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## CHAPTER 3

### CIRCULATION



*Transportation Modes*

## Vision Statement

Provide a safe, efficient and aesthetically pleasing circulation network that considers all modes of vehicular and non-vehicular movements and does so in a manner that is sensitive to the environment.



*Pedestrian Friendly Areas*



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## INTRODUCTION

The Circulation Element of the Gilbert General Plan provides the policy framework for a comprehensive transportation system including: vehicular right-of-way, transit routes, pedestrian paths, bicycle lanes, trail and equestrian facilities. Each supports and is coordinated with the Land Use element. The Circulation Element is presented in the following sections:

- Existing Conditions
- Issues
- Goals and Policies
- Implementation Strategies

The Circulation Element balances development and land use with future transportation and transit demands. This element presents existing transportation conditions and identifies a variety of issues important to the community in the future. An examination of future conditions correlates the future development with transportation system needs and provides an approach for dealing with those needs in a manner that is both financially feasible and generally acceptable to the community.

A Circulation Map identifying both streets and freeways is located in the exhibits. An Alternative Modes Map identifying Gilbert's local and express bus routes and future high capacity transit and commuter rail corridors is located in the exhibits.



## CIRCULATION

### 3.1 Existing Conditions

#### A) Street System Inventory

The key to maintaining a balanced transportation system exists in the ability to adequately plan for roadways that minimize through traffic in neighborhoods, while at the same time coordinating land use and transportation plans in order to capitalize on the efficient movements of people and goods. To accomplish this objective, a hierarchy of streets known as a Functional Classification of Streets has been established. The functional classification scheme coincides with the adjoining communities to ensure consistency as roads enter and leave Gilbert. The Town has defined a functional classification system consisting of the following roadways:

##### Freeway

Freeways are high-speed, limited access facilities that provide inter- and intra-regional access with grade separated interchanges with arterial streets. The Town of Gilbert has direct access to two freeway systems that include: US 60 (Superstition Freeway) and Loop 202 (Santan Freeway).

##### Arterial Streets

Arterials are high capacity roadways that carry large volumes of traffic between areas of high residential density, employment, retail and commercial land uses. Arterial streets provide limited direct access to abutting land uses.

The north-south arterials consist of:

- Arizona Avenue (State Highway 87)
- McQueen Road
- Cooper Road
- Gilbert Road
- Lindsay Road
- Val Vista Drive

- Greenfield Road/Santan Village Parkway
- Higley Road
- Recker Road
- Power Road

The east-west arterials are:

- Baseline Road
- Guadalupe Road
- Elliot Road
- Warner Road
- Ray Road
- Williams Field Road
- Pecos Road
- Germann Road
- Queen Creek Road
- Ocotillo Road
- Chandler Heights Road
- Riggs Road
- Hunt Highway

Baseline, Warner, Germann, Riggs, Arizona Avenue, McQueen, Gilbert, Val Vista Roads, as well as Hunt Highway are designated as major arterials over their entire length in Gilbert. Guadalupe, Elliot, Queen Creek, Ocotillo, Chandler Heights, Cooper and Lindsay Roads are designated as minor arterials over their entire length. Elliot, Ray, and Pecos Roads carry both major and minor arterial designations in Gilbert. Recker Road has sections designated as major collectors and is discontinuous south of Pecos Road. Greenfield is a minor arterial that changes to San Tan Village Parkway and classification to Major Arterial for a two and a half mile stretch near San Tan Village Mall.

In the Gateway Character Area, that portion of Williams Field Road from Higley Road to Power Road is designated as a minor arterial with a unique street section and design.

The Town of Gilbert also includes Roads of Regional Significance (RRS) in the arterial network. RRS were developed to complement the Phoenix Metropolitan freeway network by providing a three to six mile grid of roads built to a high level of design.

The arterials Roads of Regional Significance in Gilbert are:

- Gilbert Road
- Power Road
- Warner Road
- Germann Road
- Riggs Road

The proposed design guidelines for RRS will not be interpreted rigidly in Gilbert as implementation is not fully feasible. This is particularly true in the Heritage District where implementation of the right-of-way and access requirements on Gilbert Road would conflict with plans to create a pedestrian-friendly downtown.

