TRANSPORTATION

Future land use patterns and transportation systems must be closely planned together because transportation right of way is the most heavily used and experienced public space; network design influences whether an area can be urban, suburban, or rural; and because streetscapes contribute strongly to community character.

The primary goals of the regional transportation system are to:

- Improve the mobility of people and goods
- Provide choices to enhance the quality of life
- Provide infrastructure to support economic development
- Protect the natural environment and sustain public support for transportation planning efforts.

In order to meet these goals, this chapter promotes:

- Safety
- Context-sensitive solutions
- Complete streets
- The integration and connectivity of transportation systems
- Efficient system management and operation, and
- Improvements to existing inter-modal transportation systems.

This chapter addresses the everyday need to move about the community. Individual transportation modes are addressed starting with pedestrians - the smallest scale - and growing to rail and car.

Inside this Chapter:

Arizona Revised Statutes Section § 9-461.05.E.3 requires the circulation element of this Plan to include recommendations concerning setback requirements, street naming, and house and building numbering. These are included in various Titles of the City Code, including Title 10 (Zoning Code), the City *Engineering Design Standards and Specifications,* and Title 4 (Building Regulations).

Our Vision for the Future

In 2030, people get around to where they need to be in an efficient and safe manner, and more people ride the bus, their bikes, and walk, reducing emissions and increasing health.

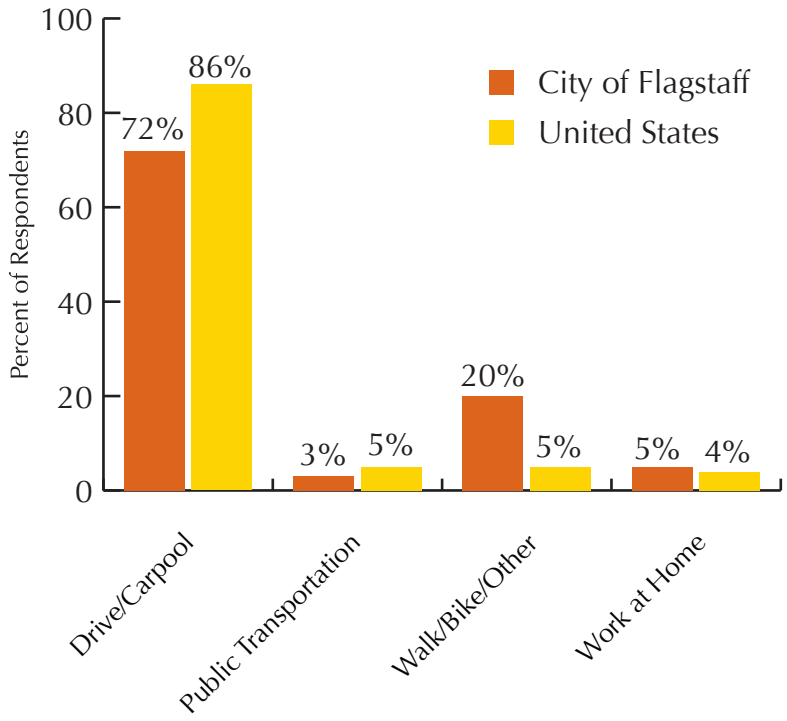
How We Get Around

Automobiles are the dominant form of transportation throughout the region, and the area is served by an extensive network of roads and streets, as illustrated on Map 25.

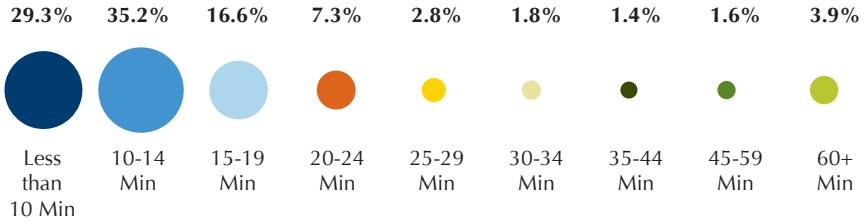
In addition to roadways, we are also nationally recognized for our walking, bicycling, and transit systems. Journey-to-work data and a local trip diary survey show our region is above national averages for using these travel modes. Nationally, survey data show that in 2011, 86 percent of workers traveled to work by car, truck, or van, while only 72 percent of workers in Flagstaff got to work this way. Conversely, 20 percent of workers in Flagstaff walked, biked, or used other means of transportation compared to only five percent nationwide.

Capitalizing on these successes is important, because within the complex relationships between transportation and land use is the simple concept that how and where we live influences how we travel. Put another way, travel choice options and investments depend on land use and community character. Local and national research indicates that neighborhoods integrating housing, shops, employment, and other uses in a compact, well-designed way can increase personal mobility while reducing vehicle congestion. Alternatively, jobs and housing located far apart, and connected only by highways or freeways, result in long commutes by car, require expensive real estate to accommodate automobiles, and inhibit or prevent use by other modes.

How We Get to Work



Journey to Work
Trip Length in City of Flagstaff



SOURCE: U.S. Census Bureau, 2011 American Community Survey 1-Year Estimates

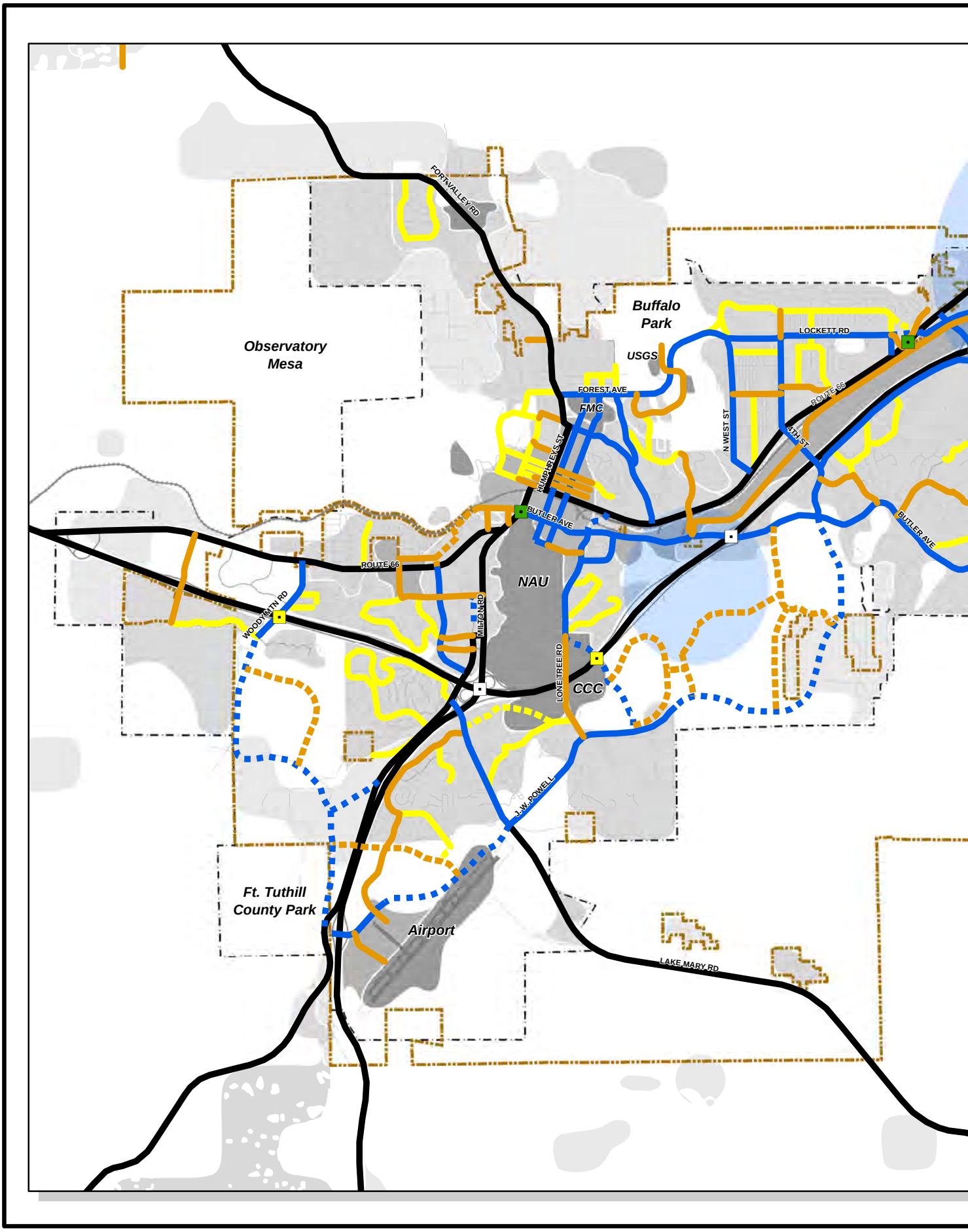
It is critical that we manage our region's transportation supply and demand. Surveys show that average trip lengths are decreasing, saving residents time and money. Census survey data indicate that in 2011, a majority of Flagstaff's workers (nearly 65 percent) get to work in 14 minutes or less, with nearly 30 percent under ten minutes.

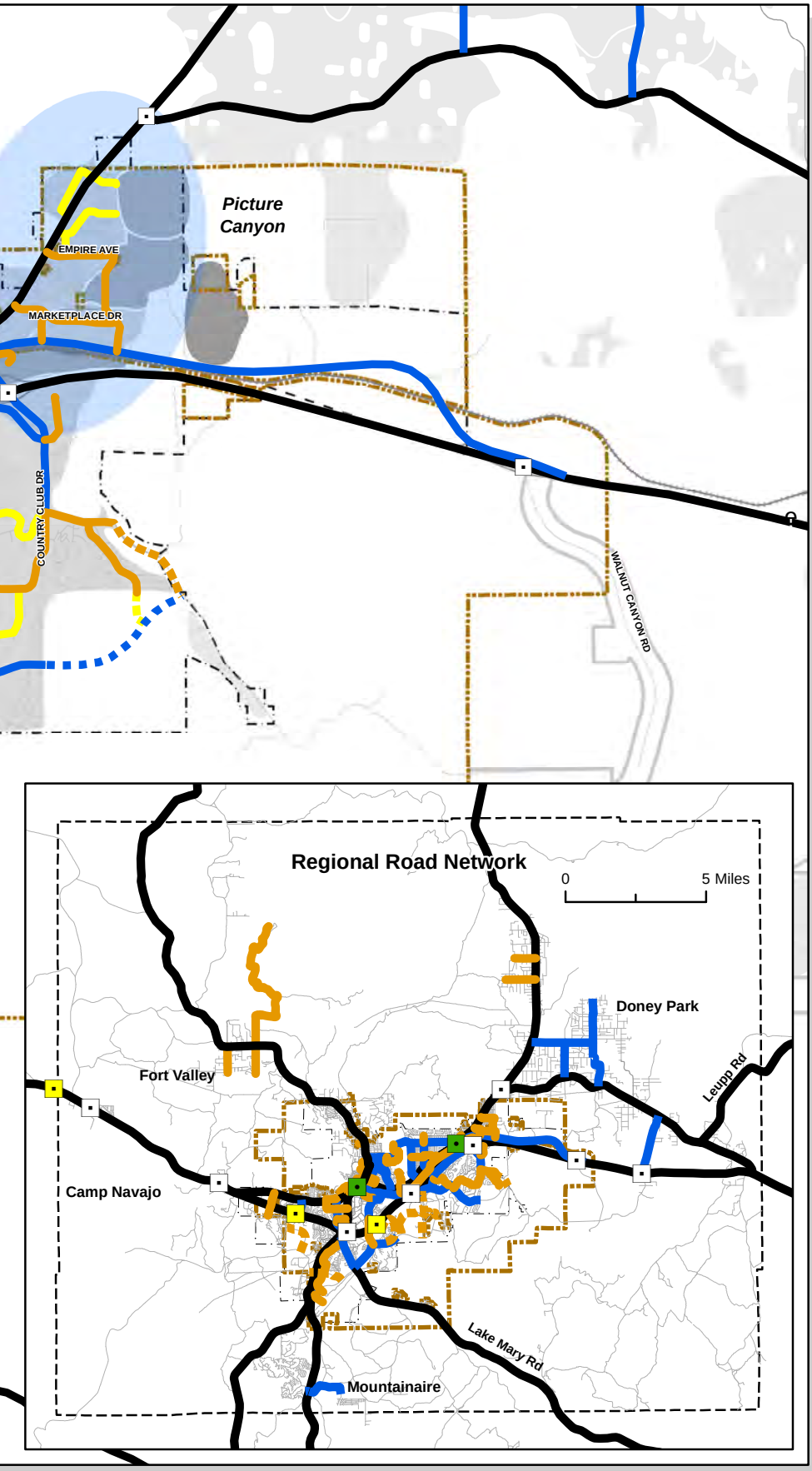
This positive trend will continue if the majority of future residential development is located near places of employment and shopping, where trips will be shorter and can be effectively served by transit or other modes. Daily vehicle trips will grow faster than population due to increases in daily travel by visitors and tourists. Flagstaff will continue to serve as the primary economic center for a growing north-central Arizona region. There will also be increases in through-traffic on the state highways, including truck traffic. These "external" trips are largely beyond regional control, impact regional infrastructure, and are not as likely to use other modes of travel.

