



The Community Circulation System

Vehicular Circulation	48	Pedestrian-Only Walking Paths	67
General Guidelines	48	Multi-Use Pathways	70
Street Connectivity	51	Sidewalks	74
Street Intersections and Visibility	52	Local Streets and Roadway Shoulder	77
Driveways and Entrances	54	Alleyways as Multi-Use Pathways	77
Traffic Calming	56	Street Intersections, Corners, Crosswalks	78
Alleyways	57	Bicycle Circulation	81
Emergency Access	57	General Guidelines	81
Street Profiles	58	Off-Street or Multi-Use Bicycle Pathways	82
Transit System	64	Bicycle Routes	84
The Regional Level	64	Bicycle Lanes	84
The Community Level	64	Bicycle Parking Facilities	86
Pedestrian Circulation	66	Equestrian Trails	86
General Principles for Design of the Community	66	Golf Carts	89
Pedestrian Ways	67		

THE COMMUNITY CIRCULATION SYSTEM



The safe, efficient and convenient movement of people, goods and services within, around and through the City of Surprise is essential to the City's ability to function on a day-to-day basis. As in most cities, people, goods, services and emergency response vehicles in the City of Surprise move from place to place using a hierarchy of interconnected local, neighborhood, community and regional streets and highways having different widths and configurations to accommodate automobiles and other types of vehicular traffic. **General Plan 2020**, adopted by the citizens of Surprise, sets forth their preference to locate, size, configure and develop a future community circulation system that:



- relates to and reflects proposed future land use and development patterns for the community;
- accommodates anticipated increases in traffic volumes;
- provides for other modes of transportation; and
- encourages greater pedestrian, bicycle and equestrian activity.

For purposes of this Manual, the community circulation system consists of streets, roads, highways, pedestrian ways, bicycle paths and equestrian trails that are developed individually, or in conjunction with one or more of the other modes of transportation. Guidelines in this section of the Manual are intended to provide direction for developing the City's circulation system to accommodate both the automobile, pedestrian, cyclist and equestrian; and to do so in a manner that enhances the City's character and image.

VEHICULAR CIRCULATION - *Guidelines address the function of, and general street improvements required for, the hierarchy of streets that currently exist, or that are proposed for the City of Surprise. Guidelines set forth recommended approaches to general improvements that the City and developers should consider when upgrading existing streets or constructing new ones.*

GENERAL GUIDELINES

- Proposed and existing arterials and highways designated as the City's primary vehicular circulation system should be located, aligned and sized to be compatible with, and connect to, the adjoining regional street and highway grid system in order to permit the efficient and uninterrupted flow of traffic throughout the region.
- Existing and proposed arterial streets designated as major continuous traffic carriers should be spaced at one-mile intervals, and provide consistent interconnectivity with the major arterial grid system of the Metropolitan Area.



- To promote efficiency in the flow of traffic on major arterials, full median breaks for turning movements should occur at not less than one-quarter (1/4) mile intervals; with left-turn-only median openings spaced at not less than one-eighth (1/8) mile intervals.
- In order to maximize carrying capacity of the major arterial street system, one-half (1/2) mile spacing should be maintained between traffic signals; with all signals speed-synchronized to promote the continuous flow of traffic and maintain consistency with a Citywide “Traffic Control System Plan”.
- Proposed and existing arterial streets should be planned and designed to minimize interruptions to traffic flow by limiting the number of vehicular access points through optimum placement of driveways and the consolidation or elimination of curb cuts.
- Collector streets in new residential developments should be designed and located to minimize through vehicular traffic, as well as shortcuts through neighborhoods, by utilizing a modified grid street pattern containing minimum street widths appropriate for the volume of neighborhood traffic.
- Highways and arterial streets designated as primary entryways and throughways for moving traffic in and around the City, should also be developed as major “image/identity” focal points for the City; and contain quality, dense landscaping and special, high-profile signage, lighting and furnishings to provide the motorist with a “sense of arrival” in, and character of, the community.



figure 4.1: Special Design Treatment of Primary Entries to City Provide “Image/Identity” Focal Point and Sense of Arrival



- Proposed and existing streets should be developed to encourage and accommodate a variety of travel modes within the right-of-way by including separated pedestrian ways, bicycle paths and, where appropriate, equestrian trails.

