WINSLOW TRANSIT PLAN | 2017

PREPARED FOR THE CITY OF WINSLOW
BY THE NORTHERN ARIZONA INTERGOVERNMENTAL
PUBLIC TRANSPORTATION AUTHORITY

IN PARTNERSHIP WITH
THE ARIZONA DEPARTMENT OF TRANSPORTATION
AND FEDERAL TRANSIT ADMINISTRATION

BUS STOP

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Federal Transit
Administration

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WINSLOW COUNCIL ON AGING
WINSLOW INDIAN HEALTHCARE CENTER
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WOODSON ENGINEERING

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CHAPTER 1 | PROJECT DEFINITION, MISSION, GOALS, AND OBJECTIVES

PURPOSE

In April 2016, the City of Winslow (City) entered into an Intergovernmental Agreement (IGA) with the Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) to set forth the terms under which NAIPTA would undertake a Transit Planning process on behalf of the City of Winslow. This chapter outlines the scope of the Plan, the goals of the project, and the input used in its development.

THE CITY OF WINSLOW AND ITS MISSION

At an elevation of 5,000 feet and with a population of 9,600, Winslow is located on Interstate 40 on the western border of Navajo County, 58 miles east of Flagstaff. Winslow was founded on historic Route 66, which remains important to local traffic and the character of the City even though intercity travel has been replaced by I-40.

The mission of the Winslow city government is to provide leadership and services that foster a healthy community, while striving for customer satisfaction.[1] In doing so, the City of Winslow has commissioned this Winslow Transit Plan (Plan) with the primary purpose of expanding employment and economic development opportunities for residents of the city. A secondary goal is to provide mobility for those who are unable to drive a car, including seniors, people with disabilities, and low-income populations.

The City's website states, "Winslow has a diversified economy in which transportation, tourism, emerging industrial/manufacturing, trade, education, two regional hospitals, a U.S. Forest Service Air Tanker Base, and retail business are important factors." The City is actively working to develop 1,000 acres of industrial property with connections to the **BNSF** rail line and working to revitalize downtown commercial businesses.

PLANNING AUTHORITY

The City executed an IGA with NAIPTA to administer an **Arizona Department of Transportation (ADOT) FTA Section 5311** Planning Grant for this study.

Terms in bold can be found in Chapter 11: Transit Glossary

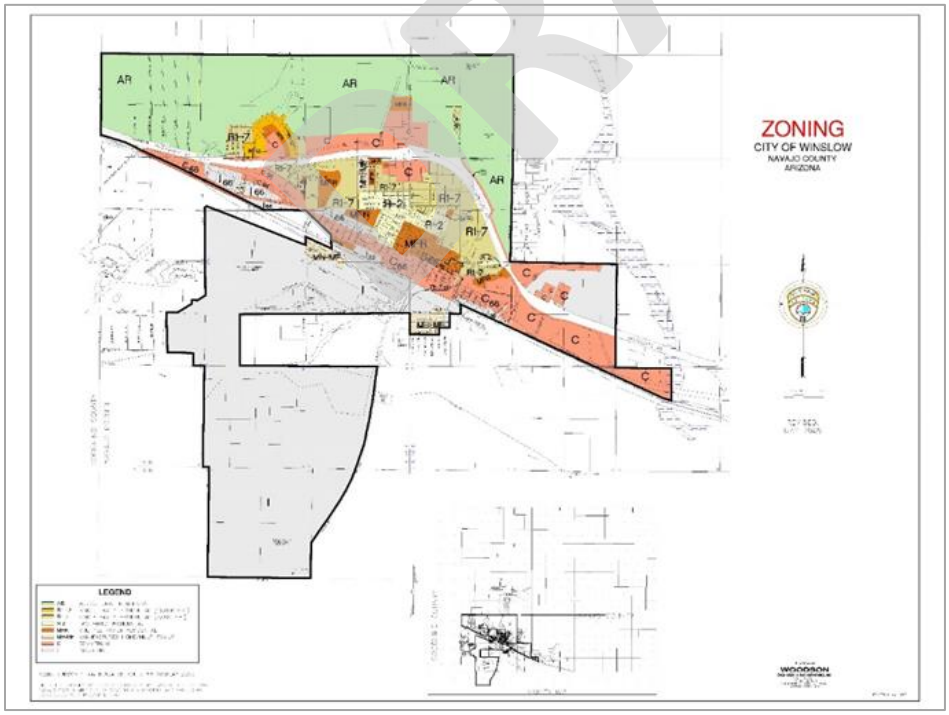
The study area is defined roughly as western Navajo County and eastern Coconino County on either side of a line along I-40 from Holbrook through Winslow to Flagstaff, with specific focus on local transit

[1] http://www.winslowaz.gov/

services in the greater Winslow area. This study includes both regionally and locally traveled roadways under control of Federal, state, county, and local entities.

Figure 1.1 Study area

Figure 1.2 Winslow proper (Zoning)



PLANNING NEED

Over the past decade, a variety of entities have conducted local and regional transit planning studies on behalf of the City, county, or region. These studies have suggested transit is feasible and beneficial to the community, but have not developed the level of analysis needed to identify appropriate service levels, phasing, costs, ridership, and performance measures. This study is an opportunity to fill those information gaps with quantifiable solutions and conduct extensive public outreach to truly understand the costs and benefits to the Winslow community. The previous planning studies are resources for providing background information and analysis while study efforts and new community input is the driver for identifying levels of services, and origins and destinations within this Plan.

The primary outcomes of studying the opportunity for transit service in Winslow are the potential increase in employment opportunities for Winslow residents though affordable access to jobs in outlying communities and to provide local mobility options. By increasing job opportunities for residents, transit service could subsequently support commercial and retail services for residents. The possibility of providing transit service has an additional benefit which meets the City's mission, in serving seniors, people with disabilities, and low income populations. Although congestion mitigation is not the primary objective of this study, identification of public transportation solutions that meet the needs of the traveling public to key locations throughout the region can significantly affect roadway uses during certain times of the day.

PLANNING MISSION, GOALS, AND OBJECTIVES

The mission of the Plan is to present to the Winslow City Council options for public transit which meet mobility needs and that are financially viable, operationally specific, and supported by the community.

More specifically, this Plan is designed to:

- Identify a variety of transit service alternatives both within the city of Winslow and to adjacent communities along I-40, and
- Recommend a detailed, financially feasible operating plan to meet those alternatives.

According to the Charter[2] of this project as created at the kickoff meeting on January 19, 2017, and based upon the needs highlighted above in combination with the review of previous plans and studies, the following goals and objectives provide basic planning direction:

1. Identify service alternatives that are "right size" solutions for:
    a. Connections along I-40 to Flagstaff and Holbrook,
    b. Local Winslow transit service, and
    c. Connections to the Navajo and Hopi Nations.
2. Recommend actionable items that are achievable in a five-year timeframe.

[2] Charter developed on January 19, 2017 with Project Management Team.

3. Develop performance-based measures to guide funding decisions:
    a. Funding sustainability, and
    b. Fare recovery options.
4. Recommend governance and service provision structure.
5. Explore sustainable funding opportunities such as establishing a sales tax, finding creative mechanisms to have services that pay higher than typical portions of operating costs, and the potential for partnership.

PLANNING EXPECTATIONS

The Project Management Team took the guidance and input gathered at the kickoff meeting and developed a more detailed list of planning expectations for this project.

- Provide an opportunity to further identify existing transportation service and gaps, and find transit solutions to best utilize existing resources to meet those needs.
- Prioritize key destinations to be served by transit.
- Evaluate service to Twin Arrows for existing and future development.
- Examine commuter needs between Winslow and both Flagstaff and Holbrook.
- Consider a variety of transit alternatives for both the **intercity** transportation service and local transit.
- Anticipate ridership demand.
- Identify **capital** needs, including vehicles and infrastructure improvements such as bus stops and traffic flow changes.
- Recommend appropriate hours of operation.
- Identify partnership opportunities including connections with other transportation systems, i.e. Mountain Line Transit (Flagstaff), White Mountain Transit (Holbrook), Greyhound, and/or other public or private transit services.
- Identify standards by which to measure success and funding priorities.
- Identify potential funding sources and partnerships.
- Discuss risks and governance strategies.
- Provide steps for implementation.

PLANNING PROCESS

Key partners – including core members, stakeholders, and the general public – provided the input to develop the public transportation solutions that are proposed in this report.

As part of the planning process, a Project Management Team was assembled to provide study parameters and oversight.

Figure 1.3 Project Management Team

Team Member	Role	Responsibility
Paul Ferris	Winslow Community Development Director, Winslow Project Lead	Winslow point of contact, assist with gathering materials, setting process
Jim Dickey	NAIPTA Planning Services Manager, and NAIPTA Project Lead	NAIPTA point of contact and project lead, responsible for meeting plan Charter
Kate Morley	NAIPTA Mobility Planner	NAIPTA assistant lead
Stephen Pauken	Winslow City Manager	Winslow oversight and monthly meeting participant
Jeff Meilbeck	NAIPTA CEO & General Manager	NAIPTA oversight and monthly meeting participant
Heather Dalmolin	NAIPTA Administrative Director & Grants Manager	Grant management and financial contact
Elias Jouen	Winslow Finance Director	Winslow billing contact

CORE TECHNICAL TEAM INPUT ANALYSIS

On March 8, 2017, the Project Management Team conducted a Core Technical Team meeting[3], assembling primary technical experts within and around the study area to assess their understanding of travel patterns and travel demand. The Core Technical Team met to discuss the project and provide meaningful input based upon their knowledge and experience as subject matter experts in important related fields. The team identified success factors, key origins and destinations, existing transit services, and potential partnerships. Information from this group was used to develop the service alternatives which were then vetted during the public engagement portion of the planning process. The team included:

- Mark Woodson, Woodson Engineering and City of Winslow Engineer
- Donavon Gomez, Hopi Senom Transit
- Shawn Silas, Hopi Senom Transit
- Lisa Robertson, City of Show Low
- Elias Jouen, City of Winslow
- Dwight Keeto, Navajo Transit
- Grant Evans, Woodson Engineering
- Sara Allred, ADOT Planning Manager
- RJ Erickson, Northern Arizona Council of Governments Mobility Planner

The meeting began with an overview of public transportation options, definitions, and the planning expectations of this study. An important part of that discussion centered on the development of

[3] Core Technical Team meeting agenda and notes, March 8, 2017.

strategies that affect ridership, including density, linearity, walkability, and proximity. From there, a series of pre-prepared topics were discussed in a roundtable format to stimulate input and conversation, including:

- Perceived success,
- Potential origin and destination using plotter maps,
- Types of services available matched with needs,
- Growth to address,
- Marketing ideas,
- Vehicle ideas,
- Branding,
- Financial partners,
- Technical issues (turning, traffic, other),
- Stops,
- Institutional/other barriers, and
- Governance.

A wide variety of information was collected at this meeting, including identification of current and planned service offerings, mapping of significant origins and destinations within the region, and ideas concerning potential partnering and service coordination.

PUBLIC OUTREACH

Public outreach was conducted at several phases to gather input about the need for public transit and preferred solutions. Outreach included the administration of two surveys, convening a stakeholder meeting, hosting an open house, media announcements, and public hearings.

INITIAL UTILITY BILL SURVEY

The Project Management Team conducted a household survey using Winslow's utility bill mailings in March 2017. The purpose of the survey was to complete a 2017 assessment of popular origins and destinations (O/D), gather public input on the need for transit, capture demographic data, and gauge general willingness to support transit with tax dollars.

The utility bill survey method was conducted through the Winslow city sanitation, water, and wastewater utility billing with a pre-paid mail-back response. A statistically valid base can be established because of the initiation of a 100 percent polling sample of residents and businesses in the study area. Billing locations include residential hookups both inside and outside of the city limits, and combination of commercial and industrial hookups also inside and outside of the city limits. The survey yielded 445 valid responses. The survey and full report is available in **Appendix D**.

Figure 1.4 Anticipated use of local services

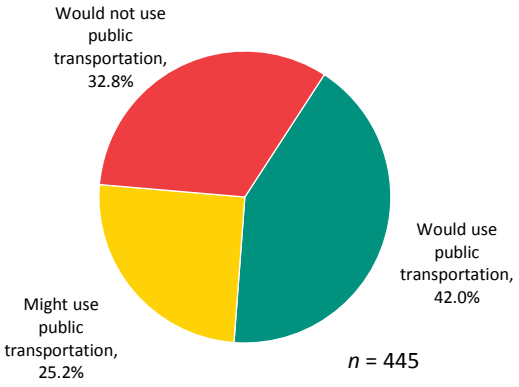
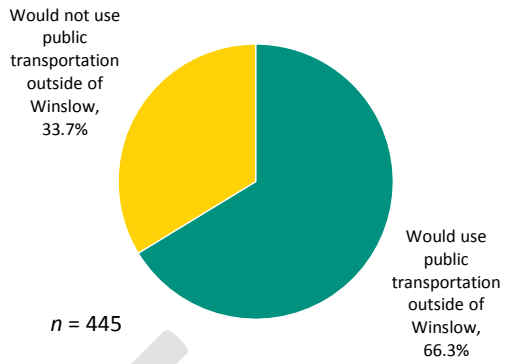


Figure 1.5 Anticipated use of regional services



PUBLIC OUTREACH ON ALTERNATIVES

A second phase of outreach was conducted in May and June of 2017. It included a multi-faceted public outreach campaign featuring radio spots, postcards, press releases, and two in-person meetings drawing about 30 people in total. Staff also met with a variety of experts and stakeholders including Twin Arrows, **Northern Arizona Council of Governments (NACOG)**, Economic Collaborative of Northern Arizona (ECoNA), ADOT, Hopi Senom, Navajo Transit, several human service agencies, educational institutions, medical centers, and major shopping destinations.

During this phase, a second survey was administered to the public via a web-based platform. The goal of this survey was to collect feedback on the drafted service alternatives by asking about their usefulness, frequency of travel on routes, and what could be modified to improve ability to use the alternatives. The results were used in identifying proposed service alternatives provided in **Chapter 9: Recommendation** as well as in the methodology for ridership projections. A full analysis of the survey is available in **Appendix E**.

A stakeholder committee also convened on May 16, 2017, to get first-hand insight into the wants and needs of those that already either request or provide some level of transportation support. The same day, a public open house was held at the Winslow Visitor Center. Approximately 30 people attended these meetings to respond to alternatives, take surveys, and provide feedback.

PUBLIC HEARINGS

The Project Management Team hosted five public presentations at Winslow City Council meetings throughout the transit planning process on the following dates:

- April 26, 2016
- February 28, 2017
- June 27, 2017
- September 12, 2017
- November 14, 2017

CHAPTER SUMMARY

The missions, goals, and objectives in this Plan were developed in coordination with City staff through a variety of stakeholder and public processes. Methods to engage the public included surveys, open houses, social media, and radio. This input was combined with research of existing plans, peer communities, and technical analysis to develop service alternatives and ultimately recommendations.

CHAPTER 2 | EXISTING CONDITIONS AND MARKET ANALYSIS

PURPOSE

There are a variety of conditions in the City of Winslow that impact the recommended alternatives presented in this report. These range from density and demographics to existing transportation services in the city of Winslow. This chapter outlines factors in the city which should be considered in the transit decision-making process.

DEMOGRAPHIC FACTORS AFFECTING TRANSIT RIDERSHIP

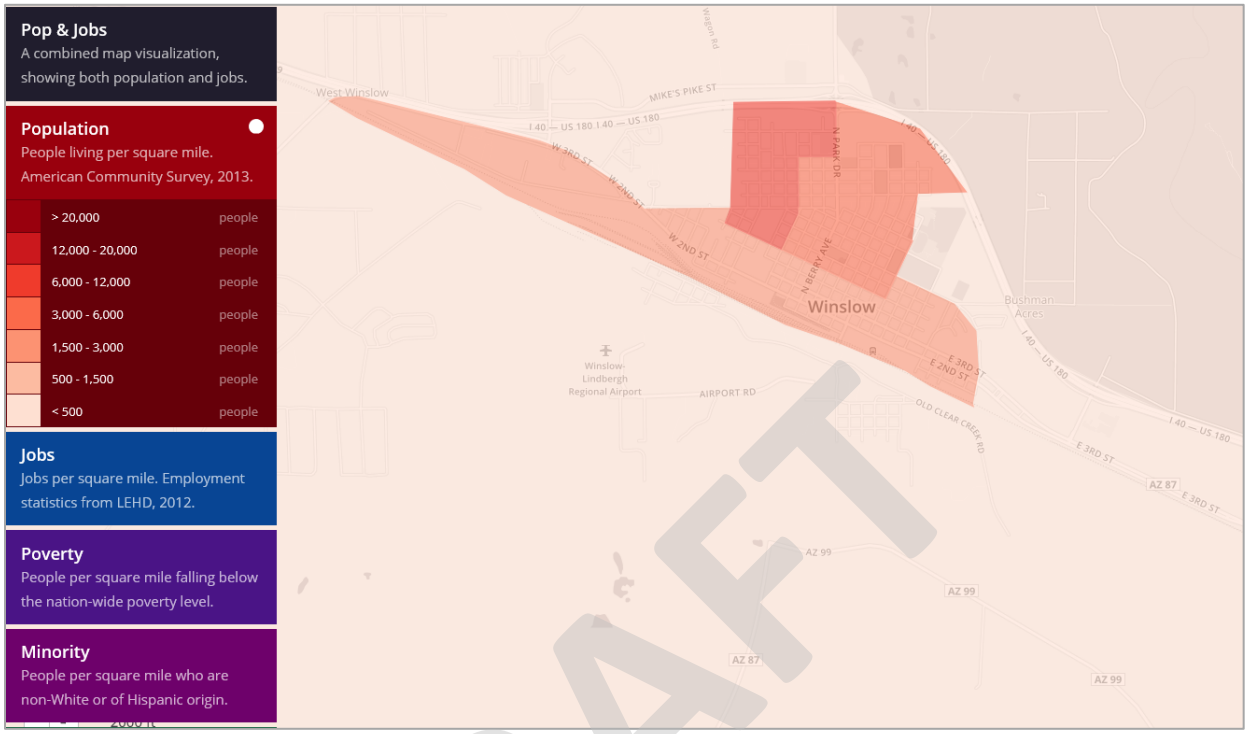
Transit ridership is often affected by a wide range of demographics, including number of households with access to personal vehicles (Figure 2.9), income levels (Figure 2.3), and age (Figure 2.7).[4] Based upon that data, it is often possible to estimate the propensity to use transit when coupled with an analysis of key destinations for work, medical, shopping, and social purposes.

POPULATION

Figure 2.1 shows population density in the city of Winslow. Density is a key driver of ridership because the closer a bus can get to people, ideally within ¼ of a mile, the more people will likely ride. This is particularly impactful when considering local service alternatives because without decent proximity to bus stops, rider access may be too difficult, which can affect total trip time. The time to get to the stop, wait, and ride to the final destination becomes too slow to be useful. Density is highest in the north central portions in Winslow where there are multiple low-income housing projects and historic neighborhoods.

[4] 2014 Winslow Demographic Data Update.

Figure 2.1: Population density[5]

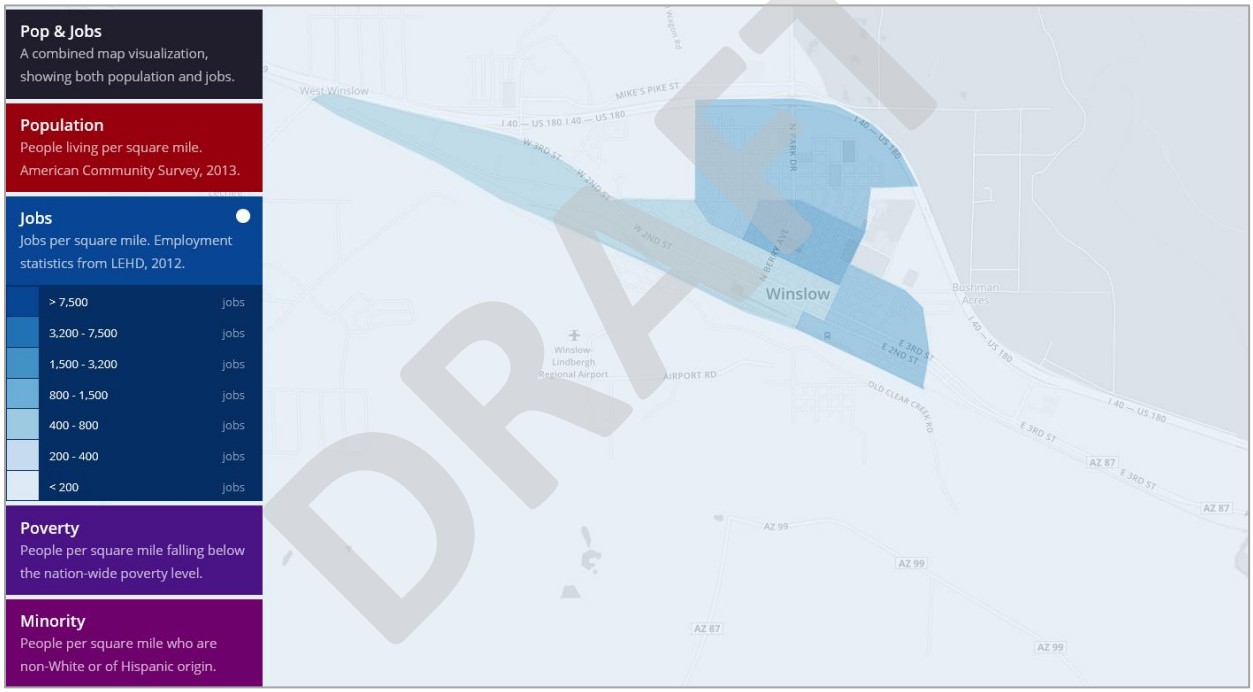


[5] Remix: "A Planning Platform for Public Transit" (www.remix.com) This tool identifies key demographics to support planning concepts.

JOBS

The American Public Transportation Association estimates that 49 percent of transit trips are to and from work, meaning providing job access generates nearly half of all ridership.[6] Therefore, job density is a key indicator of transit ridership. It not only represents destinations where residents travel for employment, but also represent places where a wider population goes for a variety of services including medical, shopping, leisure, and government facilities. Figure 2.2 shows that job density is greatest in the central part of Winslow, mostly due to the many small businesses that have converted historically residential buildings into offices. Other important job centers to note are schools, medical facilities, and government offices. Additionally, 2nd Street features historic commercial buildings well situated for revitalization opportunities.

Figure 2.2: Job density[7]



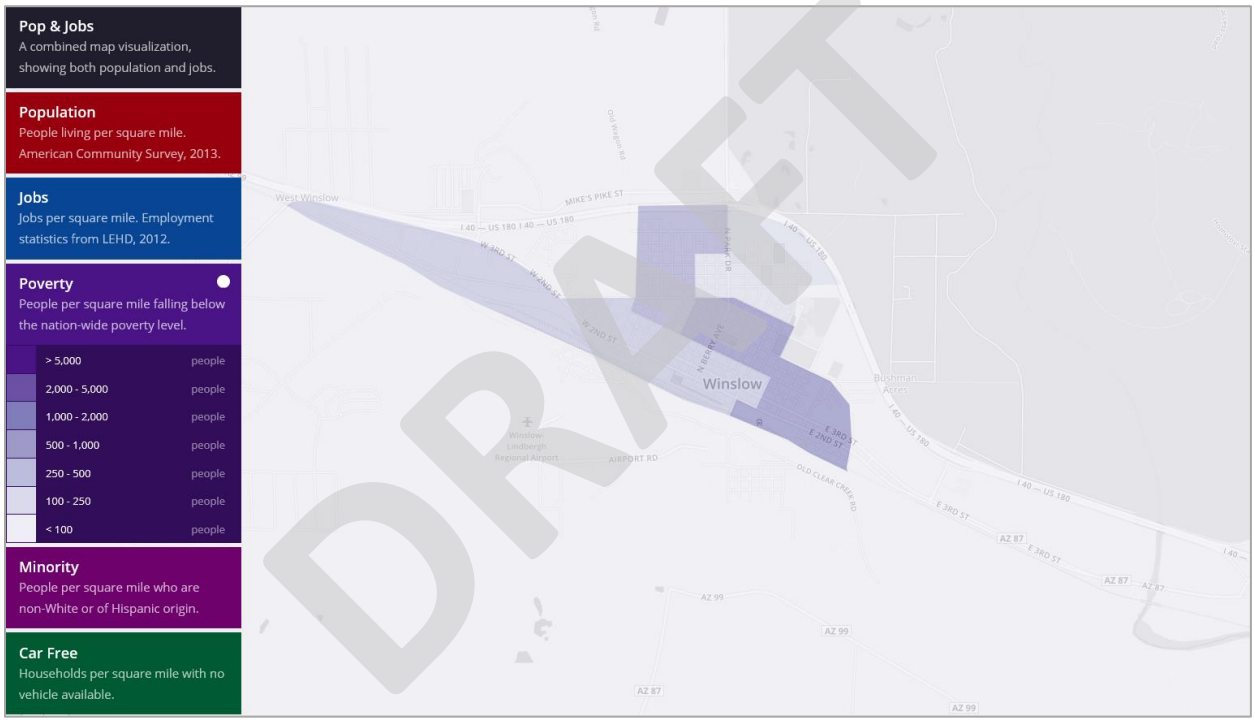
[6] https://www.apta.com/resources/reportsandpublications/Documents/APTA-Who-Rides-Public-Transportation-2017.pdf

[7] Remix: "A Planning Platform for Public Transit" (www.remix.com)

POVERTY

Often, a goal of transit service is to provide low income individuals with affordable connections to desired destinations and employment opportunities. This theme was apparent during the stakeholders meeting and public open house. Poverty can also be a driver of ridership because bus **fares** are less expensive than driving one's own car, allowing families to spend their income on other necessities. AAA[8] reports that owning a car costs $11,000 per year, whereas an annual bus pass is usually less than $1,000 per year. Winslow's households in poverty are estimated at 30 percent per the U.S. Census, with the average household income at $34,211. This is compared with 17.4 percent of the population in Arizona living in poverty, and an average income of more than $50,000.

Figure 2.3: Low income density[9]

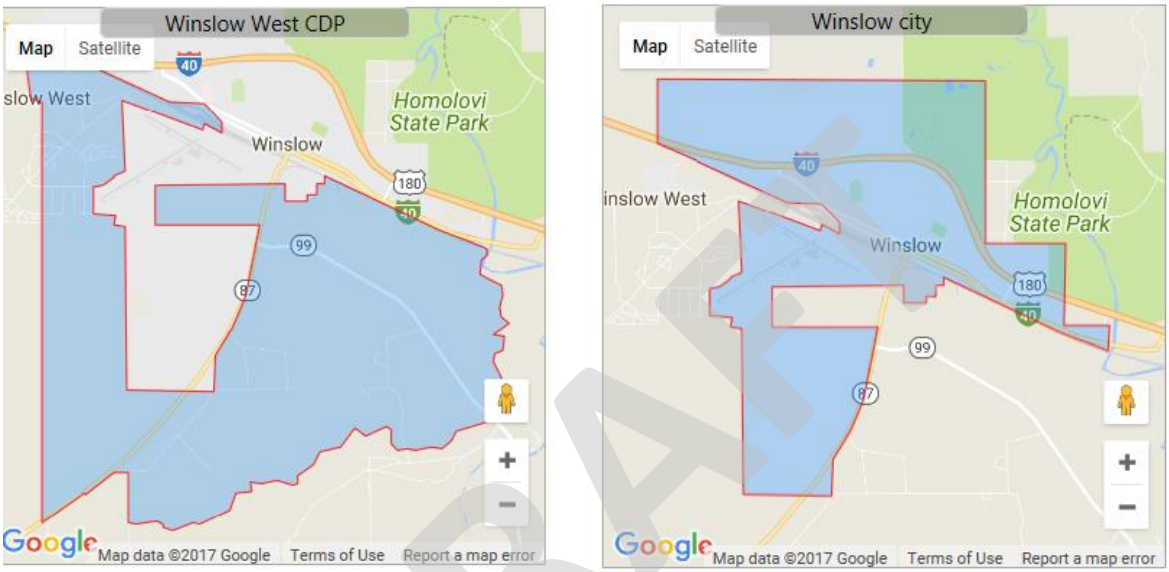


[8] https://www.aaafoundation.org/research
[9] Remix: "A Planning Platform for Public Transit" (www.remix.com)

Figure 2.4 Percent of Winslow households at or below the poverty level

	Winslow	Winslow West CDP
All families	30.1%	48.1%

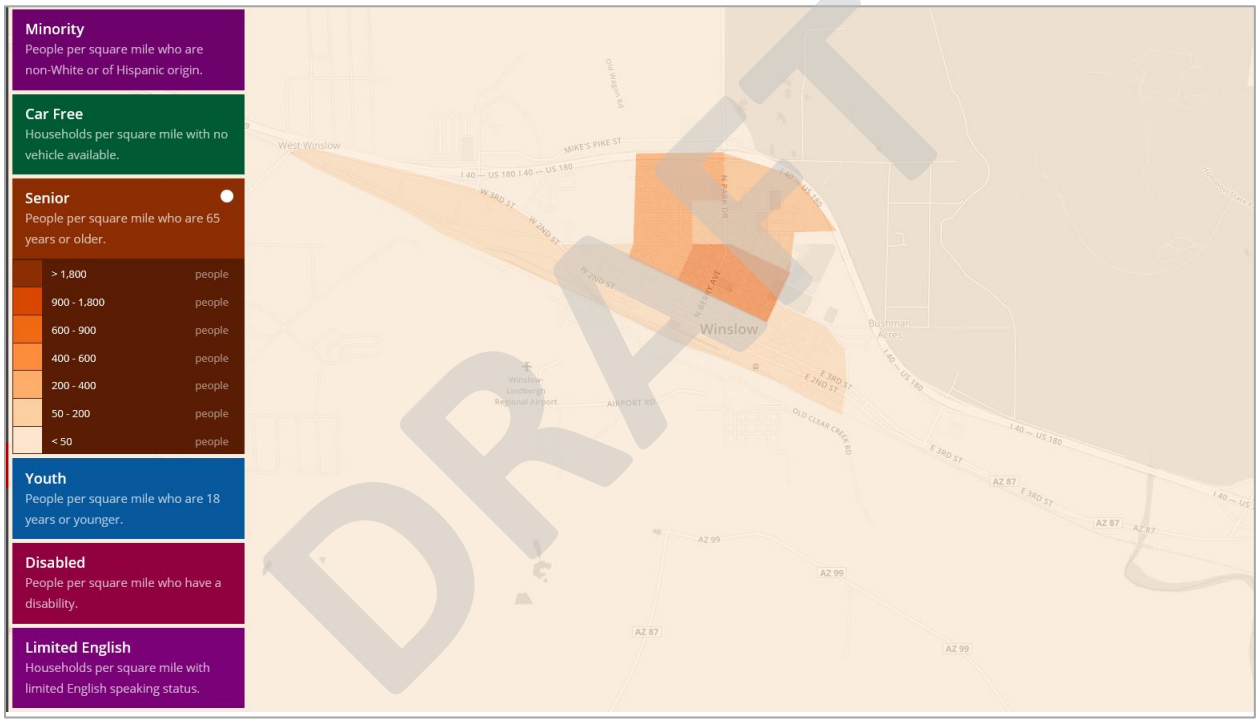
Figure 2.5: Map of Winslow West CDP and Winslow city according to U.S. Census



SENIORS AND YOUTH

Understanding senior density is also an important factor. According AARP's Public Policy Institute[10], nearly 90 percent of people over age 65 indicate they want to stay in their home as long as possible, and four of five in that age bracket believe their current home is where they will always live.[11] Such studies show that people want to "age in place," meaning those who were once able to drive and live independently become less able to do so and require services that may not have been historically available. Seniors often become dependent on others for their mobility. Transit connections to shopping and medical services are important for this population. Figure 2.6 shows that senior populations are heaviest in the center of Winslow.

Figure 2.6 Density of senior residents[12]



[10] www.aarp.org/ppi/.
[11] https://assets.aarp.org/rgcenter/ppi/liv-com/aging-in-place-2011-full.pdf
[12] Remix: "A Planning Platform for Public Transit" (www.remix.com)

The following chart breaks down population by age across the city.

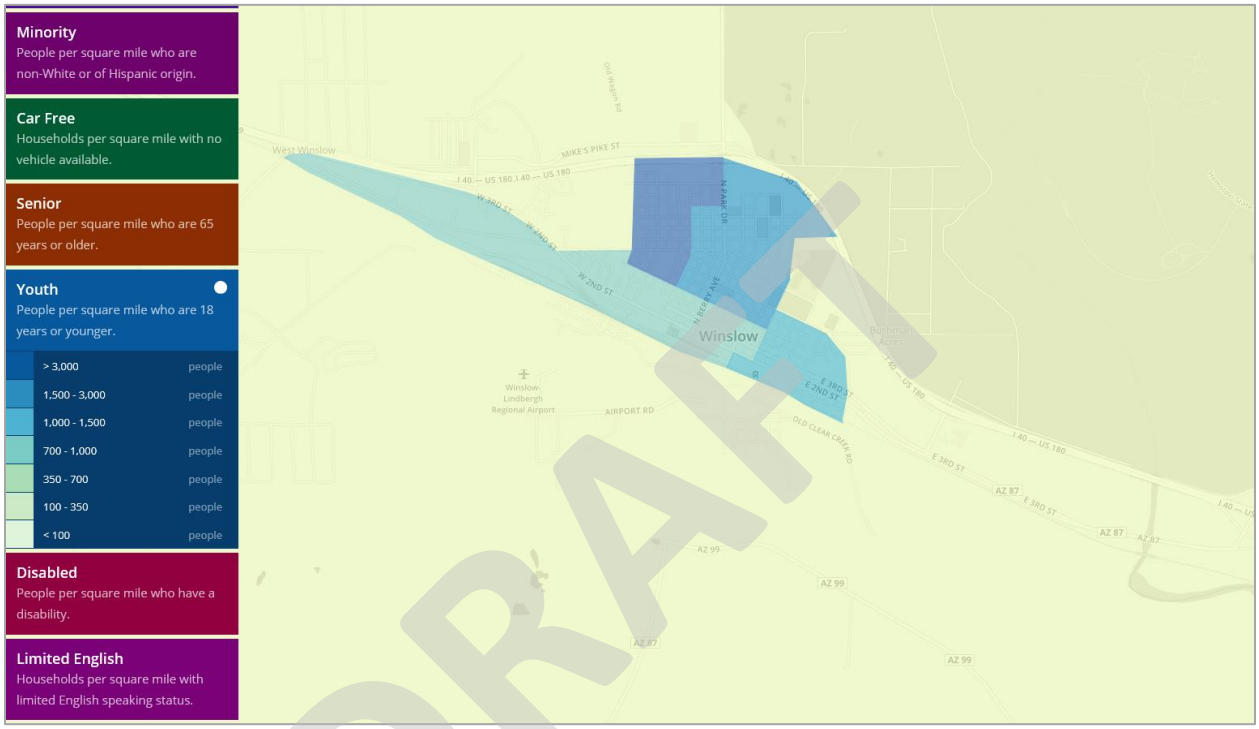
Figure 2.7 Winslow population by age[13]

Age	Winslow	Percent	Winslow West CDP	Percent
Under 5 years	718	7.5	74	14.3
5 to 9 years	627	6.6	84	16.2
10 to 14 years	761	8.0	53	10.2
15 to 19 years	613	6.4	94	18.1
20 to 24 years	797	8.4	4	8.0
25 to 34 years	1,815	19.0	55	10.6
35 to 44 years	1,168	12.3	111	21.4
45 to 54 years	1,056	11.1	13	2.5
55 to 59 years	609	6.4	10	1.9
60 to 64 years	443	4.6	5	1.0
65 to 74 years	534	5.6	15	2.9
75 to 84 years	287	3.0	0	0.0
85 years and over	102	1.1	0	0.0
Median age (years)	31.9		18.5	

[13] 2015 American Community Survey 5-Year Estimates

Likewise, youth are another often transit-dependent population. While the legal driving age is 16, many delay obtaining a license or cannot afford a vehicle and associated costs. However, the ability for youth to get to school, jobs, and recreation is critical. The median age in the Winslow West Census Designated Place (CDP) of 18.5 is well below the average median age of 37.9 in the United States[14].