Finally, we can influence the supply of new or wider roads, better road connectivity, bicycle and pedestrian facilities, and hours of transit service. Shifting travelers from cars to transit, bicycle, and pedestrian modes improves overall system performance; there will be less traffic for those who drive cars. Providing for this shift does not present the same construction costs, constructability challenges, and long-term maintenance issues as building new roads or widening existing roads especially in light of the challenges posed by terrain, Interstates 17 and 40, the railroad, and existing development patterns. Implementing Complete Street Guidelines enables safe use by all modes and by travelers of all ages and abilities as it becomes easier to cross the street, walk to shops, bicycle to work or school, or take the bus. Participation in the community becomes more inclusive, diverse, and engaging. Analysis of the growth alternatives revealed that compact growth with a strong mix of roads, transit, bicycle and pedestrian services has the most favorable impact on overall travel time.

Illustration of a complete street

Photo credit: CompleteStreets.org


FORT VALLEY RD
Observatory Mesa
Buffalo Park
USGS
LOCKETT RD
FOREST AVE
FMC
HUMPHREYS ST
N WEST ST
ROUTE 66
66TH ST
BUTLER AVE
BUTLER AVE
ROUTE 66
NAU
WOODY MTN RD
MILTON RD
LONE TREE RD
CCC
J.W. POWELL
Ft. Tuthill County Park
Airport
LAKE MARY RD



Map 25:
ROAD NETWORK ILLUSTRATION

- **Major Improvement**
- **New Interchange**
- **Existing Interchange**

Road Corridors

Commercial Corridors

- Regional Travel
- Circulation
- Future Circulation
- Access
- Future Access

Residential Corridors

- Residential Access
- Future Residential Access

- **Identify Road Network Solutions through Future Study**
- **City of Flagstaff**
- **Urban Growth Boundary**
- Open Space - Preserved (Typically USFS); Open Space - Reserved (Typically State Trust)
- Rural - Existing
- Suburban - Existing
- Urban - Existing
- Industrial / Business Park - Existing
- Special District

As amended November 15, 2018

Please see www.flagstaffmatters.com for an interactive GIS map.

NORTH

0 0.5 1 1.5 2

Miles

FLAGSTAFF REGIONAL PLAN
VISION 2030: PLACE MATTERS

Mobility and Access

The region's transportation system strives to improve mobility and access for people and goods by providing efficient, effective, convenient, accessible, and safe transportation options. The focus is on moving people. Economic development, community character, and environmental and health objectives will be advanced with a multi-modal system inclusive of roads and streets, transit routes, bicycle lanes, trails, and sidewalks.

Level of Service

This Plan's goals and policies for mobility and access include using the urban, suburban, and rural context to prioritize uses within the entire right-of-way (from back of sidewalk to back of sidewalk) and to set level of service standards. Whereas measures for vehicular levels of service are well established, multimodal (bicycle, pedestrian, transit) levels of service will require further research and adaptation to Flagstaff regional conditions. Each type of road or street has a use priority that is stratified based on context and expected desirability and activity level for each mode. Use the tables to decide what features to enhance and what features to moderate when right-of-way is scarce or when different uses hinder the functionality of each other. For example; on a suburban arterial, the efficient movement of automobiles (the high use priority), may not allow the space necessary to also park on the street (the low use priority).

The tables also describe relative levels of service for each mode with high (H), medium (M), and low (L) set for expectations of service. The service standards for automobiles apply to intersections and for all other modes, apply the area-place type on the Future Growth Illustration. These service levels are calibrated to the goals and policies of the area-place types. For instance, in urban activity centers, a higher level of automobile congestion is expected as a trade-off for safer and more comfortable pedestrian environment. Level of service standards in the *Engineering Design Standards and Specifications* are needed for pedestrian, bicycle, and transit operations. For the pedestrian and bicycle modes, the standards should go beyond space available on the road to include characteristics of the adjacent automobile traffic, density of the network, connectivity, system completeness, and crossings. In the case of transit, considerations of service frequency and bus stop accessibility will also be important.

MOBILITY AND ACCESS GOALS AND POLICIES

Goal T.1. Improve mobility and access throughout the region.

Policy T.1.1. Integrate a balanced, multimodal, regional transportation system.

Policy T.1.2. Apply Complete Street Guidelines to accommodate all appropriate modes of travel in transportation improvement projects.

Policy T.1.3. Transportation systems are consistent with the place type and needs of people.

Policy T.1.4. Provide a continuous transportation system with convenient transfer from one mode to another.

Policy T.1.5. Manage the operation and interaction of all modal systems for efficiency, effectiveness, safety, and to best mitigate traffic congestion.

Policy T.1.6. Provide and promote strategies that increase alternate modes of travel and demand for vehicular travel to reduce peak period traffic.

Policy T.1.7. Coordinate transportation and other public infrastructure investments efficiently to achieve land use and economic goals.

Policy T.1.8. Plan for development to provide on-site, publicly-owned transportation improvements and provide adequate parking.

URBAN	Use Priority and Level of Service (LOS)									
	Automobiles*		Transit		Bicycle		Pedestrian		Parking	
	Activity Center	General	Activity Center	General	Activity Center	General	Activity Center	General	Activity Center	General
Area LOS	n/a	n/a	(H)	(M)	(H)	(H)	(H)	(H)	n/a	n/a
Arterials	M (L)	H (H)	H	H	M	M	H	M	M	M
Collectors	M (M)	M (M)	H	H	H	M	H	H	H	M
Locals	L	M	L	L	H	H	H	H	H	H

SUBURBAN	Use Priority and Level of Service (LOS)									
	Automobiles*		Transit		Bicycle		Pedestrian		Parking	
	Activity Center	General	Activity Center	General	Activity Center	General	Activity Center	General	Activity Center	General
Area LOS	n/a	n/a	(H)	(M)	(H)	(M)	(H)	(M)	n/a	n/a
Arterials	H (M)	H (M)	H	H	M	M	M	M	L	L
Collectors	M (M)	M (M)	H	M	H	H	H	H	H	M
Locals	L (H)	L (H)	L	L	H	H	H	H	H	H

RURAL	Use Priority and Level of Service (LOS)									
	Automobiles*		Transit		Bicycle		Pedestrian		Parking	
	Activity Center	General	Activity Center	General	Activity Center	General	Activity Center	General	Activity Center	General
Area LOS	n/a	n/a	(L)	n/a	(M)	(L)	(M)	(L)	n/a	n/a
Arterials	H (H)	H (H)	L	L	H	M	L	L	H	H
Collectors	H (H)	H (H)	n/a	n/a	H	M	M	M	M	M
Locals	M(H)	M(H)	n/a	n/a	M	M	M	M	M	M

H = High Use Priority
(H) - High LOS

M = Medium Use Priority
(M) = Medium LOS

L = Low Use Priority
(L) = Low LOS

*The H, M, and L ranking show use priority. If the (H), (M), or (L) is in parentheses and it shows a relative level of service. The LOS for the Automobile category is applied at the intersections or street level; therefore, no Area LOS applies. Area LOS for bicycle, pedestrian, and transit modes is evaluated not on a street by street basis but on an area-wide basis. (See Page X-6 for more information)

Consideration of truck traffic is included in the automobile and transit levels of service.

Safe and Efficient Multimodal Transportation

Development of a safe and efficient multimodal transportation system is a priority. Safety, real and perceived, influences mode choice and defines, in part, quality of life. Personal and societal costs due to transportation-related fatalities and injuries are real and significant. Crashes, even fender-benders, contribute significantly to congestion. Strategies, from engineering to education, are needed to improve safety. Efficiencies can be gained in many ways. While this Plan recognizes that private automobiles likely will be the primary mode of trips in the foreseeable future, the percentage of work trips made by single-occupancy vehicles can be reduced through facility improvements and incentive programs that will increase the share of trips using public transit, car and van pools, bicycles, and walking. Increased high-speed internet capacity will also allow for telecommuting and home-based businesses, thus reducing road congestion. Efforts will continue to minimize the duration and severity of peak hour traffic congestion.

The US 180 corridor is unique because the goals of meeting safety and efficiency are complicated by a topographically constrained corridor and heavy weekend traffic during the winter. Therefore, the management of US 180 through cooperative efforts between transportation providers, land use planners, law enforcement departments, and resource management agencies will be necessary. Activities need to include monitoring, operational improvements, public information campaigns, and long-term capital planning which would initially focus on resolving issues within the limits of the existing corridor.

SAFE AND EFFICIENT MULTIMODAL TRANSPORTATION GOALS AND POLICIES

Goal T.2. Improve transportation safety and efficiency for all modes.

Policy T.2.1. Design infrastructure to provide safe and efficient movement of vehicles, bicycles, and pedestrians.

Policy T.2.2. Consider new technologies in new and retrofitted transportation infrastructure.

Policy T.2.3. Provide safety programs and infrastructure to protect the most vulnerable travelers, including the young, elderly, mobility impaired, pedestrians, and bicyclists.

Note: Mobility-impaired includes hearing and sight-impaired persons.

Policy T.2.4. Consider dedicated transit ways where appropriate.

Policy T.2.5. Continue to seek means to improve emergency service access, relieve and manage peak hour congestion, and expand multi-modal options in the US 180 corridor.

Environmental Considerations

The Flagstaff regional transportation system should enhance the character of our community and lessen our impact on our natural surroundings. Whether trekking or trucking, transportation can define how we interact with our environment - our ability to see it, access it, use it, and protect it. Transportation defines space in our built environment. In our natural environment, transportation communicates how we respect the land. Our choice of transportation affects our air and water.

ENVIRONMENTAL CONSIDERATIONS GOALS AND POLICIES

Goal T.3. Provide transportation infrastructure that is conducive to conservation, preservation, and development goals to avoid, minimize, or mitigate impacts on the natural and built environment.

Policy T.3.1. Design and assess transportation improvement plans, projects, and strategies to minimize negative impacts on air quality and maintain the region's current air quality.

Policy T.3.2. Promote transportation systems that reduce the use of fossil fuels and eventually replace with carbon neutral alternatives.

Policy T.3.3. Couple transportation investments with desired land use patterns to enhance and protect the quality and livability of neighborhoods, activity centers, and community places.

Policy T.3.4. Actively manage parking, including cost and supply, to support land use, transportation, and economic development goals.

Policy T.3.5. Design transportation infrastructure that implements ecosystem-based design strategies to manage stormwater and minimize adverse environmental impacts.

Policy T.3.6. Seek to minimize the noise, vibration, dust, and light impacts of transportation projects on nearby land uses.

Policy T.3.7. Design transportation infrastructure to mitigate negative impacts on plants, animals, their habitats, and linkages between them.

Policy T.3.8. Promote transportation options such as increased public transit and more bike lanes to reduce congestion, fuel consumption, and overall carbon emissions and promote walkable community design.

Quality Design

The Flagstaff region will pursue quality transportation system design to positively affect our development patterns, physical character, and economic viability. A well-designed street is a joy to travel whether on foot or behind the wheel of a car. Whether road signs or street trees, medians or traffic lights, designers and engineers have a full set of tools to deliver safe, efficient, and enjoyable travel options. Engineering and design standards can be set for all modes appropriate to their urban, suburban, and rural setting. This will achieve expected levels of service and contextual design respectful of the region's unique environmental and cultural heritage, landscape, and viewsheds.

Basic Principles of a Context Sensitive Process

- Design for all road users
- Emphasis on mobility for people and goods
- Legible design
- Equitable streets
- Streets as community places
- Early, continuous involvement of local stakeholders

Context Sensitive Solutions

Context sensitive solutions, or CSS, describes an approach to street design that considers the environment in which the street is located. This means that streets should look and function differently based on where they are located. For example, pedestrian facilities on a downtown street should be more robust than a sidewalk in an industrial area. Likewise, an arterial street through a neighborhood should function differently than a road through a rural area or a bus route. Freight movement, parking, community character, and land uses in the surrounding area can all influence the context for transportation infrastructure. A successful CSS approach must be collaborative, include multiple stakeholders, encourage flexibility in design, avoid one-size-fits-all solutions, and consider community objectives beyond the movement of vehicles.

Complete Streets

A complete streets policy sets a standard that all streets should be designed, operated, and maintained to enable safe access for all users, including pedestrians, bicyclists, drivers, and transit riders of all ages and abilities. A meaningful complete streets policy involves more than just sidewalks, bike lanes, and bus stops; it means that:

- Streets always provide accommodation for all users, even in temporary or interim conditions, as the default.
- Facilities for walking and bicycling are not just present, but functional, comfortable and safe.
- Operation, maintenance, and snow removal accounts for all users, including pedestrians and bicyclists.

The 6 E's of Walking and Bicycling

Planning for walking and biking has traditionally been based around six E's – Engineering, Education, Enforcement, Encouragement, Equity, and Evaluation – that make up a well-rounded, comprehensive approach to pedestrian and bicycle accommodation. Most of the City's efforts have focused on walking and biking infrastructure, which is included in Engineering. However, there is an opportunity and a need to initiate walking and biking programs to better address the other E's as part of a more comprehensive strategy.

QUALITY DESIGN GOALS AND POLICIES

Goal T.4. Promote transportation infrastructure and services that enhance the quality of life of the communities within the region.

Policy T.4.1. Promote context sensitive solutions (CSS) supportive of planned land uses, integration of related infrastructure needs, and desired community character elements in all transportation investments.

Policy T.4.2. Design all gateway corridors, streets, roads, and highways to safely and attractively accommodate all transportation users with contextual landscaping and appropriate architectural features.

Policy T.4.3. Design transportation facilities and infrastructure with sensitivity to historic and prehistoric sites and buildings, and incorporate elements that complement our landscapes and views.

