

CIRCULATION ELEMENT

The Town of Queen Creek planned transportation network provides for the movements of persons and goods within and through the Town via vehicular and non-vehicular transportation methods. The transportation goals and policies detailed in this element assist in the development of a comprehensive multi-use transportation network based on the following principles:

- **Safety** - All areas of design, operations, and maintenance of the transportation system should minimize hazards and emphasize safety for all modes of travel. Special consideration should be given to minimizing conflicts between travel modes.
- **Efficiency** - Transportation systems must be well-designed to effectively serve adjacent land uses. The degree to which each mode meets the needs of the community should be considered in terms of efficiency.
- **Balance** - A balanced transportation system provides multiple choices that are convenient and accessible for travelers. Balance is important to meet the diverse travel needs of a growing community.
- **Integration** - A multimodal system provides convenient, easy access between travel modes.
- **Mobility** - Mobility describes a person's ability to travel to destinations within a community. A balanced transportation system provides the ability to choose a travel mode based on the type and distance of a trip.
- **Accessibility** - Accessibility describes the degree to which travelers can use various modes in the transportation system. Accessible transportation systems provide ease of use for all people, regardless of physical ability or economic status.
- **Aesthetics** - Aesthetics form a uniqueness of the area and creates a theme that invites people to use the system and includes facility design, landscaping, and art.

The proposed transportation network provides a network of roadways designed to support the land use patterns provided in the Land Use Element. Figure 15: Transportation System Map shows the planned transportation network.

Planning Considerations

Roadway improvements

The Town has a limited number of arterial roadways that run the length of the community due to the railroad and two washes that run diagonally through Queen Creek. Crossings at both the railroad and the washes present challenges related to designing and building roadways. As a result, the arterial roadways that do run the length of Town experience increased congestion. Additionally, the absence of a freeway system and the lack of regional transportation alternative to the rapid growth southeast of the Town significantly impact the available capacity and contribute to saturated traffic flow during peak hour traffic.

Residents traveling through Queen Creek from the San Tan Valley area also contributes to the traffic congestion experienced along arterial roadways. Due the limited roadways that access the San Tan Valley area, traveling through Queen Creek is one of the only options. Connecting gaps in the arterial roadway system and minimizing cut-through traffic over time will help reduce the costs associated with maintaining the roadways.

