact Information (Optional)

Name: Robert Weissler Phone: 520-803-0794

Address: 9230 S Bryerly Drive, Hereford, AZ 85615

Email: weissler@aves.org

Public comments are an important part of the project and are welcome at any time for review and consideration. Comments returned by Thursday, February 14, 2013, will be included in the summary of this public meeting. Please send comments to: 6900 E. Camelback Road, Suite 800, Scottsdale AZ 85251, 480-339-4443, michael.book@hdrinc.com.

www.azdot.gov/SierraV

Sierra Vista Transportation Efficiency Study Public Meeting
Thursday, February 7, 2013 - 5:30 to 7:30 PM
Windemere Hotel and Conference Center
Comment Form

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment The best place for a cyclist is a bike lane. Ft. Huachuca would have more cyclist commuters if they would put in bicycle facilities. Bicycle lanes are the best cost effective solution for congestion

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program)

Comment

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment There are many ~~The~~ multi-shared paths needing connection ~~for~~ example BST from Avenida Cochise to Fry; some multi-shared paths are only on one side. That is Hwy 92 between Fry & BST.

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

Comment Support of local bicycle advocacy group and LCI(s) to bring LAB ~~Safe~~ Smart Cycling Traffic Safety 101 to Sierra Vista & Cochise County

Transit: (evening transit service; shuttle service – Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment

Additional Comments:

Contact Information (Optional)

Name: Thomas Armstrong Phone: _____

Address: _____

Email: _____

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Thursday, February 7, 2013 - 5:30 to 7:30 PM
Windemere Hotel and Conference Center
Comment Form

+ lanes

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program) — urban areas

Comment

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment 3' sidewalks !! and narrow streets mean one lane bikes or scooters (?) rides on the sidewalk! awful

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

Comment

Transit: (evening transit service; shuttle service to Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment Could use Dial-a-Ride because of high number of elders in SV (and County)

Additional Comments:

Contact Information (Optional)

Name: _____ Phone: _____

Address: _____

Email: _____

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Sierra Vista Transportation Efficiency Study Public Meeting
Thursday, February 7, 2013 - 5:30 to 7:30 PM
Windemere Hotel and Conference Center
Comment Form

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment S.V. already has multiple bike trails — No need for additional

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program)

Comment This is OVER KILL for S.V

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment What problems exist with sidewalk — basically none. Stop this government overkill

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment FT Huachuca can provide this info. No need for S.V

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

Comment again OVER KILL.

Transit: (evening transit service; shuttle service – Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment The only valid thing is to provide later service with existing limits

Additional Comments:

Contact Information (Optional)

Name: _____ Phone: _____

Address: _____

Email: _____

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Comment Form

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment It is very good now.

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program)

Comment Why do this in such a small town

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment Yes for the traffic signal synchronization

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

No way

OK

Comment the market will determine that

Transit: (evening transit service; shuttle service – Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment Market driven

Additional Comments:

Contact Information (Optional)

Name: _____ Phone: _____

Address: _____

Email: _____

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Comment Form

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment_____

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program)

Comment_____

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment_____

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment_____

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

Comment_____

Transit: (evening transit service; shuttle service – Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment_____

Additional Comments:

1. Increase the number of bus stops to increase the volume of people in the current buses used.
2. Bus stop shelters that are enclosed - would encourage bus usage if people don't have to stand outside when weather is cold or during monsoon storms (rain/lightning)
3. Provide information of the lesser known activity locations (not just common places like the Library) that buses past or can provide transportation (@no extra cost)
4. Provide a hop on - hop off option so the errands people normally do on the way home would be possible - Many people do their errands on their way home due to high gas prices & that lessens trips around town

Contact Information (Optional)

Name: Sandra Richardson Phone: _____

Address: _____

Email: Sandra.richardson2@us.army.mil

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Thursday, February 7, 2013 - 5:30 to 7:30 PM
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Comment Form

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program)

Comment We seem to have sufficient parking

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment Side walks too narrow in many places Hard for 2 current U.S. Size people to √ pass Walking to work seems a pipe dream given distances & press of time for most people.

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment Needed to cut single occupancy vehicles to places other than work.