Planning for Long Term Maintenance

Maintaining transportation facilities is just as important as building them. Potholes in streets, cracked streets and sidewalks, faded bike lane markings, and eroded FUTS trails discourage their use and can create safety hazards. However, resources needed for maintenance often compete with many other municipal needs, and it can be challenging to make an effective case to decision makers when asking for additional maintenance resources. The first line of defense is to build facilities that are more sustainable and require less on-going maintenance by design. This means that maintenance considerations should be addressed during design, and that individuals or departments who are responsible for maintenance should be part of the design process. Other ways to help manage maintenance obligations include setting priorities so the most important facilities and concerns are addressed first, keeping up-to-date inventories of facilities and conditions, and reviewing maintenance practices for opportunities to find efficiencies and incorporate current
methods.

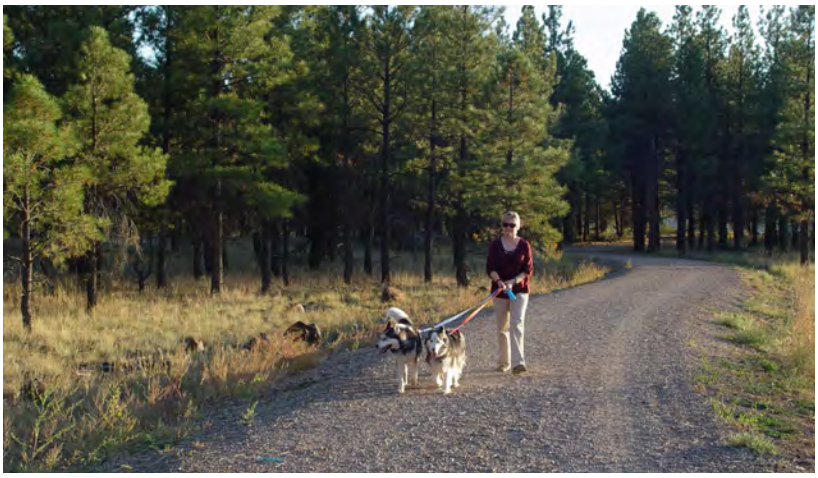


Photo credits: City of Flagstaff

Ten elements of a complete streets policy

1. Vision and intent. Includes an equitable vision for how and why the community wants to complete its streets. Specifies the need to create a complete, connected, network and specifies at least four modes, two of which must be biking or walking.
2. Diverse users. Benefits all users equitably, particularly vulnerable users and the most underinvested and underserved communities.
3. Commitment in all projects and phases. Applies to new, retrofit/reconstruction, maintenance, and ongoing projects.
4. Clear, accountable expectations. Makes any exceptions specific and sets a clear procedure that requires high-level approval and public notice prior to exceptions being granted.
5. Jurisdiction. Requires interagency coordination between government departments and partner agencies on Complete Streets.
6. Design. Directs the use of the latest and best design criteria and guidelines and sets a time frame for their implementation.
7. Land use and context sensitivity. Considers the surrounding community's current and expected land use and transportation needs.
8. Performance measures. Establishes performance standards that are specific, equitable, and available to the public.
9. Project selection criteria. Provides specific criteria to encourage funding prioritization for Complete Streets implementation.
10. Implementation steps. Includes specific next steps for implementation of the policy.

Pedestrian Infrastructure

57% of residents do not believe that motorists should be given priority over pedestrians and cyclists when planning.

- 2010 Community Values Survey

Walking is the most enduring and universal mode of transport. In Flagstaff, walking is the most robust of the active modes; the percentage of trips in Flagstaff made by walking is significantly higher than for bicycling or transit. Additionally, the percentage of Flagstaff residents who walk to work far exceeds state and national averages and places us in the upper echelon of our peer communities. According to the most recent Trip Diary Survey, one in five respondents (22 percent) made at least one walking trip of at least 600 feet during the 24-hour survey period. In the central part of the City, which includes Downtown, the Southside, and the NAU campus, one-third (33.6 percent) of respondents made at least one walking trip.

Walkability is highly dependent on land use and urban form in addition to complete and comfortable facilities. Because trips are short, walking requires proximity and is supported by density, mixed-use, and compact form. Walkability is also responsive to good urban design; attractive and engaging places are appealing to pedestrians.

Sidewalks

Sidewalks are a basic facility for walking and a fundamental component of a city-wide pedestrian network. City standards, as well as best practices, dictate that sidewalks should be located along both sides of all streets to accommodate pedestrians. Flagstaff has just over 300 miles of sidewalks along public streets, but only about half of Flagstaff's public streets (53 percent) have sidewalks along both sides of the street. Almost a third of public streets (29 percent) have no sidewalks at all. Parkways or furnishing strips, which form a buffer from traffic for pedestrians, are not present on approximately 64 percent of sidewalks.

Crossings and Intersections

The ability to cross a street is as important to the pedestrian and bicycle network as being able to walk or bike along it. There are 10 flashing beacon crossings and 21 existing grade-separated crossings in Flagstaff, including 10 bridges or tunnels that are exclusively for the use of pedestrians and bicyclists. More than 30 percent of major street intersections have limited or inaccessible pedestrian crossings. There are numerous street corridors in Flagstaff that are uncomfortable to cross due to the speed and volume of traffic and the width of the street. The presence of two interstates and the railroad through Flagstaff create significant breaks in pedestrian and bicycle networks. Grade-separated crossings refer to structures that convey pedestrians and bicyclists over or under interstates, railroad tracks, and major roads. Structures can include bridges and tunnels for the exclusive use of pedestrians and bicyclists, as well as street underpasses and overpasses that include facilities for walking and biking. Grade-separated crossings can add significant value to the walking and biking environment by providing access across features that otherwise create barriers in walking and biking networks. Enhanced crossings are those that include any features that help slow traffic, shorten crossing distances, break crossings into parts, increase visibility, or in general make the crossing safer and more comfortable. Enhancements can be used at any crossing location; however they are most beneficial at mid-block and uncontrolled crossings. Combinations of enhanced crossing treatments are most effective and can improve pedestrian crossings on high volume, high speed roadways. Typical treatments include median refuge islands, advanced yield lines, curb extensions, landscape features, pedestrian activated flashing beacons, advance warning signing, and pedestrian-scaled lighting.

Universal Design and Accessibility

Universal design has several guiding principles: Equitable use, Flexibility in use, Simple and intuitive, Perceptible information, Tolerance for error, Low physical effort, and Size and space for approach and uses. Incorporating principles of universal design makes our transportation system, and especially walking and biking facilities, accessible to all people, regardless of age, ability, or situation without the need for special adaptation. Universal design benefits all users of the transportation system, especially children, elderly individuals, people with mobility challenges, those with temporary conditions such as a broken leg or sprained ankle, and parents with strollers. Accessible facilities and universal design also directly support people with disabilities. In Flagstaff, American Community Survey statistics indicate that one out of every 11 residents have some form of disability.

Electric and micromobility devices

Micro-mobility technology is a rapidly evolving category of light-weight individual transportation devices, including electric scooters, e-bikes, electric skateboards, hoverboards, and other personal mobility devices. Electric micro-mobility devices are more efficient, affordable, and accessible than cars, and they represent a low-carbon mode of transportation to replace cars for daily vehicle trips, including commuting and daily errands. These devices provide an exciting opportunity to revolutionize transportation, reducing common barriers to active transportation, broadening the range of people who can participate and reducing car dependency.

Electric micro-mobility devices are already present in our community, and in the coming years they will become more popular as technology advances and a variety of new, electric-powered micro-mobility devices are introduced. The City's challenge will be to encourage the potential mobility benefits of these devices without creating conflicts with pedestrians and bicyclists. There is typically an expectation that new devices will compete for the same space – sidewalks, bike lanes, and FUTS trails – that in many cases is already insufficient for pedestrians and bicyclists. However, as use of these devices expands it suggests a reduction in motor vehicle use, and a reallocation of roadway space currently given to motor vehicles may be needed.

Flagstaff Urban Trails System (FUTS)

The Flagstaff Urban Trails System (FUTS, prounounced like "foots") is a City-wide network of non-motorized, shared-use pathways that are used by bicyclists, walkers, hikers, runners, and other users for both recreation and transportation. At present there are just over 58 miles of FUTS trails in Flagstaff. The overall master plan shows about 80 miles of future trails, to complete a planned system of 130 miles. About half of the miles of existing trails are paved, either in concrete or asphalt, while the other half consist of a hard-packed, aggregate surface. FUTS trails are generally 8 or 10 feet wide.

FUTS trails offer an incredibly diverse range of experiences; some trails are located along busy streets, while others traverse beautiful natural places - canyons, riparian areas, grasslands, meadows, and forests - all within the urban area of Flagstaff. The system connects neighborhoods, shopping, places of employment, schools, parks, open space, and the surrounding National Forest, and allows users to combine their transportation needs with recreation, and contact with nature.

The FUTS system is a critical component of Flagstaff's pedestrian and bicycle networks. FUTS trails that are located along busy streets provide a comfortable alternative to the street, while FUTS that pass through natural areas offer an enjoyable experience for walking and biking and often serve as a shortcut to the street system.

Regional Open Space Access

Regional Open Space or Forest access describes locations around the perimeter of Flagstaff where access to regional open space and the surrounding national forest. There are dozens of locations around Flagstaff that are currently used for access, but few of these include formal trail improvements or have legal rights-of-access. Planning for these locations will help protect and enhance access to the forest regional open space. Locations within the City of Flagstaff are identified on Map 26e.

PEDESTRIAN INFRASTRUCTURE GOALS AND POLICIES

Goal T.5. Increase the availability and use of pedestrian infrastructure, including FUTS, as a critical element of a safe and livable community.

Policy T.5.1. Provide accessible pedestrian infrastructure with all public and private street construction and reconstruction projects.

Policy T.5.2. Improve pedestrian visibility and safety and raise awareness of the benefits of walking.

Policy T.5.3. Identify specific pedestrian mobility and accessibility challenges and develop a program to build and maintain necessary improvements.

Policy T.5.4. Design streets with continuous pedestrian infrastructure of sufficient width to provide safe, accessible use and opportunities for shelter.

Bicycle Infrastructure

Our region enjoys a well-deserved reputation as a great place for bicycling. Bicycling as a travel mode presents one of Flagstaff's best opportunities for reducing vehicle trips and increasing the share of trips made by active modes. Bicycles make it possible to travel longer distances, and to carry some cargo as well. Flagstaff's compact size means that most of Flagstaff is contained within a bikeable area, so in theory, most in-town trips could potentially be converted to bicycle trips. In Flagstaff the average trip is a little over four miles in length, and almost 60 percent of all trips are less than five miles in length. This distance is eminently bikeable, provided we can make it comfortable for the average person.

Biking is also a big part of Flagstaff's culture and identity. Flagstaff is becoming a world-class destination for mountain biking, with more than 300 miles of recreational single-track trails in close proximity. Flagstaff also hosts numerous bicycle themed events throughout the year.

There are 97 miles of designated bike lanes in Flagstaff, and another 34 miles of usable shoulders. Bike lanes or shoulders are present on 71 percent of major streets, but there are several major road segments lack bike lanes altogether, including Milton Road, Woodlands Village Boulevard, and Humphreys Street. Many other streets are missing bike lanes for short stretches or at specific locations. In total there are 70 miles of missing bike lanes on major streets. Additionally, bike lanes often end before intersections; a total of 61 major intersections are missing bike lanes on one or more of the approaches to the intersection.

Bikeways

Historically, Flagstaff has accommodated bicyclists with conventional bike lanes on collector and arterial streets, as well as paved FUTS trails along some streets. The bikeways plan introduces a more robust network that include the following features:

- Designed to be low stress and comfortable. A low stress bikeways network is one where most people will feel safe and Comfortable riding a bicycle, regardless of their aptitude. For most people, riding in traffic or on busy streets is a primary source of stress. Consequently, providing an appropriate level of separation from traffic is key to a low stress bikeway network. For streets with moderate volumes and speeds, conventional bike lanes provide dedicated space for bicyclists out of the vehicular travel lane. On streets with high volumes and speeds, bike lanes alone may not be sufficient for most cyclists to feel comfortable, and separated bike lanes, cycletracks, or parallel FUTS trails should be considered. Low stress bikeways appeal to a much broader segment of the population, and as a result, make bicycling more viable as a transportation option.

- Establishes a hierarchy. Bikeways are divided into a hierarchy of four bikeway classes, with primary and secondary bikeways serving as the backbone system of main routes for crosstown and regional bicycle travel. The hierarchy organizes the bikeways system and makes it easier to navigate. The hierarchy also helps guide policies and practices for bikeways; primary and secondary routes are more likely to include separated or higher-level facilities and are considered priority routes for maintenance, snow clearing, sweeping, and closures or detours.

- Includes a variety of facilities. The planned bikeways network is comprised of a variety of facilities, which are categorized based on the extent of separation from traffic and include shared streets like bike routes and bike boulevards, dedicated on-street facilities like bike lanes, and separated facilities such as separated bike lanes, cycletracks, and FUTS trails. The network also includes a variety of intersection and crossing treatments.

- Is comprehensive and cohesive. The plan describes a bikeways system that is comprehensive and cohesive, so anyone can travel conveniently and easily by bicycle to destinations and neighborhoods throughout the community. Routes are designated by number and name to help aid navigation, and a system of wayfinding and directional signs help to pull the system together.