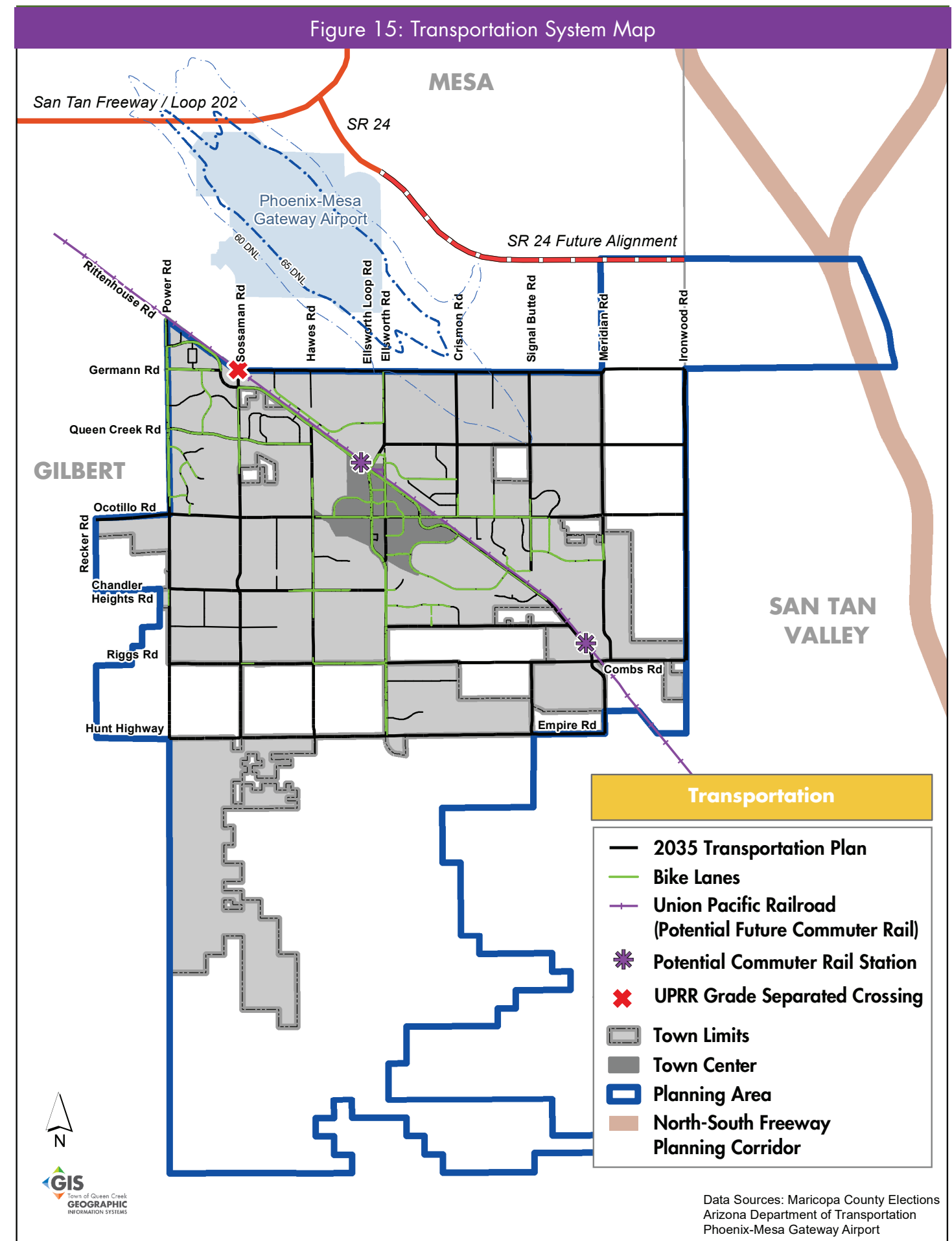
Employment opportunities and traffic

The lack of employment opportunities in Town and in the San Tan Valley area force residents to travel outside of the Town's boundaries for work. As a result, heavy traffic congestion can be observed heading northbound to the SR 24 in the morning hours and southbound from the SR 24 in the evenings as residents drive to and from work.

Transit

Based on a review of current and projected densities conducted as part of the 2016 Transportation Master Plan, a fixed route transit service may not be justified in the next 10+ years based on projected employment and population densities. Transit, however, is a key strategy in reducing roadway congestion and increased density in key areas contribute to the feasibility of future transit services.

Figure 15: Transportation System Map



Queen Creek and regional population growth

Infrastructure planning is essential to accommodate growth in Queen Creek and in surrounding areas. With growth comes additional demand on the Town's transportation system. To serve such needs, it is necessary to identify and implement improvements to transportation infrastructure.

While regional transportation options in the Town are limited to Ellsworth and Rittenhouse roads, which connect the Town to SR 24 and Loop 202, future plans are in progress to expand accessibility in Queen Creek. The Arizona Department of Transportation (ADOT) is studying a North-South major freeway corridor to improve regional transportation access. Construction of the SR 24 (Williams Gateway Freeway) will link to the Town's northeast border and Superstition Vistas Planning Area from Loop 202 towards Pinal County. This major corridor will expand regional connectivity between Phoenix and Tucson, and could assist in alleviating the current congestion within the Town from the southeast upon completion.

Commuter rail

The Arizona Department of Transportation Passenger Rail Corridor Study will document the purpose, need, options, and funding opportunities for intercity passenger rail service between Phoenix and Tucson. One of the three alternatives (known as the "Yellow" Alternative) uses the Union Pacific Railroad (UPRR) right of way through Queen Creek and includes one station in the vicinity of Rittenhouse and Ellsworth Loop roads. Of the three remaining alternatives, the "Yellow" Alternative was identified as the preferred alternative. The potential for a commuter rail station in the Town Center, with the possibility of additional stations in Queen Creek, provides a unique opportunity for transit-oriented development.

Aging population and changes in driving behaviors and preferences

Today, about one in eight people in the United States is over 65; by 2030, this age group will include one in five people. Changes in driving behaviors and preference will influence how we plan for transportation opportunities now and in the future. Arizonans who choose to not retire in dense cities will require different transportation options in their own communities when they no longer drive motor vehicles.

Millennials (people born between 1980 and 2000) are now the largest group of Americans. They tend to drive less compared to other age groups. In addition, evidence points to a declining interest in driving among this age group; the percentage of 16-24 year olds with driver's licenses has been declining.

Connected vehicles and driverless cars

Advances in transportation technology will change the cars of the future. The US Department of Transportation's Connected Vehicle program is working with state and local transportation agencies, vehicle and device makers, and the public to test and evaluate technology that will enable cars, buses, trucks, trains, roads and other infrastructure, our smart phones, and other devices to "talk" to one another. The federal government, in partnership with state and local agencies, industry, and the public, is also exploring the feasibility of partially or fully automated vehicles, possibly combined with connected vehicle technology. The combination of connected vehicles and automated vehicles could fulfill their full potential to provide unprecedented levels of safety and mobility.