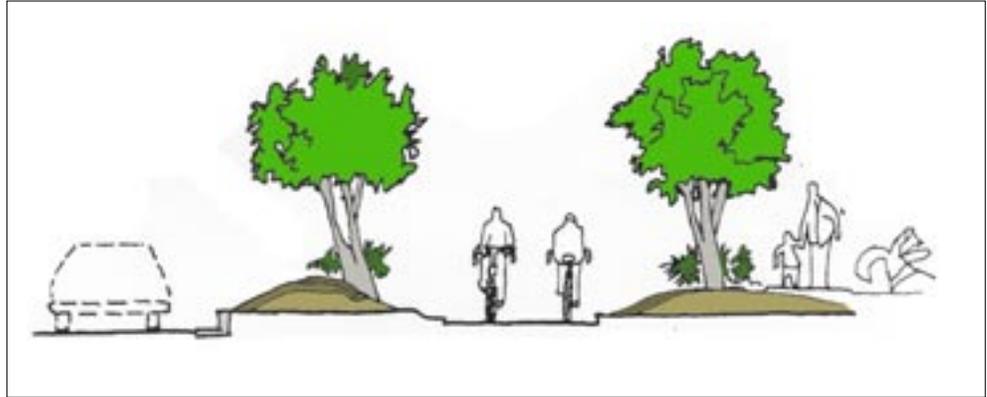


figure 4.2: Multi-Use Curb-Separated, Pathway for Pedestrian and Bicycles



- Existing and proposed arterial streets should contain landscaped medians in order to enhance the character and image of the City; provide a more intimate scale to neighborhoods and minimize heat radiation.
- Proposed and existing arterials should contain low-maintenance, drip-irrigated, heavily landscaped medians that contain tall, canopy-like trees and pines; as well as a significant number of continuous clusters of drought-resistant, plant materials.
- Proposed streets should be located, and their rights-of-way sized, in accordance with the intensity and density of land uses served, and the number of average daily trips generated by the uses.



figure 4.3: Short, Narrow Street Reflects Scale and Character of Neighborhood

- Street classification should be determined by projected traffic volumes, desired operating speeds, projected traffic types, location, and projected construction phasing.

- Streets should not be wider than needed to accommodate demonstrated traffic demand; and they should be designed to reflect the scale and character of development which they serve.

- Narrower pavement widths are encouraged for all local and collector streets in new residential development, provided the narrower pavement width accommodates projected average daily traffic counts generated by the area served, and does so without impeding the flow of vehicular and pedestrian traffic or full access by emergency response vehicles.

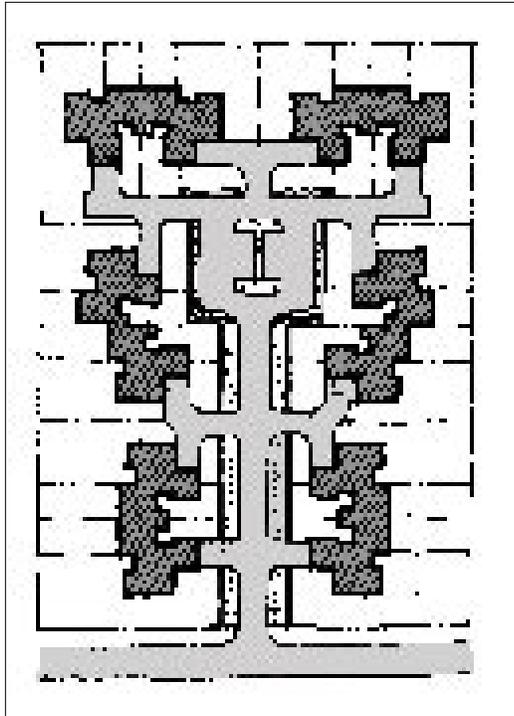


figure 4.4: Attached Homes with Shared Driveways and Narrow Street Provide Character While Meeting Safety Requirements



- All proposed residential and commercial, office and industrial developments are required to provide traffic impact analyses of the development prior to receiving approval; with specific emphasis on the impact of truck traffic on adjacent development and the overall community circulation system of the development.

STREET CONNECTIVITY

- In order to enhance the connectivity of all streets in the community, all new residential development should consider: the use of shorter blocks serving no more than twenty (20) detached residential units; minimizing the use of cul-de-sacs, except where physical constraints of the site dictate their use; constructing stub streets to serve adjacent undeveloped properties; providing street connections to nearby activity centers; and ensuring connections to, or continuation of, existing or approved public streets
- All existing and proposed street alignments and connections should provide direct routes to local destinations such as neighborhood commercial centers, schools, parks and other common destinations in order to: encourage greater use of streets by pedestrians and cyclists; eliminate concentration of traffic on just a few roads; and avoid the use of overly circuitous street layouts and cul-de-sacs, unless physical site constraints require modifications to the connections and alignments.