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

Comment Marketing??? √

Transit: (evening transit service; shuttle service – Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment Extend outside city limits

Additional Comments:

- Strategy NOT mentioned: Flexible work hours. Spread out required trips
- Most work related trips seem to be within S.V. so this seems place to concentrate efforts.
- If this is comprehensive then such things as low speed vehicles through secondary routes to decrease motor vehicles.
- If looking out 5+ years we will need plug in points for hybrid & electric vehicles.
- We are aging need consideration of those capability changes.

Contact Information (Optional)

Name: Alexander "Sandy" Kunzer Phone: 520-803-8490

Address: 4969 S. Laredo Pass, SV 85650

Email: slokunzer@hotmail.com

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Sierra Vista Transportation Efficiency Study Public Meeting
Thursday, February 7, 2013 - 5:30 to 7:30 PM
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Comment Form

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment Bicycle parking facilities should be provided by retailers not the government

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program)

Comment I don't see much need for this

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment illuminate pedestrian & bicycle crosswalks at both sides of the street, directly over the crosswalk

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment No interest

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

Comment Publish bike routes in the SV Herald when this meeting is covered.

Transit: (evening transit service; shuttle service – Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment Bus routes on post and hubs to connect FHU to SV bus routes.

Additional Comments:

1 Synchronize traffic lights to the speed limits

2 Bicycle paths away from (not parallel to) main roads and highways. Culverts w/ pavement for bicycle paths that cross highways and major streets.

Contact Information (Optional)

Name: David Gilcreest Phone: _____

Address: _____

Email: dlgilcreest@msn.com

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Windemere Hotel and Conference Center
Comment Form

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment We have all we need.

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program)

Comment No comment - don't carpool.

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment We need traffic signal synchronization on Buffalo Soldier, Hwy 92 & Hwy 80.

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment Some kind of incouragement to car/van pool to Ft Huachuca is a good idea.

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

Comment Good luck talking people into riding these busses.

Transit: (evening transit service; shuttle service – Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment Surely you jest. I rarely see anyone on the big busses driving up fuel all over the City.
NO ONE IS RIDING THESE EXPENSIVE BUSSES!

Additional Comments:

When I first heard Sierra Vista was concerned about traffic congestion I couldn't believe it. People promoting this must never have been to Los Angeles or San Francisco Bay area. That's real traffic.

When I visit the S.F. Bay area 2 or 3 times a year, I always joke how nice it will be to return to S.V. where we don't have traffic problems.

Contact Information (Optional)

Name: Marie Wagner Phone: 520 458-0210

Address: 2986 Glengarry Way SV AZ 85650

Email: SVmariea-z@yahoo.com

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www.azdot.gov/SierraV

Sierra Vista Transportation Efficiency Study Public Meeting
Thursday, February 7, 2013 - 5:30 to 7:30 PM
Windemere Hotel and Conference Center
Comment Form

Bicycle Infrastructure: (enhanced bike parking facilities; new bicycle facilities; bicycle sharing program)

Comment Who pays? Taxpayers;

Parking: (Park-and-Ride lots; priority parking for carpools; parking cash-out program)

Comment We DO NOT plan to grow; water issues per feds, (Center for Biodiversity) that threaten Ft H.; Fed gov't shrinking the military

Pedestrian Infrastructure: (assess sidewalk deficiencies and develop an improvement plan and ADA Transition Plan; implement safe routes to transit, schools, and employers; traffic signal synchronization)

Comment NO "enforcement cameras" the new one on Cochise Ave + 92 is now causing "almost" accidents when ppl slam on their brakes b/c of Fear of A ticket - look before we pull out - even on green

Vanpooling/Ridesharing:(develop regional carpool matching service; promote vanpooling to Fort Huachuca; implement a Guaranteed Emergency Ride Home program)

Comment Individual ~~choice~~ Choice to van pool or single transport, let the individual choose;

Marketing/Promotion: (subsidized transit passes for employees; wider distribution of Vista Transit schedule information; wayfinding guides; distribution of bicycle and pedestrian educational materials)

Comment not used now + I hear it on the radio daily - use Vista Transit - so ppl DO know or can find out - more info on routes/stops/hop on + off - good idea!