Goals & Strategies

GOAL 1: DEVELOP A MULTIMODAL TRANSPORTATION SYSTEM FOR ALL USERS.

Strategy 1.A: Identify transportation projects that do not reduce existing roadway capacities and address identified needs for expansion of the system in line with the Town's goals, priorities, design standards and available funds.

Action 1.A.1: Implement the Town's 10-Year Transportation CIP projects.

Action 1.A.2: Implement the Transportation Master Plan 2025 and 2035 recommended improvements.

Action 1.A.3: Continue coordinating with adjacent municipalities and counties to address regional transportation issues and identify solutions.

Strategy 1.B: Develop a safe, continuous arterial street network that can accommodate all modes, minimize congestion, and connect to arterial street networks of neighboring communities.

Action 1.B.1: Implement the Town's 10-Year Transportation CIP projects and the Transportation Master Plan 2025 and 2035 recommended improvements to the arterial and collector street network.

Action 1.B.2: Continue to use a hierarchy of arterial and collector streets to accommodate expected traffic volumes.

Action 1.B.3: Use street design as a means of discouraging through traffic in residential areas.

Action 1.B.4: Incorporate all-weather crossings at Queen Creek and Sonoqui washes in the design and construction of arterial streets.

Action 1.B.5: Designate truck routes to keep heavy vehicles away from residential areas when possible.

Action 1.B.6: Develop priorities for roadway improvements based on existing and future traffic demand.

Action 1.B.7: Explore opportunities for public/private partnerships and other funding options for roadway improvements.

Action 1.B.8: Promote the importance of continued roadway maintenance and paving for new and existing roads consistent with adopted traffic engineering and construction design standards.

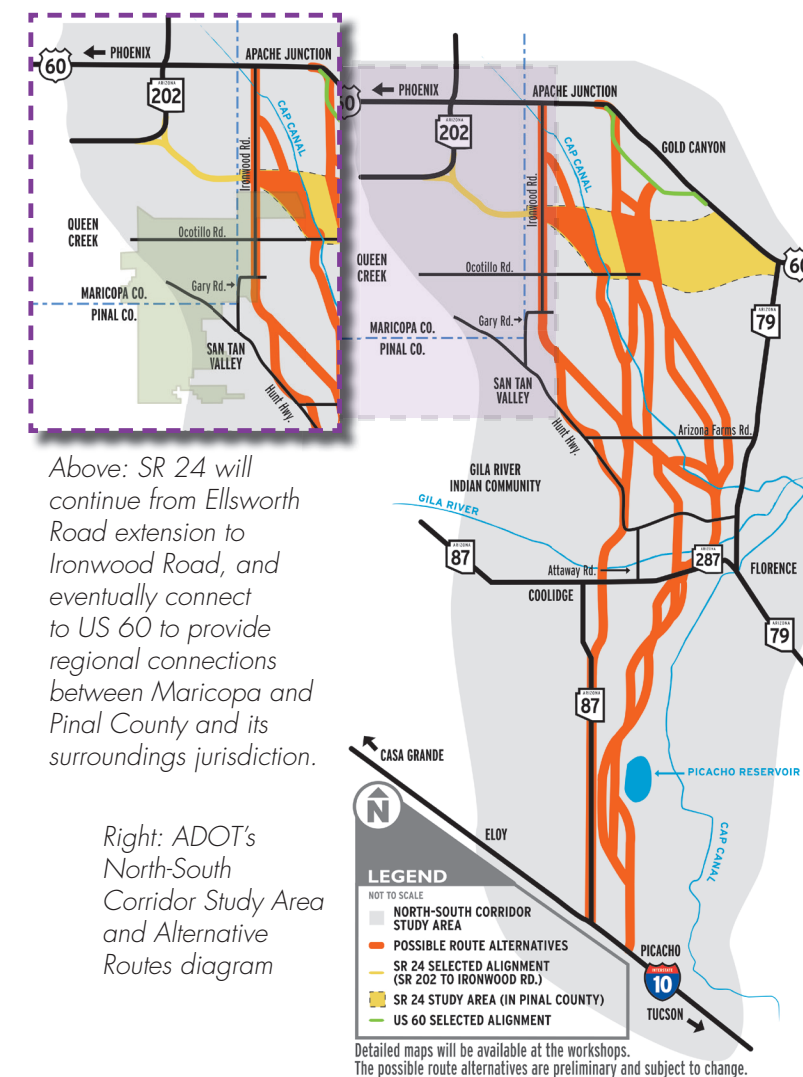
Action 1.B.9: Continue to require Traffic Impact Analysis (TIA) for major new projects and for the expansion of existing projects.