Figure 2.8 Density of youth[15]



PEOPLE WITH DISABILITIES

The U.S. Census Quick Facts 2011-2015[16] estimate that 14.4 percent of individuals under the age of 65 in Winslow have a disability. While disability categories vary greatly, many disabilities make driving, walking, or biking difficult, increasing reliance on a transit service. Additionally, some disabilities require higher levels of service than what a fixed-route bus service can provide and may require special accommodation. The **Americans with Disabilities Act (ADA)** applies to transit programs in a variety of ways and is discussed further in **Chapter 3: Capital Investment Options** and **Chapter 4: Service Alternatives**.

[14] https://www.cia.gov/library/publications/the-world-factbook/fields/2177.html
[15] Remix: "A Planning Platform for Public Transit" (www.remix.com)
[16] https://www.census.gov/quickfacts/fact/table/winslowcityarizona/DIS010215#viewtop

CAR-FREE HOUSEHOLDS

Finally, car-free households represent another characteristic important to understand for transit. The density of car-free households in the city is evenly distributed. It is interesting to note the combined number of no- and one-vehicle households in both Winslow city (46.2 percent) and Winslow West CDP (54.8 percent) is high compared to the national average of 42 percent, indicating a propensity to need and use transit, especially when coupled with households where there is more than one eligible driver.[17]

Figure 2.9 Households access to vehicles

	Winslow city		Winslow West CDP	
	Estimate	Percent	Estimate	Percent
No vehicles available	237	8.4	12	8.9
1 vehicle available	1,065	37.8	62	45.9
2 vehicles available	1,126	39.9	37	27.4
3 or more vehicles available	393	13.9	24	17.8

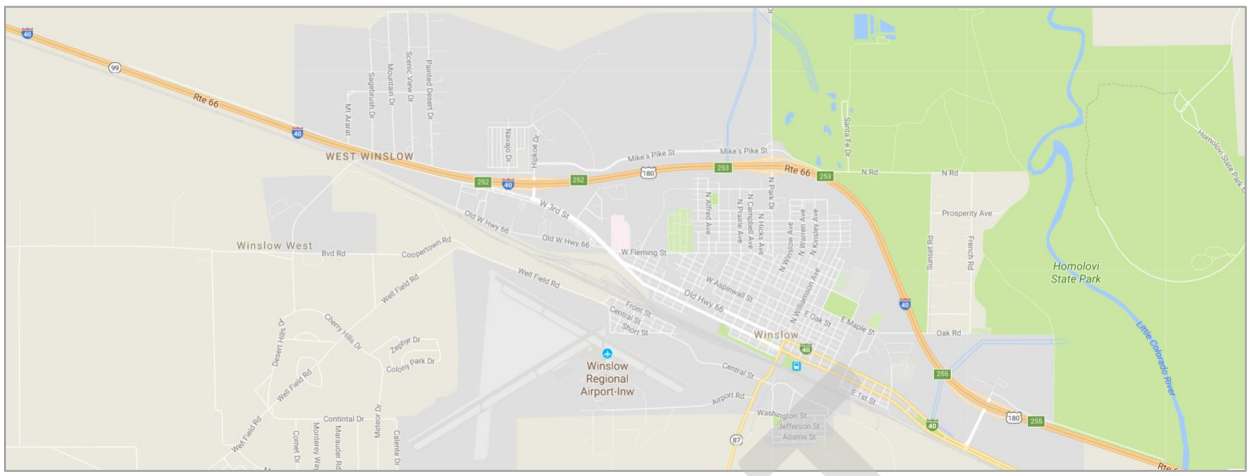
ROADWAYS AND TRAFFIC CONDITIONS

Winslow is built primarily on a grid system that is generally east-west linear along Business Route I-40/U.S. 66. There are major boundaries surrounding the community: by the I-40 corridor on the north, by I-40 interchanges on the east and west ends, and by the **BNSF** railway line on the south. Although the community does extend past these boundaries, the densest areas lie within. There are three I-40 interchanges: an east, west and mid-way point. State Route 87, which runs north-south, intersects the community to the south at approximately mid-town, and again to the north from the eastern edge of the community. Because of the location of these major roadways within the community, much of the current vehicular transportation is under the authorizing control of the Arizona Department of Transportation due to state or national identification.

The primary east-west travel corridor within the community is a one-way couplet of parallel streets – eastbound 2nd street and westbound on 3rd street (also called "Old 66 Highway"). This corridor has had significant streetscape improvement projects in the past decade. Bike and pedestrian improvements are built not just to provide access but to enhance the multimodal experience. The improved infrastructure and history of these streets are a major draw for tourism in the community. However, small businesses may be aided by transit along the 2nd street corridor, which could help development in these historic structures. The major north-south corridor is N. Park Drive, which merges into N. Berry Avenue. It runs from 2nd street to I-40. The north end of Berry Avenue is also a major business hub both for I-40 traffic and for locals, with Walmart, Safeway, and a few restaurants. Other streets in Winslow form the remainder of the grid, which serve residential, educational, healthcare, and other businesses throughout the community.

[17] www.Factfinder.census.gov

Figure 2.10 Winslow roadways



LEVELS OF SERVICE FOR ROADWAYS AND INTERSECTIONS

While many communities pursue public transit as a congestion mitigation solution, traffic congestion is minimal in the city of Winslow and not a primary motivation for developing public transit.

There are six Levels of Service (LOS) defined by the Transportation Research Boards' Highway Capacity Manual 2000 (HCM)[18], published by the Transportation Research Board (TRB). Each level of service is given a letter designation from A to F, with A representing the optimal or best condition and F the worst. LOS A, B, and C are generally considered to be satisfactory service levels, while the influence of congestion becomes more noticeable at LOS D. LOS E is undesirable and is considered by most agencies to be the limit of acceptable delay, and LOS F conditions indicate gridlock and are unacceptable to most drivers.

With the lone exception of Berry Avenue north of Hillview Street, all road segments within the study area operate at LOS B or better, and all key intersections operate at LOS B or better.[19]

ECONOMIC DEVELOPMENT TRENDS ANALYSIS

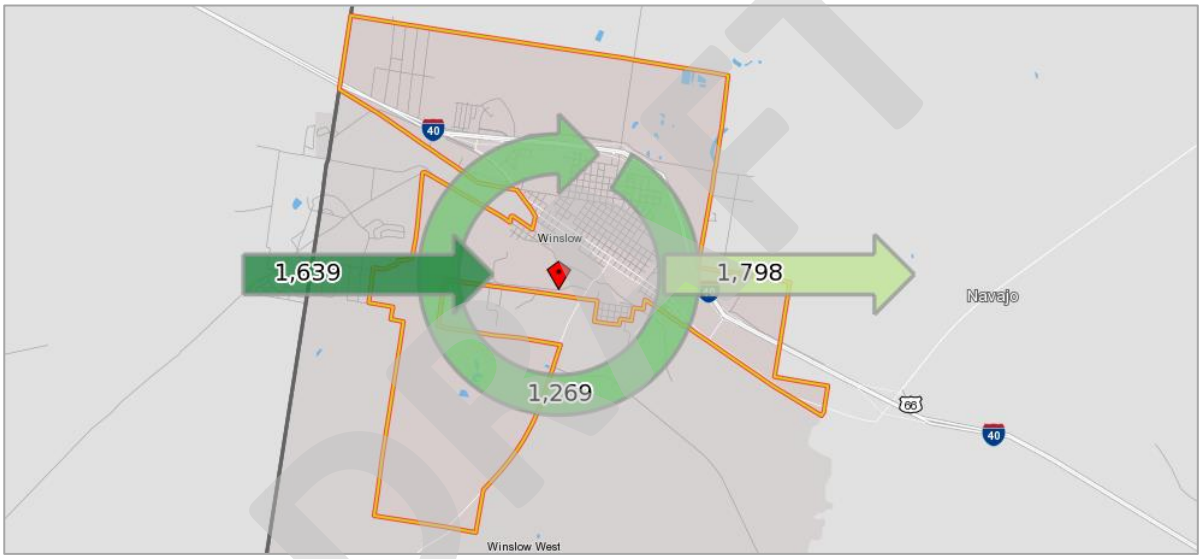
Economic development is an essential element to enhancing the standard of living of a community. Typically, it improves the employment rate, enhances the standard of living, boosts confidence, enhances tax revenues, and promotes better public services

Public transportation supports economic development in a variety of ways. First and foremost, it connects employers with employees. According to **APTA's** Who Rides Public Transportation Report:

[18] http://hcm.trb.org/?qr=1
[19] 2012 Winslow North South Transportation Report

"More riders use public transit five days a week (50 percent) than any other usage pattern. In addition, another 13 percent use it six or seven days a week. Studies tend to find that among the five day riders, commuting is the primary trip purpose, but it is among the primary trip purposes for many others as well."[20] The U.S. Census' "On the Map" tool shows that more than 1,600 people commute to work in Winslow and nearly 1,800 residents work outside of the City. The number of commuters entering and leaving are more than double the number who live and work in the city, which is estimated at 1,269. Major employers drawing a non-resident workforce include the Arizona State Prison Complex, BNSF, Winslow Public Schools, and medical facilities. For Winslow residents commuting out of town, nearly 1,400 travel more than 50 miles to work. These long commutes affect employees' well-being. Public transit can reduce this impact by allowing employees to make productive use of travel time, either for work or personal business, particularly if vehicles are Wi-Fi enabled.

Figure 2.11 Commuter demographics in Winslow[21]



The 2014 Winslow Economic Development Data Update indicates that "existing market conditions and trends in Winslow result in the following major sectors presenting significant opportunities for economic growth, which shall be defined as Critical Economic Sectors:

1. Regional Retail,
2. Value-Added Industry (industries that create new products from existing resources),
3. General and Segmented Tourism,
4. Transportation,
5. Regional Workforce Housing, and
6. Downtown Redevelopment."

[20] https://www.apta.com/resources/reportsandpublications/Documents/APTA-Who-Rides-Public-Transportation-2017.pdf
[21] https://onthemap.ces.census.gov/

The 2014 Winslow Economic Development Data Update goes on to say that, "The City may consider offering incentives to attract, retain, or expand businesses. These incentives will only be used when the City is assured that the addition of the new business or retention and/or expansion of an existing business would have a proportionately significant, positive effect on the Winslow economy. Diversification and expansion of the local economy, which will maximize the development of basic industry, is vital for the continued economic health of the city."

In response to the 2014 Winslow Economic Development Plan Update, key components of the general provisions of City policy included:

- "The City's position shall be to offer incentives that have a direct and demonstrable relationship to public benefit. Improvements including streets, water lines, traffic signals, storm drainage, parking structures, parks and open space, and similar publicly assessed improvements are examples of public-private financed incentives. Acquisition of property and construction of buildings, if necessary, must be clearly and directly related to a public purpose."
- "The City will continue its strong commitment to planning and preparation to meet tomorrow's growth challenges. Further, the City will actively support cooperative planning arrangements with other governmental entities, and communities that are unincorporated (as of the date of adoption of this policy) in the area, such as Navajo County, Coconino County, Winslow Unified School District, Navajo Nation, Hopi Tribe, the City of Flagstaff, Joseph City, and the City of Holbrook, when such cooperative planning arrangements support the City's interests."

These existing policies demonstrate Winslow may be prepared to support public transportation in several ways, including the potential to provide related infrastructure and to explore partnerships and collaborations with other governmental and private entities.

ORIGINS AND DESTINATIONS

As part of the Core Technical Team meeting, along with an analysis of the 2014 Winslow Demographic Data Update,[22] the following key potential destinations were identified. (A complete list of destinations, stops, and ridership builders that were considered are included in **Appendix C**.)

- Flagstaff Mall,
- Twin Arrows,
- Winslow Walmart,
- Hospital,
- Downtown Winslow,
- Community College,
- High School/City Park Complex, and
- Holbrook NPC/Greyhound Station.

[22] 2014 Winslow Demographic Data Update

CURRENT TRANSIT SERVICES

A variety of local and regional transportation options exist today. These existing services operate independently with little coordination between programs, creating a patchwork of transportation options for residents and commuters. Primary services have been divided up into three categories: local and regional programs assisted by Federal funding, and private transportation either provided by an employer or public pay.

LOCAL TRANSIT PROGRAMS

There are a few existing local transit resources within the city of Winslow already. They tend to be client-specific services and may include a subsidy or be wholly charged to a **passenger**.

Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities: The Federal Transit Administration's (FTA) 5310 program supports several transit services in the city of Winslow and is administered by the **Arizona Department of Transportation (ADOT)** and the **Northern Arizona Council of Governments (NACOG)**. The program provides mobility management leadership and strategies and **capital** assets (vehicles) to applicants on a competitive basis to serve seniors and people with disabilities. Trip purposes are wide, but medical and shopping trips tend to be highest.

Most applicants are social service providers who work with clients on specific transportation needs, not necessarily public transportation services. Section 5310 recipients in the city of Winslow include:

- Change Point Integrated Health: Eligible clients for Change Point's transportation are those with mental illness. Change Point provides services throughout Navajo County.
- Winslow Indian Healthcare Center: This program provides medically based rides to and from the Navajo and Hopi Reservations.
- Alice's Place: Provides rides for those experiencing domestic violence.
- Winslow Council on Aging: Operates one vehicle which provides rides for seniors within the city of Winslow.

Medical Transport

There are several services offered either by medical centers or through the **Arizona Health Care Cost Containment System (AHCCCS)** that provide transportation services to medical appointments. These services are generally referred to as **Non-Emergency Medical Transportation (NEMT)**. Below is a sample list of some of the NEMT service providers in Winslow.

- A&A MedEX,
- Indian Health Care Center, and
- Little Colorado Medical Center.

Public Pay

There are several private entities that provide transportation within the City. These services tend to exist in support of a client base, and depending upon client base or needs, often do not provide regularly scheduled services.

- Dade's Shuttle,
- Brad's Winslow Cab,
- K B Cab, and
- SafeRide.

OTHER REGIONAL TRANSPORTATION PROGRAMS

There are also several other transportation programs that provide transit or transit-like services in the study area boundaries, though not all are accessible in Winslow. Connections to the other transit systems can provide mobility opportunities well beyond scope of this study.

Regional Transit Programs

Agency/Service	Description			Contact	
Amtrak	A national provider of regional rail commuter services, currently provides services in Winslow and Flagstaff, but not Holbrook. The current schedule for Amtrak services do not facilitate regular commuter services and needs, but do provide a back-up to missed transportation connections and emergency options. There is no stop in Holbrook, rendering that commuter trip moot.			Amtrak 1.800.USA.RAIL 1.800.872.7245 www.amtrak.com	
	Service area	**Hours**	**Eligibility**	**Fare**	**Fleet**
	Los Angeles to Chicago	Westbound departing Winslow 7:50 p.m. and arriving Flagstaff 8:51 p.m.; Eastbound departing Flagstaff 4:37 a.m. and arriving Winslow 5:35 a.m.	General public	Depending on trip	Commuter rail

Regional Transit Programs (continued)

Agency/Service	Description			Contact	
Hopi Senom Hopi Nation	A Section 5311 program, Hopi Senom Transit runs three deviated fixed routes per day serving the areas of Keams Canyon, Flagstaff, and Winslow. Each route runs two trips a day on weekdays and no service on weekends. Hopi Senom Transit is currently operating commuter service that serves several locations within Winslow. The bus stops five times in the city limits between 7:30 a.m. and 8:00 a.m. and 4:30 p.m. and 5:00 p.m.			Hopi Senom Transit P.O. Box 123 Kykotsmovi, AZ 86039 928-734-3231	
	Service area	**Hours**	**Eligibility**	**Fare**	**Fleet**
	Hopi Reservation, Flagstaff, Tuba City	Monday through Friday, 6:20 a.m.-7:00 p.m.	General public	$4.00 one way to Flagstaff. Half price on Wednesdays. Vets ride free.	23-passenger ARBOC bus, two 15-passenger El Dorado buses, and a 15-passenger van
Agency/Service	**Description**			**Contact**	
Navajo Transit Navajo Nation	A Section 5311 program, Navajo Transit System is operated by the Navajo Nation tribal government on 18 fixed routes throughout the Navajo Nation, which covers 27,000 square miles in Arizona, New Mexico, and Utah. Navajo Transit does not currently offer service in Winslow; however, it previously has provided transit service along the I-40 corridor between Highway 99 and Flagstaff. Navajo Transit staff have indicated there is potential to operate such a route again in the near future.			Navajo Transit System P.O. Drawer 1330 Window Rock, AZ 86515 928-729-4002	
	Service area	**Hours**	**Eligibility**	**Fare**	**Fleet**
	Navajo Nation, plus service to Bluff and Blanding (UT), Gallup and Farmington (NM), and Flagstaff	Monday through Friday, 5:00 a.m.-7:00 p.m.	General public	$2.00 per day	7 mid-sized buses and 4 vans. A 30-passenger accessible coach was used on Route 11 to Flagstaff

Regional Transit Programs (continued)

Agency/Service	Description			Contact	
Mountain Line NAIPTA	NAIPTA's Mountain Line provides public transit service on six fixed routes throughout Flagstaff. Most routes operate on 30-minute frequencies during peak hour and on 60-minute frequencies before and after peak hour. Complementary paratransit and ADA service available throughout Flagstaff.			NAIPTA 3773 North Kaspar Drive Flagstaff, AZ 86004 928-779-6624	
	Service area	**Hours**	**Eligibility**	**Fare**	**Fleet**
	City of Flagstaff	Monday through Friday, 5:45 a.m.-10:00 p.m. Saturday and Sunday: 7:15 a.m.-8:00 p.m.	General public; NAU students, staff, and faculty ride free with ID	Fixed route: $1.25 adult; $0.60 senior/ disabled/ youth Paratransit: $2.25 one way ADA; $5.50 one way non-ADA or outside ¾ mile of fixed route	Gillig hybrid-electric buses (28-passenger)
Agency/Service	**Description**			**Contact**	
The Four Seasons Connection (FSC) City of Show Low	A Section 5311 program, FSC operates two bus routes within the towns of Show Low and Pinetop-Lakeside, with extended service to the Hon-Dah Resort and Conference Center with a transfer station at the Show Low Walmart that connects with the White Mountain Connection bus line to Holbrook and Greyhound. Deviated service is available by reservation only for pickups within ¼ mile of the designated route. All buses are wheelchair accessible and operate in accordance with ADA.			City of Show Low 180 N. 9th St Show Low, AZ 85901 928.537.0627 http://www.showlowaz.gov/270/Four-Seasons-Connection	
	Service area	**Hours**	**Eligibility**	**Fare**	**Fleet**
	Show Low and Pinetop	Monday through Saturday, 6:30 a.m.-6:30 p.m.	General public	$1 adult, $.50 senior, children free. Deviations $10.00.	

Regional Transit Programs (continued)

Agency/Service	Description			Contact	
The White Mountain Connection (WMC) City of Show Low	WMC (Section 5311), also operated by the City of Show Low, is a commuter route that serves the outlying communities of Taylor, Snowflake, and Holbrook with daily stops at Northland Pioneer College. The WMC runs three daily routes and connects with Greyhound Bus Lines in the morning, mid-day, and late afternoon. It has connections with the FSC. All buses are wheelchair accessible and operate in accordance with ADA. The White Mountain Connection has a local match provided by a variety of communities served on its route. It currently terminates in Holbrook and does not serve Winslow.			City of Show Low 180 N. 9th St Show Low, AZ 85901 928.537.0627 http://www.showlowaz.gov/270/Four-Seasons-Connection	
	Service area	**Hours**	**Eligibility**	**Fare**	**Fleet**
	Show Low, Taylor, Snowflake, and Holbrook	Monday through Friday, 6:30 a.m. – 5:30 p.m.	General public	Same town: $1 Next town: $3 Anywhere on route: $5 Half price for seniors and people with disabilities	
Agency/Service	**Description**			**Contact**	
Greyhound	A national provider of regional fixed-route bus commuter services, currently does not provide services in Winslow, but does stop in Holbrook and Flagstaff. Greyhound previously did stop in Winslow, but they lost their 24/7 stop and moved to Holbrook.			Greyhound 800.231.2222 www.greyhound.com	
	Service area	**Hours**	**Eligibility**	**Fare**	**Fleet**
	Flagstaff to Holbrook and connections nationally	The bus travels from Flagstaff to Holbrook from 2:25 a.m. to 4:05 a.m., 2:15 p.m. to 3:55 p.m., and 8:15 p.m. to 9:55 p.m. From Holbrook to Flagstaff, the buses run twice a day from 11:50 a.m. to 1:30 p.m. and 8:30 p.m. to10:10 p.m.	General public	Service between Holbrook and Flagstaff costs on average $35	

Of particular note is Greyhound, which previously stopped in Winslow. Through the identification of partners who could host a Greyhound stop, there may be incentive to return to Winslow, opening travel opportunities across the state and country. Greyhound requires a stop with a business that:

- Is located not far from I-40,
- Is open during the hours of service of Greyhound schedules,
- Provides a place for waiting passengers to get out of the weather,
- Has restroom access, and
- Can accommodate passenger transfers to regional transit providers.

Possible opportunities lie near Walmart, the Maverick fueling station, or a new connection hub on City-owned property. Alternatively, La Posada could offer a good opportunity for a hub since **Amtrak** and Hopi Senom Transit already stop nearby.

Employer-Provided

Employer-provided services are those developed for the specific needs of an employer. Two primary examples of these services, which are seldom accessed by the public, include:

- BNSF Railway Employee Shuttle: This service provides employees with specific transportation services to facilitate rail operations, including crew changes and work crews.
- Arizona State Prison System Employee Shuttles: This service provides employees with destination-specific service to the State Prison south of Winslow on Route 87 from a variety of destinations throughout northeastern Arizona.

MOBILITY GAPS

Identifying mobility gaps is a process of matching transportation needs with appropriate solutions. In communities like Winslow, those needs can be far-ranging and solutions can be varied. The "gaps" that require filling are the key determinants of the transportation solutions. In the effort to identify public transportation options to meet Winslow area needs, identification of gaps is necessary. Despite some level of transit service mentioned above, the following gaps persist:

- Key population gaps
  - Transportation for those with disabilities;
  - Transportation options for a dependent population that does not own/drive a car, including a growing aging community; and
  - Recognizing transportation limitations to those at or below the poverty line.
- Spatial gaps
  - Employment trips in key local corridors and destinations;
  - Access to medical, healthcare, and/or educational facilities;
  - Connections with regional transportation services, including other public and private bus service providers; and
  - Connections with neighboring cities and towns along the I-40 corridor and beyond.

- Information gaps
  - Gaps in awareness of existing services such as **vanpools**, human service agencies that provide transportation, and existing Hopi Senom Transit service in Winslow.
- Funding gaps
  - Finding ways to leverage existing resources to further transit's reach.

Opportunities to reduce those gaps include:

- Support of economic development,
- Continuity in transportation investments throughout the region,
- Coordination between mobility needs and land use,
- Addressing long term strategies in the allocation of transportation funding, and
- Promoting environmentally friendly transportation solutions.

PREVIOUS TRANSIT-RELATED STUDIES

Previous transit planning efforts in Winslow have included a variety of plans, projects, and studies since 2008, providing an informative basis for this Plan. These plans include the following:

- 2008 ADOT Rural Transit Needs Study
- 2008 Winslow Commuter Service Analysis
- 2010 Navajo County Central Regional Transportation Study
- 2012 AzTA Statewide Transit Visioning
- 2012 Winslow North-South Transportation Plan
- 2013 NAIPTA Transportation Survey
- 2014 NAIPTA Business Plan for Fiscal Year 2014: Twin Arrows Express
- 2014 Winslow Demographic Data Update
- 2017 NACOG Coordinated Mobility Plan

These previous studies can be broken into two categories: Statewide Transit Needs and Commuter Service.

STATEWIDE TRANSIT NEEDS

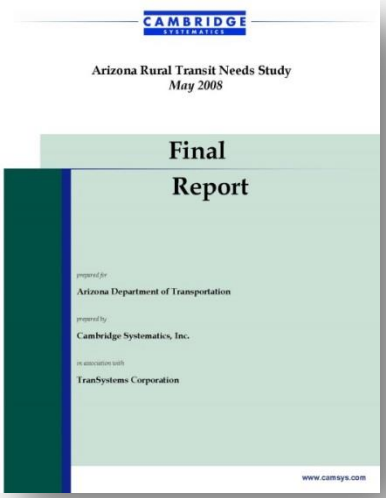
ADOT Rural Transit Needs Study

The 2008 *ADOT Rural Transit Needs Study*[23] was the first to provide detailed information on transit need in the city of Winslow and its immediate surroundings. This study was completed as part of a statewide study effort, which established three broad goals:

- Goal #1: Provide services in multiple geographic areas, including transit services that operate within designated rural areas, services that connect rural areas with each other, and services that connect rural areas with urbanized areas.

[23] 2008 ADOT Rural Transit Needs Study.

- Goal #2: Address needs of market segments that use rural transit services, including but not limited to the elderly, persons with disabilities, and persons of low income.
- Goal #3: Serve a variety of trip purposes for rural Arizona residents including employment, medical, shopping, and personal business needs.



The study employed the Arkansas Public Transportation Needs Assessment (APTNA) method to represent the demand for transit service by applying trip rates to three population groups: elderly persons ages 60 and over, persons with disabilities under age 60, and persons living in poverty under age 60.

The key statewide findings of this baseline conditions analysis include the following:

- The 2005 population of rural Arizona was estimated at 1.5 million, or 24.8 percent of the total state's population.
- The 2005 low-income population (i.e., persons with household incomes below the poverty line) was estimated at 230,800, or 32.3 percent of the total state's low-income population. The counties with the highest poverty rates are Apache (37.8 percent), Navajo (29.5 percent), and Santa Cruz (24.5 percent).
- While rural Arizona has about 24.8 percent of the state's total population, the share of the State's total employment in rural Arizona was smaller, at about 20.5 percent.

Specific to eastern Coconino County and Navajo County, Navajo County represented the third-highest demand (1.0 million trips annually) of the 12 rural counties. New Section 5311 programs were recommended for Winslow and Holbrook, along with expanded service for the Navajo and Hopi programs. At the time, there was no vision for intercity service in the Winslow area. Instead, emphasis was placed upon existing Greyhound and Amtrak services.

The plan estimated that by 2016, 35.1 percent of demand will be from elderly persons, eight percent from disabled persons, and 57 percent from persons living in poverty. This percentage change from 2007 is reflective of the growing percentage of elderly persons living in rural Arizona, although Navajo and eastern Coconino counties did not represent the highest impacts.

Finally, existing rural transit ridership in Arizona was estimated at 1.37 million **passenger trips**. This indicates that only 18 percent of rural Arizona's public transportation needs were being met. Existing rural transit services were projected to meet only 13 percent of total ridership need in 2016 if no additional services were introduced.

In this report, recommendations for the Winslow area included:

- Winslow ranked #15 of 50 communities that should be considered for FTA Section 5311 services.
- Navajo Transit was ranked #1 for expansion, with an emphasis on expanded services to Tuba City and Flagstaff, while Hopi Services were ranked #7 (of 11 programs), focusing on internal improvements.
- No intercity programs were recommended.
- No improvements to the Section 5310 coordination programs were recommended at the time.
- Investigation by ADOT into a statewide vanpool program was recommended.

"The 2008 ADOT Arizona Rural Transit Needs Study shows that Winslow has a significant population that could benefit from public transit service:

- 11.7 percent of Winslow's households have no automobile.
- 12.5 percent of the city's population is age 60 or older.
- More than 18 percent of the population under age 60 lives in poverty.

Using the APTNA method, the unmet need in 2005 was 47,500 annual trips. By 2016, the ADOT study shows this unmet need increasing to 62,300 annual trips."[24]

Through an analysis of this 2008 study, it was determined that the stated travel demand outcomes are only statistically based and may not represent actual utilization.

AzTA State Transit Vision Report

A follow-up study to the 2008 study, the 2012 *AzTA State Transit Vision Report*[25], did little to further quantify need within the greater Winslow area, but some important facts were restated from the ADOT study: "According to the 2008 Rural Transit Needs Study, 18 percent of transit need in rural areas was being met by transit service."

The potential demand and need for rural transit service in Arizona was estimated as follows:

- Transit demand in rural Arizona is projected to grow from 7.8 million passenger trips in 2007 to 10.5 million in 2016, an increase of 34 percent.
- The counties with the highest projected demand levels in 2016 are Pinal (2.5 million trips), Mohave (1.3 million), Navajo (1.0 million), and Cochise (0.9 million).

COMMUTER SERVICES

In combination with the regional studies, there have been as many as four studies that address commuter services to/from the Winslow region from 2008 to present.

[24] 2008 ADOT Rural Transportation Needs Study.
[25] 2012 AzTA Statewide Transit Visioning

Winslow Commuter Service Analysis

As early as 2008, the *Winslow Commuter Service Analysis*[26] provided a first look at potential commuter services to/from surrounding communities. The study's primary focus was the need for and financial feasibility of service between Winslow and Flagstaff, and secondary was Winslow to Holbrook. Per this study, need was estimated at 60,000+ trips (annually) between Winslow and Flagstaff, and 32,000+ trips (annually) between Winslow and Holbrook. "In summary, both the quantitative and qualitative analyses indicate a significant interest in commuter service in the Winslow-Flagstaff corridor, with lesser interest in the Holbrook-Winslow corridor."

Per the study, "Due to the relatively low projected demand and community interest, fixed-route fixed-schedule, or modified fixed-route, bus service does not appear feasible in the Holbrook-Winslow corridor at this time….If commuter service is not deemed feasible at this time, carpool and vanpool options should be explored."

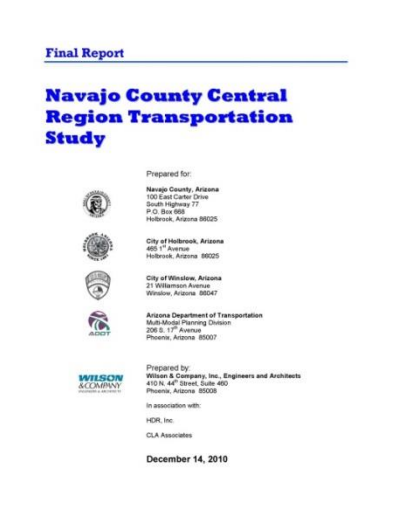
Options of peak hour and mid-day service roundtrips were recommended. A variety of service options were costed, along with capital costs for vehicles and administrative costs for up to three years of service. Governance and marketing recommendations were also made.

No action was taken regarding implementation based upon this study.

Navajo County Central Regional Transportation Study

In 2010, the *Navajo County Central Regional Transportation Study*[27] again addressed commuter needs. Primary recommendations included:

- Expand upon the successful regional White Mountain Connection transit service between Holbrook and Show Low.
- Convert the restored Amtrak station in Holbrook to a multi-modal hub serving Amtrak, Greyhound, and the White Mountain Connection.
- In Winslow, the newly restored Downtown, La Posada Hotel and Amtrak Station, along with the Winslow Airport, will continue to serve as a multi-modal transportation hub and they will all serve together as connectors to Reservation lands to the north, Flagstaff to the west, Holbrook to the east and Payson to the south.
- Transit service between Winslow and Holbrook and between Winslow and Flagstaff should be explored.


Final Report

Navajo County Central Region Transportation Study

Prepared for:

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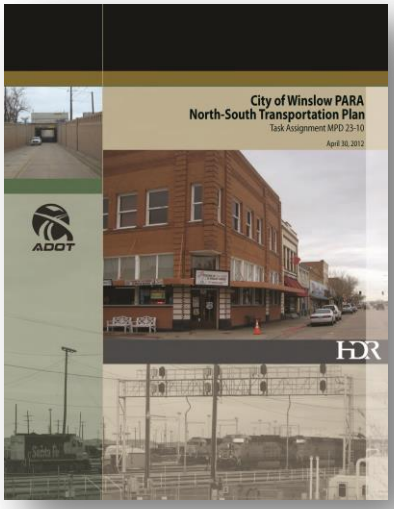
CLA Associates

December 14, 2010

[26] 2008 Winslow Commuter Services Analysis
[27] 2010 Navajo County Central Region Transportation Study

Winslow North-South Transportation Plan



In 2012, the *Winslow North-South Transportation Plan*[28] briefly mentioned commuter services. Primarily a transportation plan, this technical study addresses some multi-modal transit options but makes no specific recommendations. Using data from the 2008 ADOT study, this plan commented that "While the community expressed an interest in transit service, the greatest challenge to meeting this estimated demand is funding for transit operations. While federal grant money is available for the capital and operations costs for starter transit service, local matching funds are required. As the City has other more pressing funding priorities, it may be some time before the City could consider a grant application."