Flagstaff Trails Initiative and the Regional Trails Strategy

The Flagstaff Trails Initiative (FTI) (flagstafftrailsinitiative.org) is a non-profit trail advocacy group that seeks to improve the quality, connectivity and community support for a sustainable trail system in and around Flagstaff. FTI was launched in 2017 as a coordinated, multi-agency effort to prepare a formal, comprehensive recreational trails plan for the region. A planning process was conducted over the next few years, with extensive community involvement and technical assistance through the National Park Service's Rivers, Trails, and Conservation Assistance (RTCA) program. The process was led by the four main trail-managing agencies in the region: the City of Flagstaff, Coconino County, USDA Forest Service, and the National Park Service, and supported by a variety of trail user and advocacy groups, such as Flagstaff Biking Organization, Coconino Trail Riders, R2R Hiking Club, the Coconino Horseman's Alliance, the Sierra Club, and the American Conservation Experience.

Photo by: Ben Hicks

The planning process culminated in 2020 with creation of the Flagstaff Regional Trails Strategy. The strategy also identifies almost 100 prioritized recommendations for new trails, realignment of existing trails, connections between trails, adoption or restoration of unauthorized trails, and new or improved trailheads. To advance implementation of the strategy, the four trail-managing agencies signed on to a memorandum of understanding to continue cooperative planning and management of the region's trail system, and FTI was incorporated as a formal advocacy organization.

Arizona National Scenic Trail

The Arizona Trail is an 800-mile non-motorized trail traversing the diverse landscapes of Arizona from Mexico to Utah. Two segments of the Arizona Trail travel through the Flagstaff area: the main route passes through the center of Flagstaff north-south on FUTS trails, while a second route, referred to as the equestrian bypass, skirts around the east side of town. The Arizona Trail Association was formed in 1994 as a volunteer organization to help build, maintain, promote, protect, and sustain the Arizona Trail. The trail was designated a National Scenic Trail in 2009; one of only 11 trails so designated in the United States.

Flagstaff Loop Trail

The Flagstaff Loop Trail is a 45-mile non-motorized trail around Flagstaff that is intended to provide an exceptional recreational experience close to the urban fringe. Singletrack trails comprise most of the loop, although FUTS trails are used in several locations. The concept is that of a wheel encircling Flagstaff, with FUTS and other trails serving as spokes to provide access from the community, and the loop in turn giving access to the network of singletrack trails and regional open space. The Loop Trail has been planned as a cooperative project between the Coconino National Forest, Coconino County, and the City of Flagstaff. Local advocacy groups, most notably Flagstaff Biking Organization, have also provided extensive volunteer support.

BICYCLE INFRASTRUCTURE GOALS AND POLICIES

Goal T.6. Provide for bicycling as a safe and efficient means of transportation and recreation.

Policy T.6.1. Expand recognition of bicycling as a legitimate and beneficial form of transportation.

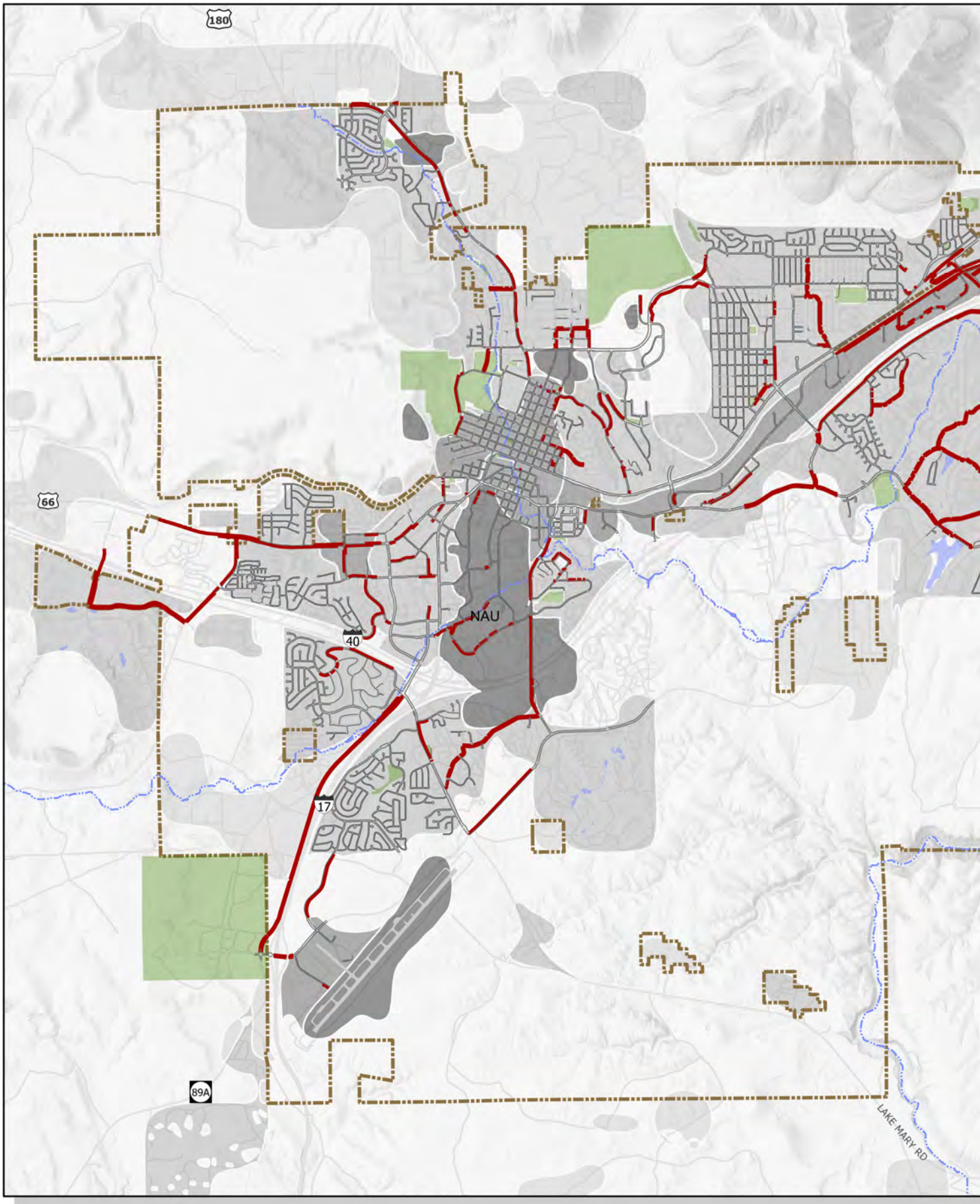
Policy T.6.2. Establish and maintain a comprehensive, consistent, and highly connected system of bikeways and FUTS trails.

Policy T.6.3. Educate bicyclists and motorists about bicyclist safety through education programs, enforcement, and detailed crash analyses.

Policy T.6.4. Encourage bikeways and bicycle infrastructure to serve the needs of a full range of bicyclist experience levels.

Policy T.6.5. Provide short- and long-term bicycle parking where bicyclists want to travel.

Policy T.6.6. Integrate policies to increase bicycling and meet the needs of bicyclists into all relevant plans, policies, studies, strategies, and regulations.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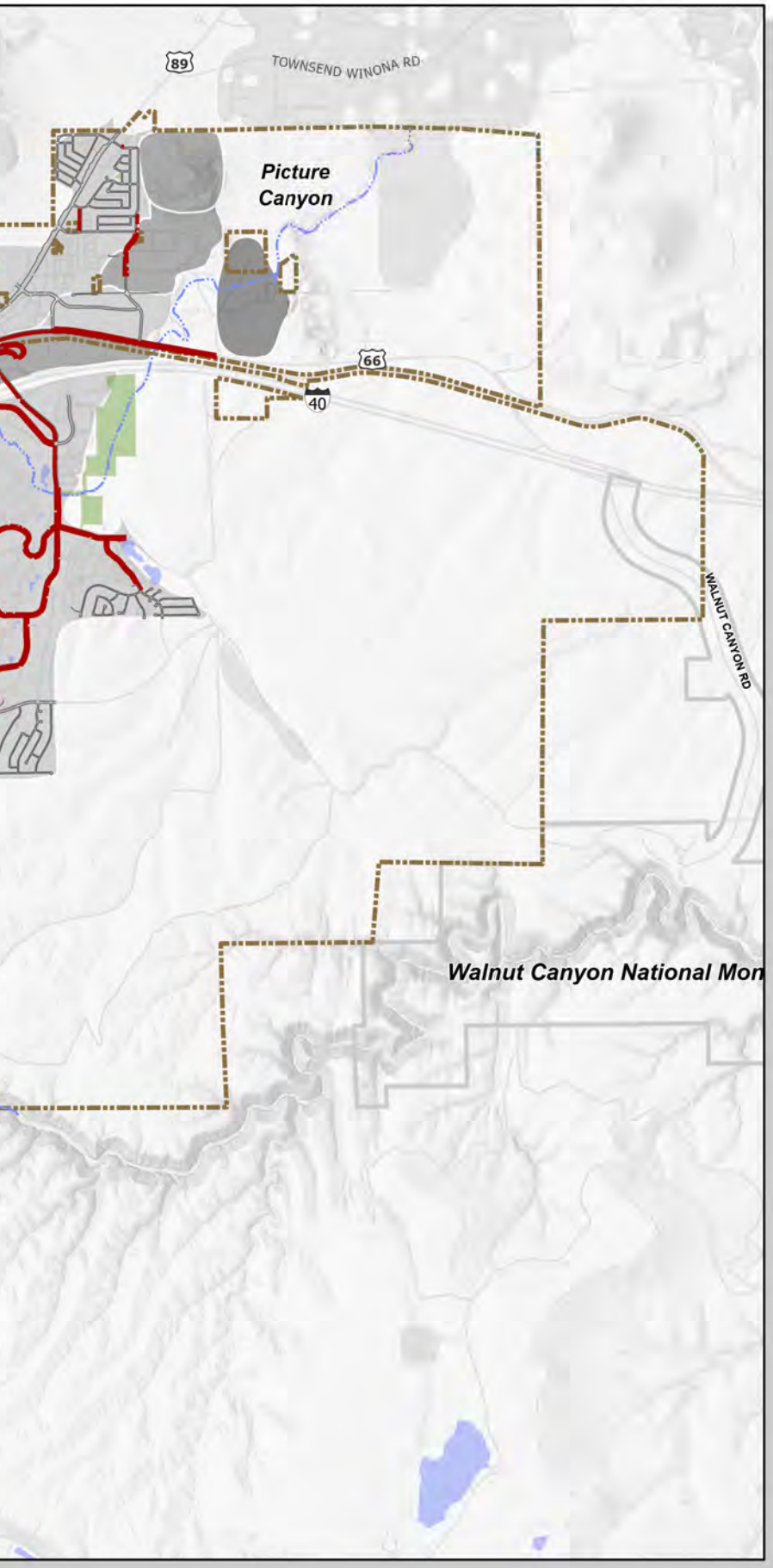

Map 26a:

EXISTING AND MISSING SIDEWALKS ON PUBLIC STREETS

- Missing Sidewalks on Major Streets
- Existing Sidewalks
- City of Flagstaff
- Open Space - Preserved (Typically USFS); Open Space - Reserved (Typically State Trust)
- Rural - Existing
- Suburban - Existing
- Urban - Existing
- Industrial / Business Park - Existing
- Special District

As Amended November 3, 2022

Please see www.flagstaffmatters.com for an interactive GIS map.