Transit: (evening transit service; shuttle service – Fort Huachuca; Vista Transit service to Fort Huachuca during weekday peak periods; Vista Transit service extension to areas outside the city limits)

Comment The buses are not used; Ft H may downsize + who pays?

Agree, better info on where + when buses go.
Bus pass "hop on + off" idea from citizen.

Additional Comments:

Sync the lights
preference to main rds 92, 90, Bst.
perhaps flashing red at certain
times + intersections, ie 92 +
Cherokee. Flashing red Sun a.m.
so you can stop + then go when clear.

Do not think we need a state transp. study
I do think S.V. can solve light syne +
state lights can be synced by state

Contact Information (Optional)

Name: j. Freden Phone:

Address: S of Sierra Vista

Email: jcfred@jcdx2.com

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www.azdot.gov/SierraV

Book, Michael

From: Mark Hoffman <Mhoffman@azdot.gov>
Sent: Wednesday, January 23, 2013 9:06 AM
To: Book, Michael
Cc: Brent.Crowther@kimley-horn.com
Subject: FW: traffic,Sierra Vista

Michael,

Please include the below comments in the Phase 2 public involvement summary.

Thank you

Mark

Mark Hoffman
Arizona Department of Transportation
Multimodal Planning Division
206 S. 17th Ave MD#310B
Phoenix, AZ 85007
602.712.7454

From: Carole Vaughn [mailto:cvaughn422@gmail.com]
Sent: Wednesday, January 23, 2013 8:43 AM
To: Mark Hoffman
Subject: traffic,Sierra Vista

Mr Hoffman,
If the goal is to reduce traffic, you are not going to be very successful.
There are some real traffic issues that should be addressed. NO u-turns on Hwy 92.
Right turn arrows with left turn arrows at BST/90 and the bypass, east gate.
Painted lines to make people turn into the proper lane at intersections.
Put in connecting streets to get rid of one way in& one way out of neighborhoods. PPPP.
Thank you,
Carole Vaughn
--
Carole Vaughn
Re/Max Homestores
C. 520-249-5222
O. 520-458-5222

Book, Michael

From: Mark Hoffman <Mhoffman@azdot.gov>
Sent: Tuesday, February 05, 2013 3:24 PM
To: Book, Michael
Subject: FW: Sierra Vista's Traffi c Flow

Michael,

Please include the below comments in the open house summary.

Thank you

Mark

Mark Hoffman
Arizona Department of Transportation
Multimodal Planning Division
206 S. 17th Ave MD#310B
Phoenix, AZ 85007
602.712.7454

From: Alice Switzer [mailto:alice_switzer@yahoo.com]
Sent: Tuesday, February 05, 2013 1:03 PM
To: Mark Hoffman
Subject: Sierra Vista's Traffi c Flow

Mark,

I will not be able to make the meeting on Thursday, but wanted to share my comments.

There are way too many street lights on the major thoroughfares in town. The City seems to think the solution to every problem is another street light. BST and Hwy 92 (+ bypass) should be like freeway travel, with no stop lights. That's the purpose of a "bypass." Please don't let us end up like Tucson, where you can't get anywhere without driving on a city arterial.

Hwy 92 south of Fry started out years ago having the right idea with frontage roads and Hwy access only at major intersections. This was a brilliant idea that no one continued to use as the businesses built southward on Hwy 92. That is something City planners should go back to working on. The frontage roads are the right idea. That would help alleviate some of the traffic problems.

Having two traffic lights at WalMart is ridiculous. One is adequate. Two are totally unnecessary. They are too close together to need two signal lights. That's both on Hwy 92 and Charleston Rd.

Last, but not least, the timing of the signal lights is a HUGE problem. You can't drive the speed limit on Fry or Hwy 92 and successfully hit green lights. As a matter of fact, if you go the speed limit, you will hit more red lights than green. That is bad for gas mileage and conservation as well as traffic flow. Someone from the City needs to get the lights timed correctly.

Thank you for taking the time to read my comments. I hope it is helpful in the City's efforts to improve traffic flow around town.