The plan went on to recommend service options supported by Section 5311 and/or Public-Private Partnership resources:

- Local Demand-Responsive Service: Transit service to meet this growing need should include demand-responsive service that operates a limited number of subscription services such as scheduled daily or weekly trips to and from a community/senior center or to a local destination such as a supermarket or Walmart.
- Regional Transit Service: The City of Winslow should also participate in and implement the recommendations of a regional transit feasibility study that examines the potential for connections between Winslow and Holbrook and Winslow and Flagstaff. The opening of the new Navajo Nation casino at Twin Arrows in 2013 would create a new activity center that might improve the feasibility of new regional service. This study would be conducted in partnership with ADOT and NACOG, including the Hopi Tribe and the Navajo Nation.

Business Plan for Fiscal Year 2014: Twin Arrows Express

In 2014, NAIPTA provided a *Business Plan for Fiscal Year 2014: Twin Arrows Express*.[29] According to this study: "Twin Arrows Casino Resort property is operated by the Navajo Nation Gaming Enterprise (NNGE) and employs several hundred service sector workers. Approximately 80 percent of these workers need transportation to and from Flagstaff. Bus transportation from Flagstaff to Twin Arrows could reduce transportation-related expenses and therefore make Twin Arrows a more convenient, competitive employer. Bus transportation could save employees money, negate the impact of car repairs causing worker absenteeism, and possibly save NNGE the costs of fuel allowances or transportation-related wage pressure. While it is possible that Twin Arrows customers may use the bus service as well, such ridership is not the primary target of this business plan."

The initial proposal was to provide hourly bus service to the Twin Arrows property from the Flagstaff Mall Connection Center. The Twin Arrows Express would connect with seven other Mountain Line

[28] 2012 Winslow North South Transportation Report
[29] 2014 Business Plan for Fiscal Year 2014: Twin Arrows Commuter Express

Transit routes and provide direct service via I-40 to Twin Arrows. It was anticipated that the bus would operate hourly, arriving at Twin Arrows at the top of the hour and departing Twin Arrows about 10 minutes after the hour. The study estimated that 4,380 hours of bus service per year would yield 28 trips per hour and cost more than a half million dollars annually.

In developing the plan, NAIPTA staff estimated ridership and costs, conducted an analysis of customers and competition, and identified of marketing and organizational opportunities. Grant options, revenues, and other financial options were also considered.

NAIPTA 2013 Five-Year Plan

In 2013, as a part of *NAIPTA's Five-Year Plan* update, high level studies regarding service at Twin Arrows Casino and beyond to Winslow were part of the study process. The plan indicates that if funding and partnerships with other agencies become available, such service should be considered.

2013 Transportation Survey

In 2013, NAIPTA conducted a *Transportation Survey*[30] of interest in a commuter service between Flagstaff and Winslow using Survey Monkey. Results provide an insight into thoughts concerning the service options. Fifty-five survey responses were received, answering as many as six questions about commuter service:

- Eighty-five percent of travel originated in Flagstaff; 11 percent from Winslow;
- Eighty percent use cars to travel; of those, 52 percent carpool and 31 percent use some kind of bus service;
- 81.5 percent of said they would use a bus to commute between Flagstaff and Winslow if available;
- Ninety percent said they would pay as much as $5.00 as a round-trip fare;
- Nearly 66 percent of respondents said they would or would consider some automatic payment method; and
- Sixty-six percent said they would ride nearly every day from Flagstaff to Winslow; 11 percent said they never would use the bus.

It is these kinds of results that have continued to create an interest in commuter services between the two communities, which could also serve an intermediate stop like Twin Arrows.

CHAPTER SUMMARY

By defining the study area and its demographics, briefs of previous studies, and review of current service options, it's possible to identify potential transit need and from there explore solutions to supplement existing services and/or fill travel opportunities in the community. Based upon these existing conditions, service alternatives derived in **Chapter 4** were created.

[30] 2013 NAIPTA Transportation Survey

CHAPTER 3 | CAPITAL INVESTMENT OPTIONS

PURPOSE

Public transportation programs require **capital** investment not only in rolling stock, but in horizontal and vertical construction projects, computerized services including data collection and management, and ancillary hardware including fareboxes, passenger counters, and various other tools.

The use of federal funding for the purchase of capital can come with significant requirements and should be considered in making purchases. This chapter provides and overview of key factors to consider in the purchase of capital goods.

MAKING CAPITAL INVESTMENTS

According to the FTA's **National Transit Database (NTD)**, capital assets include land, easements, buildings, vehicles, machinery, equipment and all other assets that have useful lives of more than one year. Capital investments include the equipment and supplies necessary to analyze, maintain and repair buses and other vehicles, and major component replacements including engines, transmissions, and others. Capital investments are notable during a startup phase of any program, and thereafter reoccur on a regular, planned basis based upon useful life or sometimes upon new technologies or catastrophic loss.

There are a variety of capital grant opportunities offered through the FTA. However, it's important to note that when including Federal funds for capital purchases, it is wise to consider the Federal "interest" in those purchases. The FTA maintains a financial stake in all shared capital purchases, which therefore must be maintained for their "useful life" based upon FTA metrics. Because the FTA maintains a stake in purchases, each capital purchase should be evaluated for the use of federal, local or other funding sources to best meet needs.

- FTA Section 5339: Formula program that finances capital projects to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities.
- FTA Section 5309: Financial assistance from Section 5309 of the Federal Transit Act. This program provides capital assistance for three primary activities:
    - New and replacement buses and facilities,
    - Modernization of existing fixed guideway systems, and
    - New fixed guideway systems.
- FTA Section 5311: Funding for rural areas of less than 50,000. Allows for capital purchases.

VEHICLES

Transit vehicles come in all shapes and sizes, based upon their application, capacities, fuel options, technologies, and the types of roads they travel. Depending upon the size of the vehicle, their useful life varies. Decisions on vehicle type are key to providing the right size of service and dictate a wide variety of investment decisions.

The term rolling stock refers to all vehicles needed for the operation of a transit system, including service vehicles (**revenue vehicles**) and support vehicles (**non-revenue vehicles**). Vehicle selection is critical to the overall financial health of the program, public perception, and passenger comfort.

FLEET SIZE

A transit fleet is made up of all rolling stock. For revenue vehicles, having a minimum **spare ratio** is necessary so that maintenance and breakdowns don't delay on-time performance, and recommendations range from 20 to 30 percent. In a small fleet, the ratio may be higher. A spare ratio is needed for each type of revenue vehicle whether it is commuter or **paratransit**. The purchase of spare vehicles is an allowable capital expense under FTA grants, but the FTA is specific on the number of spare vehicles it will fund.

REVENUE VEHICLE CONSIDERATIONS

Vehicle choice is an important component in the success of a transit system as there are impacts from maintenance considerations to capacity. It is necessary to identify the specific type of vehicles to best meet the needs of each type of service being offered. For example, choices for highway commuter routes will differ significantly from paratransit service vehicles, both in the type of vehicles chosen and the amenities offered. There are several primary criteria to consider:

- Passenger seating size and configuration: Vehicles can be manufactured to very exact specifications to meet expected maximum capacity. Perimeter seating may be a choice for some vehicles, but often times passenger prefer forward-facing seats, configured two per side of the aisle.
- Safety: Vehicles may require special safety-related features including lighting, hazard warning/detection, construction standards, and other.
- Power and drive train options: Transit buses can be powered by a variety of sources, and choices may be dependent on operating environment, a variety of power plant options including gasoline, diesel, hybrid combinations with electricity, natural gas, or other developing technologies.
- Duty/life cycle: Duty and life cycle considerations are a determinant in the purchasing of vehicles. Duty cycle includes repetitive usage, where life cycle is a consideration of the useful life of the vehicle (for replacement or rebuilding options).
- Operational limitations: Maneuverability, clearances, road conditions, and other factors may be a determining factor on bus selection, from primarily highway use where speed is an issue, to local services where speed is less of an issue but maneuvering may be conditional, to rural conditions where the duty-type is a prime consideration.

- Low versus high floor: Preferable access is obtained with "low-floor" vehicles, which often times are very close to curb height or are equipped with a mechanical "kneeling" feature. This eliminates having to step up into or down out of the vehicle, and make for easier boarding for those with mobility aids or disabilities, usually using a ramp. Conversely, high floor vehicles require two or three steps up into or down out of the vehicle, and usually require a "lift" to provide for those that require boarding assistance.
- Floors and windows: Having floors that are made of "non-slip" materials is an important safety feature. Windows that are large allow passengers the ability to see, a component of security.
- Ride: Comfortable rides are associated with vehicle suspension components. A wide variety of choices can be made, but having air-suspension components offer the best ride, as compared with vehicles with spring mounted suspension components in the rear.

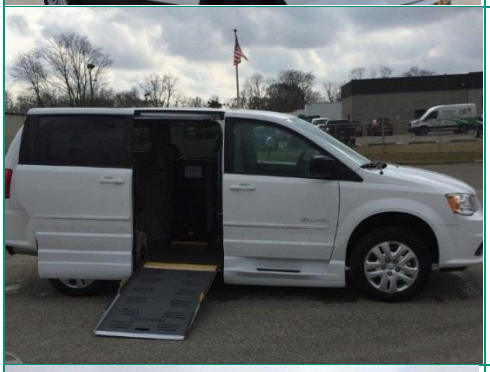
Other important considerations for vehicles include:

- Fareboxes: A variety of technologies are available to safely collect cash, fare media, and electronic fares. Some manual and some electronic, these fareboxes may also require associated tools and technologies at a maintenance/storage facility to transfer the any script and data to a central collection system, which may be supported by computer technology.
- Automated Passenger Counters: This technology senses boardings and deboardings as they occur on the bus. This technology may require additional supporting technology for data transfer.
- Cameras and other surveillance equipment: As safety and security technology, these additions to vehicles provide stored and live video which may also require additional supporting technology.
- Communications equipment: A variety of communications equipment, including central communications, internal and external bus annunciation, and emergency communications, is available.

REVENUE VEHICLE CATEGORIES

Revenue vehicle choices are presented in Figure 3.1.

Figure 3.1 Revenue vehicle categories

	Vehicle Type	Passengers	Approximate cost*	Useful life
	Sedans and SUVs	5-7	$50,000	4 years or 100,000 miles
	Vans	12-15	$60,000	4 years or 100,000 miles
	Cut-aways (body on chassis)	11-14	$85,000	7 years or 200,000 miles
	Small size buses (less than 30 foot)	Up to 23	$150,000	7 years or 200,000 miles

**Approximate cost includes branding, fare box and security items to get the vehicle ready for service. Estimations are based on minimal accessories. Hybrid electric also not included.*

	Vehicle Type	Passengers	Approximate cost*	Useful life
	Medium size buses (30-35 foot)	Up to 35	$300,000	12 years or 500,000 miles
	Large size buses (40-45 foot)	Up to 43	$350,000	12 years or 500,000 miles
	Articulated buses (60-65 foot)	Up to 57	$980,000	12 years or 500,000 miles
	Commuter (over-the-road) buses (55 foot)	Up to 55	$700,000	12 years or 500,000 miles

**Approximate cost includes branding, fare box and security items to get the vehicle ready for service. Estimations are based on minimal accessories. Hybrid electric also not included.*

ADA Components – Fleet

The **Americans with Disabilities Act (ADA)** requires that parallel services be offered for those unable to use fixed-route bus systems. Equipping a fleet with ADA components can increase independence for people with disabilities and reduce the need to provide a complimentary paratransit system.

At a most basic level, revenue vehicles should provide wheelchair and mobility device access ramps or lifts. These technologies allow for boarding and deboarding for those with limited mobility. Ramps and lifts are permanently installed by the manufacturer, and dedicated space within the seating area is required for device securement. Some vehicles may also have the ability to "kneel," meaning the floor can be lowered at a stop to allow for a smaller step into or out of the bus.

Additionally, there are capital investments a system can make to ease use of the system by people with disabilities. Visual reader boards on the interior and exterior of a bus alert hearing impaired people to upcoming stops. Likewise, bus stops should be called out by drivers for those with visual impairments. Auto-annunciators can use GPS location information to automatically announce stops as the bus approaches. These systems tend be more clear than **operators** announcing stops.

Passenger Amenities

No matter what type of vehicle is chosen, there are a variety of other features to consider in customizing that vehicle in order to make it attractive to riders.

- Bicycle racks: Usually two-, but sometimes three-position racks are mounted on the front bumper of the vehicle providing options for bicycle users to travel with bicycles without bringing them on-board.
- Luggage and storage components: The ability for passengers to bring personal items on-board is an important consideration. Loading bags and people can slow routes down significantly, so establishing rules and thoughtful storage configurations based on service type is necessary.
- Wi-Fi: Wi-Fi is a popular passenger amenity that may be particularly important to attract riders on commuter routes, allowing time on the bus to become more productive.

Vehicle Maintenance

Excellent vehicle maintenance can greatly increase the success of a transit program by ensuring the long life of vehicles limiting service disruptions. A Federal requirement is to maintain all assets in a **State of Good Repair**.

Efforts to maintain equipment and facilities requires a programmatic approach sufficient to operate at a full level of performance.

This means the asset:

- Is able to perform its designed function.
- Does not pose a known unacceptable safety risk, and
- Has met or recovered lifecycle investments.

Most vehicle maintenance programs address process in three ways:

- Preventive Maintenance: Vehicles are regularly inspected and maintained according to manufacturer specifications
- Corrective Maintenance: Vehicles are repaired in order to maintain a safe operating condition based upon component wear and/or failure
- Emergency Maintenance: Vehicles are repaired based upon accident or other unexpected event.

Useful Life is determined by the FTA. It is the expected lifecycle of a capital asset for a particular operating environment, or the acceptable period of use in service for a particular transit provider's operating environment.[31]

NON-REVENUE VEHICLES

Depending upon size of the revenue vehicle fleet and operations needs, many transit systems also acquire and maintain non-revenue vehicles, all designed to support operations. Those vehicles may be used to provide adequate service supervision, provide for emergency response, and/or provide transportation to facilitate driving substitutions or other service needs. Except for maintenance support, most operations non-revenue vehicles are sedans or vans. Maintenance support vehicles can range from light duty pick-up trucks to other heavier duty applications including tow trucks.

OPERATING AND STORAGE FACILITIES

Facilities for providing administration, operating functions, maintenance, and storage have particular needs that can affect costs of service. Generally speaking, any facility must include appropriate service and support vehicle parking, employee parking, on-site or remote administration, and a multitude of other lesser decisions, from maintenance needs including fueling, washing and cleaning, to education and training rooms, security, dispatch, operator break areas and other needs. Location of such facilities is important as it can increase access for customers and reduce **deadhead** miles for vehicles. It may be ideal to have both storage and operations based out of one location although not necessary.

[31] https://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary

OPERATIONS FACILITIES

Operations facilities are critical to a successful service as they provide the support infrastructure for operations, including administration, dispatch, customer service, education/training, and vehicle maintenance and service. Although more convenient to be co-located, some functions may be split depending upon a number of factors. Operating and administration are often housed together to provide the continuity of service. Maintenance functions support operations, and provide for the necessary routine, corrective, and emergency needs that may arise. Indoor maintenance facilities are preferable. Additional facilities for fueling, washing, and other administrative or operational needs may need to be considered. Storage and maintenance often go hand-in-hand.

STORAGE CONSIDERATIONS

FTA requires any Federally funded vehicles to be kept in a secure, fenced location. Depending upon the size of services offered, the type of storage and operating facilities may vary greatly, affecting a variety of decisions on location and type, in-house or contracted services, and climate-related issues. Storage facilities can also affect the wear and tear on rolling stock. Roof covers, especially in sunny climates, can increase vehicle life.

Figure 3.2 Indoor storage

NAIPTA indoor storage facility protects from weather, allows operators to pre-check equipment out of weather conditions, and allows for rapid deployment in snow.

Figure 3.3 Outdoor covered storage

Cottonwood Area Transit uses roof covers to protect vehicles from harsh sun.

Figure 3.4 Multipurpose facility

Sierra Vista Transit Center has a combined administrative and customer service facility.

BUS STOPS/HUBS

Siting and amenities of bus stops and hubs are an important ridership attractor, reputation builder, and customer service consideration. The range of infrastructure needs to accommodate the boarding and **alighting** of passengers is varied, from simple signage, benches, and/or shelters, to transit hubs which include parking for multiple vehicles and potentially park-and-ride options.

In the initial siting of each bus stop it is important to consider not only the important adjacent origins and destinations but also the particular siting of the stop in relationship to an intersection. Factors to consider are the route speed, visibility of the intersection for other drivers and for the reentry of the bus into traffic, and the need for a bus pullout or in-lane stop. From a transit perspective, there are three main types of bus stop locations: far-side stops, mid-block stops and near-side stops. Far-side stops are located immediately after intersections, in the direction of bus travel. Near-side stops are located prior to intersection in the direction of bus travel, and mid-block stops are located at least 400 feet away from intersections.

Figure 3.5 Bus stop location table[32]

Far-Side	
Advantages	**Disadvantages**
• Minimize conflicts between right-turning vehicles and buses. • Provides additional right turn capacity by making curb lane available for traffic. • Minimizes sight distance problems on approaches to intersection. • Encourages pedestrians to cross behind the bus. • Requires shorter deceleration distances for buses. • Gaps in traffic flow are created for buses re-entering the flow of traffic at signalized intersections.	• Intersections may be blocked during peak periods by queuing buses. • Sight distance may be obscured for crossing vehicles. • Increases sight distance problems for crossing pedestrians. • Stopping far-side after stopping for a red light interferes with bus operations and all traffic in general. • May increase number of rear-end accidents since drivers do not expect buses to stop again after stopping at a red light.
Mid-Block	
Advantages	**Disadvantages**
• Minimizes sight distance problems for vehicles and pedestrians. • Passenger waiting areas experience less pedestrian congestion.	• Requires additional distance for no-parking restrictions. • Encourages patrons to cross street at midblock. • Increases walking distance for patrons crossing at intersections.
Near-Side	
Advantages	**Disadvantages**
• Minimizes interferences when traffic is heavy on the far side of the intersection. • Passengers access buses closest to crosswalk. • Intersection available to assist in pulling away from curb. • No double stopping. • Buses can serve passengers while stopped at a red light. • Provides driver with opportunity to look for oncoming traffic including other buses with potential passengers.	• Conflicts with right turning vehicles are increased. • Stopped buses may obscure curbside traffic control devices and crossing pedestrians. • Sight distance is obscured for crossing vehicles stopped to the right of the bus. • The through lane may be blocked during peak periods by queuing buses. • Increases sight distance problems for crossing pedestrians.

[32] NAIPTA Draft Transit Guidelines prepared by Woodson Engineering.

It can also be advantageous from a timing perspective to stop in the lane, blocking traffic while boarding and **alighting** occur. Bus pullouts can make it difficult for a driver to reenter traffic. To be balanced with these preferences are roadway speeds, traffic counts, and safety concerns, especially stemming from view blocked by a bus.

Stop Amenities

In general, there is a hierarchy in the types of amenities offered at a stop. At a minimum, all bus stops must comply with Section 810.2 of DOT standards which requires that new, altered or relocated bus stops must have a firm, stable surface with a clear width of 96 inches measured perpendicular to curb or roadway edge, and a clear width of 60 inches measured parallel to the roadway and should include a sign. Consideration where amenities are placed is also important so as not to block the travel path or landing area of the bus.

Figure 3.6 Bus stop amenities

	Type	Description	Approximate cost
	Sign	A simple sign and curb painting marking a bus stop.	$1,000
	Bench	A seat on which customers can rest is present at a bus stop.	$3,000 - $4,000

Figure 3.6 Bus stop amenities (continued)

	Type	Description	Approximate cost
	Shelter	Riders have an opportunity to take shelter from the elements. These can be the mostly costly stops both in terms of vertical infrastructure and right of way needed to place a shelter.	$7,000 - $10,000
	Hub	Such a stop may accommodate multiple modes of travel at one time and have the highest levels of accommodations. Prices vary widely based on right of way access, property acquisition and vertical infrastructure provided.	$40,000 - $75,000+

For each stop there are several other amenities to consider bases on available space, usage and funding.

- Signage: What kind of signage does the stop require? A range of signage options may include a basic bus stop sign, or a sign announcing the location of a stop, to providing route information, maps, and other pertinent materials. This may include electronic information or braille.
- Lighting: Does the location require nighttime lighting for visibility and security? Safety and the perception of safety affect ridership. The city of Winslow is a dark sky city, and a variety of lighting styles can be considered. Warm-tone lights can protect dark skies and allow for riders to have strong night vision beyond the immediately lit waiting area. Lighting also can help the operator see riders at the stop. Riders often use cell phones to flash drivers when lighting is not available.
- Bike racks: Will the stop by used by those riding bikes and can they feel confident in their safe storage? Bike racks can be a simple secure object to lock a bike to or range to locked and fully enclosed storage containers.
- Trash cans: Is there enough ridership and room to accommodate a trash can? Providing trash cans can reduce bus stop maintenance as riders have a place to dispose of trash. Clean stops also increase the public image of the entire transit system.

- Other: Does the stop require video surveillance, or ability to accommodate advertising or other signage?

OTHER TRANSIT INVESTMENT OPTIONS

TECHNOLOGY APPLICATIONS

Technology applications in public transportation support a variety of needs. Some of the more common applications are:

- Communications: Communications associated with a transit system support a variety of needs including informing the public about service information and schedules through real-time web- and app-based information. Communications equipment and services are also important internal communications between drivers, dispatchers, and security personnel.
- Brokerage and dispatching tools: Depending upon service solutions, a variety of support applications may be required, from the most basic dispatching of employees to sophisticated brokerage applications that allow for managing service in real time.
- Timing and signal prioritization: In corridors where traffic and congestion may exist, applying traffic technology applications that allow buses to move with fewer delays and restrictions may be considered.

There are some additional infrastructure investments that may be considered as part of any transit service that are considered "capital investments" which support bus or stop location applications identified herein.

- Fare collection systems (manual or electronic fareboxes): These systems require some level of additional infrastructure support to be utilized, including computer and/or hardware collection systems and human resources.
- Data collection systems (automatic passenger counters): These systems require additional computer support and human resources to manage.
- Security monitoring systems (stop, platform, and bus camera/recording equipment): These systems require ongoing support to manage and monitor activities.
- Computers, tools and equipment (office and maintenance facility support): From personnel to fleet management, electronic computer support and human resources are necessary to successful operations.
- Vehicle parts (spare engines/transmissions, or other major replacement parts): Often, major inventory accompanies minor inventory to support maintenance and operations.

Depending upon the type of services offered, these types of systems can be modified to meet the offering.

STREETSCAPE AND ROADWAY INFRASTRUCTURE

Roadway infrastructure is key to providing services, as most all people who access transit do so by walking or biking to it. There are street improvements which allow for transit to move quickly through a corridor and for riders to access transit. There are a wide variety of infrastructure investments that should be evaluated: sidewalks, pedestrian crossings, and bike lanes all help users access transit. Stop signs, speed bumps, curb bumpouts, road maintenance, and bus pullouts all affect the speed of the system.

PROPERTY ACQUISITIONS AND ENVIRONMENTAL IMPACTS

Any investment in property or infrastructure on property, no matter ownership, may require a variety of legal and compliance steps, depending upon the type of funding used to complete the investments.

USING LOCAL FUNDS

Investments made with only local funds must follow local and/or county legal process to complete. Identifying right-of-way (ROW), easements, ownership issues, and local ordinance compliance are important considerations for any considered investments.

Depending upon the type of investment, additional considerations may be required including accessibility, encroachment, visibility, and/or other considerations, but do not fall outside of normal process in making similar investments. Depending upon the size of the investment, inclusion in a local Transportation Improvement Plan (TIP) may be required.

USING FEDERAL FUNDS

If there is a determination to use Federal funds (FTA, **FHWA**, or other potential sources) for part of a property, infrastructure investment, or development, this changes the dynamics of legal and compliance steps. Federal involvement will likely mean the addition of several steps that are required to justify the Federal investment.

Most importantly, recognize that a Federal investment will mean that there will remain a Federal "stake" in the investment over its useful life. That is an important consideration in using Federal funds. For property acquisition and for infrastructure placement, the Federal government becomes a "lien-holder" in the investment. Simply put, that means that any acquisition, improvements, changes, liquidation, or other action involved with the property requires Federal consultation/approval.

Along with that, it also means that several steps must be taken ahead of any final investment to guarantee the Federal compliance standards supporting the investment, primarily determination of fair market value and environmental impacts.

- Fair market value: In order to make an investment in real property, the value of the property must be determined to be at a "fair" price to identify the Federal share. This valuation process is defined in Federal guidance.
- Environmental: Some level of detailed environmental assessment will be required, the first of which would be an Environmental Overview to determine any fatal flaws and establish the next steps in environmental evaluation that must be completed to ensure that Federal investment is feasible. These efforts are in tiers, depending upon many factors, and are also defined in Federal guidance, the National Environmental Policy Act (NEPA). As many as 18 different categories of preliminary assessment may be required. From that, potential "categorical exclusions" may be applied, or more detailed "environmental impact assessments" or "environmental impact statements" may be required before Federal investment can be made.

Several other Federal compliance efforts may be required to justify Federal investment.

Most environmental and other compliance requirements are administered through the Arizona Department of Transportation. See more at:
http://azdot.gov/planning/TransitProgramsandGrants/5311-rural-public-transportation-program/resources

PROCUREMENT

No different from the processes around property acquisition and the environment, the process of procurement of capital (and/or services) is bound by many regulations and procedures that may be different based upon the nature of funding.

USING LOCAL FUNDS

Procurement procedures using local funds are bound by local regulation. City and/or County process would govern such purchases.

USING FEDERAL FUNDS

Procurement process involving the expenditure of Federal funds requires management of process merging local regulation with Federal requirements, where Federal requirements must be met no matter the local regulation. Expending Federal funds in the purchase of vehicles, facilities, equipment, supplies, or services requires significant human resources to maintain compliance. All procurement process is defined in DOT/FTA publications and administered through the Arizona Department of Transportation.

See more at:
http://azdot.gov/docs/defaultsource/planning/capitalprocurementhandbook.pdf?sfvrsn=2

RESOURCES

There are a variety of other resources that provide procurement guidance, including the **Rural Transportation Assistance Program (RTAP)** and the **Transportation Cooperative Research Program (TCRP)**.

CHAPTER SUMMARY

Capital investments are important to running a transit system, from rolling stock to horizontal improvements at bus stops to technology. Capital investments can be planned on a regular reoccurring basis but costs can vary greatly year to year. Capital investments depend heavily upon what type of service is being offered and consideration for the appropriate investment strategies addressing property acquisition and the environment including:

- Vehicles,
- Storage and operating facilities, and
- Infrastructure needs.

Chapter 9: Recommendation provides Capital recommendations for service alternatives.

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CHAPTER 4 | SERVICE ALTERNATIVES

PURPOSE

Transit service can be provided in several ways. Different solutions have different pros and cons that need to be evaluated based on the goals of providing service and limited budgets. This chapter evaluates methods of delivery for providing commuter, local, and paratransit services. These alternatives are shown as standalone options.

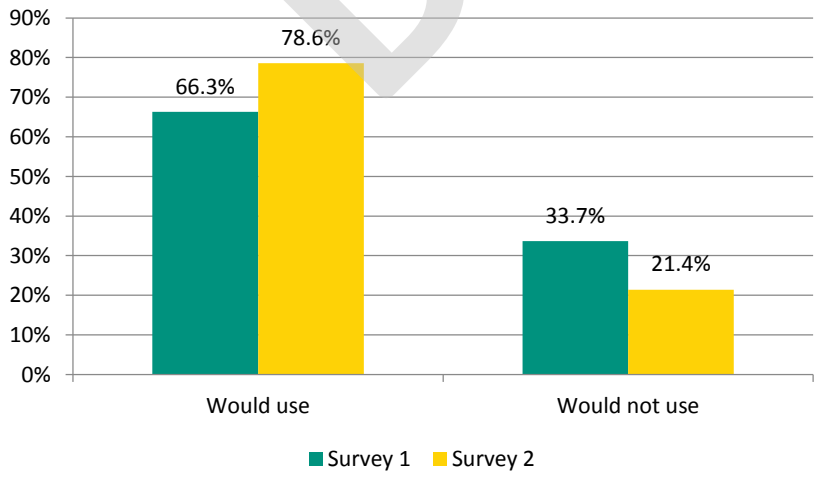
Cost Estimates:
The following cost estimates for each service alternative are based on averages from comparable 5311 providers in Arizona. They are illustrative of costs for operations and administration only. Operating and administration costs are determined though an average cost per service hour for each of the commuter, local, or paratransit services in peer programs. Estimations do not include capital costs. See full Peer Cities Comparison in Chapter 8.

COMMUTER TRANSPORTATION SERVICES

The Interstate 40 Corridor from Winslow eastbound to Holbrook, and westbound to Flagstaff, is a key transportation corridor within Arizona providing auto, truck, and truck-related transportation and commerce throughout the northern half of the state. It provides key connections for necessary services between these three cities and points/destinations beyond.

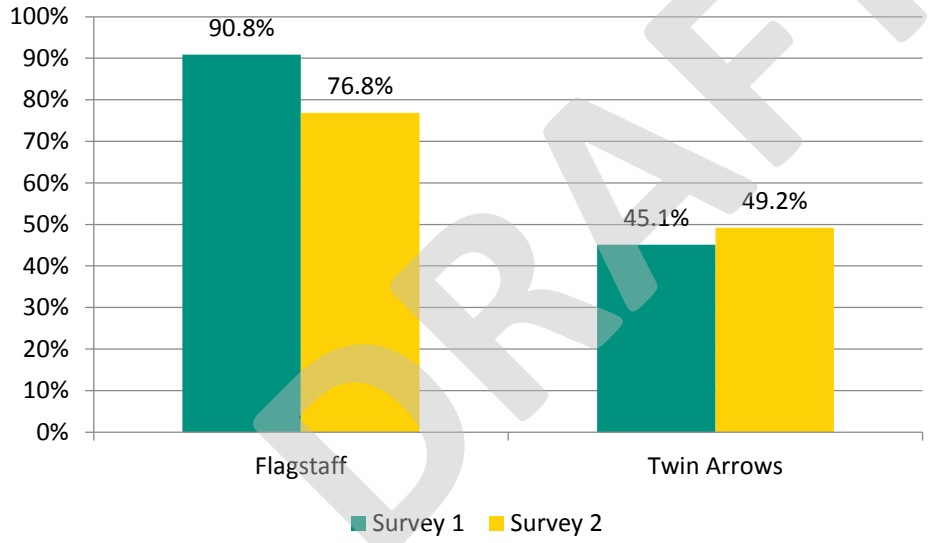
In this corridor, Winslow is the smaller of the three communities, while Flagstaff is the largest and Holbrook the second largest. Because of Winslow's geographic location between Holbrook and Flagstaff, and Winslow's size, transportation connections to the east and west are important for Winslow residents and businesses, and conversely, for those with a Winslow destination for employment or other reasons.

Figure 4.1 Commuter service demand



Flagstaff represents important destinations for north central Arizona residents, from education, healthcare, and shopping to employment and recreational options. The U.S. Census estimates there are about 1,000 people commuting daily along I-40 from 25 or more miles away. In Flagstaff, the Mountain Line Bus System provides service throughout the city, and connection to that system will enable Winslow riders to move freely throughout the community. Factors affecting demand for commuter ridership to Flagstaff include affordability. Flagstaff's housing market far exceeds the affordability index national standards, meaning many people cannot afford homeownership. ECoNA has determined that new employees in Flagstaff will not stay in the area if they are unable to find housing within two years. Winslow may be able to capture this population since the median house value is $83,800 (compared with $267,400 in Flagstaff).[33] With regular commuter service, people may be able to attain homeownership that is affordable in Winslow. Another important stop to consider along the route is the Twin Arrows Casino Resort. The casino employs about 400 Winslow residents. The challenge to providing commuter service to Twin Arrows is irregular work hours and schedules.

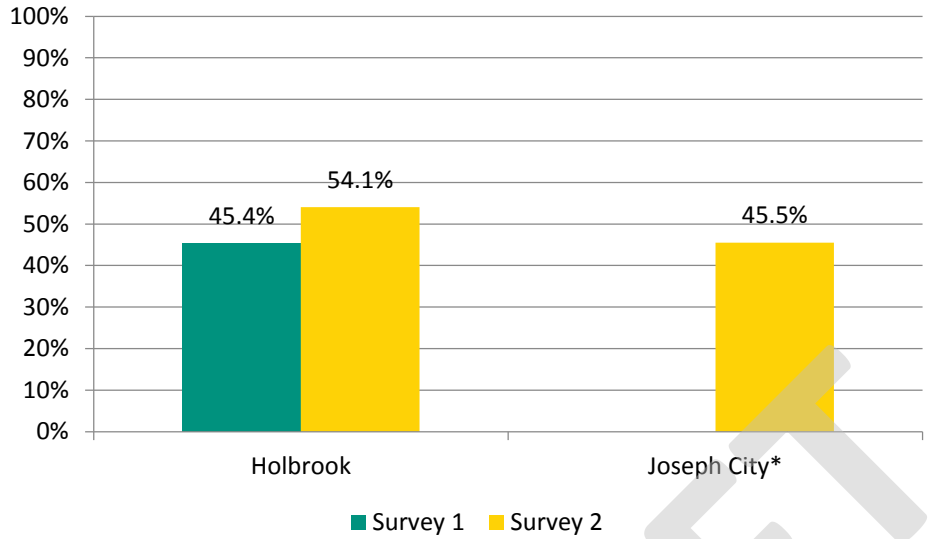
Figure 4.2 Demand for service to Flagstaff/Twin Arrows



Holbrook, as the Navajo County seat, represents an important location for accessing government services and provides its own host of employment, shopping, and transit connections. The White Mountain Connection provides service to Holbrook and connections to Pinetop-Lakeside, Show Low, Snowflake, and Taylor. Holbrook is also a stop on the Greyhound bus system with destinations across Arizona and the U.S. The U.S. Census estimates that there are about 150 people who commute from Holbrook to Winslow and an additional 350 Winslow residents who commute more than 25 miles to the east along I-40.

