Transportation Element

Introduction

Because transportation right-of-way is the most heavily used and experienced public space; because network design influences whether an area can be urban, suburban or rural; and because streetscapes strongly contribute to community character - future land use patterns and transportation systems must be planned together. The transportation element addresses the every-day need to move about the community. Successful implementation supports commuting, deliveries, emergency services, tourism and more. 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 element promotes context sensitive solutions; environmental responsibility; safety; the integration and connectivity of transportation systems; efficient system management and operation; and improvements to existing intermodal transportation systems.

Flagstaff Area Mobility Trends and Conditions

Flagstaff is nationally recognized for its walking, bicycling and transit systems; and journey-to-work data and a local trip diary survey show our region is above national averages for using these travel modes. Capitalizing and building 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. Research locally and nationwide 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.

Managing our region's transportation supply and demand through a variety of means is critical for many reasons. First, the average length of local trips has been increasing. This will continue while residential development occurs at locations removed from commercial areas. These longer trips can't effectively be served by transit or other modes. The trend will reverse or slow as more urban-type redevelopment and infill occur. Second, 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 aren't 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. Providing for this shift does not face the same cost and constructability challenges as building new roads or widening existing

roads in light of the challenges posed by terrain, interstates 17 and 40, the railroad and existing development patterns. Another national movement to consider would be adopting **Complete Street Guidelines**, which are streets designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easier to cross the street, walk to shops, and bicycle to work or school. Creating Complete Streets means transportation agencies must change their approach to community roads. By adopting a Complete Streets policy, communities direct their transportation planners and engineers to routinely design and operate the entire right of way to enable safe access for all users**.**

The following tables (charts?) illustrate regional trends in transportation mode share and how a different levels and types of transportation service affect how much time we'll spend in traffic in the future.

Table 4: Potential Modal Shifts—Flagstaff Region (by 2020)

Percent of Daily Person Trips	Summer/Fair		Winter/Inclement	
	Now	Potential	Now	Potential
Pedestrian	10%	15%	8%	14%
Bicycle	2%	6%	1%	2%
Public Transit	< 1%	3%	1%	4%
"Alternative Modes"	12%	24%	10%	20%

Transportation Element Maps

The Transportation Element includes a map illustrating major road corridors and levels of transit, bicycle and pedestrian services based on area-type context. Urban areas will require higher levels of these services than suburban or rural areas.

Goals and Policies

Goals in this element first speak to over-arching concerns including general mobility, safety, quality of design and sensitivity to the environment. Individual modes are then addressed starting with pedestrians - the smallest scale – and growing to rail and air.

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; and integrating convenient mode choices into more compact and urban future development ensures necessary linkages between our urban, suburban and rural areas. 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.

Goal T1 – Improve mobility and access throughout the region.

~~Policy T1.1~~
~~Use context sensitivity and community character to guide mobility and access provided by transportation improvements. (see 4.1 – is this redundant?)~~ Intro and 4.1 cover this.

Policy T1.2
Integrate a balanced, multimodal, regional transportation system.

Policy T1.3
Apply ***Complete Street Guidelines***[1] to accommodate all appropriate modes of travel in transportation improvement projects.

Policy T1.3
Provide a continuous system with convenient transfer from one mode to another.

Policy T1.4
Manage the operation and interaction of all modal systems for efficiency, effectiveness, safety, and to best mitigate traffic congestion.

Policy T1.5
Provide and promote strategies[2] that increase use of alternate modes of travel and manage demand for vehicular travel to reduce peak period demand.

Policy T1.6
Coordinate transportation and other public infrastructure investments efficiently to effectively achieve land use and economic goals.

Policy T1.7
Development will provide for on-site, publicly-owned transportation improvements.

[1] Complete Street Guidelines: http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/complete-streets-faq

[2] Glossary – full spectrum of 'Travel Demand Strategies'

Policy T1.8
Funding policy for operations, maintenance and capital improvements?

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 element recognizes that private automobiles will be the primary mode of trips in the foreseeable future, the percentage of work trips made by single-occupancy vehicles will 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 the tele-commuting and home-business crowd, thus reducing road congestion. Efforts will continue to be made to minimize the duration and severity of peak hour traffic congestion.

Goal T2: Improve transportation safety and efficiency for all modes.
Strategies: through smart growth, design, engineering, education, enforcement, encouragement and evaluation.

Policy T2.1
Provide safety programs and infrastructure to protect the most vulnerable travelers, including youth, elderly, mobility impaired[3] pedestrians and bicyclists.

Policy T2.2
Infrastructure design will provide safe and efficient movement of vehicles, bicycles and pedestrians.