Alice Switzer

Book, Michael

From: Mark Hoffman <Mhoffman@azdot.gov>
Sent: Monday, February 11, 2013 8:31 AM
To: Clare & Paul Stevens
Cc: Book, Michael
Subject: RE: Strategies for addressing traffic congestion in Sierra Vista

Clare and Paul,

Thank you for sending your comments. Your suggestions will be included in the public involvement summaries of the Final Report.

Regards

Mark

Mark Hoffman
Arizona Department of Transportation
Multimodal Planning Division
206 S. 17th Ave MD#310B
Phoenix, AZ 85007
602.712.7454

From: Clare & Paul Stevens [mailto:azstevens@powerc.net]
Sent: Sunday, February 10, 2013 8:30 PM
To: Mark Hoffman
Subject: Strategies for addressing traffic congestion in Sierra Vista

Dear Mr. Hoffman,

We were delighted to hear that The City of Sierra Vista and Arizona Department of Transportation are looking for input to identify options for improving traffic flow in Sierra Vista. The following are our suggestions:

Short Term Strategies:

1. Program amber (yellow) lights to be longer.
2. In order to make intersections flow more smoothly and safely, program the left hand turn signal (green arrow) to come on before the green light. (The green arrow currently comes on after the green light).
3. For pedestrian safety; do not allow right hand turns on red at the following intersections: Highway 92 and Fry Blvd. , Highway 90 and Charleston Rd./MLK Pkwy., Fry Blvd. and Calle Portal (Veterans Memorial Park). Install "NO TURN ON RED" signs.
4. Lower the speed limit on Charleston Road between Highway 90 and Fighting Colt Drive to 35 MPH. This road is mostly used by inexperienced teen drivers going to and from Buena High School and Cochise College.
5. Lower the speed limit on Fry Blvd./Highway 90 between Buffalo Soldier Trail and Giulio Cesare to 35 MPH.
6. Lower the speed limit of Martin Luther King Parkway to 35 MPH. This is a narrow and curvy road.

Medium Term Strategies:

1. For safety, especially for teen and senior drivers, Install red and green left turn arrows where there are currently green only left turn arrows. The most dangerous intersection in this regard is Highway 92 and Foothills Rd, this intersection requires a red and green turn arrow because there are dangerous blind spots.
2. Install a traffic light at Highway 90 and the exit of Fry's Food Store.
3. Install a traffic light at Wilcox Avenue and El Camino Real (near the hospital).
4. Install a concrete divider on Highway 90 between the East Gate of Fort Huachuca to Huachuca City.

Long Term Strategies:

1. Do away with the center turn lane on Highway 92. Install a center divider and "jug handles" at some of the intersections for left hand turns (while there is still land available to construct jug handles). Then install "KEEP RIGHT PASS LEFT" signs along Highway 92. This will improve the flow of traffic.
2. Provide public transportation south to the Hereford Post Office. Increase the size of the Hereford Post Office parking lot for commuter parking.

Sincerely yours,
Clare and Paul Stevens

Book, Michael

From: Mark Hoffman <Mhoffman@azdot.gov>
Sent: Tuesday, February 12, 2013 8:17 AM
To: Book, Michael
Cc: Brent.Crowther@kimley-horn.com
Subject: FW: SV Transport Efficiency Study - Additional Scheumann Comments
Attachments: Trail Courtesy Sign.jpg

Michael,

Please include the below comments in the summary.

Mark

Mark Hoffman
Planning Program Manager
206 S. 17th Ave
Mail Drop 310B
Phoenix, AZ 85007
602.712.7454
azdot.gov

-----Original Message-----
From: Inge & Steve Scheumann [mailto:sscheumann@cox.net]
Sent: Monday, February 11, 2013 4:46 PM
To: Mark Hoffman
Subject: SV Transport Efficiency Study - Additional Scheumann Comments

Mark,

Thanks for your timely, complete response. Besides my procedures clarification comment, please include the following additional comments:

Bicycle Infrastructure: safe, cooperative biking should be facilitated. One way to enhance this is to ensure that residents/visitors know the multi-use path rules through education and signage (see attached sign example). As you can see from the attached sign with is used by the Park Service, hikers have precedent over bikers - the same type of signage should be included on the multi-use paths in Sierra Vista. Enhanced bike parking facilities where the usage supports it would be helpful.