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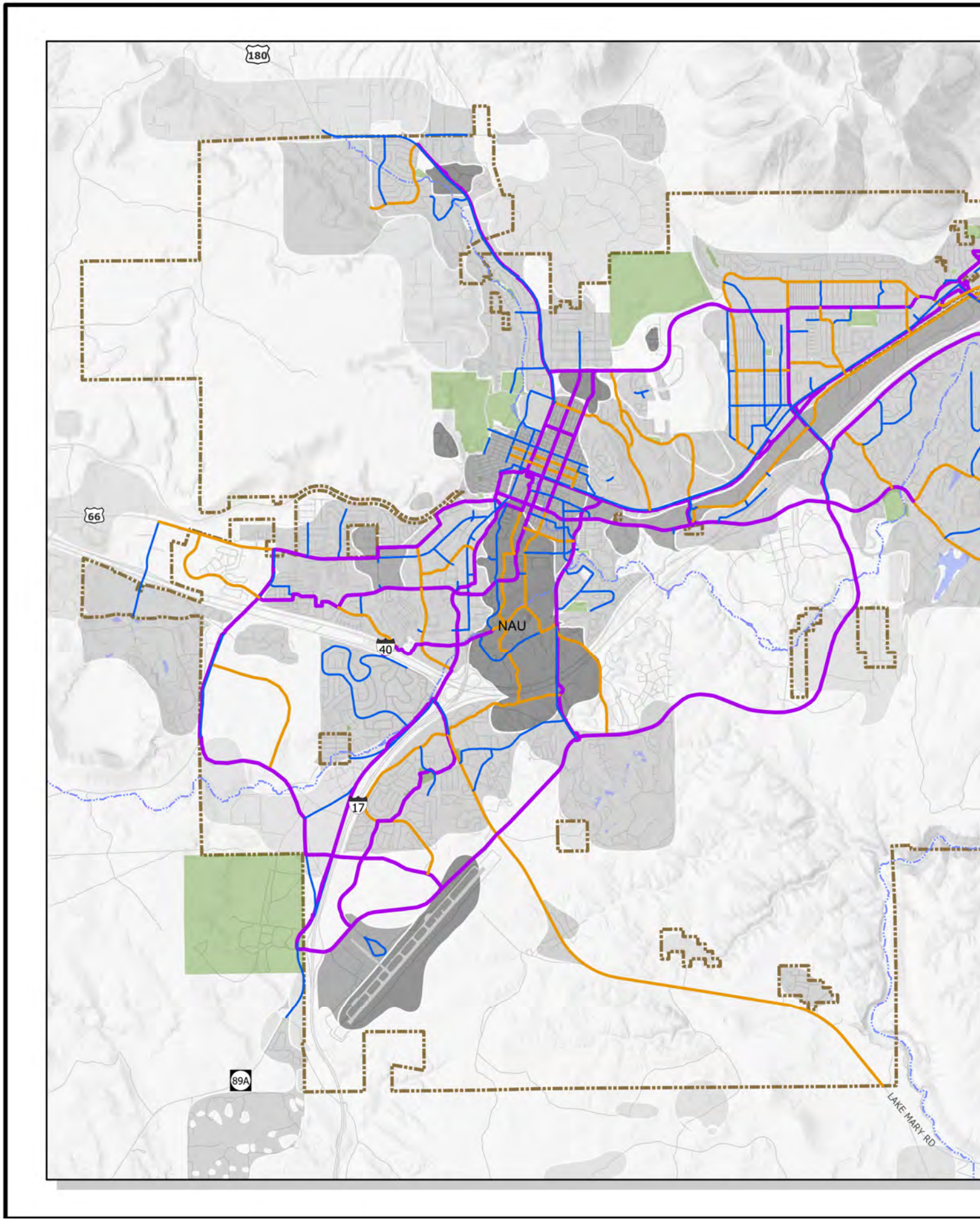
FLAGSTAFF REGIONAL PLAN VISION 2030: PLACE MATTERS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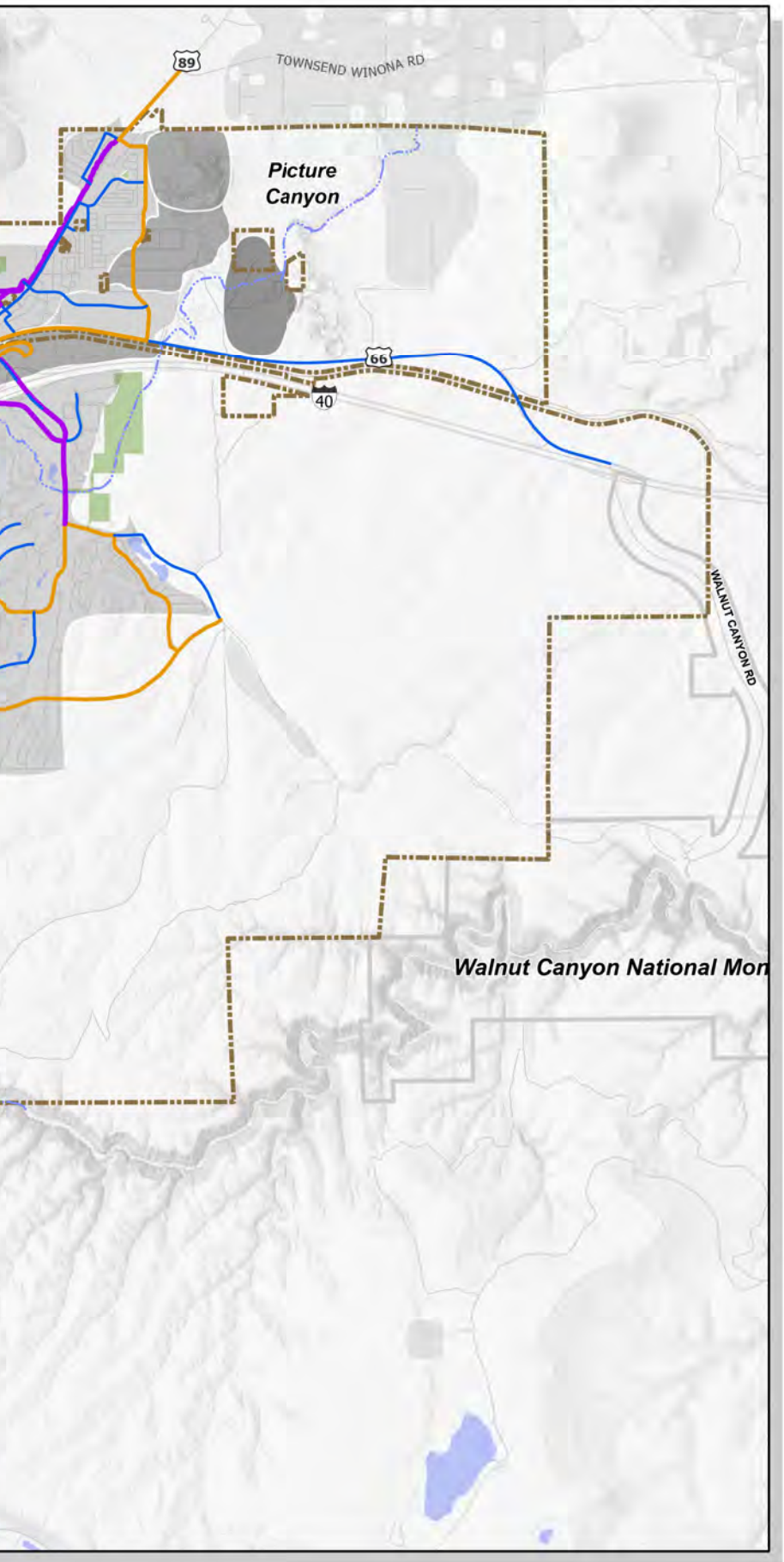

Map 26b:

PLANNED BIKEWAYS BY CLASS

Planned Bikeways

- 1 Primary
- 2 Secondary
- 3 Third
- City of Flagstaff
- Open Space - Preserved (Typically USFS); Open Space - Reserved (Typically State Trust)
- Rural - Existing
- Suburban - Existing
- Urban - Existing
- Industrial / Business Park - Existing
- Special District

As Amended November 3, 2022

Please see www.flagstaffmatters.com for an interactive GIS map.

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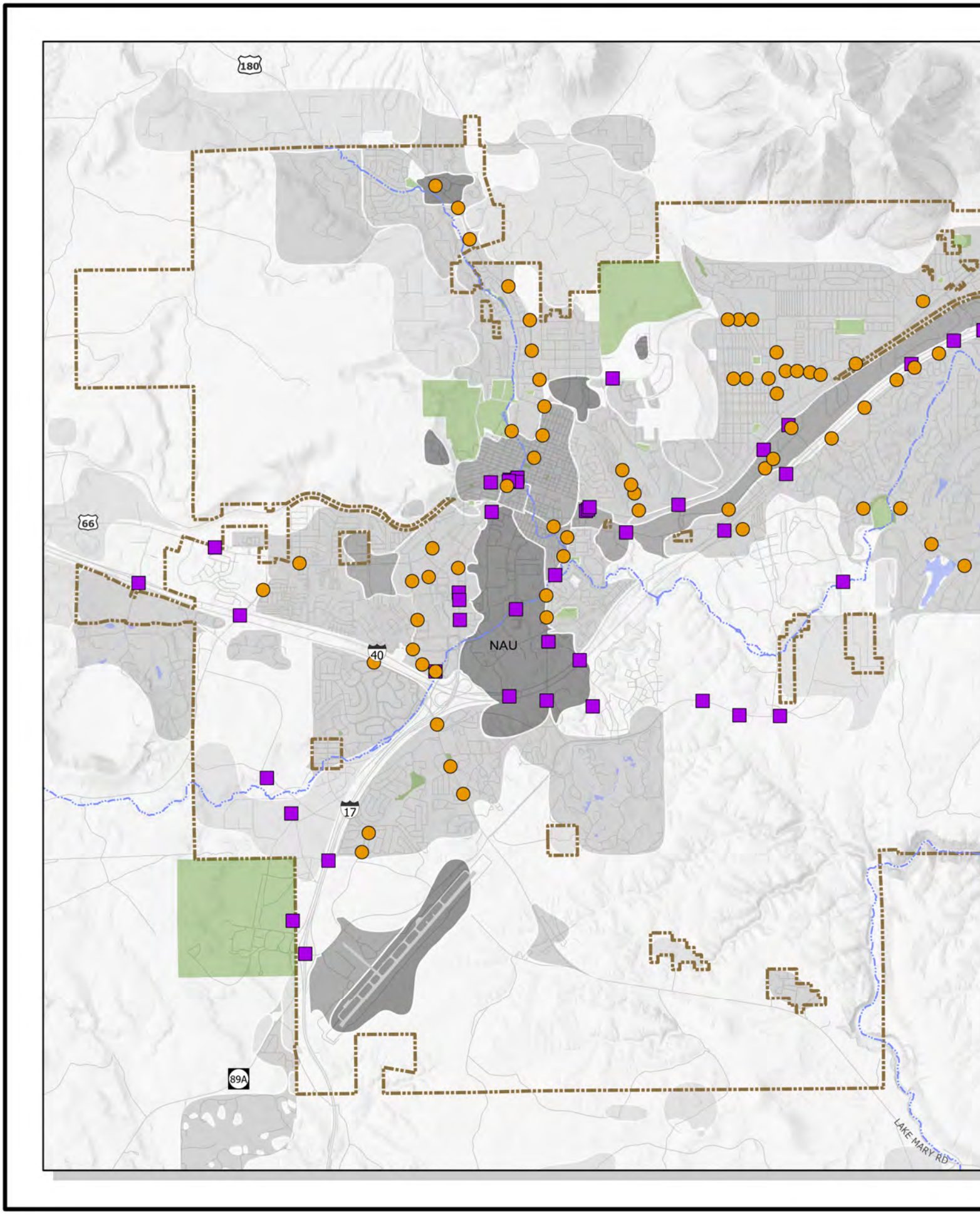
FLAGSTAFF REGIONAL PLAN VISION 2030: PLACE MATTERS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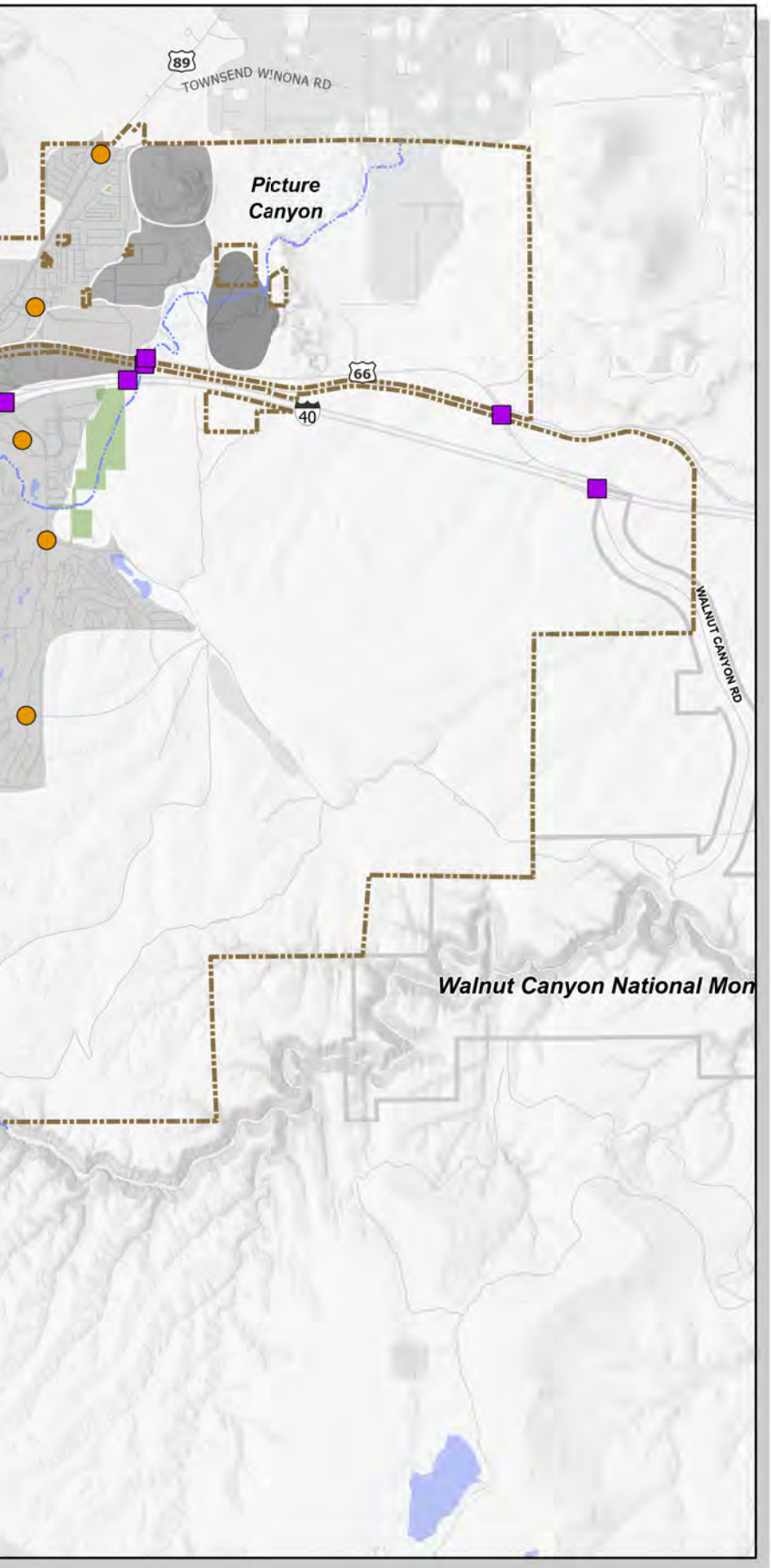

Map 26c:

ENHANCED AND GRADE-SEPERATED CROSSINGS

- Enhanced crossings | planned
- Separated crossings | planned
- City of Flagstaff
- Open Space - Preserved (Typically USFS); Open Space - Reserved (Typically State Trust)
- Rural - Existing
- Suburban - Existing
- Urban - Existing
- Industrial / Business Park - Existing
- Special District

As Amended November 3, 2022

Please see www.flagstaffmatters.com for an interactive GIS map.