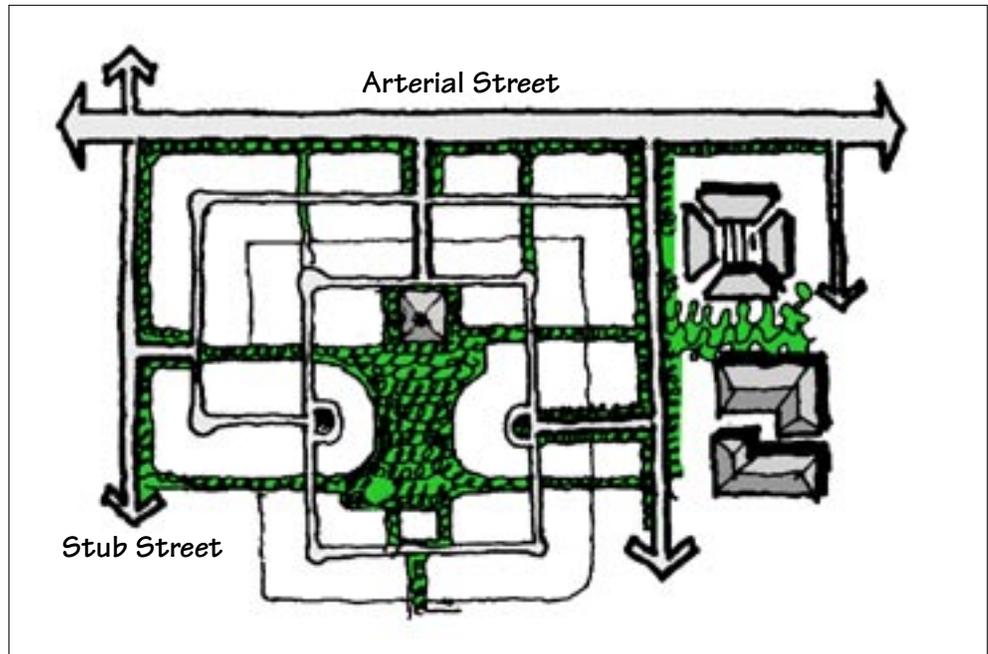


figure 4.5: Street Connectivity Enhanced by Shorter Blocks, Fewer Cul-De-Sacs and Connections to Activity Centers

- All streets and street stubs should be aligned to establish continuous neighborhood connections every one-quarter (1/4) mile, unless natural features of the site or other permanent open space precludes such connections.
- New developments should always provide adequate right-of-way through the development site in order to facilitate adequate street connections to and beyond adjoining development.

STREET INTERSECTIONS AND VISIBILITY

- Where a primary arterial street and a secondary street intersect, the cross-section of the primary arterial road should be held constant through the intersection, and the profile and cross-section of the secondary road adjusted to fit in order to minimize interruptions in traffic flow through the intersection resulting from “dips” in the roadway.
- Where two primary arterial streets intersect, the cross-section of the primary arterial having the highest Average Daily Traffic count should have its cross-section extend through the intersection.
- Curb radii at arterial street intersections that are heavily used by pedestrian and cyclists, should not exceed twenty-five (25) feet in order to moderate the speed of turning traffic; accommodate the turning movement of larger and longer vehicles without jeopardizing the carrying and stacking capacity of the intersection; and reduce the crossing distance for pedestrians and cyclists.



- For residential street intersections, curb radii should be reduced to between ten (10) and fifteen (15) feet to reduce the speed of turning traffic.

- Where practical and warranted, the use of “curb bulbs” at street intersections should be utilized to reduce street width and pedestrian crossing distances; as well as provide the motorist with a better view of pedestrian and cyclists at the intersection.

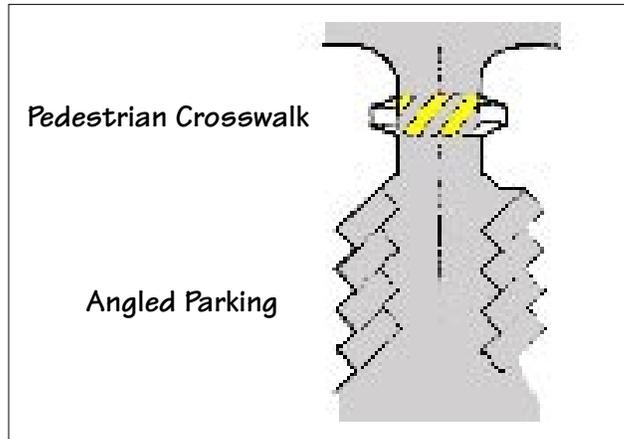


figure 4.6: Curb Bulbs Effectively Enhance Pedestrian Street Crossings

- All streets should intersect at right angles with one another.