Parking: Designated parking for cars would be a useful concept where you park to get into/off a shuttle to key Ft Huachuca locations, such as Greely Hall. For example, people could drive to the Sierra Vista Mall (and the old Wal Mart) and park in the SE corner (or another underused area) to take a shuttle to/from Greely Hall. On Ft Huachuca there should be priority parking for carpool vehicles.

Pedestrian Infrastructure: Traffic signal synchronization was discussed for Hwy 92, but it should also be used on major city streets such as Fry Blvd. We also need to educate people about pedestrian lights, as some meeting attendees did not know what the red stick man really meant.

Vanpooling/Ridesharing: There used to be busses from Bisbee, for instance. Based upon the traffic studies vanpooling from Benson, Tombstone & Bisbee and perhaps other surrounding towns should be facilitated. In addition as mentioned earlier, people should have the option of driving to the Sierra Vista Mall (and the old Wal Mart) and park in the SE corner (or another underused area) to take a shuttle to/from Greely Hall.

Marketing/Promotion: I support the educational efforts for bikes, pedestrians and carpoolers. Bus usage will not reach a critical mass in the foreseeable future, so I would market alternates such as bikes, pedestrians and carpools. I would also use the bus savings to support charitable and private transportation for those that cannot drive.

Transit: I support shuttle service to Fort Huachuca for workers and on the weekends for soldiers (shuttle to SV Mall, Wal Mart and stop or two on 7th St), but not a bus/transit service. The transit service only survives because of grants/Federal subsidies and will not reach a critical mass in the foreseeable future. Why not better use these monies to support charitable and private transportation (e.g., subsidized cab rides for the needy) for those that cannot drive and shuttle services.

Thanks for ensuring these comments will be included in the public involvement summary of the Final Report. If you have any questions concerning my comments, please contact me immediately. On what website and when will this report be available for people like me? I would hope this would be announced in the local paper and through other media outlets.

Sincerely,
Steve Scheumann
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From: Mark Hoffman <Mhoffman@azdot.gov>
To: Inge & Steve Scheumann <sscheumann@cox.net>
CC: Michael Book <michael.book@hdrinc.com>, CT Revere <CRevere@azdot.gov>
Subject: RE: SV Transport Efficiency Study - Misleading Public Meeting Information
Date: Mon, 11 Feb 2013 15:44:04 +0000

Steve,

Thank you for sending your comments. We'll make sure to better clarify our procedures for submitting comments in the future. If you have additional comments regarding the recommended strategies, please email them to me for inclusion in the public involvement summary of the Final Report.

Regards
Mark
Mark Hoffman
Arizona Department of Transportation
Multimodal Planning Division
206 S. 17th Ave MD#310B
Phoenix, AZ 85007
602.712.7454
-----Original Message-----
From: Inge & Steve Scheumann [mailto:sscheumann@cox.net]
Sent: Sunday, February 10, 2013 5:17 PM
To: Mark Hoffman
Cc: Michael Book; CT Revere

Subject: SV Transport Efficiency Study - Misleading Public Meeting Information

Mark,

I attended the 7 February meeting during which we were told we could go to the web site on the Comment Form and submit comments instead of writing them at the meeting. I just entered the web link on the bottom right of the Comment Form - www.azdot.gov/SierraV - and was redirected to - http://www.azdot.gov/MPD/Systems_Planning/SierraV.asp . This web page has no area to enter comments and the Comment Form format is not available - all I see is the Contact section where it says to send comments and questions to you. Is this what was intended by the answer at the meeting? If so, the response was misleading and certainly unclear. Consequently, attendees could have make uninformed decisions on how to comment based upon the misleading information provided.

I strongly urge you to make the commenting process clearer to participants (reference example of what not to do in the previous paragraph) and to make it easier to make comments (e.g., have the Comment Form format available for those making comments to assist in making focused & complete comments).
Please consider this email as a comment on the study; which should be included in the results, as part of the results should speak to the methodologies used and their effectiveness.

Finally, I have additional comments on the options provided, but I do not want to waste my time on this email if there is another, more efficient and effective way to provide comments. Please respond to this request on Monday, if possible, as the comment of 14 February is fast approaching. If any one of the CC addresses would like to comment on my process comments and/or how to comment, please do so quickly.

Sincerely,
Steve Scheumann

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