Policy T2.3
New technologies will be considered in new and retrofitted transportation infrastructure.

Environmental Considerations:

The Flagstaff regional transportation system supports the other plan elements to enhance the character of our community and **lessen our impact to our natural surroundings**. Trekking or trucking, transportation can define how we interact with or environment - our ability to see it, access it, use it, 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.

Goal T3
Provide transportation infrastructure which ~~balances~~ is conducive to conservation, preservation and development goals to avoid, minimize or mitigate impacts to the natural and built context.

[3] Mobility-impaired includes hearing and sight-impaired persons.

Policy T3.1
Design and assess transportation improvement plans, projects and strategies to minimize impacts to air quality and maintain the region's current air quality.

Policy T3.2
Promote transportation systems which use less fossil fuel.

Policy T3.3
Couple ~~t~~ransportation investments with desired land use patterns to enhance and protect the quality and livability of neighborhoods, activity centers and community places.

Policy T3.4
Use parking regulations to promote other modes choices and reduce seas of parking.

Policy T3.5
Design transportation infrastructure that implements eco-system based design strategies to manage stormwater and minimize adverse environmental impacts.

Policy T3.6
Seek to minimize noise, vibration, dust, and light impacts of transportation projects on nearby land uses.

Policy T3.7
Design transportation infrastructure to mitigate impacts to plants, animals, their habitats and linkages between them.

The Flagstaff region will pursue **quality transportation system design** to positively ~~effect~~ 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.

Goal T4
Quality Design: Promote transportation infrastructure and services that enhance the quality of life of the communities within the region.

Policy T4.1
Promote context sensitive solutions (CSS) supportive of planned land uses and desired community character elements in all transportation investments.

Policy T4.2
Design all gateway corridors, streets, roads and highways to safely and attractively accommodate all transportation users with contextual landscaping and appropriate architectural features.

Policy T4.3
Design transportation facilities and infrastructure with sensitivity to historic and prehistoric sites and buildings, and which incorporate elements that complement our landscapes and views.

Transit plays multiple and emerging roles in the region. It provides basic mobility for transit-dependent individuals. For example, thousands of NAU faculty, staff and students rely on transit as a cost effective means of getting to and across campus. Even now – and more so in the future – transit will play a central role in general mobility, congestion management and economic development. The region can undertake 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 as well as reduce air pollution.

Goal T5
Public Transit Infrastructure and Services: Support Northern Arizona Intergovernmental Transportation Authority (NAIPTA) in providing high-quality, safe, convenient, accessible public transportation system, where ~~cost effective~~ feasible, ~~for the public~~ serving as an attractive alternative to single-occupant vehicles.

Policy T5.1
Implement the 5-year transit master planning goals and objectives to continuously improve service, awareness and ridership.

Policy T5.2
Provide public transit centers that are effectively distributed throughout the region to increase access to public transit.

Policy T5.3
Support public transit system design that encourages frequent and convenient access points, and that integrates various transportation modes into the transit services, such as bus systems, park-and-ride lots for cars and bicycles, and bus, railroad and airline terminal facilities.

Policy T5.4
Support mobility services for ~~older adults~~ seniors and persons with mobility needs. ~~impaired persons.~~

Policy T5.5
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 T5.6

Enhance public transit options and route designs that allow for options to live well without a car.

Policy T5.7
Coordinate with NAIPTA to establish rural transit service ~~in rural areas~~ within the MPO 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.[4]

Bicycles: Our region enjoys a well-deserved reputation as a great place for bicycling. Bicycles are an excellent choice for trips of less than three miles which, depending on one's location, can deliver you to the doorstep of most good, services, and businesses in the City. The Flagstaff Urban Trail System and growing miles of bike lanes allow for even longer trips. The region will continue to invest in on-road and trail facilities for bicyclists and will seek to improve the on-site experience by encouraging employers and business to support better parking, change-rooms and other facilities. In Davis, California 19% of employees bike to work. Flagstaff is at 6% and climbing.

Goal T6
Bicycle Infrastructure: Provide for bicycling as a safe and efficient means of transportation and recreation.

Policy T6.1
Develop recognition of bicycling as a legitimate and beneficial form of transportation.

Policy T6.2
Establish and maintain a comprehensive, consistent and highly connected system of bikeways and FUTS trails.

Policy T6.3
Educate bicyclists and motorists about bicyclist safety through education programs, targeted enforcement and detailed crash analysis.

Policy T6.4
Develop bikeways and bicycle infrastructure that serve the needs of full range of bicyclist experience, including sufficient bike racks.

Policy T6.5
Provide short and long-term bicycle parking at all places where bicyclists want to go.