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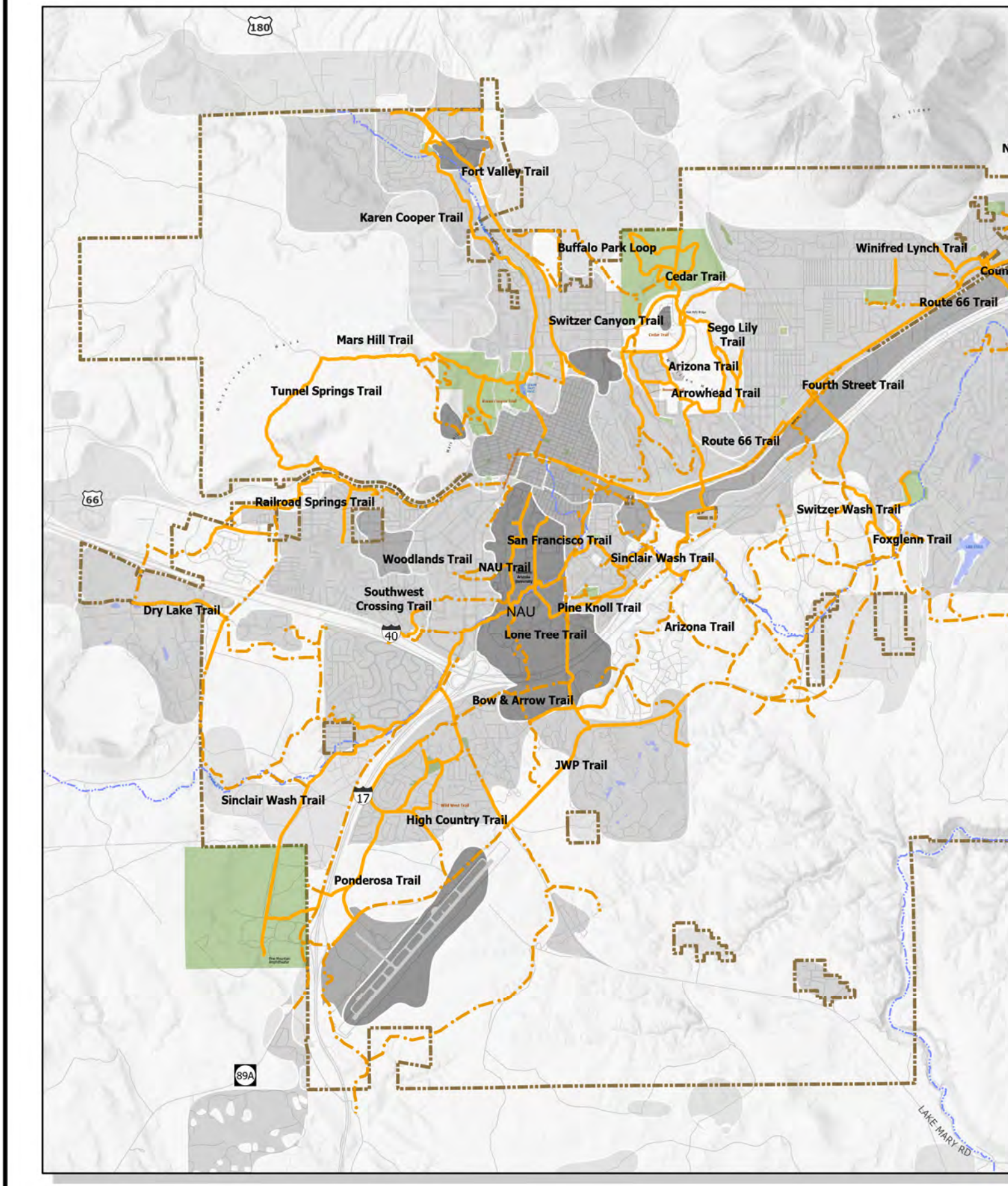
FLAGSTAFF REGIONAL PLAN
VISION 2030: PLACE MATTERS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Fort Valley Trail
Karen Cooper Trail
Buffalo Park Loop
Winifred Lynch Trail
Cedar Trail
Route 66 Trail
Switzer Canyon Trail
Sego Lily Trail
Mars Hill Trail
Arizona Trail
Tunnel Springs Trail
Arrowhead Trail
Fourth Street Trail
Route 66 Trail
66
Railroad Springs Trail
Switzer Wash Trail
San Francisco Trail
Foxglenn Trail
Woodlands Trail
NAU Trail
Sinclair Wash Trail
Southwest Crossing Trail
Dry Lake Trail
NAU
Pine Knoll Trail
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Lone Tree Trail
Arizona Trail
Bow & Arrow Trail
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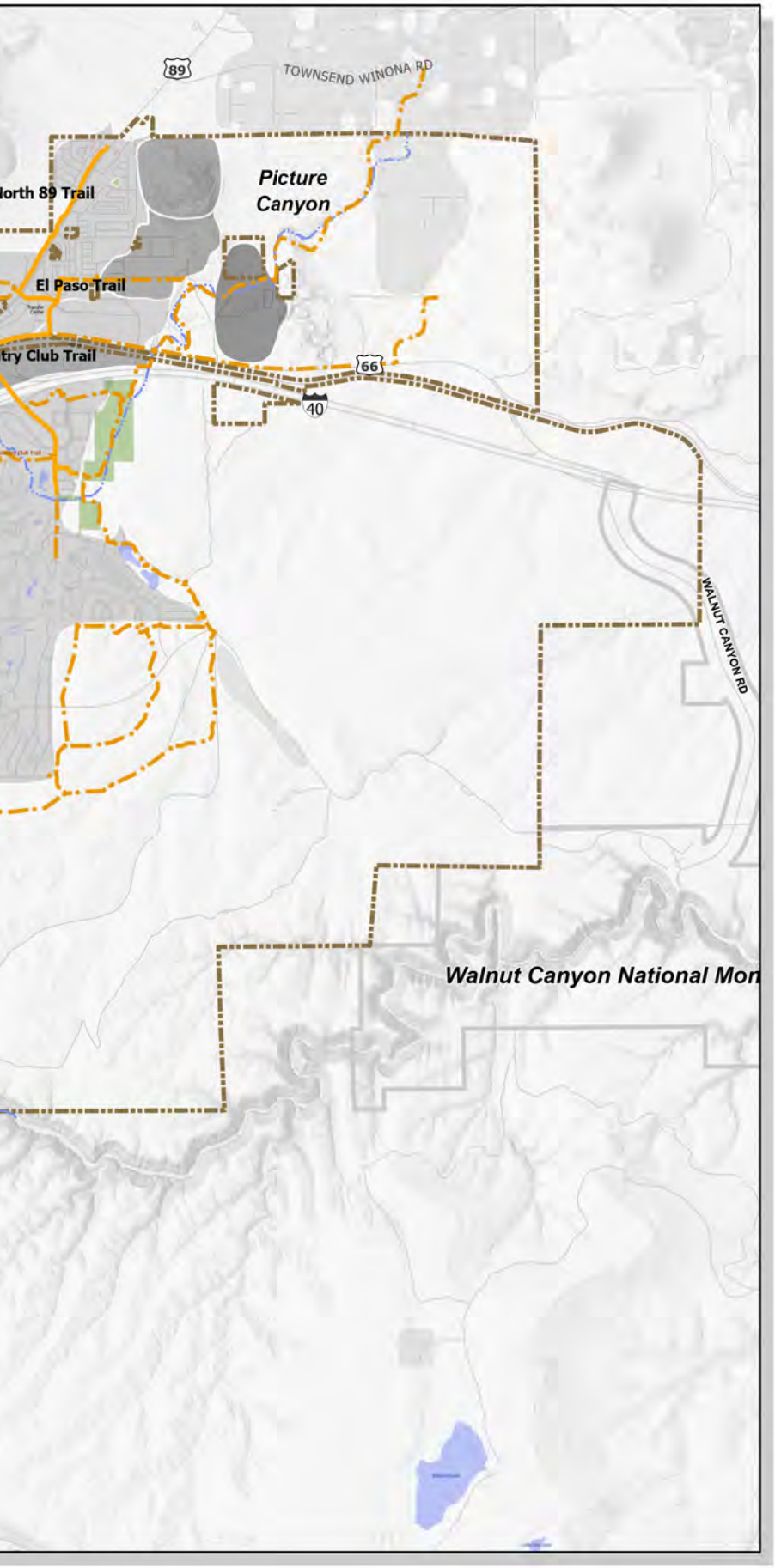

Map 26d:

EXISTING AND PLANNED FLAGSTAFF URBAN TRAILS

- Existing FUTS trails
- Planned FUTS trails
- City of Flagstaff
- Open Space - Preserved (Typically USFS); Open Space - Reserved (Typically State Trust)
- Rural - Existing
- Suburban - Existing
- Urban - Existing
- Industrial / Business Park - Existing
- Special District

As Amended November 3, 2022

Please see www.flagstaffmatters.com for an interactive GIS map.