### **Collector Streets**

Collector streets provide connections between arterial roadways and local streets linking residential, employment and commercial areas. Collector streets strengthen the continuity of the street network and establish an interconnected street pattern between the mile arterial grid. An interconnected collector street grid provides multiple routes, diffuses automobile traffic and provides better accessibility for non-motorized traffic.

### **Local Streets**

Local streets are designed primarily to provide access to property and secondarily to move local neighborhood traffic. Local streets carry low volumes of traffic traveling at lower speeds. The Circulation Map does not identify local streets.

## **B) Alternative Modes**

The existing and planned systems for alternative modes of transportation within Gilbert include the following:

### **Public Transit**

Valley Metro provides bus service to Gilbert under contract with the Regional Public Transportation Authority (RPTA). Daily express and local bus service is available in the northern, central, and western areas of Town.

The Circulation Element recognizes that high capacity transit, including bus rapid transit and commuter rail, may become feasible in the future. The MAG Commuter Rail System Study (2010) defines a southeast commuter rail corridor through Gilbert

connecting central Phoenix with Queen Creek. Commuter rail systems are designed to primarily meet the needs of regional commuters in the am and pm peak travel times. The MAG System Study concluded that of all the rail corridors studied, the southeast corridor would offer the highest ridership by a significant margin, substantial travel time savings, and would be the most cost effective of the routes. Two future rail transit station sites are identified along the Union Pacific Railroad line—one west of Gilbert Road in the Heritage District, and one south of Williams Field Road in the Gateway Character Area. A park-and-ride lot has been established within the Heritage District downtown area. This park-and-ride lot would complement a future downtown rail transit station site.

The Town has identified high capacity transit corridors and facilities. Williams Field Road is designated as a high capacity corridor to link destinations in Chandler through destinations in Gilbert to ASU Polytechnic campus, Chandler-Gilbert Community College and the Phoenix-Mesa Gateway Airport in Mesa. Gilbert anticipates a light rail alignment within the Town at some future point. The location and timing will be dependent upon the regional location of the line and availability of funds to complete the project.”

Future park-and-ride facilities are proposed near Val Vista and Germann Roads and Williams Field and Greenfield Roads and Higley and Riggs Roads.

### **Bicycle**

Street sections for arterial and collector roads include bicycle lanes. An extensive network of off-street bicycle and multi-use paths exist within existing and planned communities, along canals, utility corridors and railroad lines, where applicable, and are planned along the Loop 202 Santan Freeway corridor.

### **Pedestrian**

Pedestrian facilities, primarily sidewalks, exist along the majority of the street system except in very low density residential areas and some industrial areas. Extensive off-street pedestrian trail linkages are addressed in detail in the Parks, Open Space, Trails, Recreation and Arts and Culture element.

### **Equestrian**

A number of equestrian trails exist in the Gilbert Planning Area. The network is not fully developed and the increasing degree of urbanization has reduced the number of farm roads/trails. Policies in the Parks, Open Space, Trails, Recreation and Arts and Culture element require the connection of multi-use trails in new development to

allow older large lot subdivisions with horse privileges to connect to parks and other equestrian facilities.

### **Multi-Use Corridors**

Multi-use corridors, combining two or more alternative modes of transportation, will be incorporated into the town wide circulation and trails system. The planned trails network is shown in the Parks, Open Space, Trails, Recreation and Arts and Culture element.



## CIRCULATION

### 3.2 Issues

Current and potential transportation issues expected to be of concern over the next ten to twenty years include:

- Need for a Transportation Master Plan to create long-range objectives for the Town's circulation system.
- Need to create a connected, safe, multi-modal path system adjacent to arterials that is comfortable for pathway users.
- Need to develop a network for alternative modes to and within the Heritage District.
- Need for improved local and regional transportation/transit service and park-and-ride facilities.
- Need to structure local circulation policies and strategies to minimize adverse climate change impacts.
- Renewal and maintenance of existing right-of-way landscaping and streets.
- Collector connections between neighborhoods and commercial services.
- Regional continuity with adjoining communities, i.e. arterial-to-arterial or collector-to-collector.
- Funding and scheduling for Capital Improvement Projects to meet the needs of a growing community.