- All existing and proposed non-signalized street intersections should be planned and designed to have a visually unobstructed view of the intersection, with sight distance to the intersection determined by a sliding scale based upon such factors as street classification, width of intersection and allowable speed.

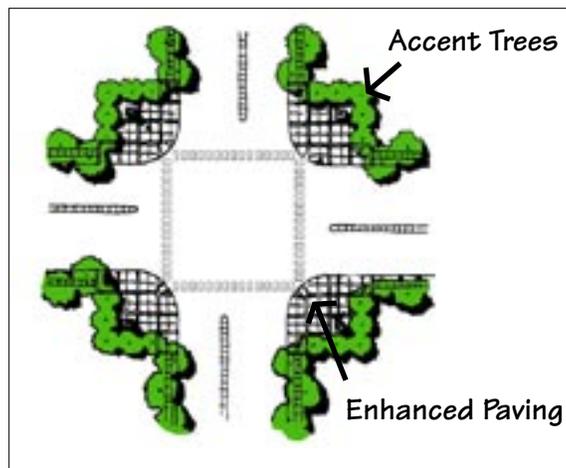


figure 4.7: Intersection Vision Corners



- Fences, walls, buildings, berms, signage, landscape materials or other man-made or natural objects should be limited in height as measured from the street gutter elevation at all intersections; and extending back from the intersection for a distance determined by the appropriate sight visibility triangle for the intersection.
- Trees limbs at street intersections must remain a sufficient distance above the surface of the road so as not to impair visibility of the intersection.

DRIVEWAYS AND ENTRANCES

- The location and number of driveway and entryway curb-cuts serving non-residential uses adjacent to a major arterial, should be minimized; and every effort should be made by the developer to provide alternate means of access to and from the site utilizing side streets around the development in order not to disrupt or impede the flow of traffic on adjacent arterials.
- All large commercial or mixed-use developments adjacent to major arterials should provide a unified traffic circulation and access plan for the overall development, including delineation of connection of their development with the community.



- Commercial center developments that include separately leased or owned lots or outparcels fronting on the major arterial should be treated as a single unit, and access to the outparcels should be incorporated into the access and circulation system of the principal commercial center rather than from separate driveways and entrances located along the adjoining major arterial.
- Driveways and entrances should be located away from street intersections, and deceleration turning lanes provided in order to reduce the number of traffic conflicts, and provide more time for vehicular turning and merging movements.

figure 4.8: Well-Spaced Ingress/Egress Reduces Traffic Conflicts

- Left-turn vehicular movements from a commercial center's non-signalized entryway into a major arterial should not be permitted in order to eliminate the potential for critical traffic conflict or the impediment of the traffic flow.

- Planned commercial developments under separate ownerships, and which are adjacent to one another, should provide for consolidated driveways, internally connected parking lots and cross circulation patterns to allow vehicles to circulate between businesses without having to re-enter the major arterial.

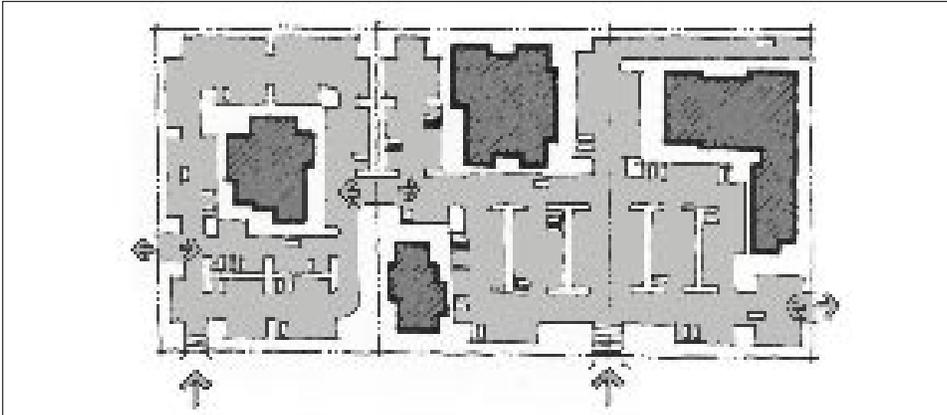


figure 4.9: Access and Circulation Maximized by Reciprocal Driveways, Cross-Circulation Pattern and Connected Parking Lots

- New residential development should be designed so that lots adjacent to a major arterial or neighborhood collector have their driveway access from an internal street.