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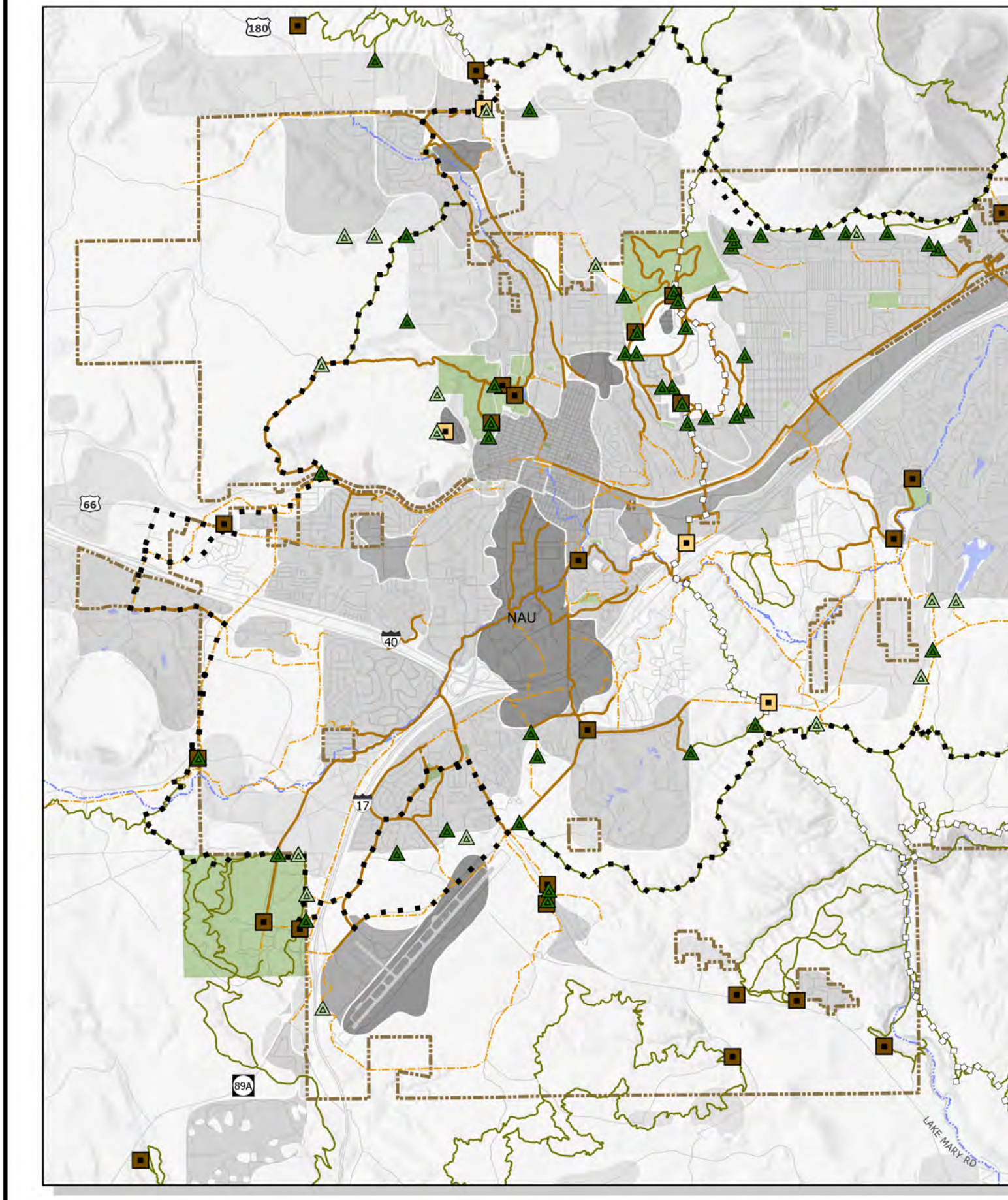
FLAGSTAFF REGIONAL PLAN VISION 2030: PLACE MATTERS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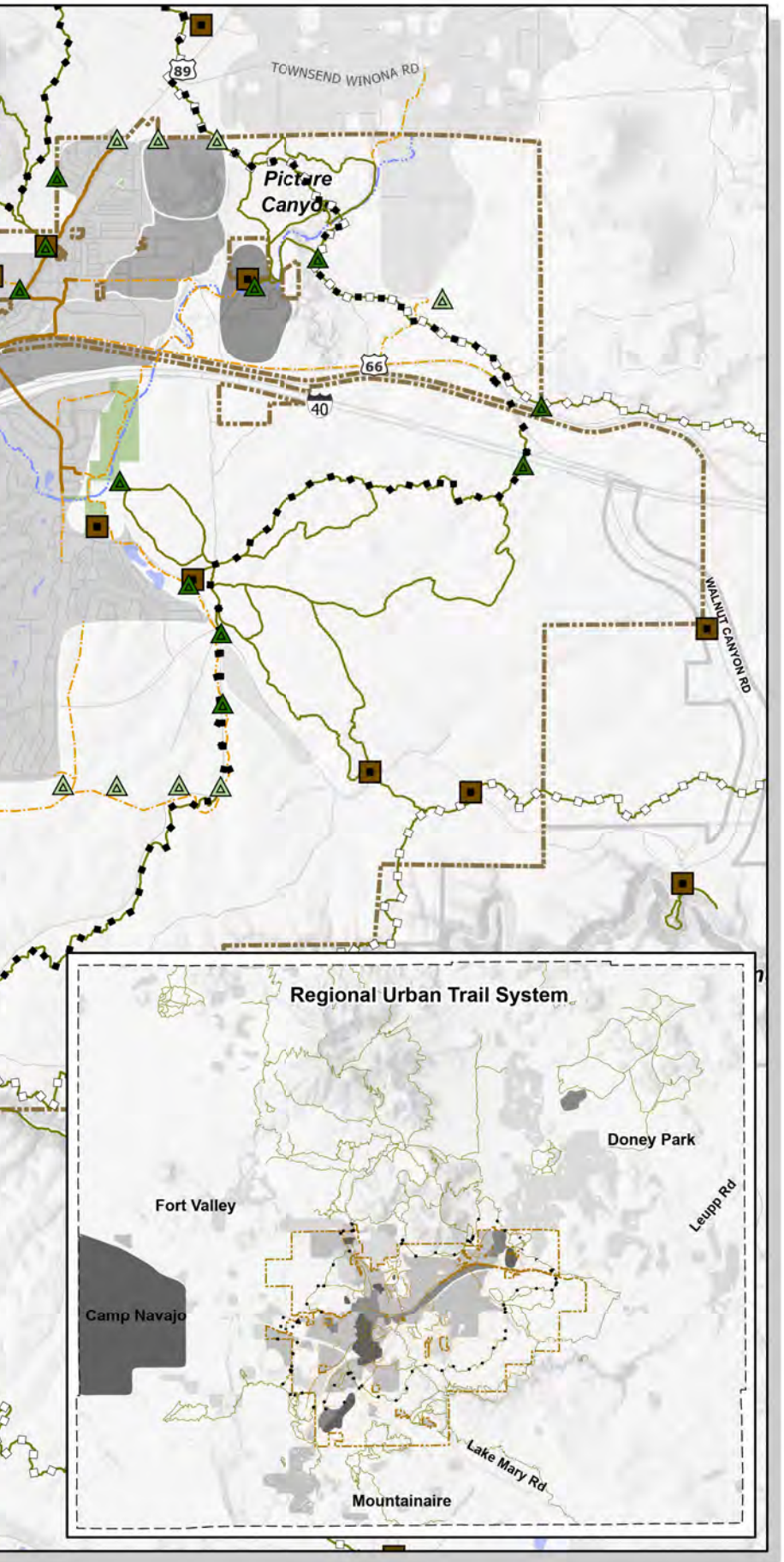

Map 26e:

FOREST ACCESS AND TRAILHEADS

- Existing trailheads
- Planned trailheads
- Existing forest access
- Planned forest access
- Existing Flagstaff Urban Trails (FUTS)
- Planned Flagstaff Urban Trails (FUTS)
- Singletrack Trails
- Arizona Trail
- Loop Trail
- City of Flagstaff
- Open Space - Preserved (Typically USFS); Open Space - Reserved (Typically State Trust)
- Rural - Existing
- Suburban - Existing
- Urban - Existing
- Industrial / Business Park - Existing
- Special District

As Amended November 3, 2022

Please see www.flagstaffmatters.com for an interactive GIS map.

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FLAGSTAFF REGIONAL PLAN VISION 2030: PLACE MATTERS

Transit

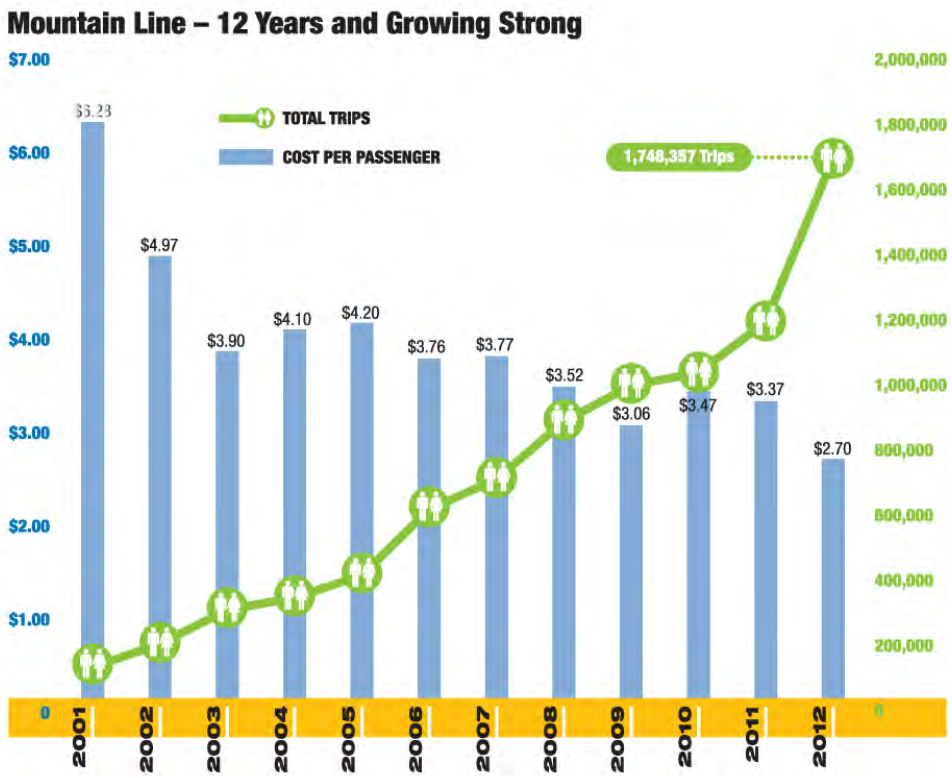
Transit plays multiple and emerging roles in the region. It provides basic mobility for transit-dependent individuals. For example, thousands of university faculty, staff, and students rely on transit as a cost-effective means of getting to and across campus. In addition, daily commuters from Doney Park and further outlying communities are in need of transit options, which could be met in collaboration with Navajo and Hopi transit services. Even now, and more so in the future, transit will play a central role in general mobility, congestion management, and economic development. The region will achieve desirable urban development by maximizing the use of urban parcels with appropriate densities and linking new land development with transit, which reduces land consumption in non-urbanized areas, reduces the number of auto trips and vehicle miles traveled, and reduces air pollution. Map 27 illustrates planned transit service levels in the planning area.

Photo credit: City of Flagstaff

The City and County work closely with two regional organizations to plan and deliver transportation services: The Flagstaff Metropolitan Planning Organization (FMPO) and the Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA). Both share the same boundaries as this Plan and work to inform and support City and County land use plans and policies. FMPO prepares a long-range, regional transportation plan (RTP) that directs the expenditure of federal transportation funds in the region. The RTP addresses all modes required to support City and County land use plans and policies and does so using reasonably expected revenues. NAIPTA produces a five-year transit plan and recently produced a long-range plan.

Photo credit: NAIPTA

Graphic credit: NAIPTA



Graphic Credit: NAIPTA

TRANSIT GOALS AND POLICIES

Goal T.7. Provide a high-quality, safe, convenient, accessible public transportation system, where feasible, to serve as an attractive alternative to single-occupant vehicles.

Policy T.7.1. Cooperate with NAIPTA in developing and implementing the five-year transit master planning goals and objectives to continuously improve service, awareness, and ridership.

Policy T.7.2. Provide public transit centers and options that are effectively distributed throughout the region to increase access to public transit.

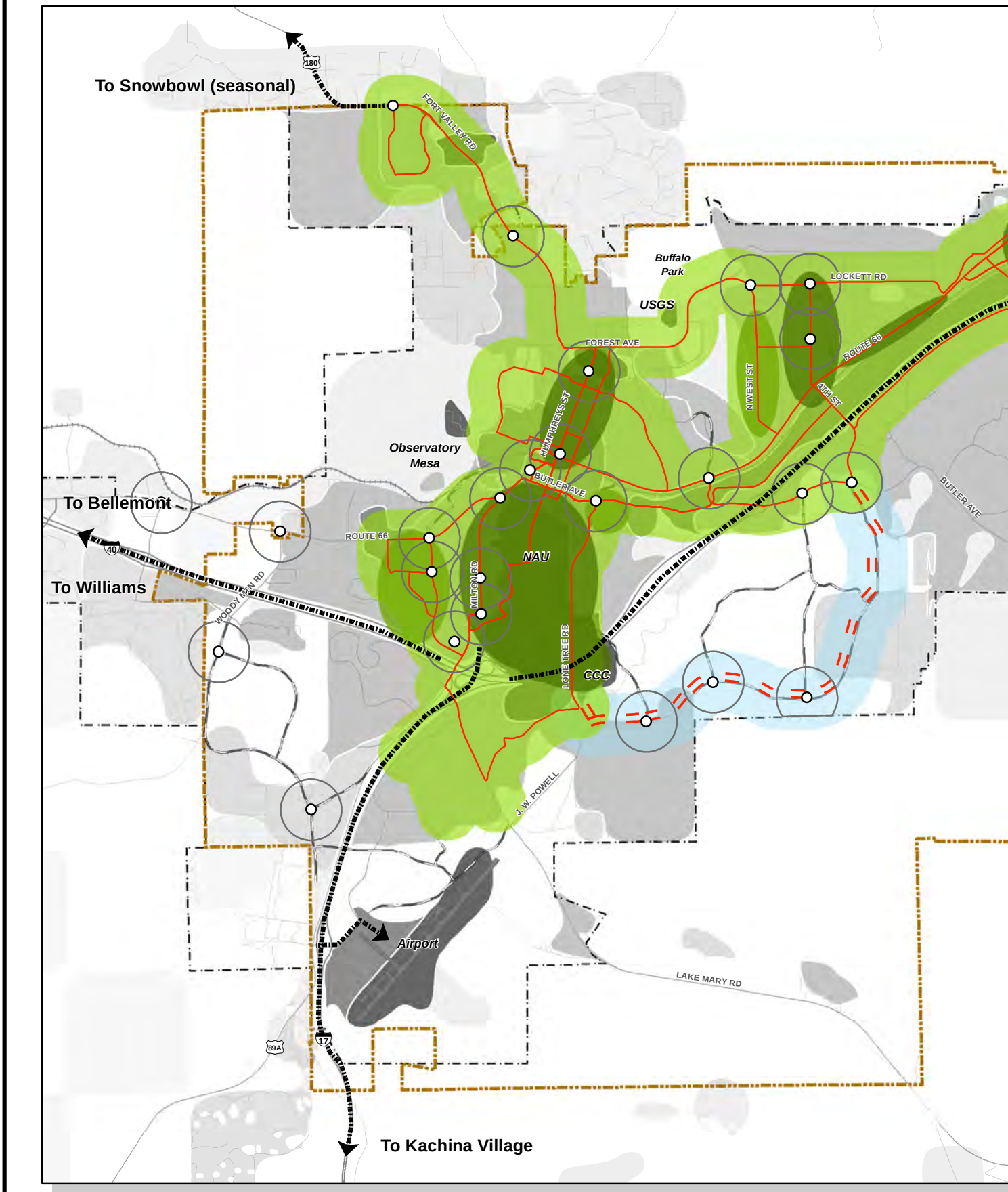
Policy T.7.3. Support a public transit system design that encourages frequent and convenient access points, for various transportation modes and providers, such as private bus and shuttle systems, park-and-ride lots for cars and bicycles, and well-placed access to bus, railroad, and airline terminal facilities.

Policy T.7.4. Support mobility services for seniors and persons with mobility needs.

Policy T.7.5. Incorporate adopted plans and policies for non-motorized and public transportation in the permitting process for all development or land use proposals, including provisions for efficient access and mobility, and convenient links between pedestrian, bicycle, and transit facilities.