## CIRCULATION

### 3.3 Goals and Policies

#### **Goal 1.0**

##### **Create safe and efficient patterns of circulation.**

**Policy 1.1** Promote the safety of turning lanes and driveway curb cuts through access management.

**Policy 1.2** Continually assess accident experience to determine the need for traffic control measures.

**Policy 1.3** Annually review plans for safe routes to and from schools.

**Policy 1.4** Utilize traffic calming devices and techniques to reduce speeds and minimize cut-through traffic in neighborhoods.

**Policy 1.5** Design street sections to be pedestrian and non-motorized vehicle friendly.

**Policy 1.6** Encourage developers of residential, commercial, industrial and employment uses to extend or establish an interconnected collector street system with adjacent properties.

**Policy 1.7** Encourage gated neighborhoods to not interrupt the natural flow of traffic from arterial and collector roads and remain accessible to pedestrian and bicycle traffic.

#### **Goal 2.0**

##### **Provide aesthetically pleasing circulation systems.**

**Policy 2.1** Utilize roadway right-of-way design standards and streetscape standards that generate attractive landscaped areas and accommodate pedestrian/equestrian/bicycle activity.

**Policy 2.2** Encourage the installation of utility and cable equipment in locations to be screened from street view.

Policy 2.3 Provide landscaped entry features in all new developments.

Policy 2.4 Provide attractive “Welcome to Gilbert” signs at arterial street gateways to the Town.

### **Goal 3.0**

#### **Provide for and encourage use of non-vehicular modes of circulation.**

**Policy 3.1** Encourage new development to establish pedestrian, equestrian, multi-use and/or bike paths consistent with the development’s theme.

**Policy 3.2** Connect neighborhoods, school sites, activity centers and recreational sites with sidewalks, trails and bikeways.

**Policy 3.3** Encourage dedication of public access easements and rights-of-way through the development process to create connected public trails, paths and bicycle routes.

**Policy 3.4** Enhance the quality of life through multi-use trails allowing equestrian movement from neighborhoods to the Town of Gilbert Central Trail System.

**Policy 3.5** Continue to develop agreements with the RWCD, SRP and Maricopa County Flood Control District to secure easements and rights-of-way for trails and paths where appropriate.

### **Goal 4.0**

#### **Continue to provide regional public transportation service to Gilbert residents and employers.**

**Policy 4.1** Consider the needs of the general public and the special needs of the elderly and individuals with impaired mobility in the planning and operation of transit services.

**Policy 4.2** Provide park-and-ride facilities in several locations for carpooling and commuter bus service.

**Policy 4.3** Provide shaded, safe, well-lit and aesthetically pleasing bus stops for regional and local bus users. Provide trail and bicycle connections to express and

local bus stops. Ensure convenient pedestrian access from bus stops to adjacent commercial and residential projects.

**Policy 4.4** Continue to plan for future linkages to regional commuter and/or light rail transit.

**Policy 4.5** Preserve transit corridors for high speed transit (Bus Rapid Transit and Commuter Rail).

**Policy 4.6** When intersections are improved and/or widened, build bus pullouts for both existing and future transit routes as appropriate.

**Policy 4.7** Encourage large retail developments adjacent to identified transit corridors to designate parking for park-and-ride lots.

#### **Goal 5.0**

##### **Integrate transportation and land use.**

**Policy 5.1** Design projects for multiple choices of transportation.

**Policy 5.2** Continue to provide Valley Metro bus routes through Gilbert. Expand frequency of service and add additional routes as funds and demand dictate.

**Policy 5.3** Develop mixed-use activity centers including support services, shops, employment, residential and entertainment uses as a trip reduction and greenhouse gas reduction strategy.

**Policy 5.4** Include park-and-ride facilities in activity centers to encourage drivers to utilize alternative methods of transportation.

**Policy 5.5** Regional employment centers should be served by multi-modal transportation systems (i.e. streets, trails, bikeways, paths, and transit).

#### **Goal 6.0**

##### **Insure all modes of transportation connect efficiently both within the Town and to similar facilities in adjacent jurisdictions.**

**Policy 6.1** Coordinate with adjacent communities to provide an interconnected system of pedestrian ways, equestrian trails, bikeways, multi-use trails and transit routes across jurisdictional lines.

**Policy 6.2** Coordinate with adjacent communities to provide similar street cross-sections for continuous major and minor arterials.

**Policy 6.3** Provide a north-south bike route within the Heritage District.

**Policy 6.4** Provide multi-use trails accessing the Central Trail System.

**Policy 6.5** Provide on-street bicycle lanes along selected arterial and collector streets as identified by Town Standards.