Strategy 1.C: Develop a safe network of collector and local streets that connect neighborhoods to the arterial street network, encourage bicycling and walking, and incorporate traffic calming strategies.

Action 1.C.1: Promote connectivity between key public and private facilities within the planning area, including San Tan Mountain Regional Park, Town parks, schools, and other activity areas through the design and construction of paths and trails.

Action 1.C.2: Maintain the Town's current standards for requiring sidewalks and bike lanes on all new arterial and collector roadways.

Action 1.C.3: Implement the Transportation Master Plan recommended additions collector street system.



Strategy 1.D: Foster economic development through an integrated multimodal transportation system.

Action 1.D.1: Encourage multimodal connections to major economic generators to the region, each other and to neighborhoods and other facilities.

Action 1.D.2: Encourage transportation facilities that support employment opportunities within Queen Creek and help to reduce commute times for residents.

Strategy 1.E: Provide for non-motorized modes of transportation through construction of bicycle, pedestrian, multi-use and equestrian paths/trails in the right-of-way in coordination with existing paths/trails and facilities in adjacent properties.

Action 1.E.1: Continue to provide bicycle lanes and sidewalks in conjunction with development of arterial and collector streets where right-of-way exists.

Action 1.E.2: Evaluate gaps in the non-motorized transportation system and identify funding for future projects to close such gaps.

Action 1.E.3: Identify and pursue all options for supplemental public and private funding assistance to improve the Town's trail system.

Action 1.E.4: Expand the availability of multi-use paths and trails to accommodate equestrian and non-motorized modes of transportation as provided in the Parks and Recreation Master Plan.

Strategy 1.F: Promote multi-jurisdictional transportation planning involving the Town, adjacent municipalities, and counties that share a common transportation system and face common transportation issues.

Action 1.F.1: Promote intergovernmental coordination in development of a multi-use transportation system with Maricopa and Pinal counties and surrounding jurisdictions.

Action 1.F.2: Maintain involvement with surrounding multi-jurisdictional transportation planning initiatives including the ADOT North-South Corridor study, the SR 24 expansion, and the Phoenix-Tucson intercity rail project.

Action 1.F.3: Promote transportation planning programs in coordination with adjacent municipalities, Maricopa County, Pinal County, Maricopa Association of Governments (MAG), Central Arizona Association of Governments (CAAG) and the Arizona Department of Transportation (ADOT).

Action 1.F.4: Coordinate with the City of Mesa regarding the construction of connections to the SR 24 expansion at Signal Butte and Ironwood roads.

Action 1.F.5: Coordinate with Phoenix-Mesa Gateway airport to retain convenient access to passenger terminals and airport amenities.

Strategy 1.G: Promote expansion of local or regional public transportation service.

Action 1.G.1: Coordinate with surrounding jurisdictions regarding new or expanded service to ensure appropriate transit connections and continuity of service.

Action 1.G.2: Evaluate the feasibility for transit services, identifying any changes in population and employment density, as well as transit expansion in neighboring communities that could connect to fixed route service in Queen Creek.

Action 1.G.3: Continue to promote vanpools.

Action 1.G.4: Work with Valley Metro to initiate one circulator service within the Town and evaluate potential expansion of the circulator program if successful.

Action 1.G.5: Explore express route service to nearby transit centers and/or downtown Phoenix.

Action 1.G.6: Evaluate potential park-and-ride locations such as Queen Creek Marketplace.

Action 1.G.7: Encourage transit oriented development surrounding potential future UPRR station stops.

Action 1.G.8: Evaluate other potential UPRR station stops for additional transit oriented development opportunities.

Strategy 1.H: Support and promote technology enhancements to the transportation system such as electric vehicles and charging stations; vehicle to vehicle and vehicle to infrastructure communication; and autonomous vehicles.

Action 1.H.1: Implement the TMP recommended projects for Intelligent Transportation Systems (ITS) including the ITS Strategic Plan, improvements to the fiber optic communications network, traffic signals, closed-circuit television cameras, dynamic message signs, and regional connectivity.

Action 1.H.2: Support opportunities for electric vehicle charging stations in new and existing development.

Action 1.H.3: Stay informed on improvements to connected and autonomous vehicle technology and potential future uses in Town.

Strategy 1.I: Implement a transportation system that is compatible with adjacent land uses and preserves scenic, aesthetic, historic and environmental resources while balancing safety, mobility, and access.

Action 1.I.1: Promote use of landscape themes for arterial streets that include low water drought-tolerant plants to enhance the appearance of the community.

Action 1.I.2: Incorporate "rural design characteristics" in the design of arterial streets in equestrian areas to reflect the adjacent residential character and allow the continued use of right-of-way for equestrian and multi-use trails.