[33] 2011-2015 American Community Survey 5-Year Estimates.

Figure 4.3 Demand for service to Joseph City/Holbrook



**Note: Joseph City was not included as a response option in Survey 1.*

Along with these municipalities, the I-40 corridor passes through (from east to west) Navajo County, Navajo Tribal Land, and Coconino County. Within those jurisdictions lie National Forest and Bureau of Land Management areas. A major destination between Winslow and Holbrook is Joseph City and the Cholla Power Plant. Twin Arrows Casino and Resort is a major destination that lies between Winslow and Flagstaff.

As midpoint in this corridor, Winslow can benefit from connections both to the east and west, including connections with Hopi and Navajo tribal communities.

CONNECTIONS TO OTHER TRANSIT SERVICES

The corridor currently has limited public transportation options. A variety of private or specialized transportation services do exist, but reasonable connections between points of interest for the general public are limited. Greyhound and **Amtrak** are not routine and regular commuter solutions. Private specialized transportation solutions (i.e., **Non-Emergency Medical Transportation**, private shuttle services to metropolitan areas, and private employment shuttles for the Arizona Prison system or **BNSF** railway employees) tend to be higher cost or serve specific clientele. NAIPTA provides a vanpool program for groups of four or more people with a similar commute schedule and origin or destination in Coconino County. Historically, Navajo Transit has also operated along the I-40 corridor, but does not do so currently.

Regular, dependable, and affordable services, offered at convenient times, would benefit the residents of Winslow and allow people to live and work in different cities.

Transportation along the I-40 corridor would make it possible to connect with two neighboring public transportation programs. Routes which align with these services will enable riders to move around Flagstaff on the Mountain Line system or through major towns in the White Mountains on the White Mountain Connection. Additionally, Hopi Senom Transit runs from Keams Canyon to Winslow twice a day, providing connections to communities north of Winslow.

OPTIONS FOR PROVIDING COMMUTER SERVICE

The group of largest potential riders along the corridor are regular commuters. If morning and evening services are created to provide transportation options, that will enable more job choice and financial freedom.

Commuter vs. Intercity
Commuter services are funded by ADOT under the Section 5311 (f) Intercity Bus Program. While such services are referred to as "commuter" routes within this document, the terminology used with ADOT regarding federal funding is "intercity."

Commuter: Winslow-Flagstaff

Results from the utility bill survey conducted in March 2017 show 60 percent of respondents would be interested in regional service to Flagstaff and 30 percent would be interested in services to Twin Arrows. Weekday service was the most desired travel time, confirming the desire for commuter service.

The map in Figure 4.2 outlines a proposed commuter bus service between Flagstaff and Winslow with a stop at Twin Arrows. The proposed service is provided with one bus running once in the morning and once in the evening offering one trip in each direction. The **run time** of one-way service is 58 minutes. The proposed service is estimated to cost approximately $66,000 per year assuming a $59/hour cost, running weekdays only.

A key component of this service is connecting to the Mountain Line system in Flagstaff at the Mall Connection Center (MCC). There are three Mountain Line routes that serve the MCC daily, all with a terminus in Downtown Flagstaff. In order to allow sufficient time for commuters to make it downtown with time to walk to their final destination by 8 a.m., connections would need to be made at the MCC at 7:15 a.m. Additionally, the service proposes a drop off at Twin Arrows Casino, to drop riders at the Casino entrance take six minutes from the roundabout at the highway exit. While this does not seem long, to through passengers, six minutes can feel like a lifetime. Coordinating with Twin Arrows to pick up passengers at the roundabout would save time, money, and make the route more appealing.

Figure 4.4 Winslow-Flagstaff commuter services[34]

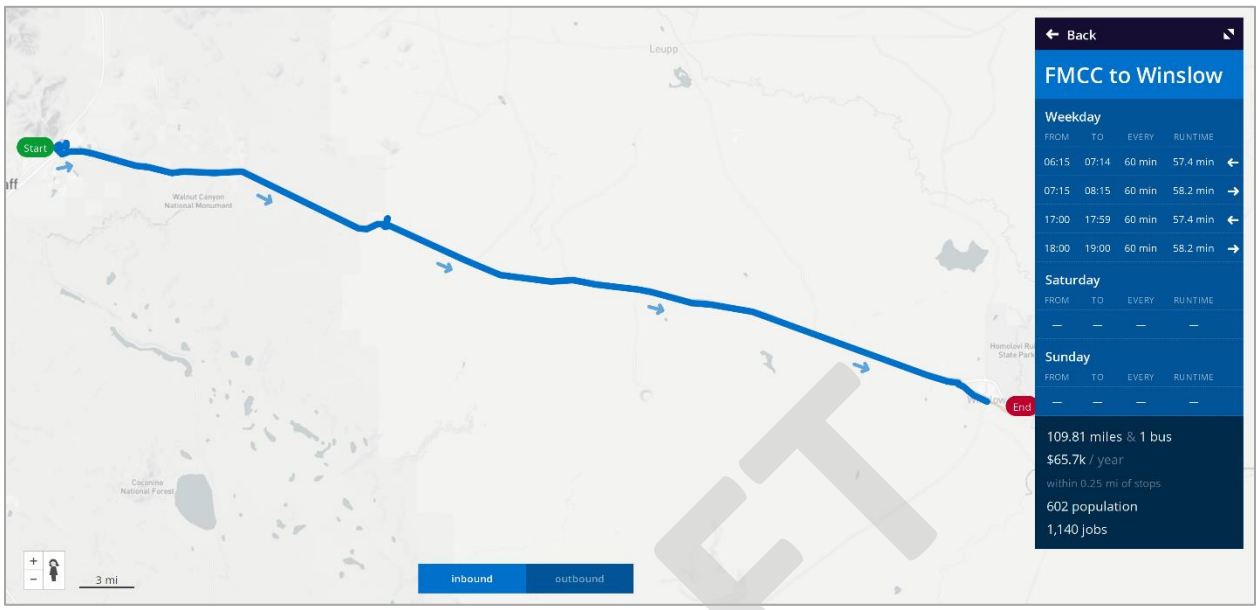


Figure 4.5 Winslow-Flagstaff route run time map

[34] Remix: "A Planning Platform for Public Transit" (www.remix.com)

Figure 4.6 Winslow-Flagstaff run times by segment

Segment Start		Segment End		Run time	Miles
1	Flagstaff Mall Connection Center	2	Flagstaff I-40 Interchange 201	4:45	1.6
2	Flagstaff I-40 Interchange 201	3	Twin Arrows I-40 Interchange 219	15:45	17.9
3	Twin Arrows I-40 Interchange 219	4	Twin Arrows roundabout	2:45	1.2
4	Twin Arrows roundabout	5	Twin Arrows Casino Resort	3:35	1.2
4	Twin Arrows roundabout	6	Twin Arrows I-40 Interchange 219	1:15	0.3
6	Twin Arrows I-40 Interchange 219	7	Hwy 99 junction I-40 Interchange 245	22:25	26.2
7	Hwy 99 junction I-40 Interchange 245	8	Winslow I-40 Interchange 252	6:25	6.3

Figure 4.7 Proposed Winslow-Flagstaff schedule

	Morning Commute		Evening Commute	
Location	Arrival time	Departure time	Arrival time	Departure time
Winslow/La Posada		6:15 a.m.		5:00 p.m.
Twin Arrows roundabout	6:50 a.m.	6:50 a.m.	5:35 p.m.	5:35 p.m.
Flagstaff Mall Connection Center	7:14 a.m.	7:15 a.m.	5:58 p.m.	6:00 p.m.
Twin Arrows roundabout	7:40 a.m.	7:40 a.m.	6:25 p.m.	6:25 p.m.
Winslow/La Posada	8:15 a.m.		7:00 p.m.	

Commuter: Winslow-Holbrook

The utility bill survey indicated another 30.1 percent of respondents would want transit to go to Holbrook with weekdays also being the most popular time for travel. In the second survey, Joseph City was the location most identified for having daily commuter ridership. Unlike service to Flagstaff, service to Winslow tends to provide access to school and government services, making a midday run an important consideration. The following map outlines proposed commuter fixed route service between Winslow and Holbrook. The service would run with one bus providing one trip each direction in the morning, midday, and evening. The one-way run time is 50 minutes. Costs are estimated at $75,000 per year at an estimated $59/hour.

Important considerations for this service are transfers to and from the White Mountain Connection (WMC) that occur at 7:40 a.m., 12:35 p.m., and 4:35 p.m. inbound to Holbrook, and 8:25 a.m., 1:10 p.m., and 5:10 p.m. outbound to Show Low at the Navajo County Complex. Connecting with the inbound at the County complex would allow for connections to NPC though the WMC. Exiting the highway to provide service to Joseph City takes six minutes; dropping at the power plant itself would take longer and so partnering with the plan to pick up employees in Joseph City would be needed.

Figure 4.8 Winslow-Holbrook Commuter service[35]

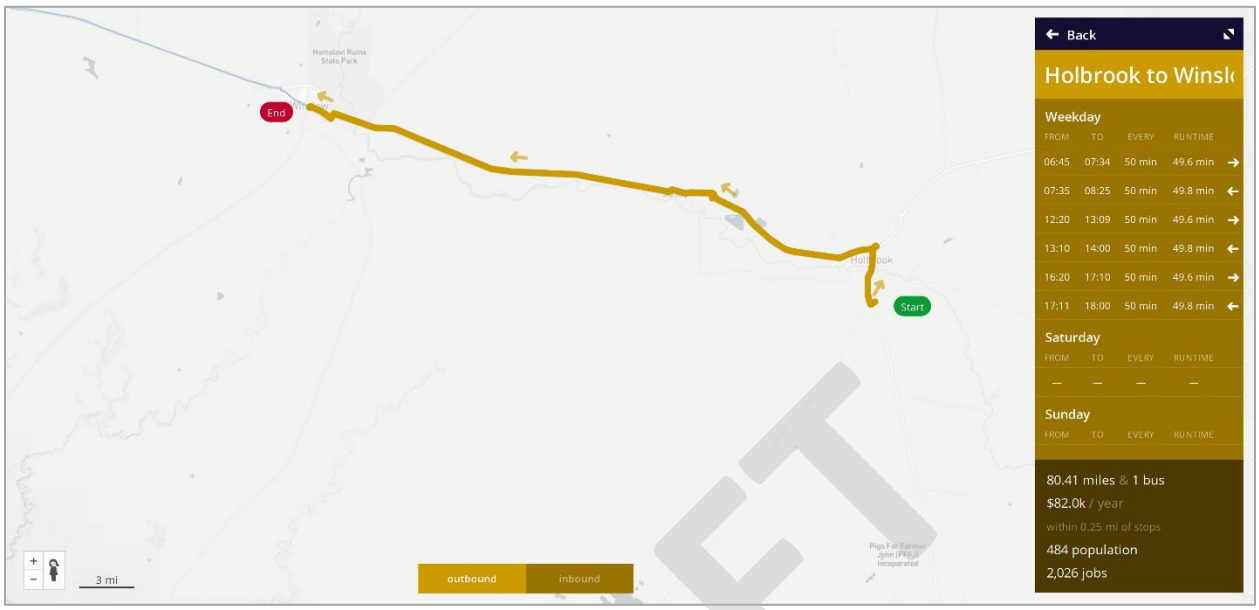
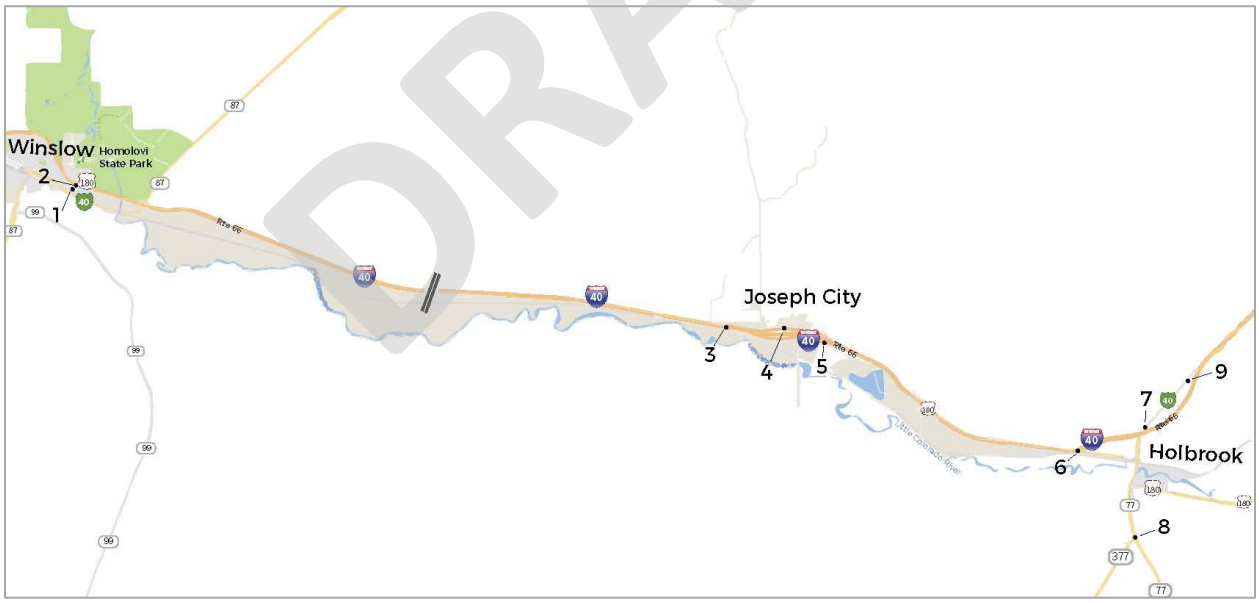


Figure 4.9 Winslow-Holbrook route run time map



[35] Remix: "A Planning Platform for Public Transit" (www.remix.com)

Figure 4.10 Winslow-Holbrook run times by segment

Segment Start		Segment End		Run time	Miles
1	Flying J	2	I-40 on-ramp (Winslow)	1:00	0.1
2	I-40 on-ramp (Winslow)	3	Joseph City I-40 Interchange 274	15:40	18.18
3	Joseph City I-40 Interchange 274	4	Main St/Westover St	3:25	1.6
4	Main St/Westover St	5	Joseph City I-40 Interchange 277	3:08	0.6
4	Joseph City I-40 Interchange 277	6	Holbrook Hopi Dr I-40 Interchange 285	7:00	9.0
6	Holbrook Hopi Dr I-40 Interchange 285	7	Holbrook Navajo Dr I-40 Interchange 286	2:00	1.7
7	Holbrook Navajo Dr I-40 Interchange 286	8	Navajo County Complex	8:00	3.6
7	Holbrook Navajo Dr I-40 Interchange 286	9	Northland Pioneer College Painted Desert Campus	2:47	1.5

Figure 4.11 Proposed Winslow-Holbrook schedule

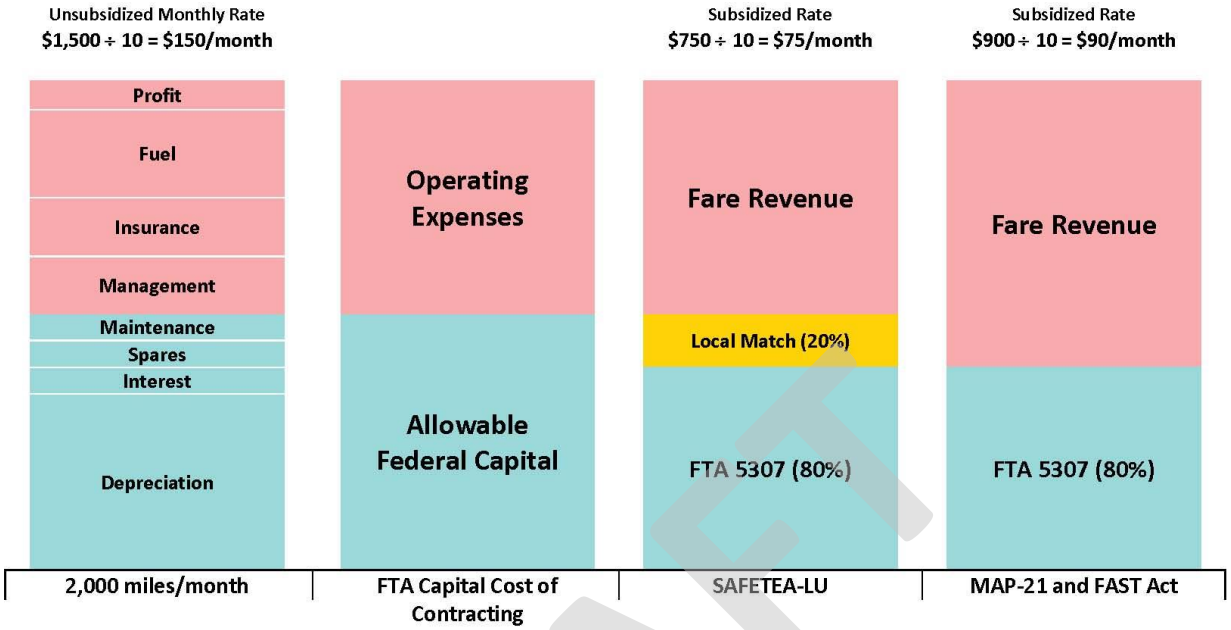
Location	Morning Commute		Midday Commute		Evening Commute	
	Arrival Time	Departure Time	Arrival Time	Departure Time	Arrival Time	Departure Time
Winslow/La Posada		6:45 a.m.		12:20 p.m.		4:20 p.m.
Joseph City	7:09 a.m.	7:09 a.m.	12:44 p.m.	12:44 p.m.	4:44 p.m.	4:44 p.m.
Holbrook/County Complex	7:35 a.m.	7:35 a.m.	1:10 p.m.	1:10 p.m.	5:10 p.m.	5:10 p.m.
Joseph City	8:00 a.m.	8:00 a.m.	1:35 p.m.	1:35 p.m.	5:35 p.m.	5:35 p.m.
Winslow/La Posada	8:25 a.m.		2:00 p.m.		6:00 p.m.	

Vanpool Program

Vanpool programs can provide cost-effective, flexible schedule commuter services at a low cost to communities. Vanpools are groups of riders with similar commutes who choose to lease a vehicle and "pool" together. Unlike a carpool, costs are not negotiated among participants, but rather the cost of a monthly vehicle lease and fuel are shared by the group. The vanpool program includes all scheduled and unscheduled maintenance/service/repairs, 24-hour roadside assistance/towing, loaner vehicle (if needed), commercial insurance with zero deductible, and can offer a guaranteed ride home program. Additionally, drivers may use the vehicle during the day. Unlike other Federally funded transportation programs, vanpools may count rider fares as their **local match** for the program, meaning that while the City could add a subsidy to increase affordability, no local dollars are required.

As an example, NAIPTA offers its Vanpool Program to anyone with a commute with an origin or destination in Coconino County. A typical vanpool between Winslow and Flagstaff costs approximately $1,000 including gas per month. NAIPTA subsidizes the lease $400 per month. The remaining costs are divided evenly between riders in the van.

Figure 4.12 Vanpool subsidy



Carpool Programs

New technologies are making it easier for carpoolers to connect in real-time and without much advanced planning. Apps like Scoop, Carma, and ZimRide help connect riders and offer real-time payment options[36]. The largest challenges to implementing such a solution would be marketing and community buy-in. The City may consider contracting with a single provider to offer service in the region to build users in one program. This is important so that that riders could log on and find willing drivers. Riders can also rate each other, ensuring people ride with others who are safe drivers, friendly, and considerate. Another method of incentivizing carpools is through a park-and-ride at a transit hub.

[36] https://www.takescoop.com/
https://www.gocarma.com/
https://www.zimride.com/

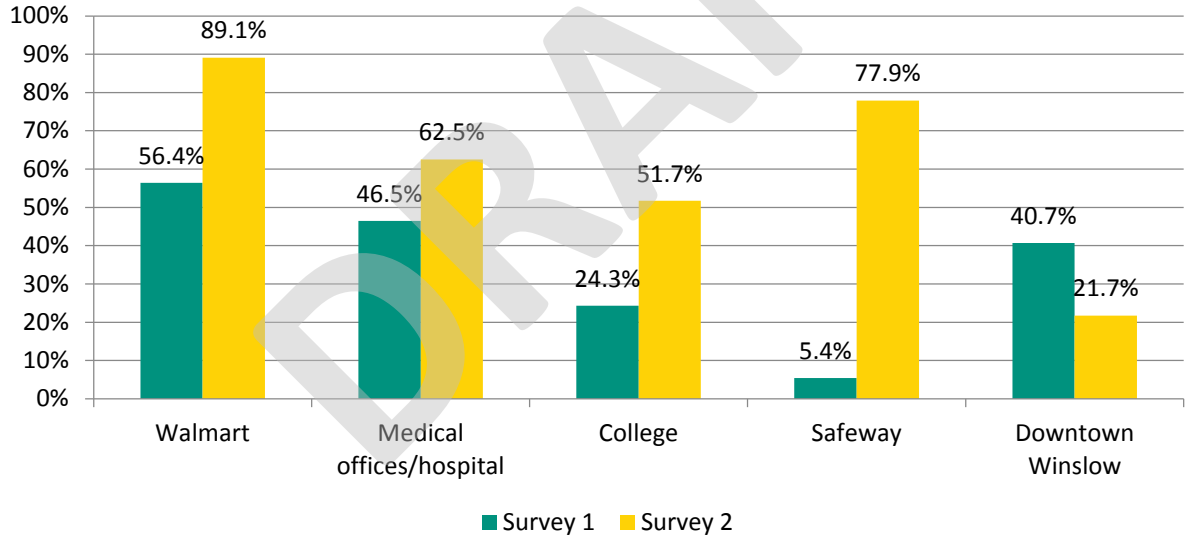
LOCAL TRANSIT SERVICES

LOCAL SERVICE NEEDS

As identified in **Chapter 2: Existing Conditions and Market Analysis**, there are a variety of demographic facts which influence the need for transit service in Winslow. Key demographics highlighting its importance are that 30 percent of households are in poverty, 45 percent of households have one vehicle or less, 14.5 percent of people under 65 have a disability, and 10 percent of the population is age 65 or older.

In the utility bill survey, 42 percent of respondents said they would use public transit in Winslow and another 25 percent said they might use it. That combined total increased in the second survey with 75.9 percent of people indicating they would consider using transit. Wal-Mart (56.4 percent and 89.1 percent) was the most frequently cited destination, followed by medical offices/hospital (46.5 percent and 62.5 percent) and Northland Pioneer College, Safeway and downtown Winslow (which were also popular destinations).

Figure 4.13 Preferred local destinations



OPTIONS FOR PROVIDING LOCAL SERVICE

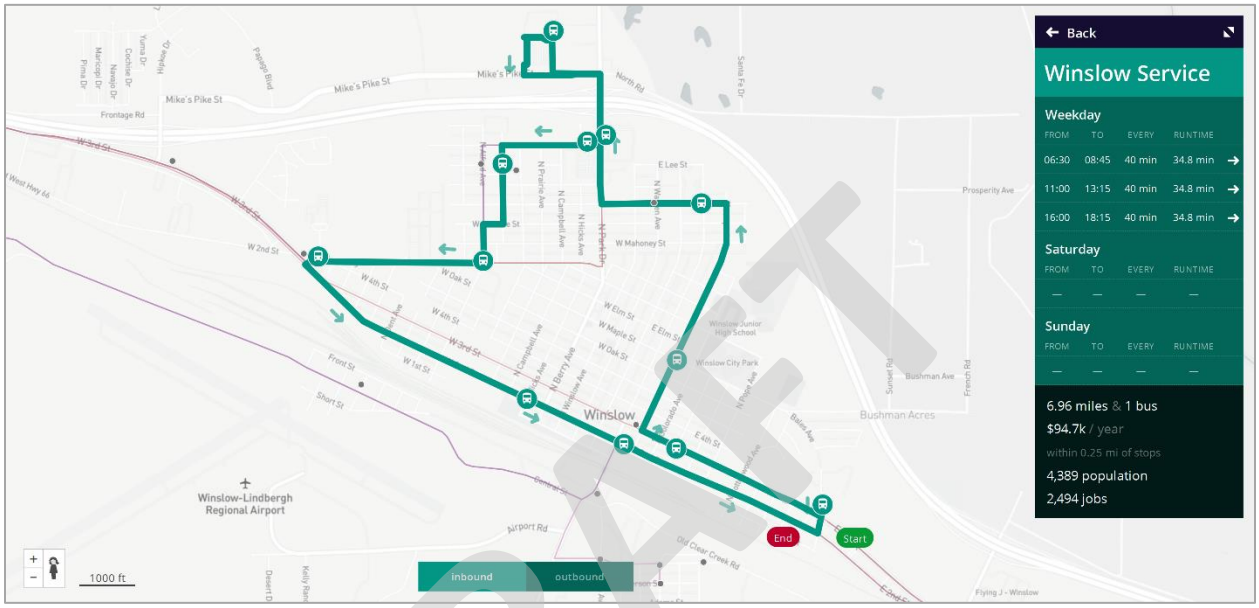
There are several ways that the Winslow community may be served by public transportation solutions: **fixed-route**, complementary **paratransit** (ADA) or **deviated fixed-route**, and **demand-response**.

Fixed-route

Based on survey responses regarding priority origins and destinations, the Winslow Frequency Fixed-Route Local Service Alternative (see Figure 4.14) was completed. This route focuses on serving a primary **passenger** base interested in accessing important origins and destinations in the core of the business community along Business Route 66 as well as the central I-40 interchange where primary commercial

and retail businesses are located. The route is proposed to run in two-hour time blocks, three times per day. Each loop takes 35 minutes to complete. Providing a five-minute layover will allow the route to run on a 40-minute schedule, making three laps every two hours for a total of nine loops per day. The route is estimated to cost $94,000 per year assuming a $54/hour cost.

Figure 4.14 Winslow Frequency Fixed-Route Local Service Alternative[37]

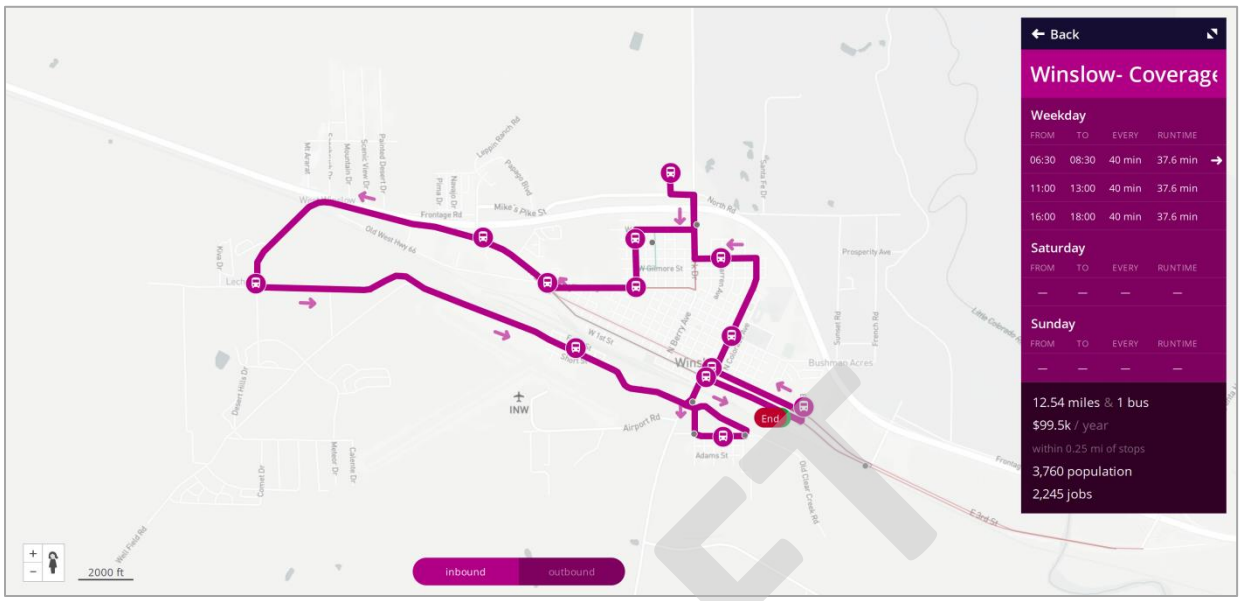


At the May 2017 Stakeholders Workshop and Open House, the community indicated it would like to see service to more outlying areas with high levels of human service needs including housing locations on the west, south, and east sides of the community on the south side of the BNSF right-of-way. In addition, feedback from the second survey also indicate a desire to reach these outlying areas. Based on that feedback, the Winslow Coverage Fixed-Route Local Service Alternative was created (see Figure 4.15).

The route is proposed to run in two-hour time blocks, three times per day. Each loop takes 52 minutes to complete and is proposed to run once per hour for a total of six trips per day. The route is estimated to cost $82,000 per year assuming a $54/hour cost.

[37] Remix: "A Planning Platform for Public Transit" (www.remix.com)

Figure 4.15 Winslow Coverage Fixed-Route Local Service Alternative[38]



Both service alternatives serve major destinations but have slightly different focuses. The frequency alternative prioritizes service every forty minutes to fewer locations to shorten waits for the bus. The coverage alternative would only run once an hour but would allow people to walk shorter distances to catch a bus, though their waits would be longer. The Frequency alternative will likely produce higher performance measures such as trips/hours and lower costs per passenger.

Hopi Senom Transit currently runs a commuter route with several stops in Winslow twice a day, as identified in Figure 4.16. The route begins and ends on north Highway 87. There are currently no capital improvements in Winslow to support the Hopi Senom service. Hopi Senom Transit runs from 7:45 to 8:50 a.m. and 3:45 to 5:15 p.m. Additional service levels during these times should complement and not duplicate Hopi Senom Transit's existing service. Partnership with that service could provide additional mobility opportunities.

[38] Remix: "A Planning Platform for Public Transit" (www.remix.com)

Figure 4.16 Hopi Senom existing services[39]

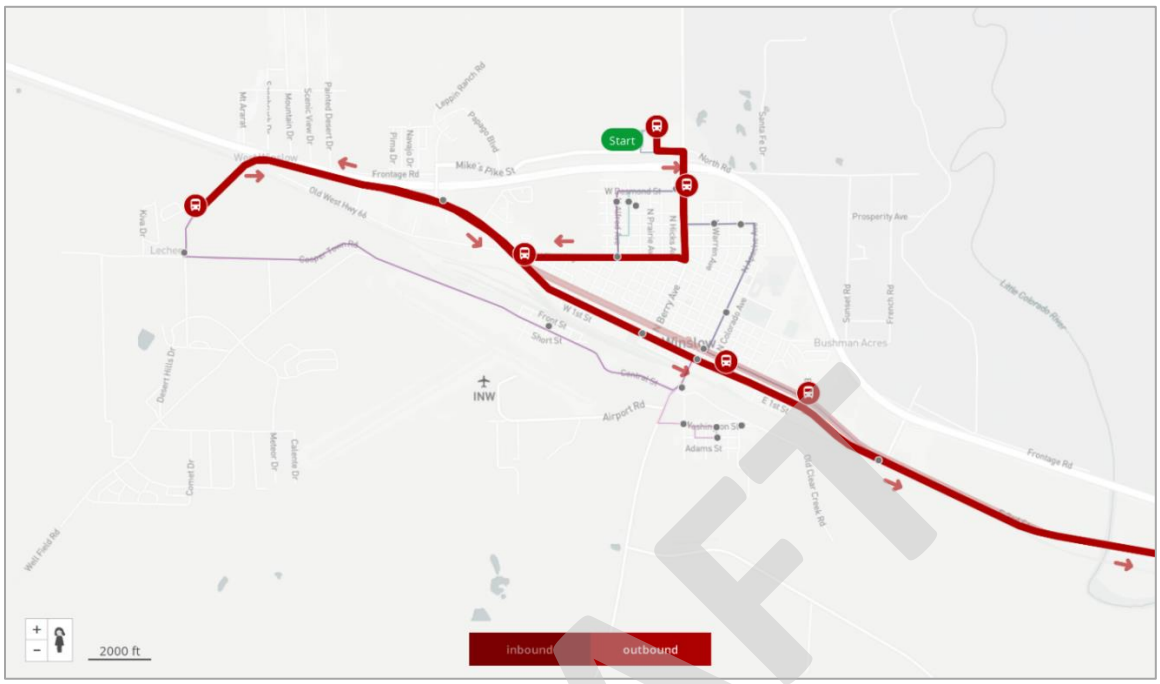
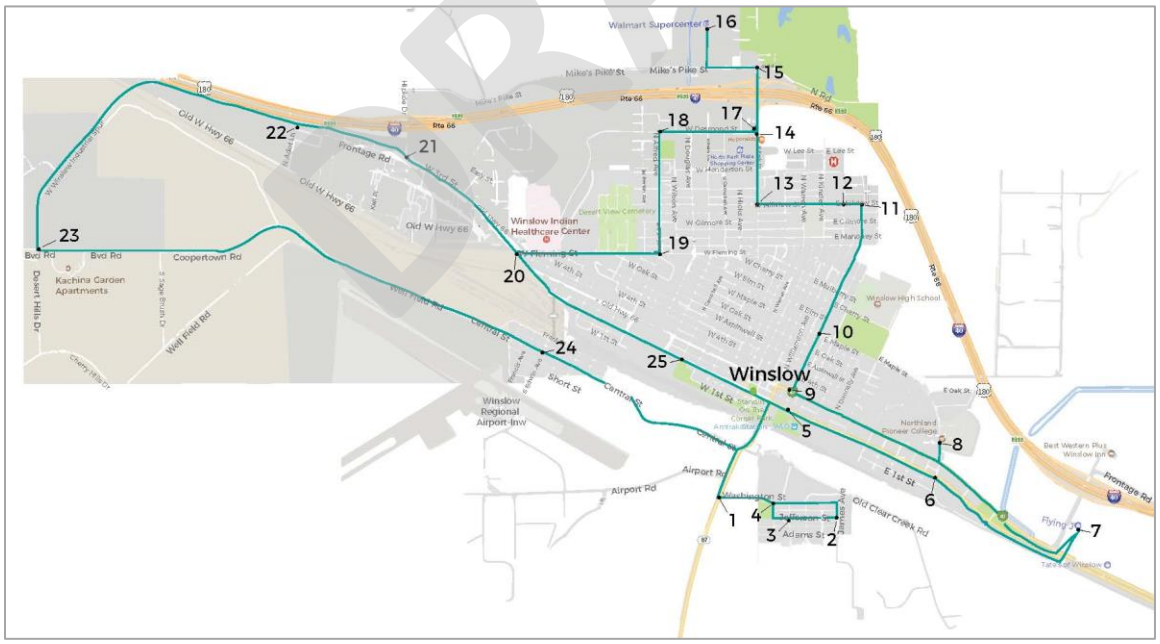


Figure 4.17 Winslow local run time map



Note: Numbers = stop locations

[39] Remix: "A Planning Platform for Public Transit" (www.remix.com)

Figure 4.18 Winslow local run times by segment

	Segment Start		Segment End	Run time	Miles
1	Hwy 87/Washington St	2	James Ave/Jefferson St	2:10	1.0
2	James Ave/Jefferson St	3	Jefferson St/Bauerbach Ave	1:10	0.5
3	Jefferson St/Bauerbach Ave	4	Robert Ave/Washington St.	0:50	0.1
1	Hwy 87/Washington St	5	La Posada	1:30	1.3
5	La Posada	6	Hwy 66 E/Bales Ave	1:52	0.66
6	Hwy 66 E/Bales Ave	7	Flying J	1:53	0.74
6	Hwy 66 E/Bales Ave	8	NPC (Bales Ave)	1:23	0.2
8	NPC (Bales Ave)	9	Hwy 66 W/Apache Ave	2:10	0.8
9	Hwy 66 W/Apache Ave	10	Winslow HS (Apache Ave/Maple St)	1:43	0.2
10	Winslow HS (Apache Ave/Maple St)	11	Apache Ave/Hillview St	2:30	0.6
11	Apache Ave/Hillview St	12	Hillview St/Williamson Ave	0:32	0.1
12	Hillview St/Williamson Ave	13	Hillview St/Park Dr	1:40	0.37
13	Hillview St/Park Dr	14	Park Dr/Desmond St	0:35	0.23
14	Park Dr/Desmond St	15	Park Dr/Mike's Pike St	1:25	0.3
15	Park Dr/Mike's Pike St	16	Walmart	1:30	0.3
16	Walmart	17	Park Dr/Desmond St	4:08	4.7
17	Park Dr/Desmond St	18	Desmond St/Alfred Ave	1:55	0.4
18	Desmond St/Alfred Ave	19	Alfred Ave/Fleming St	2:07	0.4
19	Alfred Ave/Fleming St	20	Winslow Indian Healthcare Center	2:07	0.58
20	Winslow Indian Healthcare Center	21	3rd St/Hipkoe Dr	3:46	0.63
20	Winslow Indian Healthcare Center	25	Winslow Visitor's Center	3:20	0.9
21	3rd St/Hipkoe Dr	22	3rd St/ADOT Ln	0:59	0.48
22	3rd St/ADOT Ln	23	Winslow Industrial Spur/BVD Rd	2:20	1.51
23	Winslow Industrial Spur/BVD Rd	24	Central St/Edwin Ave	4:55	2.3
24	Central St/Edwin Ave	1	Hwy 87/Washington St	3:01	1.8
25	Winslow Visitor's Center	5	La Posada	2:40	0.5

Required ADA services

With regularly scheduled fixed-route services, the **Americans With Disabilities Act (ADA)** requires the provision of services for those with disabilities who may not be able to access a fixed-route bus or a stop along the fixed-route services. Vehicles providing fixed-route services must equipped with ramps or lifts to meet the needs of those with mobility devices including walkers or wheelchairs, or who have other mobility needs.