**Policy 6.6** Encourage all new development to build the segment of the Gilbert Trail System that is adjacent to the development, if no trail exists. Provide public access easements on the trail.

**Policy 6.7** Work with Maricopa County to develop unincorporated arterial street segments within the Town planning area. Use Town and County funds to improve scalloped street segments throughout the Town.

#### **Goal 7.0**

##### **Insure accessibility throughout the circulation system.**

**Policy 7.1** Reduce physical barriers between neighborhoods to encourage accessibility.

**Policy 7.2** Enhance access for people with impaired mobility. Ensure that people with disabilities are provided with equal access to work, home and community destinations by enforcing applicable state and federal accessibility laws.

**Policy 7.3** Promote public and private construction of timely and financially sound infrastructure expansion through the use of infrastructure funding and finance planning coordinated with development activity.

#### **Goal 8.0**

##### **Provide reasonable levels of service on all arterial roads.**

**Policy 8.1** Signalize intersections when traffic volumes and safety warrants are met. Interconnect traffic signals to improve progression and manage traffic flows with computerized traffic management systems.

**Policy 8.2** Plan street facilities with adequate rights-of-way. Require the established minimum rights-of-way and lanes for Town streets, based on their classification.

**Policy 8.3** Design townwide networks to balance the safe and efficient movement of traffic with the need to safely access these networks from the local level and reduce pressure to use regional networks for townwide trips.

**Policy 8.4** Use technology and design practices (such as uniformly spaced traffic signals, coordinated timing sequences, and "intelligent" traffic management systems) to create a safe and efficient flow of traffic on Gilbert's major streets, optimize travel, increase corridor capacity, reduce traffic congestion, more efficiently move people, goods and information throughout the networks.

**Policy 8.5** Emphasize mixed-use relationships in land use decisions that will reduce the distance and frequency of automotive trips and support alternative modes, such as pedestrian paths, equestrian trails, bicycle routes, transit, telecommuting and technology for moving people and information.

**Policy 8.6** Provide for alternative modes of transportation on townwide corridors that are reasonably accessible to all socio-economic and demographic groups within the community.

**Policy 8.7** Encourage an active partnership between Gilbert citizens, government, and businesses in the development and implementation of transportation and technology solutions such as coordinating and encouraging alternative business hours, telecommuting and flexible employee scheduling to help reduce traffic congestion at peak times and the number and distance of automobile-dependent trips.

**Policy 8.8** Use Transportation Demand Management (TDM) techniques such as trip reduction, flexible schedules, participating in a transportation management association, etc. to reduce capacity demands on transportation networks.

**Policy 8.9** Ensure that telecommunications and utility providers efficiently use rights-of-way and locate, install and maintain their facilities in a manner that minimizes traffic disruption and visual impacts.

**Policy 8.10** Use Intelligent Transportation Systems (ITS) technology to help congested corridors by improving vehicle movement, monitor changes in traffic volumes and travel patterns and adjust signal timing accordingly.

## Goal 9.0

### Create a Transportation Master Plan based on total Town build out.

**Policy 9.1** Study ways to make automobile, transit and other multi-modal circulation more efficient and economical while providing a rational pattern of land development.