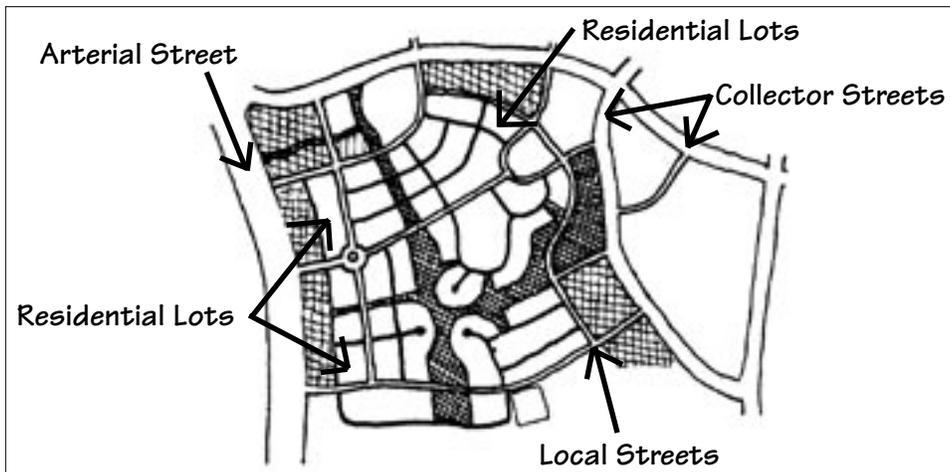


figure 4.10: Local Streets to Provide Driveway Access to Lots

- Minimum lot frontages should be larger for lots located on major arterials, than those lots fronting local streets, in order to increase the distance between driveways, as well as reduce the number of access points along the arterial street.
- Major identification and image entryways to new non-residential or gated residential developments should be designed so that the entry aligns with adjacent streets, and the length of the entryway provides sufficient entry depth to prevent vehicles from stacking into the flow of traffic on abutting streets.



TRAFFIC CALMING

- New residential development should contain street widths that are narrow enough to slow traffic, while accommodating demonstrated traffic demand and providing for emergency vehicular access.
- “T” intersections should be used in new residential developments to discourage through neighborhood traffic; and they should be strategically placed and carefully sited to avoid the creation of a “maze-like” street pattern, and provide potential prominent vistas to parks, and surrounding mountains.
- The periodic and strategic placement of round-a-bouts and narrow, landscaped medians within the pavement width of residential local and collector residential streets should be encouraged throughout the City.