[4] Transit dependant individuals: Those who can only get around via public transit, who do not own a car or cannot drive.

Policy T6.6
Ensure that policies to increase bicycling and meet the needs of bicyclists are fully integrated into all relevant plans, policies, studies, strategies and regulations.

Virtually everyone begins and ends each trip as a **pedestrian**. Making the region walkable makes sense. ~~This is especially true for our youth and our elderly.~~ It is important for our individual and community health. The economy depends on it – most purchases occur on foot. It is the intent of the region to make walking safe, convenient, and comfortable and for more of us, the mode of choice.

Goal T7
Pedestrian Infrastructure: Increase the use of pedestrian infrastructure, including the urban trail system (FUTS), as a critical element of a safe and livable community.

Policy T7.1
Provide accessible pedestrian infrastructure with all public and private street construction and reconstruction.

Policy T7.2
Develop a program for the installation of pedestrian infrastructure in already developed urban areas where they do not currently exist.

Policy T7.3
Improve pedestrian visibility and safety and raise awareness of the benefits of walking.

Policy T7.4
Identify specific pedestrian mobility and accessibility challenges and develop measures for implementation of necessary improvements.

Policy T7.5
Design streets with continuous pedestrian infrastructure of sufficient width to provide safe accessible use and opportunities for shelter.

Automobiles ~~will~~ are likely to continue to be the dominant form of transportation in the region – especially for longer trips. Road 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. *Describe arterials, collectors, neighborhood streets in relationship to overall goals and policies below.*

Goal T8
Automobile and Truck Infrastructure: Establish a functional, safe, and aesthetic hierarchy of roads and streets.

Policy T8.1
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 T8.2
Maintain the road and street classification system that is based on context, function, type, use, and visual quality.

Policy T8.3
Design neighborhood streets using appropriate traffic calming techniques and street widths to sustain quality of life.

Policy T8.4
Protect rights-of-way for future transportation corridors.

Policy T8.5
Support area economic vitality by improving intersection design for freight movements. .

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 more important part of our economy. The region will position itself to take better advantage of this important mode of travel.

Goal T9
Rail Freight and Passenger Rail: Strengthen and support rail service opportunities for the region's businesses and travelers.

Policy T9.1
Seamlessly integrate passenger rail with other travel modes including improvements to the downtown passenger rail station and surroundings.

Policy T9.2
Promote Amtrak service and ~~enhance~~ support opportunities for interregional passenger rail service.

Policy T9.3
Promote development of rail spurs and an intermodal freight facility or facilities as needed to support viable economic growth.

Policy T9.4
Increase the number of grade-separated railroad crossings.

Air travel ties our region to the nation and globe more quickly than any other mode of travel. "Face time" is important to all relationships – business relations included. Improving and expanding service to and from Flagstaff Pulliam Airport ~~brings~~ connects our region ~~closer to the world~~ to larger hubs of air travel. 55,000 people travel to and from this small airport every day.

Goal T10
Air Service: Strengthen and expand the role of Flagstaff Pulliam Airport as the dominant hub for passenger, air freight, public safety and other services in Northern Arizona.

Policy T10.1
Maintain and expand Flagstaff Pulliam Airport as an important link to the national air transportation system.

Policy T10.2
Improve multimodal access and service to and from the airport including transit, bicycle and parking services.

Policy T10.3
Seek opportunities to expand destinations and frequency of regional air service throughout the Southwest and West ~~and southwest~~.

Policy T10.4
Plan and manage transportation infrastructure to discourage land uses incompatible with the airport and flight zones.

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.

Goal T11
Public Support: Build and sustain public support for the implementation of transportation planning goals and objectives, including the financial underpinnings of the plan, by actively seeking meaningful community involvement.

Policy T11.1
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 T11.2
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 T11.3
Include and involve all segments of population, including those potentially under-represented 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 T11.4
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.

Policy T11.5

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

Acronyms:

ADA: Americans with Disabilities Act

ADOT: Arizona Department of Transportation

A.R.S.: Arizona Revised Statutes

CAC: Citizens Advisory Committee (for the Regional Plan update)

CSS: Context Sensitive Solution

ESRI: Environmental Systems Research Institute

FMPO: Flagstaff Metropolitan Planning Organization

FUTS: Flagstaff Urban Trails System

LOS: Level of Service

NAIPTA: Northern Arizona Intergovernmental Public Transportation Authority

RLUTP: Flagstaff Regional Land Use and Transportation Plan

RTP: Flagstaff Metropolitan Planning Organization Flagstaff Pathways 2030 Regional Transportation Plan

SWOT: Strengths, Weaknesses, Opportunities and Threats (Method of Analysis)