ADA services can be achieved in one of two primary ways:

- Complementary paratransit: The FTA requires complementary **paratransit** services within ¾ of a mile of any fixed-route bus system, providing origin-to-destination services to those riders who are functionally unable to ride the fixed-route bus or for whom the bus stop is not accessible. This service tends to be very expensive and drives up transit costs for a community. Complementary paratransit systems will add significantly to fixed-route service costs. For six hours of paratransit service as proposed in the options above, the estimated associated costs are $103,000 annually assuming a cost of $67/hour.

- Deviated fixed-route: Though similar to fixed-route, a **deviated fixed-route service** may divert from its regular route to pick up or drop off passengers within ¾ mile surrounding the fixed route and within its schedule, usually through a dispatching scenario. This type of system often meets the ADA complementary paratransit service requirement through deviation, and can allow the bus system to operate with only one vehicle rather than multiple vehicles at a time, saving money. However, deviations can impact the ability to run a timely system and the fixed-route service schedule is created with large buffers to accommodate detours; administrative support is required to coordinate deviations with the bus operator based upon passenger requests. This makes it difficult for riders to plan their schedules. Costs for deviations are implied in the service alternatives above; however, the **frequency** of service would be reduced, meaning that there would be fewer loops made for the same amount of money.

As clearly defined by Federal statute and regulation, ADA services requirement only apply to local service provision. Specifically, defined commuter services are not required to meet the ADA, but vehicles in all services, whether fixed-route or commuter in nature, should be mobility device-equipped, usually with a ramp or a lift to accommodate walkers, wheelchairs, and other mobility needs.

ADA service areas are illustrated here for each of the Frequency and Coverage service alternatives.

Figure 4.19 ADA services applied to the Frequency option

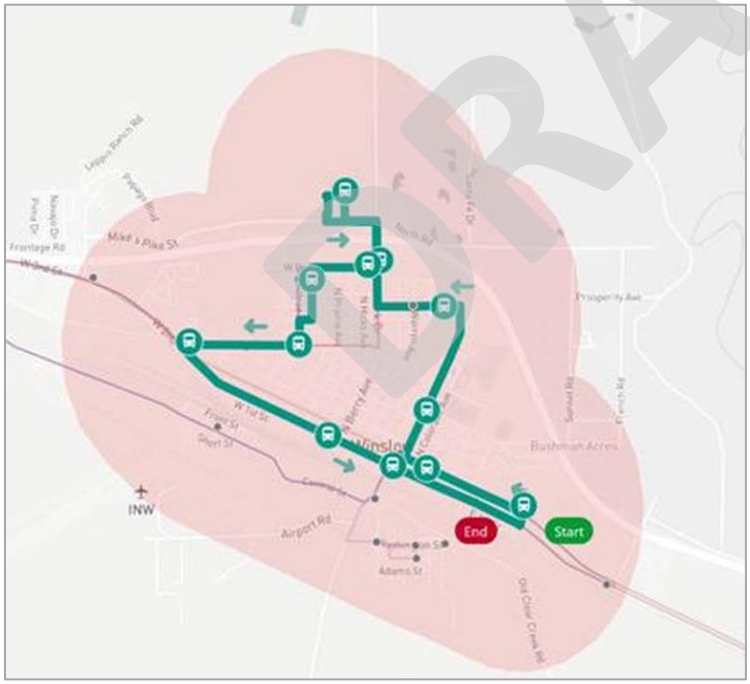
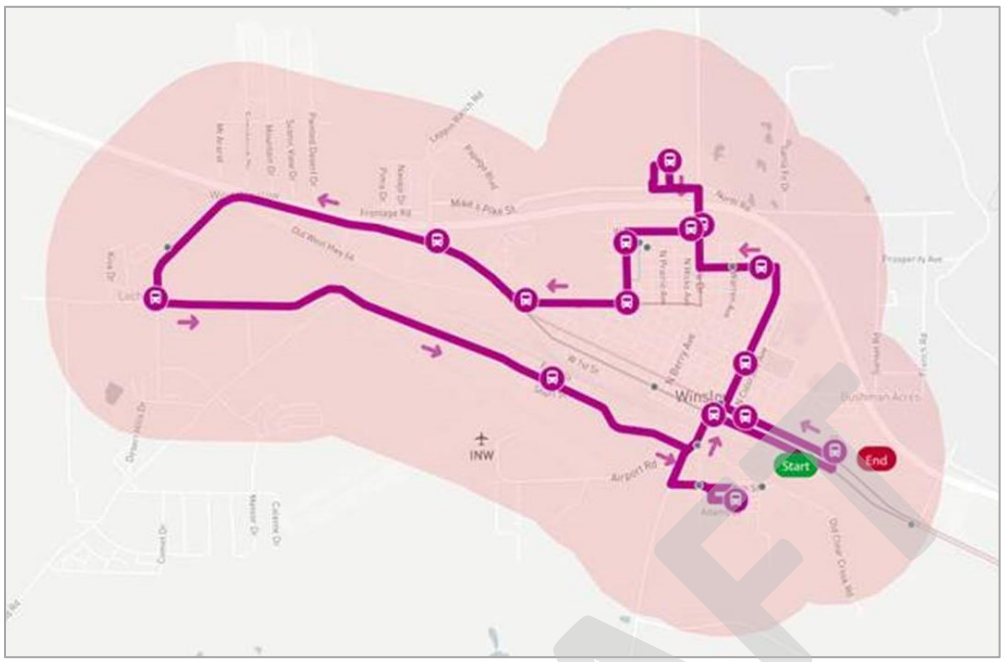


Figure 4.20 ADA services applied to the Coverage option



Demand-response services

As an alternative to fixed-route services and the required ADA complementary paratransit services, a community may elect to instead offer **demand-response** services. These services can be pre-scheduled (in order to meet ADA requirements) and/or on-demand-scheduled pick-up and drop-off of passengers by a vehicle that responds to trip requests, regardless of purpose, usually through a dispatch system.

Services like this can be tailored to local preferences, including the service area, days and hours of operation, and defined by categories of clients. Clients can be general public in nature or limited to seniors, those with disabilities, or any number of other categories as determined. Because of the nature of the service, ADA requirements are automatically met using this method.

As with fixed-route services, all transit vehicles must be equipped to provide for the use of mobility devices, usually with a ramp or a lift, to accommodate walkers, wheelchairs, and other mobility needs.

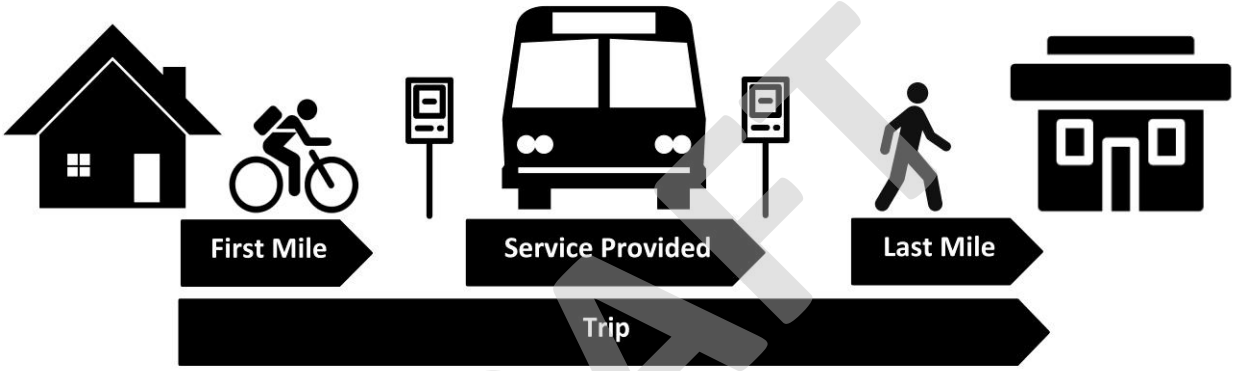
Demand-response paratransit services are estimated to cost $67/hour. If they were provided 6:30 a.m. to 6:30 p.m. on weekdays, the total annual costs would be approximately $206,000.

OTHER TRANSIT SERVICE INVESTMENTS

FIRST/LAST MILE SOLUTIONS

Transit service is ineffective without a way for people to travel to and from bus stops in a convenient, safe, and comfortable manner. Most often, **first/last mile** trips are bike and pedestrian trips. Infrastructure improvements on the streetscape may also greatly enhance access to transit services, by improving options to arrive from or reach any destination. These improvements could include wide ADA accessible sidewalks, bike lanes and paths, benches, and lighting.

Figure 4.21 First/last mile



GUARANTEED RIDE HOME

A deterrent to taking transit to neighboring communities along I-40 is the high cost of missing the ride home. Taxi trips can cost upwards of $100 and the risk of missing a bus can deter people from riding all together. Finding solutions to reduce the risk of missing the bus home can increase ridership. Such programs are referred to as Guaranteed Ride Home programs. Ideas for providing such a program include:

- Contracting a taxi company,
- Offering a "sweeper" service such as rental car or vanpool, and
- Publishing existing Greyhound and Amtrak schedules in coordination with commuter service schedules.

Such programs can be very costly and clear limits on access to any such programs should be established.

MARKETING

No matter what type of service is offered, marketing a start-up service in Winslow will require a variety of efforts to ensure that potential users are familiar with service options. Marketing efforts may include:

- Public meetings and open houses;
- Groundbreaking or kick-off ceremonies;
- Social media exposure including a website, Twitter, Facebook, and other avenues;
- Local and regional media, Including newspapers and radio PSA coverage;
- Branding contests;
- Free ride promotions;
- Residential and business mailers; and
- Booths at public events.

Once service is initiated, continued marketing will help build ridership and service identity. One of the most important means of marketing is to have good branding and to keep buses and stops clean. Developing a reputation for timeliness and friendliness is also critical. Recognizing that not all potential riders will be aware of service startup, continuing to access a variety of media and publication resources will be key to building a service base of users. Ongoing efforts to market services may include:

- Social media exposure including a website, Twitter, Facebook, and other avenues;
- Local and regional media, Including newspapers and radio PSA coverage; and
- Booths at public events.

PARTNERSHIPS

An excellent marketing tool, developing partnerships with a variety of private for-profit and non-profit organizations and many public agencies will also provide the kind of sustainable support necessary for a successful service. There are many ways to look at partnerships:

- Partnering with other transportation services providers: There are many providers of transportation services in the Winslow area, including for-hire taxi cabs, social services agencies that provide specialized transportation, other public transportation services, private organizations that provide specialized services for employees or customers, and others. Identifying these key players and initiating partnerships with them to meet mutual needs may be beneficial to all parties, and represent some costs savings that may be rechanneled to other needs. For instance:
  - Show Low-provided services in Holbrook,
  - Hopi Senom-provided services in Winslow and surrounding communities,
  - Navajo-provided services around the Winslow community,
  - Greyhound regional services along I-4, and
  - Amtrak regional services parallel to I-40.
- Businesses: Many businesses are dependent upon employee and patron transportation options to be successful. Partnering with those organizations to encourage transit ridership by providing convenient and/or timely access, supporting infrastructure, or incentives to ride would be very beneficial to all parties. Examples of partnerships could include:
  - Walmart,
  - Safeway,
  - Flying J,
  - Maverik, and
  - Medical facilities.
- Government: Along with the many businesses and private sector options that are available, often times governmental locations provide additional partnership opportunities because of their need to provide services to the public and support commuting employee populations. Examples of these partnerships could include:
  - Educational facilities, both secondary and higher education locations;
  - Department of Economic Security;
  - City and County governmental services centers; and
  - Community centers and parks.

CHAPTER SUMMARY

There are many ways transit needs can be met depending on the goals of a community. Regular commuters can have a high level of service for low cost with a vanpool program; however, that doesn't meet needs of occasional riders as a commuter bus service does. For local services, definition of target populations can help determine how to best serve those populations. In summary, a variety of alternatives have been presented.

Commuter services:

- Winslow-Flagstaff commuter bus,
- Winslow-Holbrook commuter bus, and
- Vanpool program.

Local services:

- Fixed-Route Frequency,
- Fixed-Route Coverage,
- Hopi Senom Transit route improvements,
- ADA complementary paratransit, and
- Demand-response paratransit program.

Each of these service alternatives can be a stand-alone program or combine to create a unique, Winslow-specific transit program to meet community needs. **Chapter 9: Recommendation** will provide further information on the possibilities for combining services to create a complete transit service package.

CHAPTER 5 | FINANCIAL CAPACITY AND COMMITMENT

PURPOSE

The financial capacity of any transit provider is a key component to meeting the day-to-day activities of providing public transportation services. Financial capacity not only means having the dollars available to fund transit, but the capacity to manage the administration of the services in cooperation with the many partners that may be part of funding the service. Beyond having the financial capacity to fund and administer a program, the City and its partners need to make a commitment to provide funding for services at identified levels over the course of many years. This commitment to "sustain" service offerings in the long-term is important to allow any startup of service the opportunity to mature to identify its strengths, weaknesses, and long-term viability. The purpose of this chapter is to outline common expenses and revenues and federal requirements for receiving funds.

EXPENSES

Expense is highly influenced by the type of service offered, service span, and types of vehicles used. Major categories of annual costs fall under operations and administration and include labor, maintenance, fuel, and insurance. When added together, these costs could account for more than 80 percent of all costs on an annual basis.

Public transportation costs fall into three general categories based upon a Federal reimbursement/**local match** strategy for the Section 5311 program.

- Operations: (FTA reimbursement rate close to 58/42) The day-to-day delivery of services, including all operations-related employees' wages/salaries/benefits, costs of routine maintenance, and other regular day-to-day activities excluding administration.
- Administration: (FTA reimbursement rate close to 80/20) Activities associated with the administration of services, including office employees, supplies and services, planning, call taking, and other office functions.
- Capital acquisition: (FTA reimbursement rate close to 80/20) Purchases associated with buses, facilities, stops, vehicle component replacements (engines, transmissions), and other major purchases that depreciated.
- Planning: (FTA reimbursement rate close to 80/20) Regular reoccurring planning costs occur every five years with the update of the transit five-year plan. Planning funds can also be used for design and engineering of horizontal and vertical construction.

OPERATIONS

Operations expenses are typically consumed within the year and tend to be the more obvious costs associated with running a transit system, including operator wages, maintenance, fuel, office space, and insurance. Operations can be entirely contracted out to another agency to run the system, making the costs associated with running a system more predictable. Figure 5.1 shows a typical breakdown of operating costs in rural areas.

Figure 5.1 Operating cost breakdown[40]

Operating Expense Category	Rural
% Operating Expense	**100%**
Operator's salaries/wages	*39.0%*
Other salaries and wages	*13.0%*
Sub-total salaries and wages	**52.0%**
Fringe benefits	**14.0%**
Services	**2.0%**
Fuel and lubricants	**17.0%**
Tires and tubes	**2.0%**
Other materials/supplies	**3.0%**
Utilities	**2.0%**
Casualty and Liability costs	**4.0%**
Miscellaneous expenses	**4.0%**

ADMINISTRATION

Administrative expenses remain relatively consistent year-over-year provided that service levels remain consistent. Federal revenue sources require a significant amount of compliance for Equal Opportunity Employment, data reporting, procurement (including the use of Disadvantaged Business Enterprises and Buy America), civil rights (including Title VI and ADA), safety, drug testing, and other components. These requirements can have a significant impact on staffing levels and are considered administration costs along with other business expenses such as customer service. Administrative costs can be significant, and at least some portion of these costs cannot be contracted out, such as responsibilities related to finance and compliance.

[40] *Guidebook: Managing Operating Costs for Rural and Small Urban Public Transit Systems*, Texas A&M Transportation Institute, March 2014.

Figure 5.2 Estimated five-year Operations and Administration costs

Operations & Administration	Cost/ hour	Year 1*		Year 2		Year 3		Year 4		Year 5		Total
		Service Hours	Estimated Cost	Service Hours	Estimated Cost	Service Hours	Estimated Cost	Service Hours	Estimated Cost	Service Hours	Estimated Cost	
Winslow- Flagstaff Commuter Bus	$59	1,100	$65,365	1,100	$66,672	1,100	$68,006	1,100	$69,366	1,100	$70,753	$340,163
Winslow- Holbrook Commuter Bus	$59	1,262	$74,992	1,262	$76,491	1,262	$78,021	1,262	$79,582	1,262	$81,173	$390,259
Winslow- Fixed Route Frequency	$54	1,722	$93,295	1,722	$95,161	1,722	$97,065	1,722	$99,006	1,722	$100,986	$485,513
Winslow- Fixed Route Coverage	$54	1,491	$80,775	1,491	$82,391	1,491	$84,039	1,491	$85,719	1,491	$87,434	$420,358
Winslow- Complementary Paratransit	$67	1,530	$102,803	1,530	$104,859	1,530	$106,956	1,530	$109,095	1,530	$111,277	$534,990
Winslow- Demand Response	$67	3,060	$205,606	3,060	$209,718	3,060	$213,912	3,060	$218,190	3,060	$222,554	$1,069,980
Vanpool (quantity in vans)**	$2,544	2	$5,088	4	$10,176	6	$15,264	6	$15,264	6	$15,264	$61,056

*Assumes 2% CPI

**Vanpool administration at 33 percent lease price + administration fee

CAPITAL

Capital expenses are cyclical, varying from year to year based upon a variety of factors, including life cycle of capital assets, technology upgrades or additions, major component replacement, facility and support needs, and other major repairs that can be capitalized. Year one capital costs may be extensive with the purchase of multiple vehicles, storage yards, bus stops, and transit hubs. Some phasing can be applied, particularly for buses and bus stop amenities.

Figure 5.3 Estimated five-year Capital expenses

Capital	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5		Total
		Quantity	Estimated Cost	Quantity	Estimated Cost	Quantity	Estimated Cost	Quantity	Estimated Cost	Quantity	Estimated Cost	
Winslow-Flagstaff Commuter Bus												
Vehicles	$150,000	2	$300,000		$0		$0		$0		$0	$300,000
Stops	$3,000	3	$9,000		$0	1	$3,000		$0	1	$3,000	$15,000
Commuter hub	$60,000	1	$60,000		$0	0	$6,000		$0	0	$6,000	$72,000
Other*			$0		$36,684		$36,684		$36,684		$36,684	$146,734
Total			**$369,000**		**$36,684**		**$45,684**		**$36,684**		**$45,684**	**$533,734**
Winslow-Holbrook Commuter Bus												
Vehicles	$150,000	2	$300,000		$0		$0		$0		$0	$300,000
Stops	$3,000	5	$15,000		$0	1	$3,000		$0	1	$3,000	$21,000
Commuter hub	$60,000	1	$60,000		$0	0	$6,000		$0	0	$6,000	$72,000
Other			$0		$36,684		$36,684		$36,684		$36,684	$146,734
Total			**$375,000**		**$36,684**		**$45,684**		**$36,684**		**$45,684**	**$539,734**
Winslow Fixed-Route Frequency												
Vehicles	$85,000	2	$170,000		$0		$0		$0		$0	$170,000
Stops	$3,000	12	$36,000	1	$3,000	1	$3,000	1	$3,000	1	$12	$45,012
Storage and office space	$15,000	1	$15,000	1	$15,000	1	$15,000	1	$15,000	1	$15,000	$75,000
Other			$0		$90,715		$90,715		$90,715		$90,715	$362,861
Total			**$221,000**		**$108,715**		**$108,715**		**$108,715**		**$105,727**	**$652,873**
Winslow Fixed-Route Coverage												
Vehicles	$85,000	2	$170,000		$0		$0		$0		$0	$170,000
Stops	$3,000	15	$45,000	1	$3,000	1	$3,000	1	$3,000	1	$3,000	$57,000
Storage and office space	$15,000	1	$15,000	1	$15,000	1	$15,000	1	$15,000	1	$15,000	$75,000
Other			$0		$90,715		$90,715		$90,715		$90,715	$362,861
Total			**$230,000**		**$108,715**		**$108,715**		**$108,715**		**$108,715**	**$664,861**

*Other is average capital costs of peer cities including capitalized preventative maintenance

Figure 5.3 Estimated five-year Capital expenses (continued)

Capital	Unit Cost	Year 1		Year 2		Year 3		Year 4		Year 5		Total
		Quantity	Estimated Cost	Quantity	Estimated Cost	Quantity	Estimated Cost	Quantity	Estimated Cost	Quantity	Estimated Cost	
Winslow Complementary Paratransit												
Vehicles	$60,000	2	$120,000		$0		$0		$0		$0	$120,000
Stops	N/A											$0
Storage and office space	$15,000	1	$15,000	1	$15,000	1	$15,000	1	$15,000	1	$15,000	$75,000
Other			$0		$41,231		$41,231		$65,178		$41,231	$188,872
Total			**$135,000**		**$56,231**		**$56,231**		**$80,178**		**$56,231**	**$383,872**
Winslow Demand-Response												
Vehicles	$60,000	4	$240,000		$0		$0		$0		$0	$240,000
Stops	N/A											$0
Storage and office space	$15,000	1	$15,000	1	$15,000	1	$15,000	1	$15,000	1	$15,000	$75,000
Other			$0		$41,231		$41,231		$41,231		$41,231	$164,925
Total			**$255,000**		**$56,231**		**$56,231**		**$56,231**		**$56,231**	**$479,925**
Vanpool												
Van lease**	**$3,168**	**2**	**$6,336**	**4**	**$12,672**	**6**	**$19,008**	**6**	**$19,008**	**6**	**$19,008**	**$76,032**

*Other is average capital costs of peer cities including capitalized preventative maintenance

**Capital portion of lease = 66 percent

PLANNING

Planning expenses include updating transit plans every five years, public outreach, engineering and design for construction, and planning for expansion or new programs. As a recipient of Section 5311 funds, the FTA or ADOT may require other planning functions on an as-needed basis.

REVENUES

Revenues include a broad variety of opportunities to fund public transportation. Transit is a public good because it's very difficult to turn a profit if the goal is to provide an affordable service; few public transportation programs break even. Most systems are at least partially funded with tax revenue, but there are several ways that a municipality can supplement funds to lessen the reliance on tax revenues. Whatever type of revenue is considered it should be evaluated for revenue potential, impacts to ridership and collection methodology, compliance requirements, and support for overall system goals.

Below are examples of some relevant and likely revenue options:

- Local funds: Local funds can be used for public transit and remain the primary source of funding aside from Federal resources for most transit programs. The source of the local funds can be diverse, from general fund revenue allocations to dedicated funding sources, including local, regional, and/or state tax revenues. In Arizona's case, a state funding resource does not currently exist. These local funds are used as a match to federal funds for portions of operations, capital, and administrative costs.

  Tax dollars to support transit can include general fund revenues, or transit can be funded as a dedicated tax or as part of bigger local funding initiatives, either as "quality of life" issues, environmental programs, or other local goals where transit can be identified as a recipient of some of the funds. Many larger urban areas choose to have a dedicated local municipal or regional transit tax, and some counties have used taxing authority to support public transit. In Winslow, a dedicated transit tax of .05 percent would provide approximately $300,000 in support for transit annually[41].

  Municipalities can fund transit as one large budget item or break apart operations and capital funding. If this is done, capital funding may be supported through a variety of municipal options where public transit vehicles and other infrastructure could be part of a large infrastructure package, or a stand-alone.

[41] City of Winslow Manager's Office.

- Federal grants: A variety of grants can be considered to offset the costs of service, but most come with a matching requirement. The FTA Section 5311 program is assumed to be the basis for Winslow transit services as it is designated for rural areas (see FTA Section 5311 below). Other grants may be pursued in order to fund certain functions or needs. Depending on the purpose, sometimes those grants may come from other federal sources beyond the FTA. Health and Human Services, FHWA, and other programs provide funds along with the FTA that can be used for transit. It is important to note that grant funds almost always have a **local match** requirement, and a Federal DOT grant program typically cannot be used as matching funds for another Federal DOT grant program. There are a variety of federal funds which can be used as local match, including but not limited to:
    - Older Americans Act (Title III),
    - Temporary Assistance to Needy Families (TANF),
    - Indian Reservations Roads Program,
    - STP Flexible Funds,
    - Community Services Block Grants, and
    - Department of Health and Human Services.

  As previously mentioned, most grant programs are provided on a reimbursement basis, requiring the local recipient to fund the program and then apply for reimbursement. Important to note is that Arizona observes the Federal fiscal year, which runs October 1 through September 30.
- Fares. Most systems charge passengers a boarding **fare** to offset the costs of operations, although there is no requirement for a fare and service can be offered for free to passengers. Fares are used to reduce overall cost before applying/calculating federal and local funds. Fare rates can be set in a variety of ways including flat rates, based upon trip length, or offered as bulk rates such as monthly or annual passes. Reduced fare categories like seniors or students, and any number of other variations, can support the underlying goals of providing transit service in the first place. It is important to understand that the basic "fixed-route fare" is the basis for establishment of other fares for other categories of riders, including ADA paratransit fares, which are regulated to be a maximum of twice the fixed-route fare.

  Central to charging a fare is the methodology of fare collection, management, and accounting. Fare collection can be a deterrent to ridership if it is not easy and seamless for riders to use. Fare collection methodology is rapidly changing from a traditionally cash-only system to new technology that allows for electronic payment, single and multi-pass cards, and stored dollar value on cards. Many systems are

even moving to app-based payment. Each of these options has a variety of impacts on both the customer and management of the system. When cash is accepted, a range of security issues must be addressed, including onboard security, cash counting, and deposit methodology. However, cash options are attractive to low-income users who may not have credit cards or smart phones. Electronic options, on the other hand, are attractive to users who don't often carry change or who prefer to buy bulk passes in advance. These systems can be costly to install, though administrative costs can be lower than cash systems.

- Advertising: Transit systems often elect to sell advertising on the outside or inside of vehicles, at bus stops, or any number of other ways to offset the costs of service. There are obligations and potential complications associated with advertising, including selling, posting, and managing the ads, and balancing the types of advertising allowed with free speech/First Amendment rights. There can also be competing interests between branding one's own transit system and allowing for others to advertise on its capital. Sustainability and reliability of advertising resources must be considered. In general, advertising can help support the minor costs of a system, but will not provide enough support to rely.
- Partnerships: Another source of funds is finding partnerships from organizations and agencies with motives to provide transit. Partnerships with other public agencies, municipalities, or government entities are logical and popular. Partnerships with the private sector, which may benefit from the transit service being offered (i.e., resorts, social service organizations, businesses, educational facilities, and others) may be excellent resources for funds to offset the cost of services. When exploring a partnership, usually done through a legal agreement, it is important to consider issues of sustainability and reliability of these funding sources.

  As part of this study, four primary partnerships have been explored and may require additional discussions:
  - Greyhound: Establishing a Greyhound stop at Maverik, Flying J, or a future Navajo development.
    - This partnership would establish a connection to regional services along I-40 both east and west, through a coordination of schedules of local services.
    - This partnership would provide a financial relationship that can be beneficial to the Section 5311 program administration.
    - This partnership may provide layover and bus storage options for local services.
  - Winslow Indian Health Care Center: Coordinating local public transportation options to serve this major facility.
    - This partnership would provide additional access resources to patrons aside from current specialized transportation programs or infrequent Hopi services.
    - Employees can utilize transit services to meet their work schedules.
  - Northland Pioneer Community College: Coordinating services with NPC broadens and diversifies access.
    - Student populations have more frequent schedules to meet attendance requirements.
    - Employees can access transit services.
    - Parking supply can be improved when more students utilize transit.

- Winslow Chamber of Commerce: A central resource of nearly 200 members.
  - Single source to develop business friendly transit service options.
  - Ability to promote transit services for both employees and patrons.
  - Provides promotions and incentives for the mutual benefit of employers and public transportation.

- Commuter Tax Benefit: While not a revenue source, an important consideration in reducing the burden on both riders and potentially on partnerships is the Commuter Tax Benefit. This $255 per month tax credit is available to employees and employers for commuter-related expenses including transit, commuter highway vehicles (vanpools), and qualified parking and bike expenses. For employees, the tax credit works as a pre-tax benefit much like a Health Savings Account that can be used to pay for bus passes or vanpool fees. Because it is a pre-tax benefit, it can also save employers on payroll taxes. Alternately, employers may provide vouchers for qualified transportation costs up to $255 per month per employee and deduct expenses as a business expense. These benefits can help incentivize private business to participate in funding transit services.