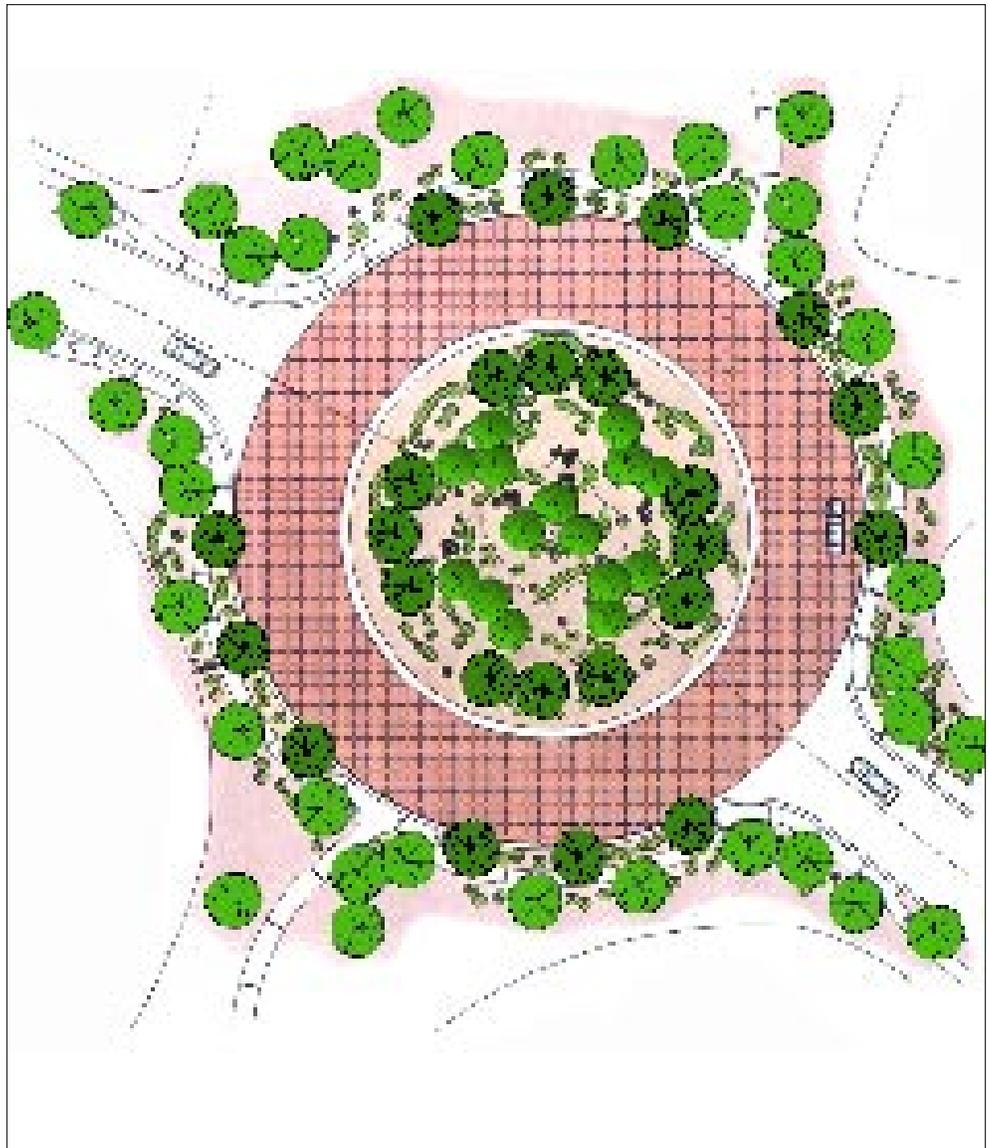


figure 4.11: Residential Collector with Round-a-bout

ALLEYWAYS

- In an effort to reduce street pavement widths and eliminate driveway curb cuts in new residential development, the use of alleyways with rear garage configurations and entry access points should be considered as an alternative means of access to a residential lot.

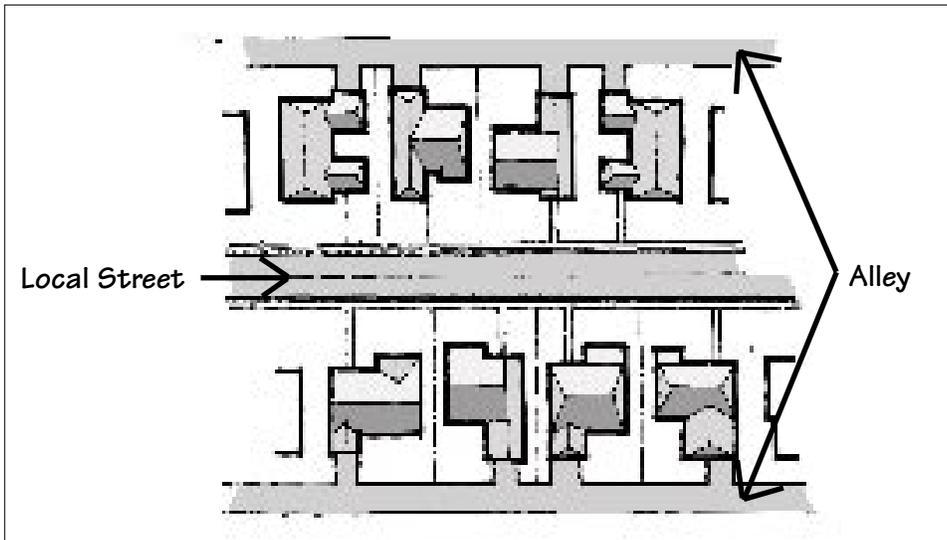


figure 4.12: Local Residential Street with Alley Loaded Drives

- New development containing alleyways should consider planning and designing the alleyways as a secure pedestrian way that links to the neighborhood pedestrian and open space system.



EMERGENCY ACCESS

- The community circulation system should be planned and designed utilizing an interconnected street system to permit ease of access for emergency response vehicles.
- All development must provide emergency access for fire apparatus on paved roads and driveways that are designed to support heavy loads.
- All multi-family residential and non-residential development on property greater than one acre should have a minimum of two (2) access points for emergency response vehicles.
- Within the hierarchy of existing and proposed two-way City streets, a minimum unobstructed pavement width of eighteen (18) feet, with a minimum vertical clearance of thirteen (13) feet should be provided for fire apparatus access.
- The unobstructed pavement width for fire apparatus should be reduced to a minimum of ten (10) feet in developments where a split one-way pair of streets exists.

STREET PROFILES

- In order to encourage variety in the planning and design of new large-scale residential development, and to provide for community character enhancement of the interconnected street and community open space system, the following types of streets should be developed.

Streets - The following street profiles should be encouraged for all new development.

– **Local Street, Example 1 (facing page)**

- ♦ minimum right-of-way width of forty-feet (40');
- ♦ paved street width of twenty three-feet (23'), measured from back-of-curb to back-of-curb;
- ♦ ribbon or rolled curb and gutter;
- ♦ no on-street parking, except in parking bays; and,
- ♦ no sidewalk.