**Policy 9.2** Review and analyze intelligent transportation alternatives.

**Policy 9.3** Provide designated routes for all modes of transportation including pedestrian, bicycle and equestrian.

**Policy 9.4** Plan for future multi-modal transportation to the Growth Areas within the Town to help reduce trips.

**Policy 9.5** Create a build out of land use mass model.

**Policy 9.6** Prioritize transportation improvements for inclusion in the Town's Capital Improvement Program (CIP).

**Policy 9.7** Include constraints such as time, budget and long term maintenance.

**Policy 9.8** Continue a CIP process that uses a financial analysis to quantify costs in both the short and long term.



*Gilbert Bicyclists*



## CIRCULATION

### 3.4 Implementation Strategies

Circulation Element	Responsible Entity	Complete By
1. Develop a Town wide Transportation Master Plan that identifies deficiencies within the existing network and accommodates future transportation corridors.	Traffic Engineering	Ongoing
2. Require Traffic Impact Analysis of significant new residential, industrial, office and commercial development. Depending on the scale of the project, Traffic Impact Analysis will require different levels of evaluation. These different levels are: 1) Access Analysis: to review curb cut requests and assist with site plan approval, 2) Traffic Impact Study: to analyze impacts to adjacent streets as a result of major projects and to identify mitigation measures; and 3) Transportation Plan: major projects require special analysis and design related to the roadway network traffic flow and mitigation of impacts.	Planning Traffic Engineering	Ongoing
3. Maintain the functional integrity and safety of the arterial system through access control on arterial streets.	Traffic Engineering	Ongoing
4. Maintain the ongoing Transportation System Management (TSM) Short-Range Improvement Program, including the following improvements to enhance safety and traffic operations: <ul style="list-style-type: none"> <li>• Speed limit evaluations</li> <li>• Upgrading of signing</li> </ul>	Traffic Engineering Engineering	Ongoing

<ul style="list-style-type: none"> <li>● Installation of left turn arrows</li> <li>● Installation of turn restrictions</li> <li>● Upgrading of pavement markings</li> <li>● Installation of raised pavement markers</li> <li>● Spot geometric improvements to eliminate hazardous conditions</li> <li>● Installation of safety lighting at major intersections</li> <li>● Closing of selected curb cuts</li> <li>● Maintaining intersection sight triangles</li> <li>● Installation of raised medians</li> <li>● Traffic signal synchronization and integration of signal timing with adjacent communities</li> </ul>		
<p>5. Conduct a Community Transit Needs/ Feasibility Study, considering both the need for improved regional connections to adjacent communities, and the need for intra-community service, possibly in the form of fixed route local bus. It should also evaluate future park-and-ride facility needs. The existing RPTA regional transit plan, which encompasses all of Maricopa County, could be used as a foundation.</p>	<p>Traffic Engineering Town Manager's Office</p>	<p>Ongoing</p>
<p>6. Improve collector streets as required by increasing traffic volumes within the community. The Town shall look at all available public and private funding sources to finance these improvements.</p>	<p>Development Services Public Works</p>	<p>Ongoing</p>
<p>7. Conduct periodic community-wide Traffic Volume Counts as a basis for future planning as new roadways are constructed. Average daily traffic and manual turning movement counts should be conducted periodically at key intersections, particularly at those with high accident rates or rapidly increasing traffic volumes.</p>	<p>Traffic Engineering</p>	<p>Ongoing</p>
<p>8. Continue to eliminate scalloped streets and build these streets to their ultimate section design. Coordinate with Maricopa County Department of Transportation to eliminate scalloped streets</p>	<p>Development Services Public Works</p>	<p>Ongoing</p>



located within County islands. The Town shall look at all available public and private funding sources to finance these improvements.		
9. Implement an identification and mitigation program for high accident locations. The Town Traffic Engineer should regularly review police data on traffic accidents, flag high accident locations, and implement appropriate mitigation where technically and financially feasible.	Traffic Engineering	Ongoing
10. Develop neighborhood traffic control plans to deter visitor through traffic from using local streets as "short cuts" through residential neighborhoods. Appropriate steps vary from neighborhood to neighborhood, but may include improved guide signage, turn regulations, "speed humps"; and, in extreme cases, physically closing off streets or creating cul-de-sacs. It is important that such measures preserve adequate access for legitimate local traffic, especially emergency vehicles.	Traffic Engineering	Ongoing
11. Develop guidelines for Urban Heat Island mitigation by developing criteria for the use of "cool pavement" technology and engineered green spaces when developing new roads and renovating existing roads.	Planning Engineering	Ongoing
12. Develop a Town sponsored pilot project to explore the uses of "cool" technologies in new development/redevelopment. Utilize Arizona State University cool pavement technologies.	Planning	
13. Develop transit policies and design standards for transit facilities including shelter design and location, bus pullouts and major transit centers.	Traffic Town Manager's Office	Ongoing
14. Evaluate all planned road projects for bicycle, pedestrian and transit components.	Planning Traffic Engineering	Ongoing

15. Maintain compliance with Americans with Disabilities Act for pedestrian movement along Town sidewalks, paths, trails and pedestrian crossings within Town right-of-way.	Planning Traffic Engineering	Ongoing
16. Attend Maricopa Association of Governments (MAG) meetings to stay informed on issues relating to: commuter rail, Power Road and MAG standards.	As Scheduled	Ongoing