Figure 5.4 Estimated five-year revenues

Revenue	Year 1				Year 2			Year 3			Year 4			Year 5				Total
	Operating/ Admin	Capital	Planning	Total	Operating/ Admin	Capital	Total	Operating/ Admin	Capital	Total	Operating/ Admin	Capital	Total	Operating/ Admin	Capital	Planning	Total	
Winslow-Flagstaff Commuter																		
Federal 5311	$40,372	$295,200	$40,000	**$375,572**	$41,179	$29,347	**$70,526**	$42,003	$36,547	**$78,550**	$42,843	$29,347	**$72,190**	$43,700	$36,547	$80,000	**$160,246**	**$757,083**
Local	$24,993	$73,800	$10,000	**$108,793**	$25,493	$7,337	**$32,830**	$26,003	$9,137	**$35,140**	$26,523	$7,337	**$33,860**	$27,054	$9,137	$20,000	**$56,190**	**$266,813**
Total	**$65,365**	**$369,000**	**$50,000**	**$484,365**	**$66,672**	**$36,684**	**$103,356**	**$68,006**	**$45,684**	**$113,689**	**$69,366**	**$36,684**	**$106,049**	**$70,753**	**$45,684**	**$100,000**	**$216,437**	**$1,023,897**
Winslow-Holbrook Commuter																		
Federal 5311	$46,317	$300,000	$40,000	**$386,317**	$47,244	$29,347	**$76,591**	$48,189	$36,547	**$84,735**	$49,152	$29,347	**$78,499**	$50,135	$36,547	$80,000	**$166,682**	**$792,825**
Local	$28,674	$75,000	$10,000	**$113,674**	$29,248	$7,337	**$36,584**	$29,833	$9,137	**$38,969**	$30,429	$7,337	**$37,766**	$31,038	$9,137	$20,000	**$60,175**	**$287,168**
Total	**$74,992**	**$375,000**	**$50,000**	**$499,992**	**$76,491**	**$36,684**	**$113,175**	**$78,021**	**$45,684**	**$123,705**	**$79,582**	**$36,684**	**$116,265**	**$81,173**	**$45,684**	**$100,000**	**$226,857**	**$1,079,993**
Winslow Fixed-Route Frequency																		
Federal 5311	$58,605	$176,800	$40,000	**$275,405**	$59,777	$86,972	**$146,750**	$60,973	$86,972	**$147,945**	$62,192	$86,972	**$149,165**	$63,436	$84,582	$80,000	**$228,018**	**$947,283**
Local	$34,690	$44,200	$10,000	**$88,890**	$35,384	$21,743	**$57,127**	$36,092	$21,743	**$57,835**	$36,813	$21,743	**$58,556**	$37,550	$21,145	$20,000	**$78,695**	**$341,103**
Total	**$93,295**	**$221,000**	**$50,000**	**$364,295**	**$95,161**	**$108,715**	**$203,877**	**$97,065**	**$108,715**	**$205,780**	**$99,006**	**$108,715**	**$207,721**	**$100,986**	**$105,727**	**$100,000**	**$306,713**	**$1,288,386**
Winslow Fixed-Route Coverage																		
Federal 5311	$50,741	$184,000	$40,000	**$274,741**	$51,755	$86,972	**$138,728**	$52,790	$86,972	**$139,763**	$53,846	$86,972	**$140,819**	$54,923	$86,972	$80,000	**$221,895**	**$915,945**
Local	$30,035	$46,000	$10,000	**$86,035**	$30,635	$21,743	**$52,378**	$31,248	$21,743	**$52,991**	$31,873	$21,743	**$53,616**	$32,510	$21,743	$20,000	**$74,254**	**$319,274**
Total	**$80,775**	**$230,000**	**$50,000**	**$360,775**	**$82,391**	**$108,715**	**$191,106**	**$84,039**	**$108,715**	**$192,754**	**$85,719**	**$108,715**	**$194,435**	**$87,434**	**$108,715**	**$100,000**	**$296,149**	**$1,235,219**
Winslow- ADA/Complementary Paratransit																		
Federal 5311	$67,399	$108,000	$40,000	**$215,399**	$68,747	$44,985	**$113,732**	$70,122	$44,985	**$115,107**	$71,524	$64,143	**$135,667**	$72,955	$44,985	$80,000	**$197,940**	**$777,844**
Local	$35,404	$27,000	$10,000	**$72,404**	$36,112	$11,246	**$47,358**	$36,834	$11,246	**$48,081**	$37,571	$16,036	**$53,607**	$38,322	$11,246	$20,000	**$69,569**	**$291,018**
Total	**$102,803**	**$135,000**	**$50,000**	**$287,803**	**$104,859**	**$56,231**	**$161,090**	**$106,956**	**$56,231**	**$163,187**	**$109,095**	**$80,178**	**$189,274**	**$111,277**	**$56,231**	**$100,000**	**$267,508**	**$1,068,862**
Winslow Demand-Response																		
Federal 5311	$134,798	$204,000	$40,000	**$378,798**	$137,494	$44,985	**$182,479**	$140,243	$44,985	**$185,228**	$143,048	$44,985	**$188,033**	$145,909	$44,985	$80,000	**$270,894**	**$1,205,432**
Local	$70,808	$51,000	$10,000	**$131,808**	$72,224	$11,246	**$83,470**	$73,669	$11,246	**$84,915**	$75,142	$11,246	**$86,388**	$76,645	$11,246	$20,000	**$107,891**	**$494,472**
Total	**$205,606**	**$255,000**	**$50,000**	**$510,606**	**$209,718**	**$56,231**	**$265,949**	**$213,912**	**$56,231**	**$270,143**	**$218,190**	**$56,231**	**$274,421**	**$222,554**	**$56,231**	**$100,000**	**$378,785**	**$1,699,904**
Vanpool																		
Federal 5311	$2,544	$5,069	$0	**$7,613**	$5,088	$10,138	**$15,226**	$7,632	$15,206	**$22,838**	$7,632	$15,206	**$22,838**	$7,632	$15,206	$0	**$22,838**	**$91,354**
Local	$2,544	$1,267	$0	**$3,811**	$5,088	$2,534	**$7,622**	$7,632	$3,802	**$11,434**	$7,632	$3,802	**$11,434**	$7,632	$3,802	$0	**$11,434**	**$45,734**
Total	**$5,088**	**$6,336**	**$0**	**$11,424**	**$10,176**	**$12,672**	**$22,848**	**$15,264**	**$19,008**	**$34,272**	**$15,264**	**$19,008**	**$34,272**	**$15,264**	**$19,008**	**$0**	**$34,272**	**$137,088**

*Fares not shown as already removed from Operating/ Admin costs

FTA PARTNERSHIPS AND COMPLIANCE

Whenever Federal funds are used, the recipient of the funds is subject to compliance testing and auditing to ensure that the funds are used according to FTA directives. It is important to understand those metrics and prepare for routine audit procedures, either by ADOT or potentially directly by FTA contractors and staff. Consideration for such requirements is important prior to deciding what funding source should be used for specific expenses.

PARTICIPATION

The FTA has very specific requirements for participation in its funding programs. The Section 5311 Non-Urbanized Formula Grant Program provides funding to support the administrative, operating, intercity operating and capital, and planning costs of public transit services in rural areas with populations of less than 50,000. Federal funds for the Section 5311 Program are apportioned to the states on a formula basis. ADOT is responsible for the identification of programs in Arizona that meet eligibility requirements for participation, administration, direction and oversight.

ADOT's program is identified specifically at www.AzDOT.gov. Available on their website is:

- FFY 2016 Funding Cycle Section 5311 Program Guidebook,
- FFY 2016 Section 5311 Notice of Funding Availability (NOFA), and
- FY 2016 Section 5311 Budget Worksheets.

COMPLIANCE

ADOT is responsible for and provides a measure of insulation in the compliance function because of its role as the administrator of FTA grant programs for locations like Winslow. But the roles and responsibilities of recipients of grant funds require their continued and complete compliance regardless of direct administrative responsibilities. According to the Rural Transportation Assistance Program (RTAP):

> *Basic grant management requirements under SAFETEA-LU*
> *The Common Grant Rule gives the basic grant management requirements for state and local governments, and it comprises two U.S. Department of Transportation (DOT) regulations: 49 CFR Part 18, "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments" and 49 CFR Part 19, "Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations." Sub-recipients that are units of government, including Indian tribal governments, must follow the requirements stated in Part 18. Sub-recipients that are private and non-profit organizations are to follow the requirements of Part 19.*

> *Your state enters a written agreement with you, the sub-recipient, stating the terms and conditions of assistance for the project, and this agreement also states which Federal and/or state requirements with which you must be in compliance. Your state is responsible for assuring the Federal government that all of its sub-recipients are in compliance with the Federal requirements that are explained below. Please note that this section does not give all of the details of each requirement, and for more information, or to view the source of all information and quotes in the text, you should refer to Circular 9040.1g. The subheadings contain the page numbers that correspond with that requirement's location in Circular 9040.1G.* [42]

Compliance categories are numerous, including continuous control, audit, procurement, financial management and control, public hearings, environmental, ADA, drug and alcohol testing, and many other requirements that must be met. Additionally, the transit provider must comply with Federal and state regulations on procurement, limits on use of funds, and reporting. One resource which can help navigate the rules and requirements is the National Rural Transit Assistance Program which provides training, research and resources to Section 5311 providers.

For a full listing of the state management review process and associated compliance categories, go to: https://www.transit.dot.gov/regulations-and-guidance/safety/oversight

REIMBURSEMENT

All state or Federal government public transportation grants require the full capacity of the recipient to provide all initial funding, because grant funding is on a reimbursement basis. Understanding this administrative requirement is an important consideration in financing a transit program.

CHAPTER SUMMARY

While the costs of a transit system are expensive, federal and state grants can significantly reduce local costs. When entering an agreement to provide transit services in a partnership with ADOT, it is important to recognize Winslow's financial capabilities and commitment to the program, as there are a variety of requirements to operate any program. Along with providing local match, the City must be able to dedicate financial resources to address reimbursement strategies, provide reporting, and meet compliance requirements.

[42] RTAP: http://nationalrtap.org/transitmanager/Administration-Compliance/5311-Grant-Management-Requirements

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CHAPTER 6 | RISK

PURPOSE

Public transportation programs have two primary types of risk: liability and business. Owners and operators of transit systems must prepare for both types of risk. This chapter will describe risks and strategies of mitigation.

DEFINING RISK

Primary to the definition of risk is the liability of offering public transportation services. That liability can be defined by insurance limits for accidents against bodily injury and/or harm for all parties, asset protection, protection of workers, and other liabilities. This type of risk can be managed through insurance. Typically, insurance companies will rate an agency based on the number of vehicles in the fleet and value of the transit budget and set insurance rates accordingly on an annual basis.

Secondary to the definition of risk is the potential for harm done to the business itself. Business risk ranges from reputation, long-term sustainability, internal and external forces associated with funding as well as natural forces including weather, labor market issues, variable costs of purchased commodities like fuel, and a variety of other important conditions that might interrupt or in some other way threaten the provision of viable transit services. It also identifies the potential losses should the business fail, such as lost cost spent on capital equipment and improvements.

Risk mitigation includes determining the acceptable methods of managing cost variability or changing variable costs of risks into fixed cost. Some liability risks (and costs) can be turned into fixed costs by purchasing insurance or contracting services. But more difficult is turning business risks from variable to fixed costs.

LIABILITY

Insurance programs for public entities can take many forms. Whether or not they are stand-alone transit specific programs or part of larger municipal insurance pools that might include other (City) assets and liability exposures, the programs internalize risk for the City and represent additional protection limits.

OPTIONS TO CREATING BARRIERS TO LIABILITY RISKS

In some cases, insurance can be a key consideration on whether or not a municipality decides to provide transit service directly or to contract that service. When a City provides transit services, liability is carried across all departments for having that service. By using a competitive contracting procurement

process, the City can move the insurance risk program from its own ledger to that of the contractor providing service to the City. Contract service can reduce other variable costs like fuel, labor, and maintenance costs. In so doing, the City can turn what would be a variable cost to a fixed cost carried by the contractor. However, even in the case of contracting service, the City should carry excess insurances.

Alternatively, to reduce risks to the City, the City could consider creating a stand-alone entity or district out of which to operate transit. This creates legal barriers that protect other departments of the City from the risks associated with a public transit entity. In Arizona, this is somewhat complicated through the Arizona Revised Statutes (ARS) and does not represent a reasonable option to pursue in early years of offering transit service.

INSURANCE CONSIDERATIONS

No matter whether the City directly operates or contracts service, there are primary areas of insurance responsibility that should be addressed:

- Asset Protection (risk associated with the value of rolling stock, facilities, equipment and supplies),
- Liability Protection (risk associated with accidents, including vehicle damage and personal injury, property damage, and other components), and
- Workers' Compensation (risk associated with injuries to employees while on the job).

Typical insurance program limits include:

- Asset Protection: Typically, these costs are based the type and number of assets and value of the vehicles. Asset protect is often tied to the location of the garage. Almost all asset policies come with a deductible where the owner will have some first dollar coverage responsibility.
- Liability Protection: Liability protection may be rated as a flat rate, often based upon experience and/or loss history, or may be rated on a per/mile or per/hour basis. Modal services (local fixed-route, paratransit, commuter, vanpool, or other **modes**) may represent differences in ratings and/or how they are charged. Deductibles also play a role in the cost of insurance, and may range from small amounts to very high deductibles, usually considered first dollar expense in a transit budget. Typically, these ratings are re-evaluated annually, and there are a variety of insurers and brokers to search the market. A self-insurance program where the first dollar responsibility remains internal is often still protected by umbrella coverages.
- Workers' compensation: Usually, workers' compensation is rate-based depending upon class of employment, usually divided between administrative, operators, and maintenance classes. Ratings for operators are often higher than the other categories.

Finally, insurance pools can sometimes help manage City costs when the insurance requirements of the transit system are merged with other City insurance costs, primarily police, fire, administration, and any other municipal services that operate vehicles on behalf of the City.

In the case of the City of Winslow, since it participates in the Arizona Municipal Risk Retention Pool (AMRRP) state program, which is a "pool," insurance coverages are somewhat straightforward and are

simply added to the coverages/rates already paid for fire, police, public works, and parks and recreation. The insurance exposure in this case is closer to a fixed cost than a variable cost. For transit, rates for asset protection and liability coverages are predicated on vehicle value on an annual basis, regardless of duty cycle and/or usage. Loss history is factored in over a three- to five-year horizon, which mitigates isolated claims, especially when the claims are made regardless of fault determination. Annual insurance rates for a 15-passenger van are approximately $2,300.[43]

Likewise, workers' compensation is also predicated on the additional payroll encumbered through employment of drivers, mechanics, and administrative positions, based upon their annual payrates and categories determined by the insurer. Rates may fluctuate based upon group experience and exposure over time. Again, the insurance exposure in this case is closer to a fixed cost than a variable cost. Annual workers' compensation costs based upon an average $125,000 annual payroll (as many as five employees) are approximately $10,200.[44]

By participating in these pools, risks are shared by a larger group, which can have the effect of leveling the costs of risks, and maybe making the insurance costs of transit more competitive than stand-alone options, apart from a pool including fire and police, which may drive rates up. Conversely, there are potentials to be part of a pool of like-programs (other transit programs in other communities), but are sometimes hard to arrange. No matter the pool type, variations of exposure by each participant (or worker class) affects all other participants' rates.

BUSINESS RISK

Business risk represents an entirely different approach associated with offering a public transit program, but still presents a real threat to the organization. Unlike managing risks associated with a purchased insurance program where dollar settlements are typical, and the return on the investment may be measured, the return on investment on a variety of business risks as identified herein may be very difficult to determine, and may never be quantified.

Business risk can be viewed in several ways. Here are three primary categories (not in priority order):

1. Financial Risks: A host of financial risks face public transportation programs, and may be cyclical. These categories may be stand-alone or leverage each other.
    - Funding reliability: Funding reliability is the long-term sustainability of financial support from local resources, partnerships, and state and/or Federal grants. Any erosion of those resources through political will or economic downturns represents a threat to the transit program.
    - Leadership: Long-term leadership can also represent a risk to the transit program. Changes in political leadership or local support, performance-related issues, or any other

[43] Based upon estimates provided by Southwest Risk, 6-23-17
[44] Based upon estimates provided by Southwest Risk, 6-23-17

potential problem, if continual, can represent long-term sustainability issues that threaten continuation of the transit program.

- Financial Capacity: Financial capacity, or the ability to afford the ebbs and flows of funding sources in the short term (such as insurance claims and unexpected variable costs), must be addressed through the financial capacity of the City. Almost all Federal funding is distributed on a "reimbursement basis," which means that the City must be able to await payment based upon an application for reimbursement while continuing to pay for transit program costs. Reimbursement can be delayed for months.

2. Service Risks: There are both short- and long-term risks associated with providing service to the public. There are five categories that can represent threats to the program:
   - Ridership: Ridership variations can take several forms. Initially, overestimating ridership, or not understanding trip-making needs, times of day, or origins and destinations, can all affect ridership. In turn, ridership can affect public perception, subsidy rates, and other variables which affect general support for the program.
   - Operating Environment: Misinterpreting the operating environment, including streets traveled, location of stops, weather, transportation competition, management of detours, and a variety of other physical environment issues could affect the viability of the transit program.
   - Equipment: The condition of equipment, including amenities, cleanliness, comfortability, configuration, seating, vehicle size, and maneuverability can cause significant risk to the operation of the program both through the ability to provide a reliable, safe, and convenient transportation option and through perceptions of the service to the general public.
   - Performance: On-time performance is critical to the usability and therefore success of a transit program. On-time performance includes leaving stops on schedule, arriving on schedule, and a variety of other schedule adherence issues. Addressing special events, closures, delays, span of day, and other operating conditions can instill different levels of confidence.
   - Reliability: Finally, linked to performance, is service reliability. Affected by the environment, operator performance, equipment performance, and other factors, providing service that is not reliable based upon the printed schedule can promote a lack of confidence and significant program risks.

   Service risks represent a real threat to the public perception and use of a transit program. Where buses are deemed unclean and unsafe, ridership can be greatly reduced and the program will not be a point of pride for a community. This will affect willingness to continue to use public dollars for funding. If contracting service to a private provider or another governmental organization, extra importance must be given to the oversight of the contract for service performance in order to manage these risks. Primary to these considerations are the non-performance and or poor performance issues that risk the delivery of service or the service reputation.
3. Safety and Security Risks: Although linked together in most discussions, there are significant differences to what is safe and what is secure, and how to achieve those goals.
   - Safe: Safety is often viewed by actions and results. Safe driving, safe working conditions, safe equipment, and safe conditions of access all represent threats to a transit system.

Most are viewed through occurrences of accidents and/or incidents, ranging from the smallest trip and fall, to significant vehicular accidents, injuries, or the loss of life and/or assets. Threats associated with an unsafe system will impact program success through reputation as well through undefined real costs.

- Secure: Security is less tangible, and often is represented more by a feeling than an action. Well-lit spaces, video surveillance, safe refuge locations, and supervisor presence define secure feelings, whereas lack of cleanliness, unruly passengers, rude operators, and other behavior problems can promote an unsecure feeling among patrons and employees. Threats to security often result in poor reputation, therefore affecting usage that will spell problems for the transit program.

Training programs that cross disciplines offer a direct mitigation to many of the risks identified herein, both from the direct liability to business risk. All employees should be offered training and certified depending upon their employee classification. Training programs must be designed based upon local operating, administrative, and maintenance program needs, and be provided by trained instructors. Training programs are often provided by outside resources. A variety of programs exist offered in cooperation with the Federal Transit Administration, through universities, and/or through transit associations at the national, regional, or state level.

FTA identifies many employee classifications as "safety sensitive," which adds an additional requirement for compliance with drug and alcohol testing, both pre-employment and random.

VARIABLE VERSUS FIXED COSTS

The costs associated with risk, either on the insurance side or the business side, come with some variability. Identification of ways to change the variability into a no-variable, or fixed, cost reduces risk. Variable costs may be deferred through annual ratings, or litigation, or contracting services. Most transit programs reduce variability by transferring the costs (risks) through contracting services or by purchasing service from another governmental organization. In so doing, the variable cost is usually included as part of the rate paid, and therefore becomes fixed. This could also be true of labor, maintenance, fuel, and other costs that are market- or performance-driven. Purchasing service provides some insulation from risk and costs.

Purchasing services can be achieved through one of two methods: competitive procurement with a private sector profit or non-profit provider, or purchase of service from or through another government provider (in this case a neighboring FTA Section 5307, 5310, or 5311 program).

There are other benefits to purchasing services, such as cost savings in the form of less internal administration and/or employee head count. However, there can be disadvantages to doing so, including loss of control, ineffective communications, response to passenger concerns, and some performance management. A thorough examination of these benefits and disadvantages should be considered as the transit program is developed.

CHAPTER SUMMARY

Managing and mitigating risks is critical to the success of a transit program. Insuring a transit program is complicated and best represented by professionals that can provide comparisons, ratings, and coverages based upon the City's decision on choices from many variables. Creating barriers to liability through organizational structure and insurance programs can help protect the City from damages to assets, bodily injury, and workers' compensation. As important as the financial risks are the risks to perception of service, both for riders and for creating broad public support for a transit system.

CHAPTER 7 | PERFORMANCE MEASURES: INDICATORS OF SUCCESS

PURPOSE

Public transportation programs have a long history of measuring for success. Measures of success are often unique to each transit system, but most often those measures fall into one of several categories that help define what success looks like for a specific community based on its demographics, economic conditions, geography, and goals for providing public transit. In the case of a new transit system being developed, it is often difficult to define specific measures of success unique to the community. The purpose of this chapter is to identify common performance measures and describe the process for creating a performance measurement plan.

MEASURING PERFORMANCE

According to the Transportation Research Board's TCRP Report #88: *A Guidebook for Developing a Transit Performance-Measurement System*[45], there are three primary reasons for an entity to measure transit performance:

1. Because they are required to do so;
2. Because it is useful to the agency to do so; and/or
3. Because others outside the agency need to know what is going on.

Performance measure data provide transit agency management with objective assessments of current circumstances, past trends, existing conditions, and unmet needs. Transit agencies often identify specific types of measures to meet expectations of those who pay for, use, and/or support the transit system. Key uses of these data for decision makers include:

- Monitoring service,
- Evaluating economic performance,
- Administering the organization,
- Communicating the organization's achievements and challenges,
- Developing service design standards, and
- Noting community benefits.

[45] TCRP Report #88: http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_report_88/SummaryDoc.pdf

PERFORMANCE MEASUREMENT PLANS

Performance Measurement Plans are needed to guide the establishment of measuring methodology, reporting, and outcome process related to performance measures. The TCRP Report #88 Guidebook[46] presents an eight-step process for establishing a performance measurement program or for refining an existing one. These steps are, in order:

1. Define goals and objectives;
2. Generate management support;
3. Identify internal users, stakeholders, and constraints;
4. Select performance measures and develop consensus;
5. Test and implement the program;
6. Monitor and report performance;
7. Integrate results into agency decision-making; and
8. Review and update the program.

None of the steps in this process should be viewed in isolation because there is considerable overlap between them. In fact, the outcomes from virtually all of these steps will influence the others and will play a significant role in determining program success. The creation of a performance measurement plan should be a part of the transit implementation process.

Setting performance standards is an important process, particularly if the standards will provide key information to decision-makers about when and where to provide service. Setting standards too high can result in a system which seems to be underperforming but may actually be meeting community goals. Likewise, setting standards too low may not provide valuable information about how to allocate limited resources and give false impression of success where there is room for significant improvement. Effective performance measurement plans include some common key characteristics:

- Stakeholder acceptance,
- Linkage to goals,
- Reliability and credibility,
- Variety of measurements,
- Number of measures,
- Level of detail,
- Flexibility, and
- Realistic goals and targets.

[46] TCRP Report #88: http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_report_88/SummaryDoc.pdf

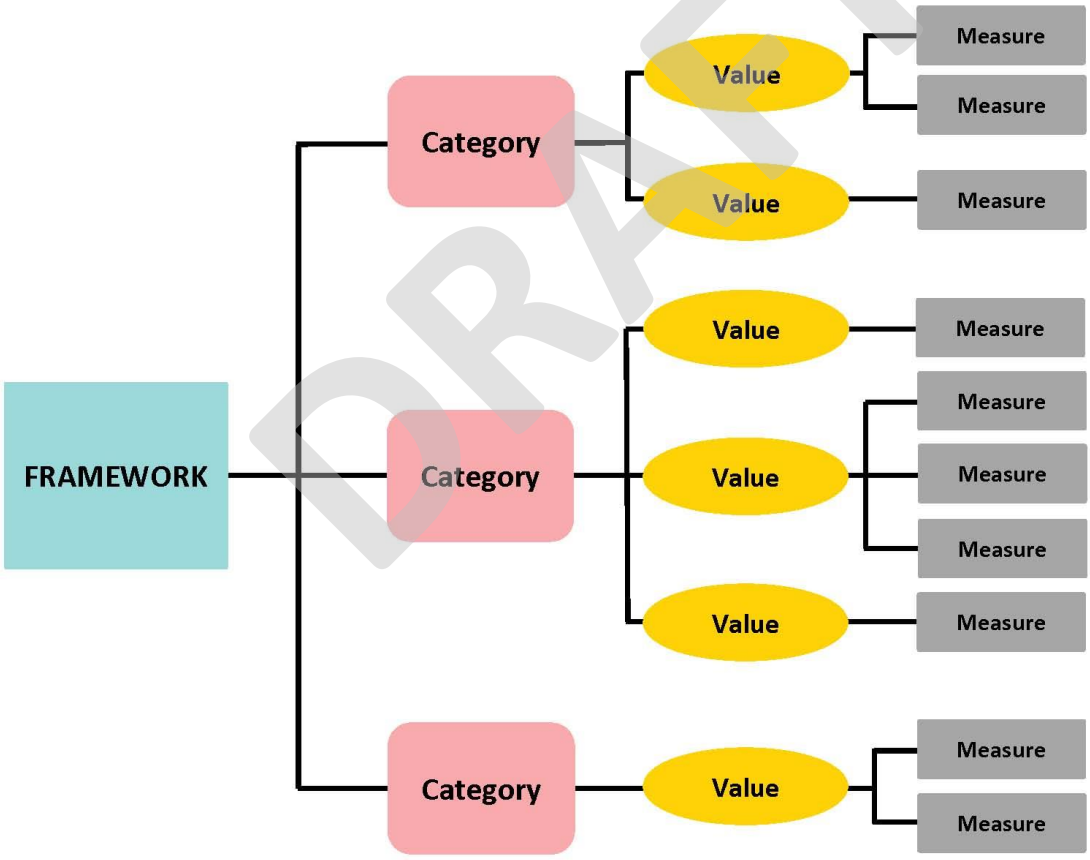
SERVICE STANDARDS BY MODE[47]

Each mode of service could have its own unique performance standards, as some services may not be appropriate for certain days of the week, some services may have longer span of day depending upon destinations or transportation need, and some services may need to operate more/less frequently than others.

FRAMEWORK FOR PERFORMANCE MEASURES

The framework for performance measures includes three tiers: categories, values and measures. Under each category, the values Winslow hopes to achieve should be identified. From there, measures can be created to measure that value.

Figure 7.1 Conceptual framework for performance measures[48]



[47] Valley Metro Regional Transit Standards and Performance Measures: http://www.valleymetro.org/publications_reports/transit_standards_performance_measures

[48] NCHRP Report 446, A guidebook for Performance-Based Transportation Planning.

CATEGORIES

According to TCRP Report #88[49], there are eight general categories of measurement:

1. Availability: Where and when service is provided, and having sufficient capacity available for passengers to take trips at their desired time.
2. Service delivery: Including reliability, customer service, passenger loading, and agency goal accomplishment.
3. Safety and security: Reflecting the likelihood that one will be involved in an accident or become the victim of a crime while using transit.
4. Maintenance and construction: Evaluating the effectiveness of an agency's maintenance program and the impacts of construction projects on customers.
5. Economic: Transit performance evaluated from a business perspective, including utilization, efficiency, effectiveness, and administrative measures.
6. Community: Measures of transit's impact on individuals and on the community as a whole.
7. Capacity: The ability of transit facilities to move both vehicles and people.
8. Travel time: How long it takes to make a trip by transit: by itself, in comparison to another mode, or in comparison to an ideal value.

Some of the categories are easy to measure with quantitative data that is routinely gathered, while others require specialized equipment to measure. Some items may be qualitative measures and collected through repetitive surveying. Determining capacity to reliably collect measures over an extended timeframe is important to tracking system progress and function.

VALUES AND SERVICE PROVISION GOALS

The values portion of the framework directly links measures with desires of a community. A basic goal setting should be developed to identify success of any transit service or route. Typically, the following values are considered and provide an example however values should be refined to reflect Winslow's specific goals.

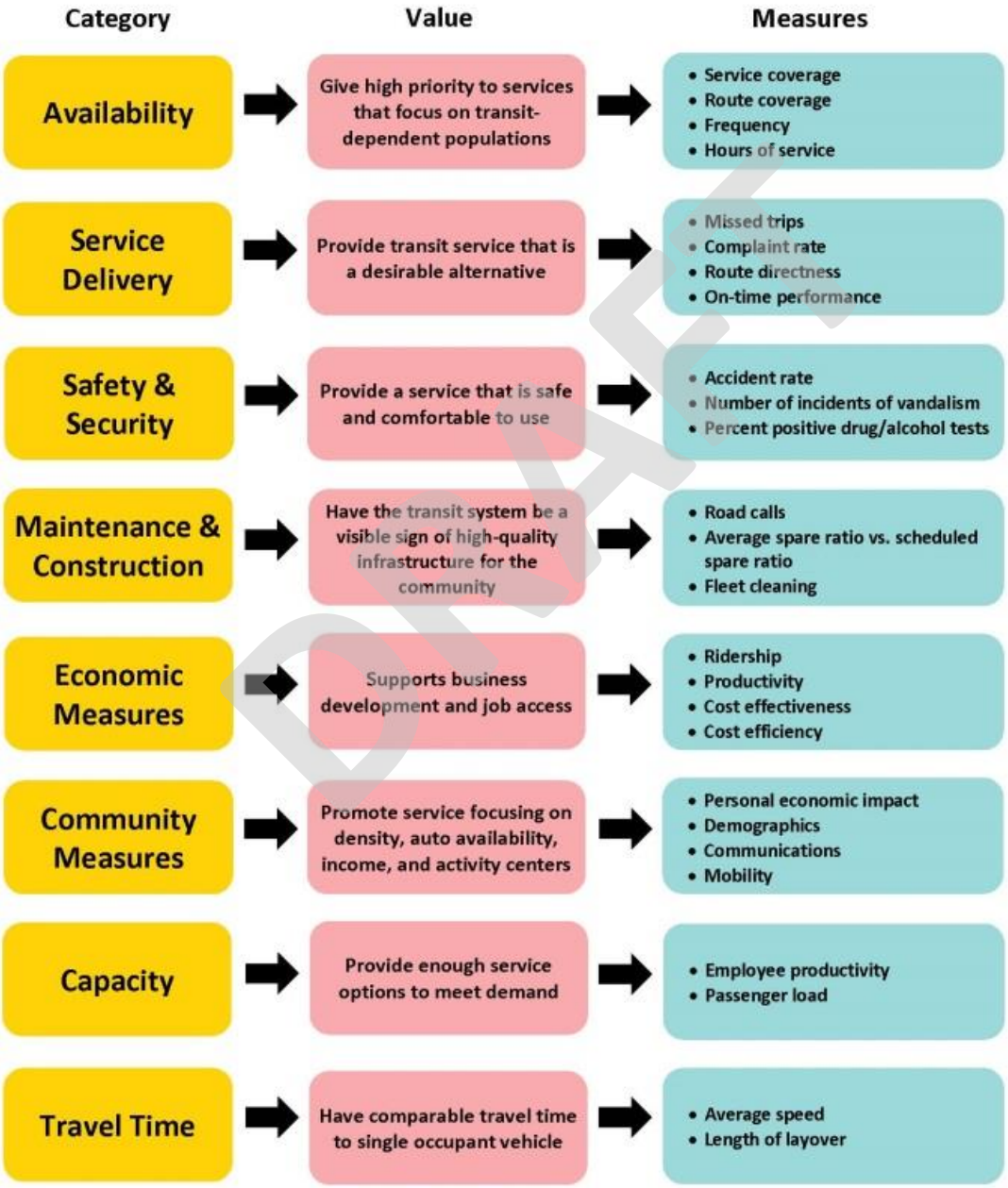
- Availability: Give high priority to services that focus on transit-dependent populations.
- Service delivery: Provide transit service that is a desirable alternative.
- Safety and security: Provide a service that is safe and comfortable to use.
- Maintenance and construction: Have the transit system be a visible sign of high quality infrastructure for the community.
- Economic: Supports business development and job access.
- Community: Promote service focusing on density, auto availability, income, and activity centers.
- Capacity: Provide enough service options to meet demand.
- Travel time: Have comparable travel time to single occupant vehicle.

[49] TCRP Report #88: http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_report_88/SummaryDoc.pdf

MEASURES

Depending on identified values under each category, a variety of measures can be used to evaluate performance. Figure 7.2 identifies common measures for evaluating categories and values as identified by TCRP Report #88.

Figure 7.2 Performance measures



An analysis of other small systems finds that the following measures are commonly collected, easy to track, and have good comparison measures, and therefore should be considered along with their benchmark:

Measure	Benchmark Example
Frequency	1 hour or less
Service span of day	12-hour span, non-continuous
Complaint rate	1 per 1,000 trips
On-time performance	95%
Accident rate	1 per 10,000 miles
Road calls	1 per 5,000 miles
Fleet cleaning	All once per week
Productivity	3-4 passengers/mile
Cost effectiveness	Cost/passenger, cost/mile
Percent positive drug/alcohol tests	Less than 1 per 100

PERFORMANCE MEASURE REQUIREMENTS

Assuming Winslow uses the Section 5311 program for Federal funding, some performance measures would be required to be reported to the state and Federal government. These measures should be a part of a Performance Measurement Plan and provide the minimum basis of analysis. Those measures include:

- Passenger trips,
- Project **revenue miles**,
- Deadhead miles,
- Total project miles,
- **Vehicle service hours**,
- Volunteer drivers,
- Personal vehicles in service,
- Major accidents,
- Major injuries, and
- Fatalities.

BENCHMARKING INDICATORS OF SUCCESS

While establishing performance measures is the first step, making good use of them is another. Since setting standards is designed to be a tool to measure meeting identified goals and to determine the appropriate allocation of resources, determining how measures will be used to make changes to the system is important. Because the data may be used to make decisions, the data collected should be timely, accurate, and accessible.

Service measures can be evaluated in any number of ways, and can be employed alone or used in combination. Typical general categories of evaluation include:

- Baseline standards: A measurement process where a baseline of acceptable attainment is identified. If not attained, a decision must be made as to how or if to continue the service based upon the metric.
- Relative standards: A measurement process where the measurements are addressed based upon improvements, where typically the lowest 25 percent of attainment is the focus of improvements, and after the focus, a decision must be made about continuing the service based upon the improved metric.
- Peer systems: A measurement of comparison against peer transit systems that have similar conditions (e.g., city sizes, level of government support, fare levels, goals and objectives, cost of living, etc.) and are used to measure success against what other similar agencies are able to accomplish. It is important to select peers that closely match Winslow services, including span of service, modes of service, and similar demographics.
- Route design standards: A measurement process looking at the efficiency of service through a set of design standards such as **passengers per mile** or **passengers per hour**. If design standard is met, the agency can be reasonably confident that a goal related to that standard is met.

BASELINE STANDARDS

Baseline standards do not necessarily allow for factors such as marketing, maturity, and flexibility in offerings, whereas relative standards are more likely able to address a variety of conditions and provide an opportunity to focus on improvement over a period of time. They can be rigid and not allow for the flexibility necessary to allow for growth in a new system. If set, baseline systems should be set low, to a standard under which continuing to provide service is completely unreasonable.

RELATIVE STANDARDS

Using a relative standards approach, creating thresholds is a tool for comparing and measuring relative performance of services by service type. Thresholds can be established at breakpoints in order to identify top, mid-range, and bottom performers.

One way to do this is to use a quartile-based performance concept:

- Top-performing: 25 percent of services offered,
- Mid-range-performing: 50 percent of services offered, and
- Bottom-performing: 25 percent of services offered.

By using this approach, focus can be addressed on the lowest-performing routes in order to assess their weaknesses as compared to mid-range- and top-performing services. Decisions can be made on the methodology to improve bottom-performing services over a period of time. As an example, during the next evaluation period, those improvement methodologies can be assessed for success.

PEER SYSTEMS

Many times, communities also use peer services in peer cities to evaluate transit performance. These efforts must be done with the confidence that the peer relationship is strong in order to be considered useful. In Arizona, the FTA Section 5311 program is offered in more than 20 communities, but it is important to recognize that local dynamics dictate service offerings and may not be comparable.