– **Local Street, Example 2 (facing page)**

- ♦ minimum right-of-way width of fifty-feet (50');
- ♦ paved street width of thirty-feet (30'), measured from back-of-curb to back-of-curb;
- ♦ rolled curb and gutter;
- ♦ on-street parking on both sides;
- ♦ minimum five-foot (5') planting strip; and
- ♦ five-foot (5') curb-separated sidewalk on both sides of the street.

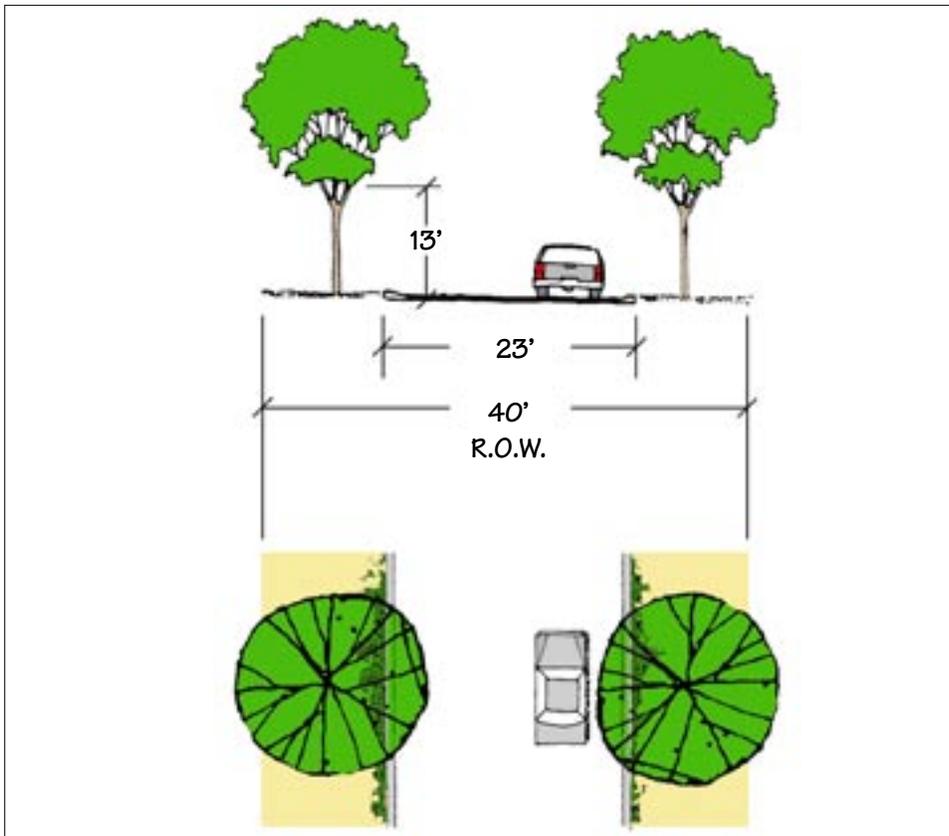


figure 4.11: Local Street, Example 1 - No Parking. Paving Dimensions from B.O.C..