Policy T.7.6. Coordinate with NAIPTA to establish rural transit service within the region that is consistent with County land use plans, based on funding availability, cost effectiveness, location of major trip generators, distance between generators, and the needs of transit-dependent individuals.

Note: Transit dependent individuals are those who can only get around via public transit, and who do not own a car or cannot drive.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ROUTE 66
NAU
MILTON RD
To Williams
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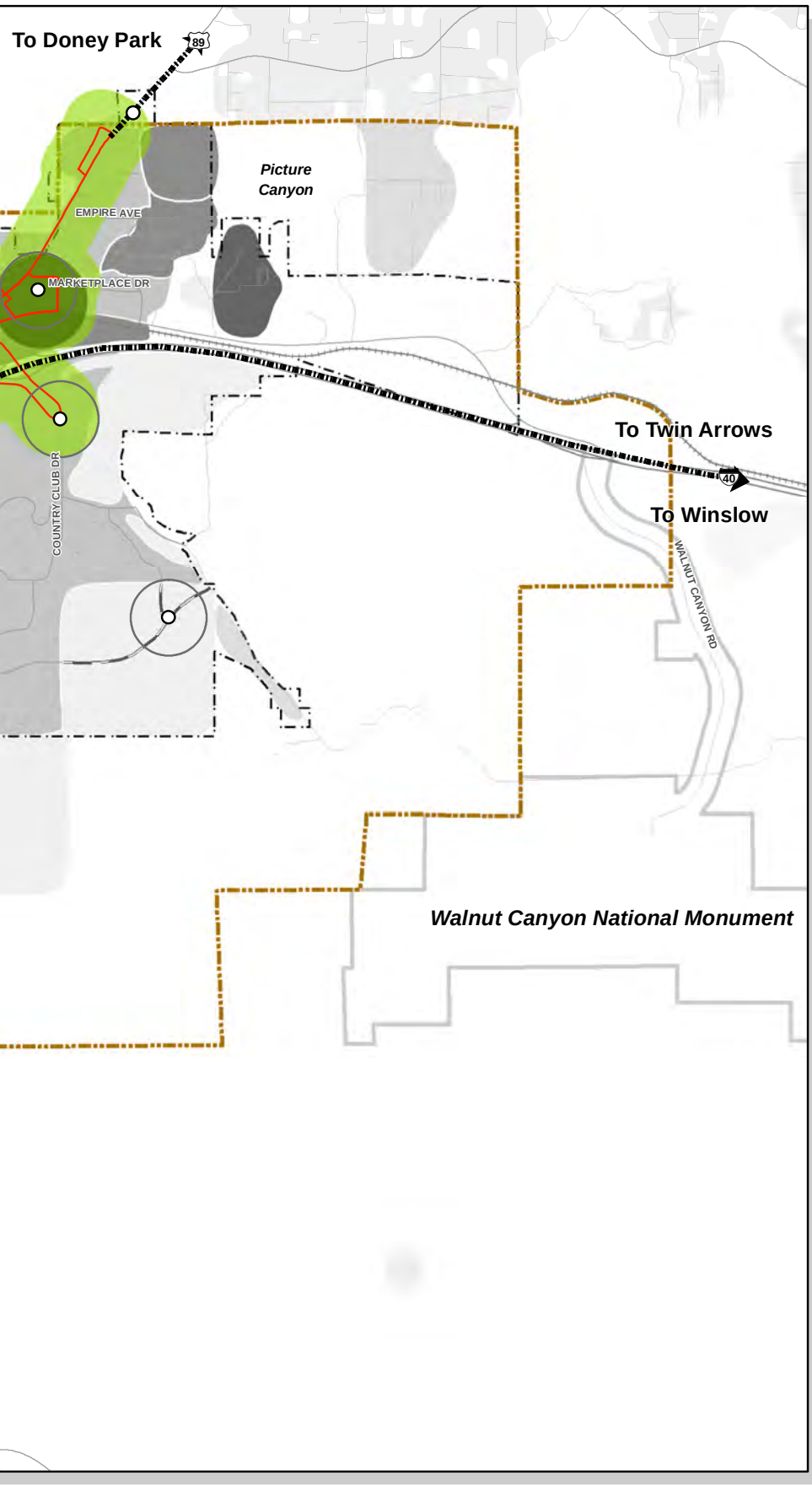
To Kachina Village



Map 27:

PLANNED TRANSIT SERVICE LEVELS:
Markets and Key Corridors

- Activity Center
- RTP Future Road Network

Transit Market Service Level:

- High Level
- Moderate Level
- Standard Level
- Standard Level- Future
- Existing Transit Route
- Future Transit Route
- Future Express Service
- City of Flagstaff
- Urban Growth Boundary
- Open Space - Preserved (Typically USFS); Open Space - Reserved (Typically State Trust)
- Rural - Existing
- Suburban - Existing
- Urban - Existing
- Industrial / Business Park - Existing
- Special District

Future growth illustrations and plans do not preclude private development entitlements. Please see www.flagstaffmatters.com for an interactive GIS map.

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FLAGSTAFF REGIONAL PLAN VISION 2030: PLACE MATTERS

Roads and Corridors

Automobiles are likely to continue to be the dominant form of transportation in the region, especially for longer trips. Roads and streets will be more effectively designed into the areas they serve. As parts of the region urbanize, reliability will become more important than speed. In urban activity centers, levels of service for pedestrians, bicycles, and transit will take precedence over service for cars.

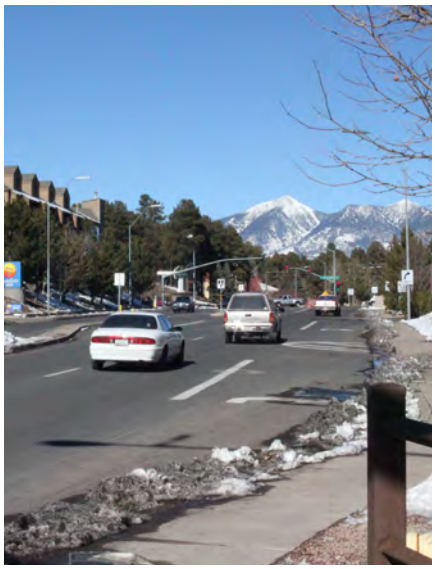

Photo credit: City of Flagstaff

Corridors and Functional Class

Successful places require successful corridors. Constraints by Flagstaff's terrain, railroads, highways, and interstates heighten our need for clear expectations of our corridors to establish the "sense of place" and to service the expected land use patterns. The desired "sense of place" for the region, centers, and neighborhoods will be more successfully achieved when the function and role of our corridors is sensitively applied.

Corridors in urban, suburban, and rural places will serve similar yet unique functions and roles. The *Flagstaff Regional Plan* deals directly with the corridors serving regional travel and circulation roles and sets general expectations for the smaller access corridors. The corridor classifications should be understood as a sliding scale with circumstances dictating the road's functional class. Corridors may be classified as regional travel, circulation, and access, as shown on Map 25. Listed below are the functional classifications and some of the multi-modal facilities associated with each.

Regional Travel Facilitates long-distance travel across and between regions	• Freeways • Passenger and freight rail • Major arterials • Dedicated express bus lanes
Circulation Provides for movement between neighborhoods and non-residential uses	• Minor arterials • Urban thoroughfares • Major collectors • Fixed transit routes
Residential Access or Access Local access to adjacent land uses	• Minor collectors • Local streets – commercial and residential, neighborhood streets

Corridors and Place Types

The term "corridor" is used in the Community Character, Growth & Land Use, and Transportation Chapters. Corridors are roads demarcated on maps based on their role in the greater transportation system, surrounding existing and future land uses and their context. Categories of Regional Travel, Circulation, and Access denote transportation roles on Map 25. In the Community Character chapter, some of these roads are identified as Gateway and Great Street Corridors on Map 12 for their value in placemaking and their relationship to iconic scenery. In the Land Use Chapter, the relationship between corridors and area types is described on pages IX-37, IX-50 and IX-55. To further identify the relationship between corridors and land uses, Access corridors on Map 25 are divided into Access and Residential Access; the former is associated with commercial and mixed use environments and the latter with neighborhood settings.

Corridors serve many roles, and these roles may be understood as:

- Carrier of goods and people – how many, how far, what kind, what means
- Connector of activities – how active, what scale, what purpose, relationships
- Space and Shelter for activities within the public realm – how often, vulnerable, duration, solitude
- Symbol for the understanding of place – identity, purpose, behaviors as it applies to specific roads or corridors, not to classes of corridors.
- Builder and destroyer of city and place – corridors may be perceived as supporting a sense of place, or destroying it.

Photo credit: City of Flagstaff

To fully implement the Regional Plan's vision for Flagstaff's roadways a Flagstaff "Streets Master Plan" should be developed to serve as the specific plan that bridges the City's *Engineering Design Standards and Specifications* and the *Flagstaff Regional Plan*. Until such a Plan is developed, functional classifications for roads and their definitions can be found in the *Engineering Design Standards and Specifications.*

Corridors in the Regional Transportation Plan

The Regional Transportation Plan (RTP) is a five year planning document developed by the Flagstaff Metropolitan Planning Organization. It is used to identify roadway projects that are eligible for federal funding. Some of the future roads identified on Map 25 are also identified in the RTP, however, these two documents are not required to match. The RTP provides more detail about the stage of planning for each roadway. Some future corridors are considered "conditional roads" in the RTP, which means that further study is required before proceeding with a project. Examples include the Clay Avenue Extension, the US 89 Bypass, the Metz Walk Extension, etc.

AUTOMOBILE GOALS AND POLICIES

Goal T.8. Establish a functional, safe, and aesthetic hierarchy of roads and streets.

Policy T.8.1. Promote efficient transportation connectivity to major trade corridors, employment centers, and special districts that enhances the region's standing as a major economic hub.

Policy T.8.2. Maintain the road and street classification system that is based on context, function, type, use, and visual quality.

Policy T.8.3. Design neighborhood streets using appropriate traffic calming techniques and street widths to sustain quality of life while maintaining traffic safety.

Policy T.8.4. Protect rights-of-way for future transportation corridors.

Policy T.8.5. Support the area's economic vitality by improving intersection design for freight movements.

Policy T.8.6. Maintain the City's street infrastructure in a cost effective manner to ensure the safety and convenience of all users.

Photo credit: City of Flagstaff

Passenger Rail and Freight

The economics of air travel in the southwest and freight movements across the nation may position passenger rail and rail freight to increase share of travel. BNSF and Amtrak are integral parts of our history and community fabric and can become a more important part of our economy. The region will position itself to take better advantage of this important mode of travel.

PASSENGER RAIL AND RAIL FREIGHT GOALS AND POLICIES

Goal T.9. Strengthen and support rail service opportunities for the region's businesses and travelers.

Policy T.9.1. Seamlessly integrate passenger rail with other travel modes including connectivity and operational improvements to the downtown passenger rail station and surroundings.

Policy T.9.2. Promote Amtrak service and support opportunities for interregional passenger rail service.

Policy T.9.3. Promote development of rail spurs and an intermodal freight facility or facilities as needed to support viable economic growth.

Policy T.9.4. Increase the number of grade-separated railroad crossings.

Photo credit: City of Flagstaff

Air Travel

Air travel ties our region to the nation and globe more quickly than any other mode of travel. "Face-to-face time" is important to all relationships – business relations included. Improving and expanding service to and from Flagstaff Pulliam Airport connects our region to larger hubs of air travel. Approximately 60,000 people travel to and from this small airport annually (CY 2011 Air Carrier Activity Information System FAA Calendar Year 2011 Primary Airports 9/27/2012).

AIR TRAVEL GOALS AND POLICIES

Goal T.10. Strengthen and expand the role of Flagstaff Pulliam Airport as the dominant hub for passenger, air freight, public safety flights, and other services in northern Arizona.

Policy T.10.1. Maintain and expand Flagstaff Pulliam Airport as an important link to the national air transportation system.

Policy T.10.2. Improve multimodal access and service to and from the airport including transit, bicycle, and parking services.

Policy T.10.3. Seek opportunities to expand destinations and frequency of regional air service throughout the southwest and west.

Policy T.10.4. Plan and manage transportation infrastructure to discourage land uses incompatible with the airport and flight zones.

Public Support for Transportation

Transportation is central to the lives of our citizens. Residents and visitors pay for its construction and operation. That construction and operation is often disruptive. Therefore, an open planning process, inclusive design process, and effective communications are essential.

Photo credit: City of Flagstaff

PUBLIC SUPPORT FOR TRANSPORTATION GOALS AND POLICIES

Goal T.11. Build and sustain public support for the implementation of transportation planning goals and policies, including the financial underpinnings of the Plan, by actively seeking meaningful community involvement.

Policy T.11.1. Maintain the credibility of the regional transportation planning process through the application of professional standards in the collection and analysis of data and in the dissemination of information to the public.

Policy T.11.2. Approach public involvement proactively throughout regional transportation planning, prioritization, and programming processes, including open access to communications, meetings, and documents related to the Plan.

Policy T.11.3. Include and involve all segments of the population, including those potentially underrepresented such as the elderly, low-income, and minorities (see Title VI of the Civil Rights Act of 1964 and Executive Order 12898 - Environmental Justice).

Policy T.11.4. Attempt to equitably distribute the burdens and benefits of transportation investments to all segments of the community.

Policy T.11.5. Promote effective intergovernmental relations through agreed-upon procedures to consult, cooperate, and coordinate transportation-related activities and decisions, including regional efforts to secure funding for the improvement of transportation services, infrastructure, and facilities.

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