ADOT staff can provide leadership in developing peer models and comparisons.

ROUTE DESIGN

Route design can be a way to measure efficiencies in a system and design improvements. Measurements include things like number of diversions, cycle time, **deadhead** time, dwell time, and so forth. Monitoring route design allows for continual tweaks to the system that can be easy to fix and provide efficiencies in the system.

MONITORING AND REPORTING

When beginning the measuring process, it is important to note that data collection is the key to successful reporting. Having a solid methodology is an investment in human resources and tools, as a strong process can greatly reduce time spent collecting and evaluating measures because typically, monitoring and measuring are ongoing efforts that can produce monthly, quarterly, and annual reports, and eventually, allow for comparisons over longer periods of time.

Setting a routine monitoring and reporting review process enables the data to be used effectively in decision-making. This can be done through an annual or biannual report that both highlights successes and evaluates opportunities for improvement on underperforming metrics. Such reports and metrics are valuable in the grant and funding process to provide key data on system performance and value.

ADOT REPORTING REQUIREMENTS AS A SECTION 5311 RECIPIENT

ADOT requires grantees to comply with the following to remain in good standing under the Section 5311 program. The FTA requires each designated recipient under the Section 5311 program to provide annual rural data for the **National Transit Database (NTD)**. The NTD is the system through which the FTA collects uniform data needed by the Secretary of Transportation to administer department programs. FTA requires that each state DOT receiving funds under the Section 5311 program to submit an annual report for each Section 5311 transit agency. Each grantee must provide information on annual revenue, operations, and services provided. The reporting period is July 1 through June 30. While entities may also report to NTD directly when they are direct recipients or Tribes, the NTD data for Section 5311-funded service must be provided to ADOT when requested.

At a minimum, ADOT requires reporting on the following, although many other small systems will also track their **farebox recovery**, subsidy per boarding, and on-time performance:

- Monthly:
  - Reimbursement requests including maintenance of adequate financial records, that document and support all grant expenditures,
  - Submission of invoices that are accurate and timely,
  - DBE contracting activities, and
  - Capital milestones;
- Quarterly:
  - TAC Minutes and or agendas;
- Annual:
  - Complementary paratransit plan updates,
  - Single audit report,
  - NTD report, and
  - Insurance certificates; and
- Other:
  - Proposed schedule or fare changes,
  - Accident reporting with 24 hours,
  - Asset management and vehicle records, and
  - Full participation in site visits with timely responses to any deficiencies.

Annual Performance Data					
Passenger trips	0	Cost/passenger trip	0	Volunteer drivers (people)	0
Project revenue miles	0	Cost/mile	0	Personal vehicles in service	0
Deadhead miles	0	Cost/service hour	0	Major incidents	0
Total project miles	0	Passengers/mile	0	Major injuries	0
Vehicle service hours	0	Passengers/service hour	0	Fatalities	0

CHAPTER SUMMARY

Should a transit program be established, a Performance Measurement Plan should also be established that identifies what data will be collected, methodology for doing so, evaluation standards and a reporting process to decision-makers. For Winslow, certain performance measures may be more worthwhile to consider, and be broken out separately depending upon modal offerings.

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CHAPTER 8 | PEER CITIES AND WINSLOW PROJECTIONS

PURPOSE

In order to create projections for costs, ridership and performance measures for each of the service alternatives identified in **Chapter 4**, peer cities providing similar services have been identified and analyzed for a variety of measures. This chapter walks through that analysis to provide projections for each service alternative.

PEER CITIES

For this report, data from four peer ADOT/FTA 5311 programs was gathered to identify likely performance measures applicable to Winslow transit services. Additionally, data from Mountain Lift, NAIPTA's paratransit system, was used as a comparison for paratransit and demand-response service, as was data from NAIPTA's vanpool program. All of these peer systems have had years to mature which allows for some service stability and more reliable statistical review.

Commuter service peer programs:

- Show Low White Mountain Connection,
- Cottonwood Verde Lynx, and
- Coolidge CART.

Local service peer programs:

- Show Low Four Seasons Connection,
- Cottonwood Area Transit,
- Coolidge Cotton Express, and
- Douglas Rides.

Paratransit service peer programs:

- Cottonwood/ADA Paratransit, and
- NAIPTA Mountain Lift.

METHODOLOGY

COST METHODOLOGY

Using comparative data from these programs, an estimated cost for sample alternatives is provided. Measures are compared with similar service types. For example, commuter services were only compared with commuter services and local services only compared with similar local services. Costs were estimated for ongoing **net operating** and administration as cost per hour (without collected fare revenue), capital costs, and planning costs.

Because each service offers a variety of hours and miles of service, the measure **cost per hour** was used as tool to compare service despite these differences. The average cost per hour was then applied to number of hours of service under the proposed alternatives in **Chapter 4**.

In addition to cost per hour, capital costs were considered. For each service alternative, estimated ridership was used to determine what vehicle should be purchased. The number of stops for each service was also considered. These costs were applied to year one and would reoccur on a regular, planned basis, but not within five years. Capital costs on an annual basis included office, storage, hub spaces, and routine capital costs including preventative maintenance. This cost was determined through the average of the **peer systems** capital costs for appropriate service type. In so doing, each example provides a snapshot of potential annual budget

Planning costs were assumed to be $50,000 in year one for implementation and $100,000 in year five for an updated five-year plan regardless of service type.

RIDERSHIP METHODOLOGY

Various methodologies were used to forecast the potential ridership on transit service for local fixed-route, commuter fixed-route, demand-response, and ADA paratransit for the city of Winslow. For fixed-route forecasts, forecasts were generated based on both commuter home to work trips using Longitudinal Employer-Household Dynamics (LEHD) data and supported by simplified **Transit Cooperative Research Program (TCRP)** tools. Demand-response forecasts were estimated using two models developed by the National Center for Transit Research (NCTR). Paratransit ridership was estimated using an additional TCRP tool for estimating ADA complementary paratransit demand. Data used in these forecasts are based on 2010 Census data for population characteristics, American Community Survey data for additional demographic data, 2014 LEHD home to work flow data, service characteristics of the service alternatives identified in **Chapter 4**, service statistics from peer transit, and reasonable assumptions for additional service variables such as fares. See **Appendix G** for further details.

Baseline service alternative assumptions:

- Winslow Flagstaff Commuter Service: Two round trips weekdays only. One round trip a.m. and one round trip p.m.
- Winslow Holbrook Commuter Service: Three round trips weekdays only. One round trip a.m., one round trip midday, and one roundtrip p.m.
- Vanpool: Assumes program buildout at six vans.
- Winslow Frequency Fixed-Route: Nine loops daily weekday only. Three in the a.m., three midday, and three p.m.
- Winslow Coverage Fixed-Route: Six loops daily weekday only. Two in the a.m., two midday, and two p.m.
- Winslow Demand-Response: Twelve-hour weekday only service.
- Winslow Complimentary Paratransit: Hours to complement fixed route.

COMMUTER SERVICE COMPARISONS AND PROJECTIONS

Commuter service costs are compared with three peer services also offering a commuter route: Show Low's White Mountain Connection, Coolidge's CART, and Cottonwood's Verde Lynx (See **Chapter 2: Existing Conditions and Market Analysis** for more information).

For commuter services, the average cost per passenger trip is $9.49. The average fare for commuter service in peer cities is $1.11. The average cost per hour for operating is $59.42.

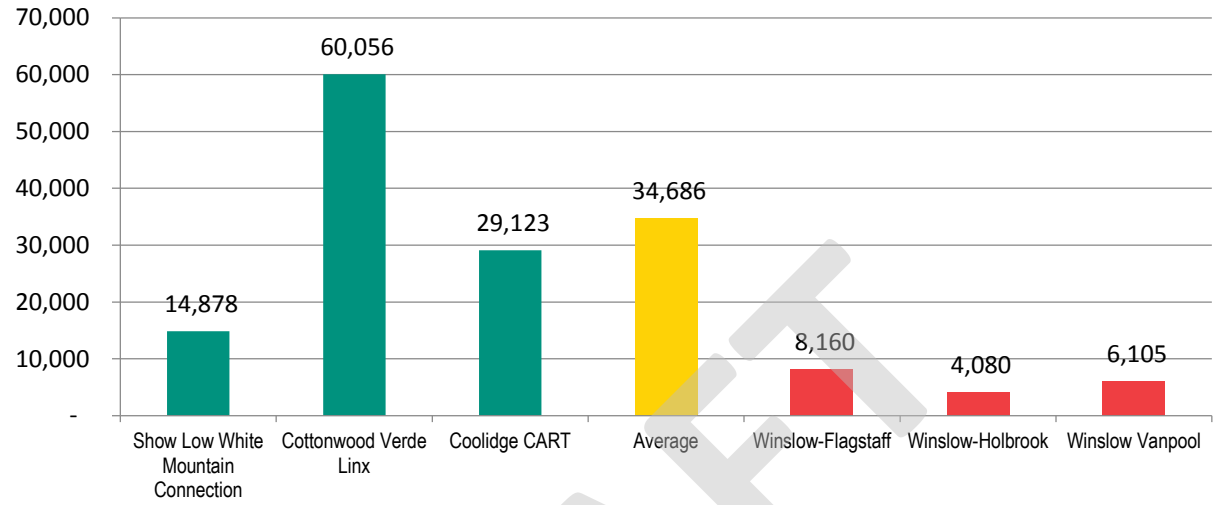
Figure 8.1 Commuter service comparisons[50]

	Show Low White Mountain Connection	Cottonwood Verde Lynx	Coolidge CART	Average
Category				
Passenger Trips	14,878	60,056	29,123	34,686
Total Miles	102,216	174,447	138,725	138,463
Vehicle Service Hours	3,132	6,478	4,902	4,837
Performance				
Cost/Passenger Trip	$10.69	$6.45	$11.32	$9.49
Cost/Mile	$1.73	$2.22	$2.39	$2.11
Cost/Hour	$50.79	$59.78	$67.70	$59.42
Passengers/Mile	0.16	0.33	0.21	0.23
Passengers/Hour	4.75	9.85	5.98	6.86
Operations Costs (58%/42%)				
Total Operations Costs	$167,095	$357,312	$331,846	$285,418
Fares	$15,101	$61,640	$38,992	$38,578
Net	$151,993	$295,672	$292,854	$246,840
Local Share (42%)	$63,837	$124,182	$122,999	$103,673
Federal Share (58%)	$88,156	$171,489	$169,855	$143,167
Administration Costs (80%/20%)				
Total Administration Costs	$7,086	$91,573	$52,400	$50,353
Local Share (20%)	$1,485	$18,344	$10,480	$10,103
Federal Share (80%)	$5,942	$73,307	$41,920	$40,390
Capital Costs (80%/20%)				
Total Capital Costs	$400	$55,208	$54,443	$36,684
Local Share (20%)	$400	$11,042	$10,889	$7,443
Federal Share (80%)	$0	$44,166	$43,554	$29,240
			Federal Share of Cost/Hour:	**61.76%**
			Local Share of Cost/Hour:	**38.24%**

[50] Show Low Data 10/1/2015-9/30/2016; Cottonwood Data 6/1/2016-6/1/2017; Coolidge Data Performance Measures FY2016; Budget FY2018 projections

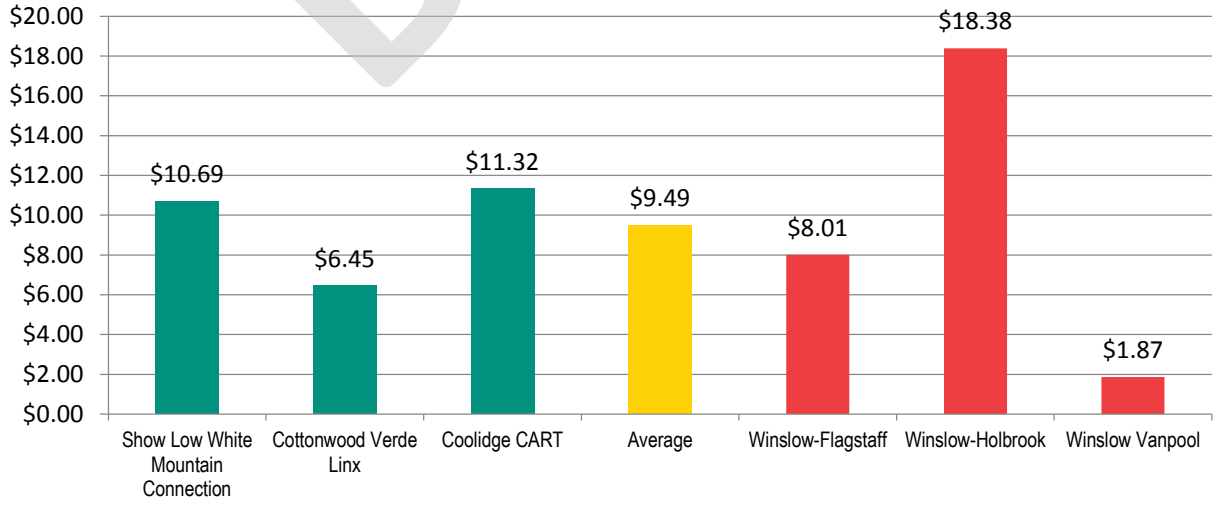
The ridership estimate for the Flagstaff- Winslow Route is 8,160 annual trips. Ridership estimated for the Winslow-Holbrook Route is 4,080 trips.

Figure 8.2 Commuter passenger trips



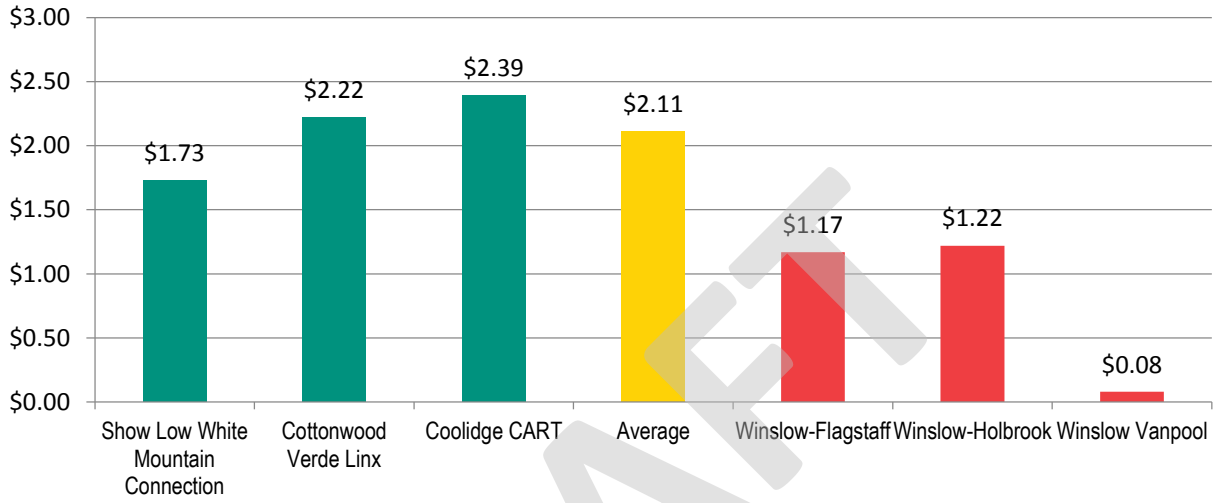
Based on passenger trips, the following performance measures are expected. Costs per passenger trip shows that Winslow-Flagstaff has a slightly lower cost per trip than average. Due to low ridership, the Winslow-Holbrook cost per passenger trip are the highest of any service compared. Vanpools provide a very low cost per trip but with total five-year expenses for vanpool at just over $60,000 versus approximately $350,000 for commuter bus service. However, vanpools only serve a select group of commuters rather than the general public.

Figure 8.3 Commuter cost/passenger trip



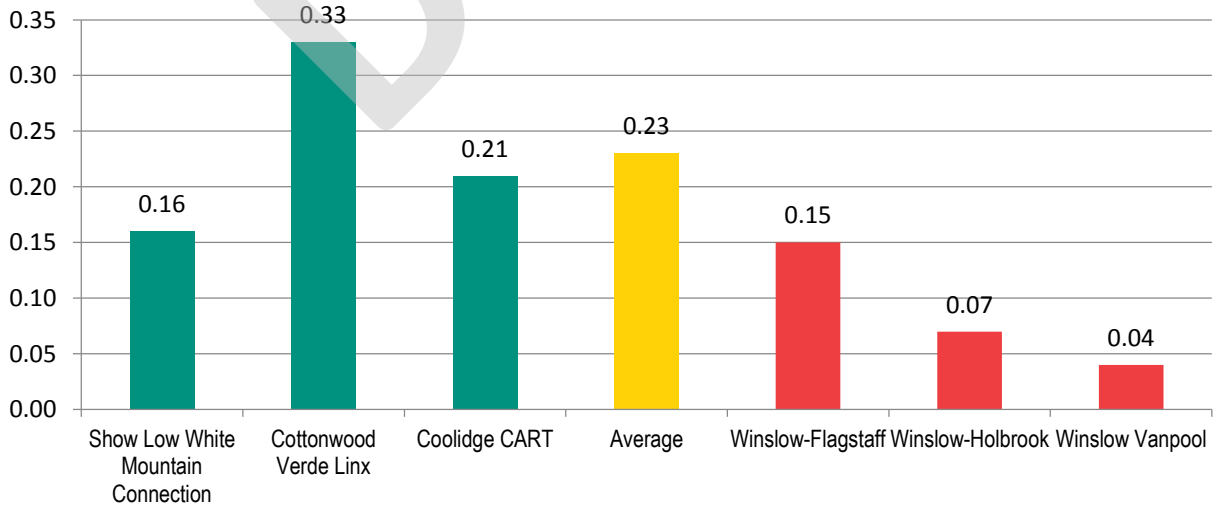
Cost per mile comparisons show that all the Winslow the service alternatives are cheaper than any of the peers. This is due to the minimal levels of service being proposed with only two trips to Flagstaff and three trips to Holbrook per day. Vanpools consistently provide good cost performance metrics due to their low costs.

Figure 8.4 Commuter cost/mile



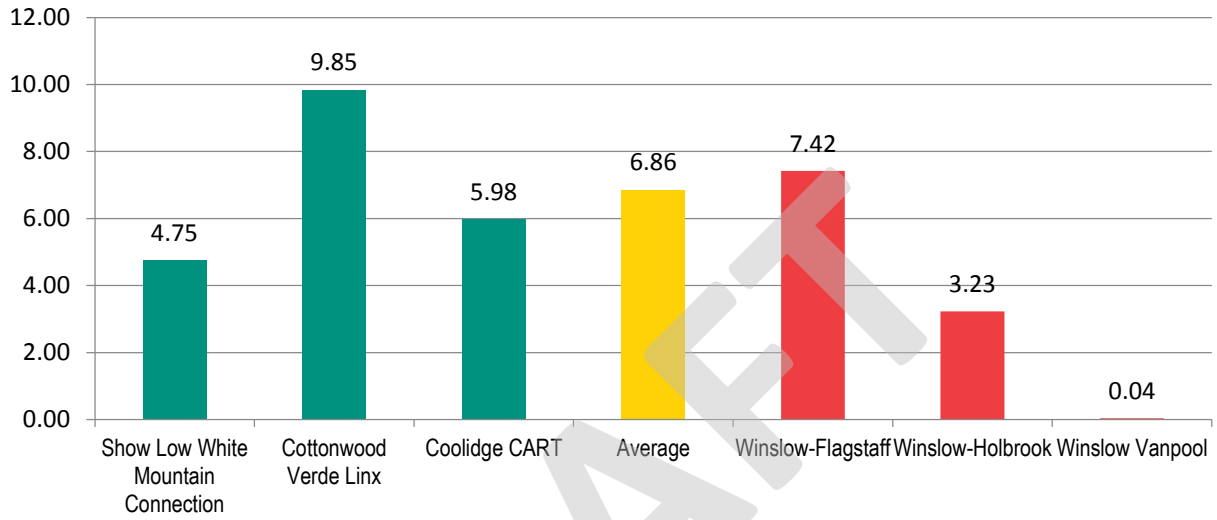
All three service alternatives have low passengers per mile compared to peer communities. However, vanpool performs poorly because six vans are used to transport passengers meaning service miles are very high, creating the poor metric.

Figure 8.5 Commuter passengers/mile



The Winslow-Flagstaff route has above average passengers per hour. However, this is partly due to the limited service hours under the baseline proposal. Winslow-Holbrook services perform poorly compared to peers. Vanpool appears to perform poorly; however, this is because six vans are used to transport passengers meaning service hours are very high, creating the poor metric.

Figure 8.6 Commuter passengers/hour



Analysis of performance measures for commuter service alternatives shows that vanpool is the most cost effective way to provide service. Vanpool only serves regular commuters, however, and may not meet important community goals. The Winslow-Flagstaff commuter bus performs well compared to peer communities in terms of costs though does not have high ridership. Along with performance measures, goals of the system should be considered. Even if low measures are expected, the service may still meet community goals.

LOCAL SERVICE COMPARISONS AND PROJECTIONS

Local service costs are compared with four services: Show Low Four Seasons Connection, Cottonwood Area Transit, Coolidge Cotton Express, and Douglas Rides (See **Chapter 2: Existing Conditions and Market Analysis** for more information).

Figure 8.7 Local fixed-route service comparisons[51]

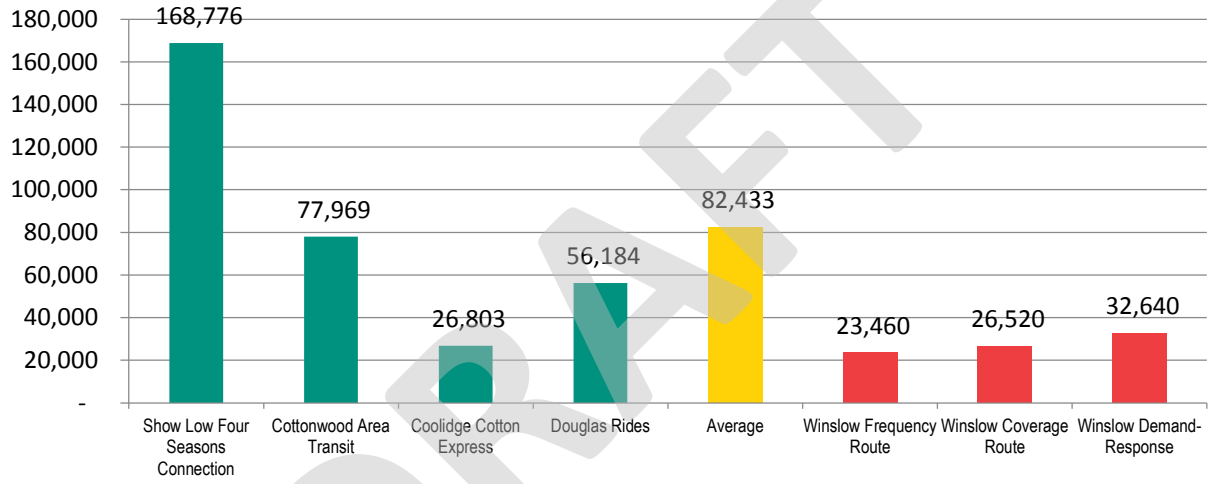
	Show Low Four Seasons Connection	Cottonwood Area Transit	Coolidge Cotton Express	Douglas Rides	Average
Category					
Passenger Trips	168,776	77,969	26,803	56,184	82,433
Total Miles	172,192	149,884	85,259	112,272	129,902
Vehicle Service Hours	7,452	10,065	10,062	9,816	9,349
Performance					
Cost/Passenger Trip	$2.50	$7.70	$19.39	$8.53	$9.53
Cost/Mile	$2.51	$4.01	$6.09	$4.34	$4.24
Cost/Hour	$56.56	$59.66	$51.64	$48.85	$54.18
Passengers/Mile	1.01	0.56	0.31	0.51	0.60
Passengers/Hour	22.65	7.92	2.66	5.72	9.74
Operations Costs (58%/42%)					
Total Operations Costs	$389,888	$554,100	$519,627	$590,596	$513,553
Fares	$35,236	$95,588	$17,110	$36,000	$45,984
Net	$354,652	$458,512	$502,517	$554,596	$467,569
Local Share (42%)	$148,954	$192,575	$211,057	$232,930	$196,379
Federal Share (58%)	$205,698	$265,937	$291,460	$321,666	$271,190
Administration Costs (80%/20%)					
Total Administration Costs	$66,857	$142,007	$99,800	$215,660	$131,081
Local Share (20%)	$13,371	$28,447	$19,960	$43,132	$26,228
Federal Share (80%)	$53,483	$113,605	$79,840	$172,528	$104,864
Capital Costs (80%/20%)					
Total Capital Costs	$16,073	$85,614	$52,308	$208,867	$90,715
Local Share (20%)	$1,207	$17,123	$10,462	$41,773	$17,641
Federal Share (80%)	$14,466	$68,491	$41,846	$167,094	$72,974
				Federal Share of Cost/Hour:	**62.82%**
				Local Share of Cost/Hour:	**37.18%**

[51] Show Low Data 10/1/2015-9/30/2016; Cottonwood Data 6/1/2016-6/1/2017; Coolidge Data Performance Measures FY2016; Budget FY2018 projections; Douglas Data Performance Measure extrapolated from April 2017 and budget projections from

Local services have an opportunity to generate much higher ridership, so average cost per trip from peer communities is $9.53. The average fare for local service in peer communities is $0.56. However, cost per service hour is slightly less than commuter services at $54.18 per hour.

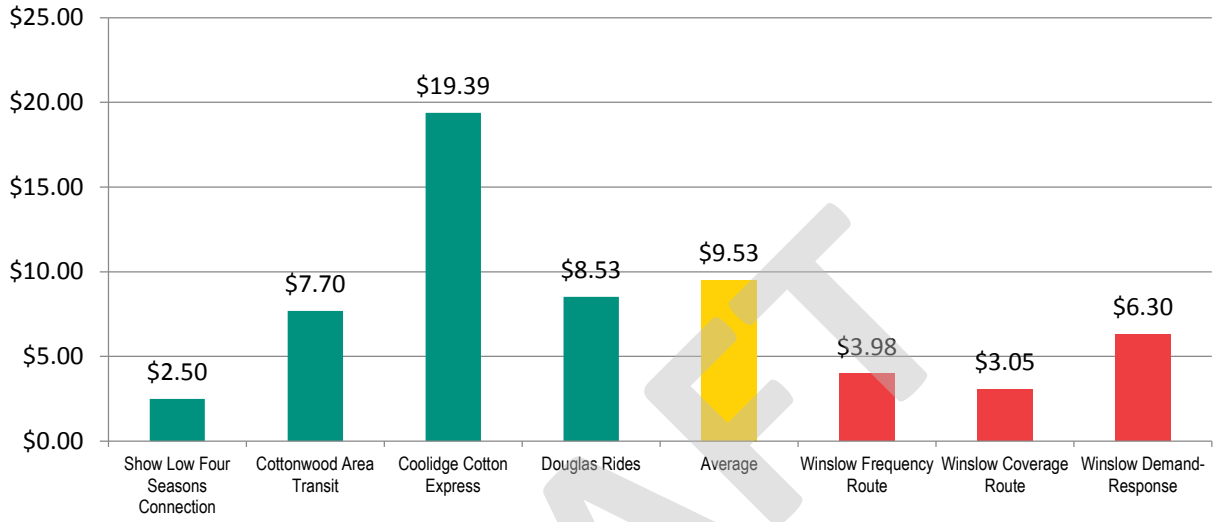
Ridership estimates for local service show that the Frequency route would have 23,460 annual trips and the Coverage route would get 26,520 trips. This is because the Coverage route reaches riders who would have no access without the extended service option. An alternative to providing local service through a fixed-route system is to provide a demand-response system. Ridership estimates for this total 32,640 annual trips, largely in part because the door-to-door service attracts additional riders through convenience.

Figure 8.8 Local passenger trips



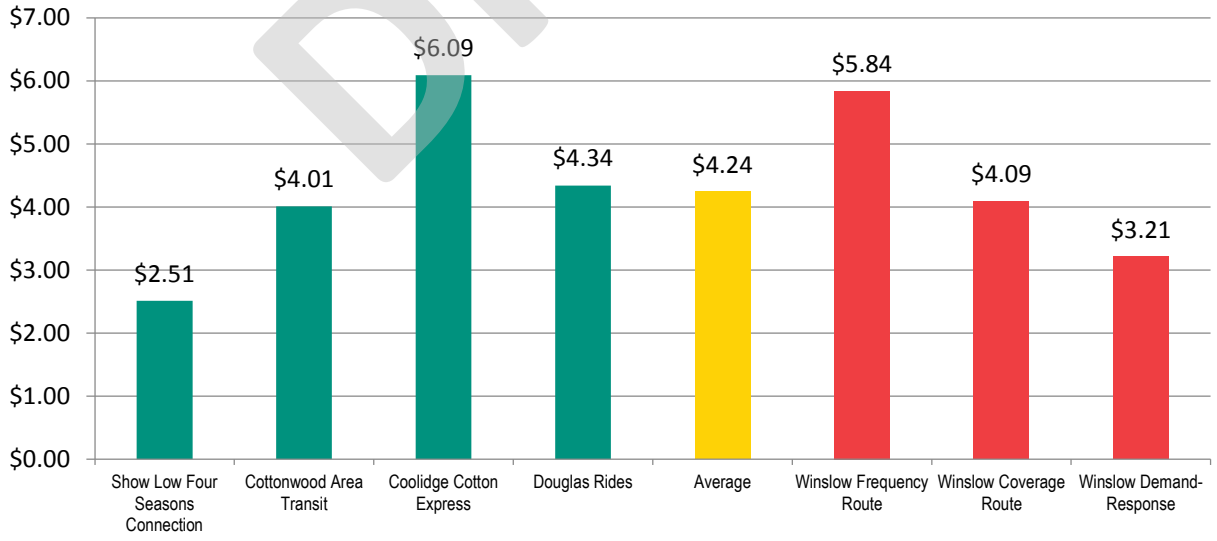
Based upon the above estimates, the following performance measures were created. Cost per passenger trip for all of the Winslow local service alternatives is below average. While ridership is low, the costs of proposed services compared to peer services is even lower.

Figure 8.9 Local cost/passenger trip



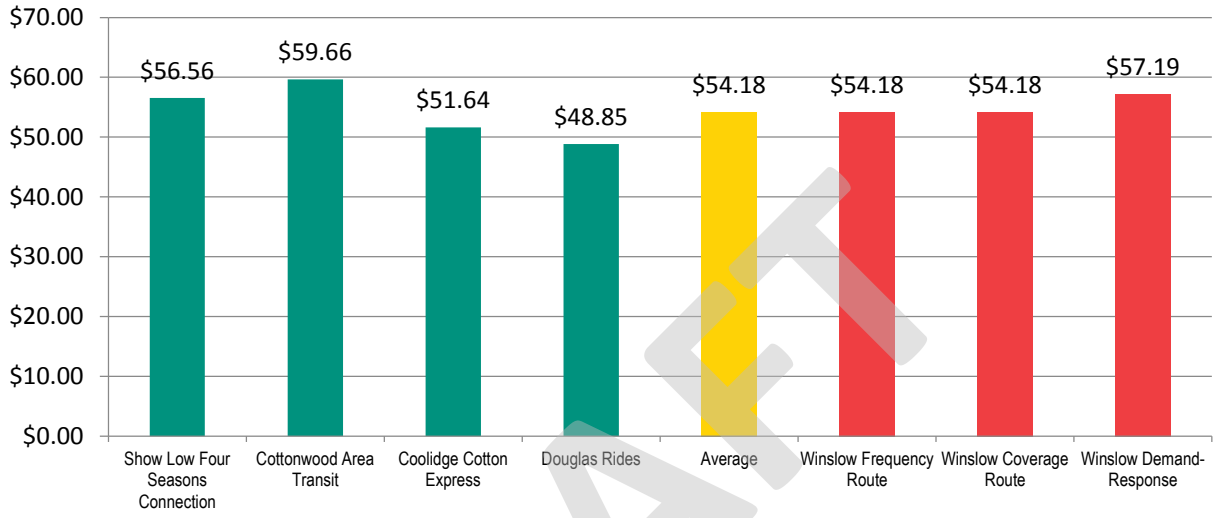
Cost per service mile is lower than average for the Coverage and demand-response alternatives but higher than average on the Frequency route.

Figure 8.10 Local cost/mile



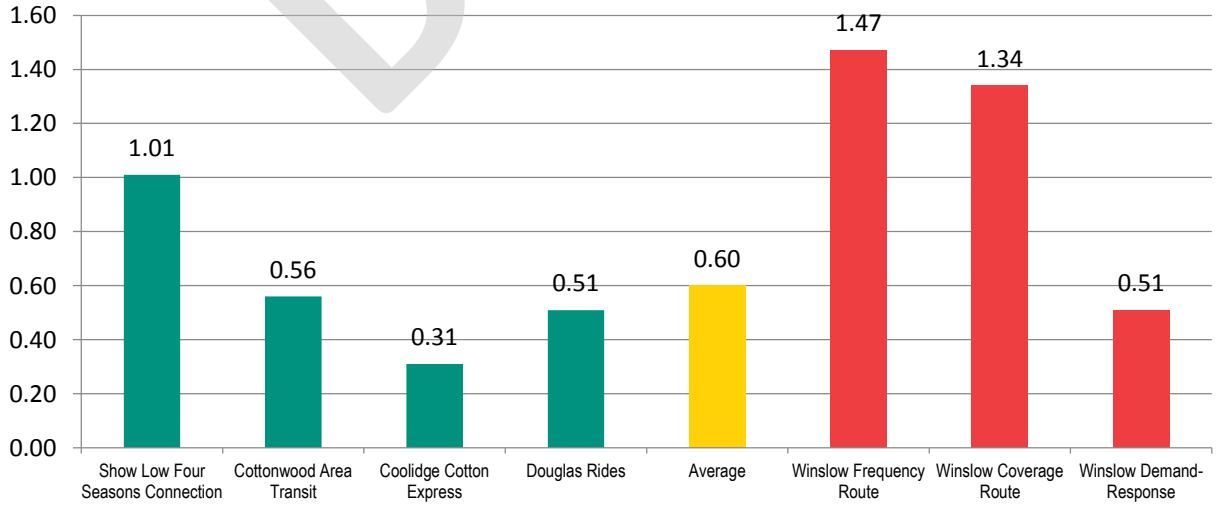
Cost per service hour was the basis for all analysis, so the Winslow Frequency and Coverage routes equal the average of peers. Of note here is that demand-response has a higher cost per hour than fixed-route services. The tradeoff for the higher cost per hour is the higher level of service with door-to-door stops and the ability to meet the needs of customers in terms of time of service.

Figure 8.11 Local cost/hour



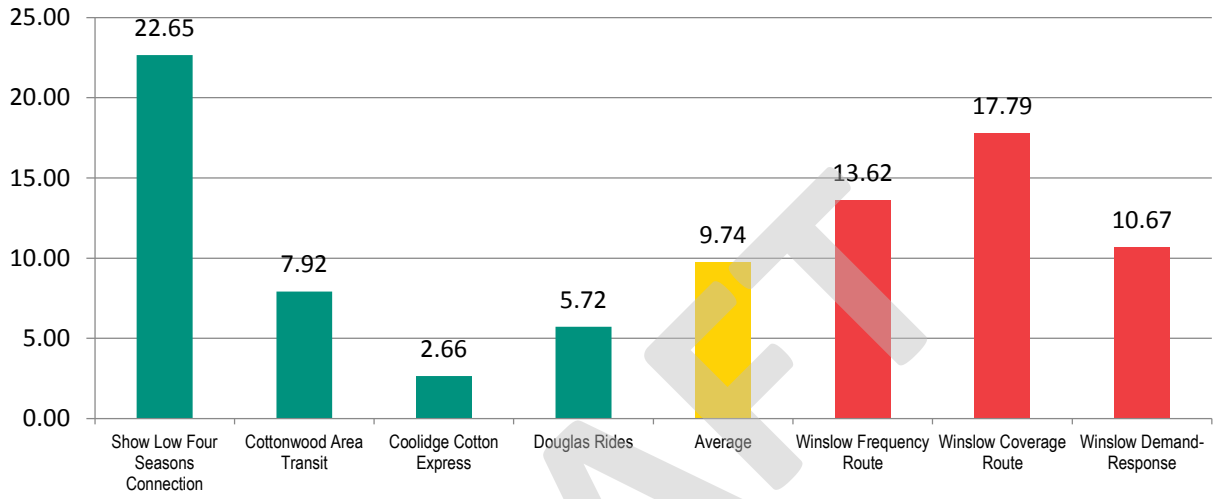
Both the Frequency and Coverage routes have good passenger per mile metrics compared to peer cities, primarily because of the significantly smaller Winslow service area. The Winslow proposed services have less than 20,000 annual miles compared to their peers with an average of nearly 130,000 annual miles.

Figure 8.12 Local passengers/mile



Passengers per hour is above average for all the local service alternatives compared to the peer average. Again, this in in part due to the limited service hours. This is due to the baseline service proposals which at most suggest just over 3,000 hours of service while other communities are providing a minimum of 7,000 hours of service.

Figure 8.13 Local passengers/hour



Overall review of local service performance measures show that because of the constrained amount of proposed service, the local fixed-route services can perform reasonably well compared to peer cities. Alternatively, the demand-response service has lower performance compared to alternatives but provides a much higher level of service.

COMPLIMENTARY PARATRANSIT SERVICE COMPARISONS AND PROJECTIONS

Complementary Paratransit comparisons were based on the peer programs in Cottonwood and Flagstaff. (Complementary Paratransit services are a companion to local fixed-route services, a requirement of the ADA. Whenever local services are provided, reasonable accommodation must be made to serve those who have disabilities and are unable to access or ride regular fixed-route services.)

Figure 8.14 Complementary paratransit (ADA) service comparisons[52]

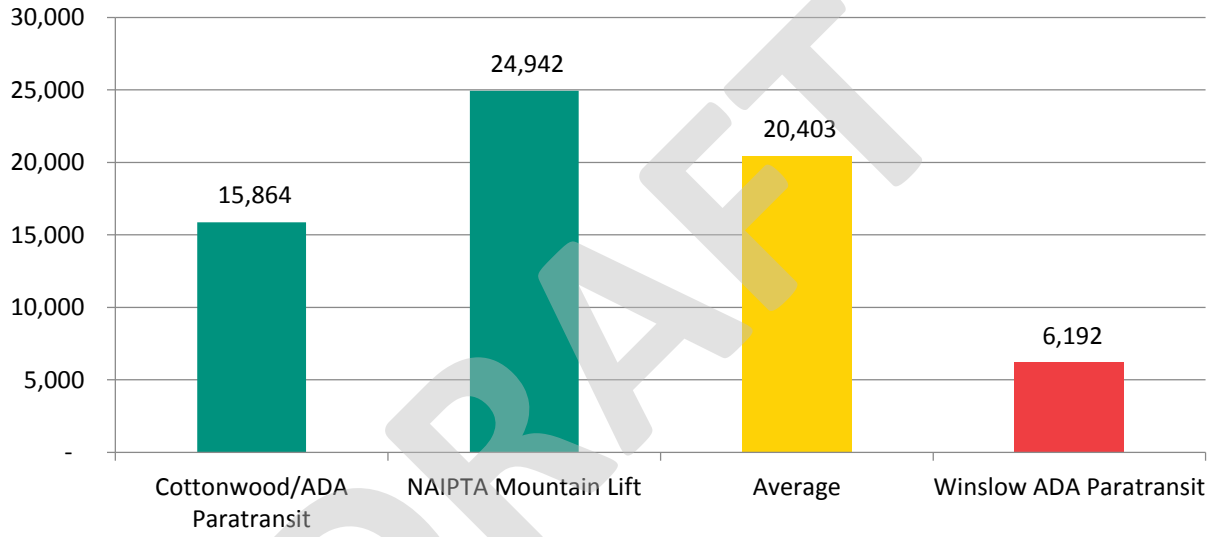
	Cottonwood ADA Paratransit	NAIPTA Mountain Lift	Average
Category			
Passenger Trips	15,864	24,942	20,403
Total Miles	91,825	113,651	102,738
Vehicle Service Hours	10,065	8,663	9,364
Performance			
Cost/Passenger Trip	$28.82	$12.58	$20.70
Cost/Mile	$4.98	$6.78	$5.88
Cost/Hour	$45.42	$88.96	$67.19
Passengers/Mile	0.17	0.22	0.20
Passengers/Hour	2.59	2.88	2.73
Operations Costs (58%/42%)			
Total Operations Costs	$421,841.25	$518,483	$470,162
Fares	$72,772	$61,716	$67,244
Net	$349,069	$456,767	$402,918
Local Share (42%)	$146,609	$191,842	$169,226
Federal Share (58%)	$202,459.93	$264,925	$233,692
Administration Costs (80%/20%)			
Total Administration Costs	$108,111	$313,893	$211,002
Local Share (20%)	$21,657	$62,779	$42,218
Federal Share (80%)	$86,489	$251,114	$168,801
Capital Costs (80%/20%)			
Total Capital Costs	$65,178	$17,284	$41,231
Local Share (20%)	$13,036	$17,284	$15,160
Federal Share (80%)	$52,143	$0	$26,071
		Federal Share of Cost/Hour:	**65.56%**
		Local Share of Cost/Hour:	**34.44%**

[52] Cottonwood Data 6/1/2016-6/1/2017; NAIPTA unaudited data FY17

Complementary paratransit (ADA) services have the highest costs per hour because of the highly individualized services they provide, meeting customer needs in terms of time of trip and by providing door-to-door service. The average cost per trip is $29.86. The average fare for paratransit service is $3.30. Cost per hour in peer communities is $67.19.

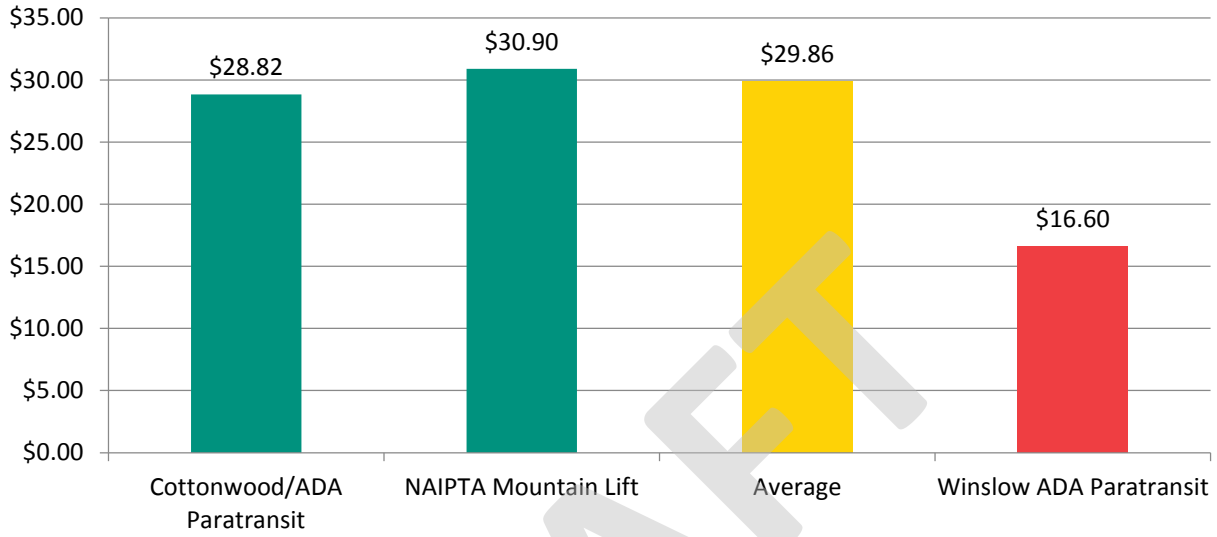
Annual ridership estimates show that Winslow Complementary Paratransit (ADA) trips would be low. This is one performance measure where systems generally want low ridership because the costs are in addition to providing a fixed-route service. Systems often work to make their fixed-route service as accessible as possible by people with a variety of disabilities.

Figure 8.15 ADA paratransit passenger trips



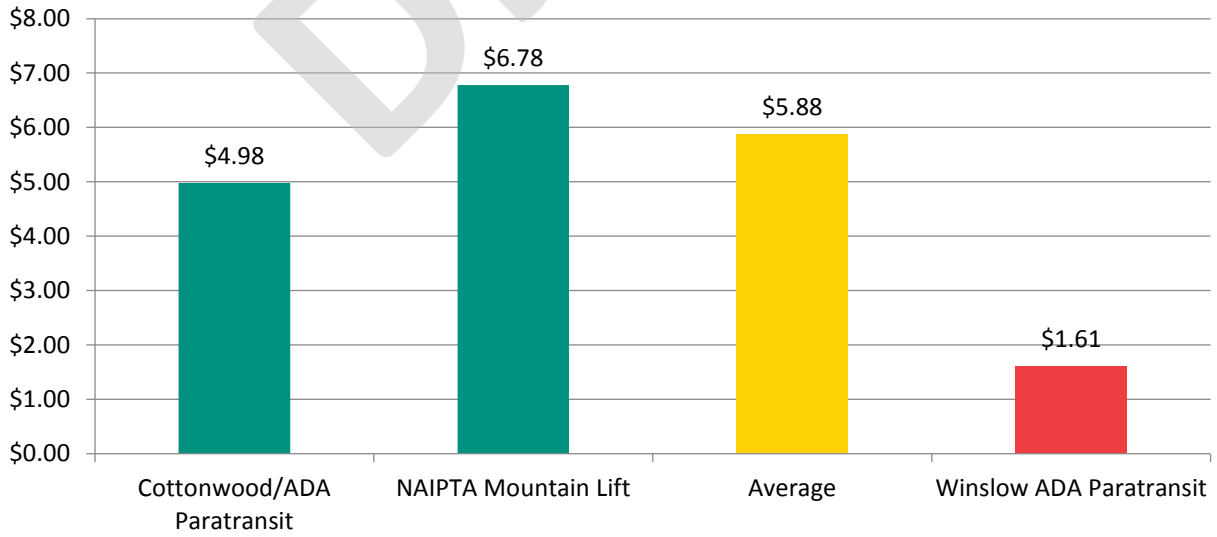
While ridership is low, the cost for providing service to a smaller number of people is much higher than peer systems because of the low number of passenger trips.

Figure 8.16 ADA paratransit cost/passenger trip



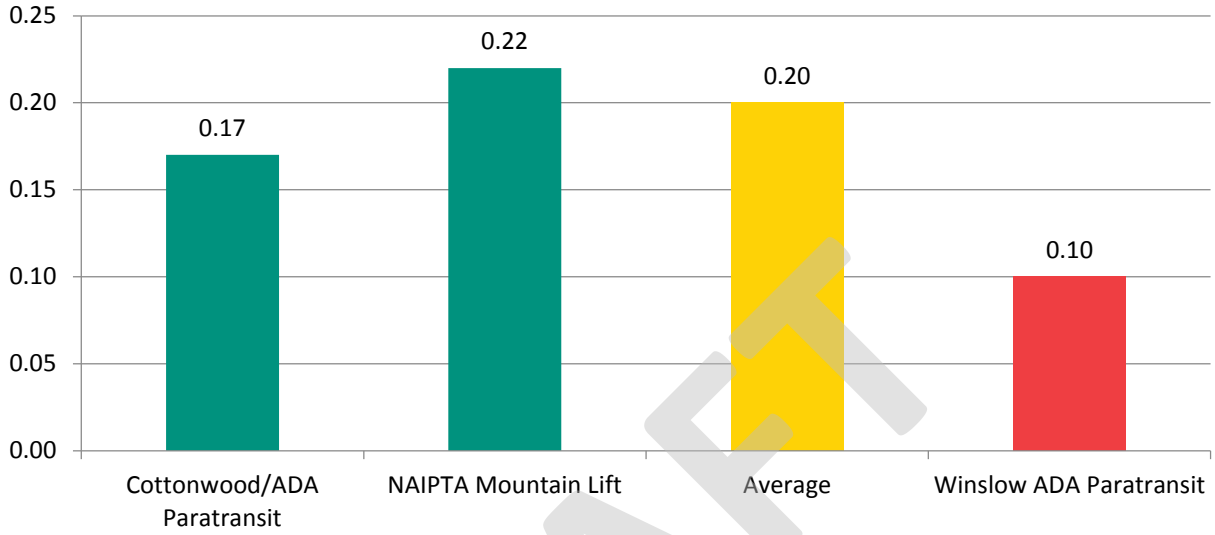
Because not many trips are expected, only one fourth of the number of trips of the peer systems, the cost per mile is low. Trips will also likely be short in length due to the small service areas. The vehicles may be sitting idle a great deal of the time.

Figure 8.17 ADA paratransit cost/mile



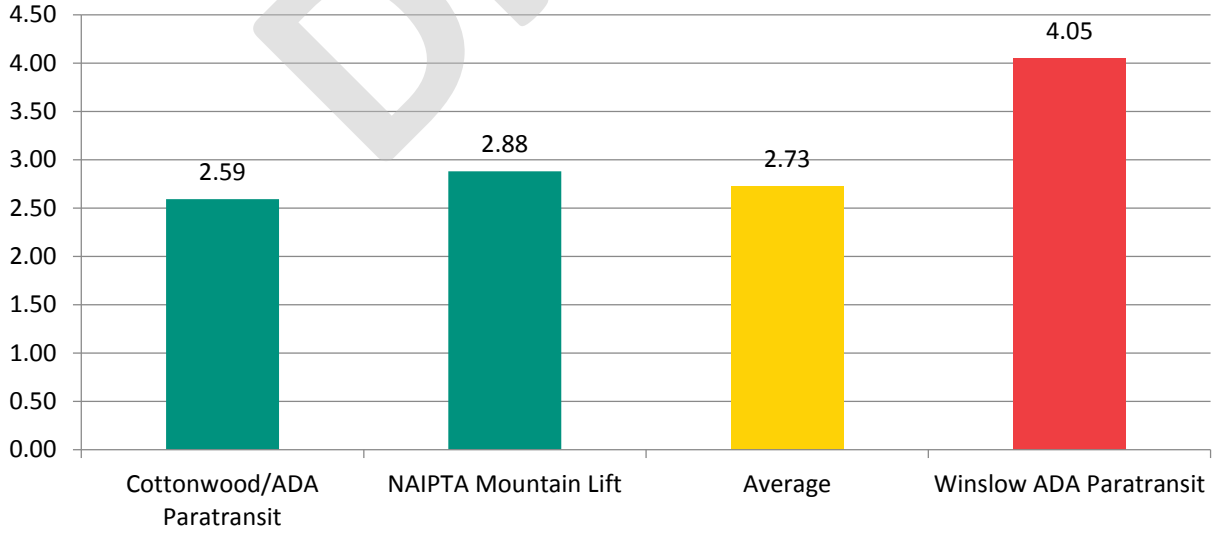
Passengers per mile is again a low measure, largely because the ridership is low compared to the peer cities.

Figure 8.18 ADA paratransit passengers/mile



Winslow is projected to have fewer passengers per hour than peer systems. Likely, it will be hard to match the low number of riders each day so that trips can be shared, and the system will usually be providing a single occupant an origin-to-destination ride.

Figure 8.19 ADA paratransit passengers/hour



Overall, the ADA paratransit system is a costly way to provide highly individualized services to few people. It is important to remember that such a system is required in addition to a fixed-route service and limited in who it serves.

CHAPTER SUMMARY

Performance measures and peer city comparisons can go a long way to setting expectations for a service. The measures used in this chapter are the most common metrics transit systems keep. However, as noted in **Chapter 7: Performance Measures**, it is important to keep in mind the goals of the City and to also set specific metrics that measure success in meeting community priorities. Providing services with performance measures below average may still be important to a community if it is meeting other City-specific goals.

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CHAPTER 9 | RECOMMENDATION

PURPOSE

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CHAPTER 10 | IMPLEMENTATION

PURPOSE

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CHAPTER 11 | TRANSIT GLOSSARY[53]

- A -

ADA (Americans with Disabilities Act of 1990) This legislation requires transportation providers to make transportation accessible to individuals with disabilities.

ADA accessible vehicles Public transportation revenue vehicles which, in compliance with ADA requirements, do not restrict access, are usable, and provide allocated space and/or priority seating for individuals who use wheelchairs, and which are accessible using lifts or ramps.

Administration expenses/administrative costs Eligible project administrative costs may include, but are not limited to general administrative expenses such as salaries and fringe benefits for the project director, transit manager, and secretary; marketing expenses, insurance premiums or payments to a self-insurance reserve, office supplies, facilities and equipment rental, and administering drug and alcohol testing. Administrative costs may not exceed 30 percent of the total (sum of) federal administrative and operating/intercity operating budgets (preventive maintenance, whether capitalized or not, is considered an operating expense).

Alighting The act of exiting a transit vehicle (deboarding).

Amtrak Amtrak is a national supplier of passenger rail services, and provides a stop in Winslow for both east- and westbound services.

American Public Transportation Association (APTA) To strengthen and improve public transportation, APTA serves and leads its diverse membership through advocacy, innovation and information sharing. APTA and its members and staff work to ensure that public transportation is available and accessible for all Americans in communities across the country.

Arizona Department of Transportation (ADOT) ADOT is responsible for the distribution of FTA transit funds to rural areas.

[53] Glossary terms from U.S Department of Transportation, National Transit Database Glossary, and ADOT 2016 Section 5311 Guidebook.

- B -

Burlington Northern Santa Fe BNSF is a critical link that connects consumers with the global marketplace. For more than 160 years, BNSF has played a vital role in building and sustaining this nation's economy. Amtrak partners with BNSF to provide passenger rail services in Northern Arizona, including Winslow.

- C -

Capital Projects related to the purchase of equipment. Equipment means an article of non-expendable tangible property having a useful life of more than one year and an acquisition cost which equals the lesser of:

- The capitalization level established by the government unit for financial statement purposes, or
- $5,000.

Capital expenses Capital expenses include the acquisition and improvement of public transit equipment and facilities needed for an efficient public transit system. By FTA definition, all capital expenses include facilities or equipment with a useful life of at least one year. Capital expenses generally exceed $5,000 purchase cost. Capital expenses include buses, vans, radios and communication equipment, vehicle rehabilitation, wheelchair lifts and restraints, passenger shelters, engine overhauls and special maintenance tools, operational support such as computer hardware/software, and minor construction or rehabilitation of transit facilities. "Intelligent transportation system" (ITS) equipment includes vehicle locator systems, scheduling software, information kiosks, etc. Capital expenses do not include operating expenses (OE) that are eligible to use capital funds, such as preventive maintenance.

Cost per hour The cost per hour is the net operating costs (total operating cost minus fares plus the total administration costs) divided by the number of miles traveled in revenue and non-revenue service.

Cost per mile The cost per mile is a ratio of the operating and administrative costs divided by the number of miles traveled in revenue and non-revenue service.

Cost per passenger trip The cost per passenger trip is a measure of operating and administrative costs as a ratio of the number of passengers who utilize the service; i.e., total costs divided by number of passengers who board the service yields cost per passenger trip.

Cost per service mile Similar to cost per mile, the cost per service mile is a ratio of the operating and administrative costs divided by the number of revenue miles the vehicle is in service, not counting non-revenue (deadhead) service miles.

Couplet A one-way pair, one-way couple, or just couplet is a pair of parallel, usually one-way streets that carry opposite directions of a signed route or major traffic flow.

- D -

Deadhead The miles and hours that a vehicle travels when out of revenue service. Deadhead includes:

- Leaving or returning to the garage or yard facility,
- Changing routes, and
- When there is no expectation of carrying revenue passengers.

However, deadhead does not include:

- Charter service,
- School bus service,
- Operator training, or
- Maintenance training.

Demand-response (DR) A transit mode comprised of passenger cars, vans or small buses operating in response to calls from passengers or their agents to the transit operator, who then dispatches a vehicle to pick up the passengers and transport them to their destinations. A demand-response operation is characterized by the following:

a) The vehicles do not operate over a fixed route or on a fixed schedule except, perhaps, on a temporary basis to satisfy a special need, and
b) Typically, the vehicle may be dispatched to pick up several passengers at different pick-up points before taking them to their respective destinations and may even be interrupted en route to these destinations to pick up other passengers. The following types of operations fall under the above definitions provided they are not on a scheduled fixed-route basis:
    - Many origins – many destinations,
    - Many origins – one destination,
    - One origin – many destinations, and
    - One origin – one destination.

Deviated fixed-route service Transit service that operates along a fixed alignment or path at generally fixed times, but may deviate from the route alignment to collect or drop off passengers who have requested the deviation.

- F -

Fares Fares are paid by passengers as a fee for service. Grantees are not required to charge a fare. Each grantee may establish a fare based upon its local needs. Fares and other operating revenue reduce the overall project operating costs eligible for Federal funding.

Farebox recovery Many transit systems charge a fare to ride the service. The amount of fares, including cash and fare media purchased with credit/debit, is expressed as a ratio to the cost of service; i.e., 20 percent farebox recovery means that fares offset the full cost of service by 20 percent.

FAST Act The Fixing America's Surface Transportation Act, or "FAST Act," was signed into law on December 4, 2015, by President Obama. It is the first law enacted in over ten years that provides long-term funding certainty for surface transportation, meaning states and local governments can move forward with critical transportation projects, like new highways and transit lines, with the confidence that they will have a Federal partner over the long term.

Federal Transit Administration (FTA) As a component of the U.S. Department of Transportation, the FTA is responsible for the administration of funding and oversight of those state, regional, or local transit systems that are the recipients of Federal transportation funding.

FHWA Federal Highway Administration.

First/Last Mile First/last mile describes the gaps or barriers that discourage potential riders from using transit because a bus stop cannot be easily accessed from home, work, or other destinations. Public transportation agencies typically provide bus services that may frame the core of such trips, but users must complete the first and last portion on their own; they must first walk, drive, or roll themselves to the nearest stop or station. This is referred to the first and last mile of the user's trip, or first/last mile for short, even though actual distances vary by users.

Fixed route A service or route operating on a schedule and on the same streets in a repetitive fashion. Service may be offered on a one-way loop or bi-directional.

Fixed-route service Transit service using rubber-tired passenger vehicles operating on fixed routes and schedules, regardless of whether a passenger actively requests a vehicle.

Frequency Frequency defines how often a fixed-route service will travel upon its designated route. Typically frequencies range from hourly to as little as every three to five minutes, depending upon demand.

FTA grant programs Financial assistance from FTA programs. These funds include:

- FTA Capital Program (Section 5309);
- FTA Urbanized Area Formula Program (Section 5307);
- FTA Clean Fuels Program (Section 5308);
- FTA Metropolitan Planning (Section 5303);
- FTA Special Needs of Elderly Individuals and Individuals with Disabilities Formula Program (Section 5310);
- FTA Other Than Urbanized Area Formula Program (Section 5311);
- FTA Research, Development, Demonstration and Training Projects (Section 5312);
- FTA Job Access and Reverse Commute Formula Program (Section 5316);
- FTA New Freedom Program (Section 5317);
- FTA Transit in the Parks (Section 5320);
- FTA State of Good Repair (Section 5337);

- FTA Bus and Bus Facility (Section 5339); and
- Interstate Transfer Program.

- H -

Headway The time interval between vehicles moving in the same direction on a particular route.

- I -

Intercity and Intercity Feeder service Both the Intercity and Intercity Feeder routes are awarded as Intercity by ADOT. Intercity routes are between two urbanized areas not located close together. Intercity Feeder routes are from a rural area to an urban area or connect a rural area to an Intercity route. Intercity routes must connect to a larger transit network. If the route does not connect, it will not be considered for intercity funding. Marketing materials and websites must indicate that the route is an Intercity or Intercity Feeder route. These routes have limited stops in the communities they serve and must allow passengers to carry baggage. ADOT awards 15 percent of its formula funds to Intercity per FTA requirements. ADOT will not fund Intercity routes that do not demonstrate a significant benefit to rural communities. As with all programs, ADOT funds the deficit of the operating expenses after the fare has been deducted. See **operating expenses** for eligible expenses.

- L -

Local match Financial assistance from local entities that support the operation of the transit system. They include, but are not limited to:

- Tax levies: A specified amount from local levies that is dedicated to supporting public transit system operating costs;
- General funds: Transfers from the general fund of local governments to cover the local share portion of the transit system budget;
- Specified contributions: Contributions from city, county or other municipal governments towards the local share portion of the transit system budget;
- Donations: Donations from individuals or organizations to help cover the costs of providing transit service but which are not related to specific passengers or trips; and
- Other revenues (such as advertising).

- M -

Mode (Rural) Description of mode of service operated with subcategories for bus and demand-response modes. Bus mode can be conventional bus fixed-route service, bus deviated fixed-route service, or intercity bus service. Demand-response can be the usual service (no standing reservations) or subscription demand-response where there are on-going reservations for scheduling consistent passenger trips. These subscription services are for categorical programs, such as Medicaid, Meals-on-

Wheels, sheltered workshops, independent living centers and any social service agency programs. Sub-recipients of Section 5311 funds may report these programs to the extent that services are provided in coordination with public transit trips; i.e., they are included in a coordinated public transit-human services transportation plan.

- N -

National Transit Database (NTD) The National Transit Database is a service that requires recipients of Federal funds for public transportation (all modes) to report a variety of information, including revenues, expenses, operating data, safety data, and other categories. The information is compiled for analysis and review by all interested parties.

Net operating expense Net operating expense is the expense balance that remains after operating revenues including farebox are subtracted from eligible operating expenses.

Non-Emergency Medical Transportation (NEMT) NEMT is a classification of service that is between regular transit services and ambulance services. Typically, NEMT provides services to passengers who have special transportation needs that are not emergent in nature but cannot be accommodated by regular transportation services. Examples may include use of stretchers or specialty mobility devices, or travel to access dialysis or other specialized service needs.

Non-revenue vehicles Vehicles used to support service provision, such as administration, supervision, and maintenance vehicles.

Northern Arizona Council of Governments (NACOG) NACOG is the designated organizational structure of the region including Coconino, Navajo, and Apache counties to provide various planning and administrative support.

- O -

Operating costs/operations expenses Operating expenses are those costs directly related to system operations. At a minimum, the following items are considered to be operating expenses: fuel; oil; licenses; and salaries and fringe benefits for drivers, dispatchers and transit supervisor/operations manager. Maintenance costs may be included in the operations or may be capitalized.

Operating revenues Operating revenues are monies derived from the project which are returned to the operation of the project to offset operating costs. All fare revenues paid by the riders (cash fares, fares from tickets, passes, etc.) are considered to be operating revenue and therefore cannot be used as local match.

Operators The personnel (other than security agents) scheduled to be aboard vehicles in revenue operations, including:

- Vehicle operators,
- Conductors, and
- Ticket collectors.

Operators may also include attendants who are transit agency employees that are aboard vehicles to assist riders (typically the elderly and persons with disabilities) in boarding and alighting, securing wheelchairs, etc.

- P -

Paratransit Types of passenger transportation which are more flexible than conventional fixed-route transit but more structured than the use of private automobiles. Paratransit includes demand-response transportation services, shared-ride taxis, carpooling and vanpooling, and jitney services. Most often refers to wheelchair-accessible demand-response service.

Passenger An individual on board, boarding, or alighting from a revenue transit vehicle. Excludes operators, transit employees, and contractors.

Passenger trip A passenger trip is defined as the time and length of a trip that a passenger is onboard a transit vehicle. If a passenger deboards and alights onto another transit vehicle to "transfer" to another service, that begins a separate trip.

Passengers per mile Passengers per mile is a ratio of the number of passengers divided by the number of miles traveled in revenue and non-revenue service.

Passengers per service hour Passengers per service hour is a ratio of the number of passengers divided by the number of hours traveled in revenue service.

Peer system A peer system is one that matches in as many ways as possible the service that a system is operating. Typically, a logical peer system would operate services in the same type of geographic and demographic areas using similar equipment in a similar operating environment.

Planning expenses Planning funds are available at an 80/20 match ratio. Eligible planning activities include feasibility, implementation, operation, routes, facility, marketing, short-range, regional mobility and coordination, ridership surveys, and origin and destinations studies and plans. Planning activities may be funded by other planning funds at the discretion of ADOT.

Preventive maintenance Activities required to preserve or extend the functionality and serviceability of the asset in a cost-effective manner, up to and including the current state-of-the-art for maintaining such asset. Valid for vehicles and building components and systems.

Preventative maintenance costs All the activities, supplies, materials, labor, services, and associated costs required to preserve or extend the functionality and serviceability of the asset in a cost-effective manner, up to and including the current state-of-the-art for maintaining such asset.

- R -

Revenue hours The hours that vehicles travel while in revenue service (also called vehicle service hours). Vehicle revenue hours (VRH) include:

- Revenue service, and
- Layover/recovery time.

Revenue miles The miles that vehicles travel while in revenue service (also called vehicle service miles). Vehicle revenue miles (VRM) include:

- Revenue service.

Revenue service (miles, hours, and trips) The time when a vehicle is available to the general public and there is an expectation of carrying passengers. These passengers either:

- Directly pay fares,
- Are subsidized by public policy, or
- Provide payment through some contractual arrangement.

Vehicles operated in fare-free service are considered in revenue service. Revenue service includes:

- Layover / recovery time.

Revenue service excludes:

- Deadhead,
- Vehicle maintenance testing,
- School bus service, and
- Charter service.

Revenue vehicle The floating and rolling stock used to provide revenue service for passengers.

Route deviation A type of transit service that operates as conventional fixed-route bus service along a fixed alignment or path with scheduled timepoints at each terminal point and key intermediate locations. Route deviation service is different than conventional fixed-route bus service in that the bus may deviate from the route alignment to serve destinations within a prescribed distance (e.g., ¾ mile) of the route. Following an off-route deviation, the bus must return to the point on the route it left. Passengers may use the service in two ways:

- If they want to be taken off-route as part of a service deviation, they must tell the bus operator when boarding; or
- If they want to be picked up at an off-route location, they must call the transit system and request a pickup, and the dispatcher notifies the bus operator.

Run time Run time defines how long any fixed-route service operates from the beginning to the end of its defined service route.

Rural Transportation Assistance Program (RTAP) The Rural Transit Assistance Program is a program of the FTA dedicated to creating public and rural transit solutions through technical assistance, partner collaboration, and free training.

- S -

SAFETEA-LU The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users was a funding and authorization bill that governed United States federal surface transportation spending. It was signed into law by President George W. Bush on August 10, 2005, and expired on September 30, 2009.

Section 5310 Financial assistance from Section 5310 of the Federal Transit Act. This program provides capital assistance to state and local governments and private non-profit groups in meeting the transportation needs of elderly individuals and individuals with disabilities. A seven-state pilot program for FY 2006-2009 was established to determine whether expanding eligibility to operating assistance would improve services to elderly individuals and individuals with disabilities. In the pilot, up to 33 percent of a participating state's apportioned Section 5310 funds could be used for operating expenses. The state (or a state-designated agency) administers the section 5310 program.

Section 5311 Financial assistance from Section 5311 of the Federal Transit Act. This program provides formula funding to states and Tribes for the purpose of supporting public transportation in areas with a population of less than 50,000. Funding may be used for capital, operating, state administration, and project administration expenses.

Spare ratio This refers to the number of vehicles available to support the number of vehicles assigned to regular service should those regular service vehicles not be available. Typically, the FTA assumes that services should operate at a 20 percent spare ratio, or one spare vehicle for every five in service. For small services where fewer vehicles are in service, the spare ratio will be allowably higher.

State of Good Repair A condition sufficient for capital assets to operate at a full level of performance. This means the asset:

1. Is able to perform its designed function,
2. Does not pose a known unacceptable safety risk, and
3. Has met or recovered lifecycle investments.

- T -

Transit Cooperative Research Program (TCRP) TCRP is an applied, contract research program that develops near-term, practical solutions to problems facing transit agencies.

- V -

Vanpool A transit mode comprised of vans, small buses, and other vehicles operating as a ridesharing arrangement, providing transportation to a group of individuals traveling directly between their homes and a regular destination within the same geographical area. The vehicles shall have a minimum seating capacity of seven persons, including the driver.

Vehicle miles The miles that vehicles travel while in revenue service (actual vehicle revenue miles) plus deadhead miles. Actual vehicle miles include:

- Revenue service, and
- Deadhead.

Vehicle service hours The hours that a vehicle is scheduled to or actually travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service.

Vehicle service miles The miles that a vehicle is scheduled to or actually travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service.