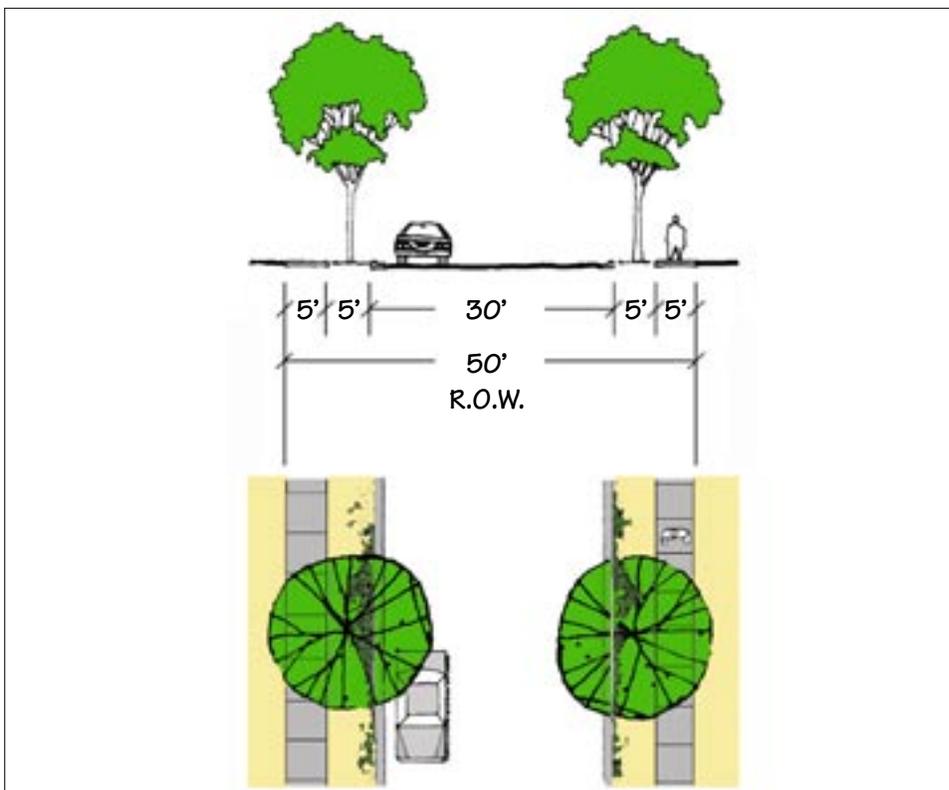


figure 4.12: Local Street, Example 2. Paving Dimensions from B.O.C..

Residential Collector Streets - The following street profiles should be utilized when developing residential collector streets

– **Residential Collector Street, Example 1 (facing page)**

- ◆ minimum right-of-way of sixty-feet (60');
- ◆ no median;
- ◆ no parking; and
- ◆ thirty two-foot (32') paved surface for vehicles and bicycle lanes, measured from back-of-curb to back-of-curb; and
- ◆ curb separated sidewalks.

– **Residential Collector Street, Example 2 (facing page)**

- ◆ minimum right-of-way of seventy-feet (70');
- ◆ fourteen-foot (14') wide illuminated and heavily landscaped median with median breaks no closer than every one thousand feet (1000');
- ◆ two (2) sixteen-foot (16') wide paved surfaces for vehicles and striped bicycle lanes, measured from back-of-curb to back-of-curb;
- ◆ no parking; and
- ◆ two (2) twelve-foot (12') wide curb-separated pedestrian/landscaped areas located on both sides of the street.

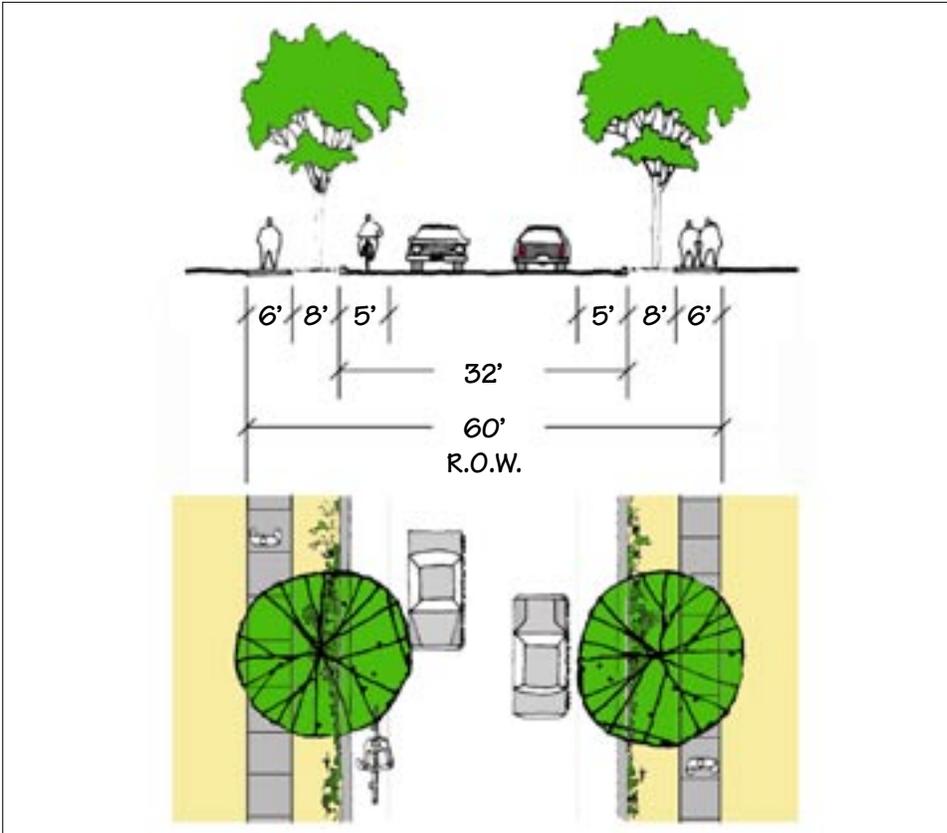


figure 4.13: Res. Collector Street, Example 1 - No Median. Paving Dim. from B.O.C.

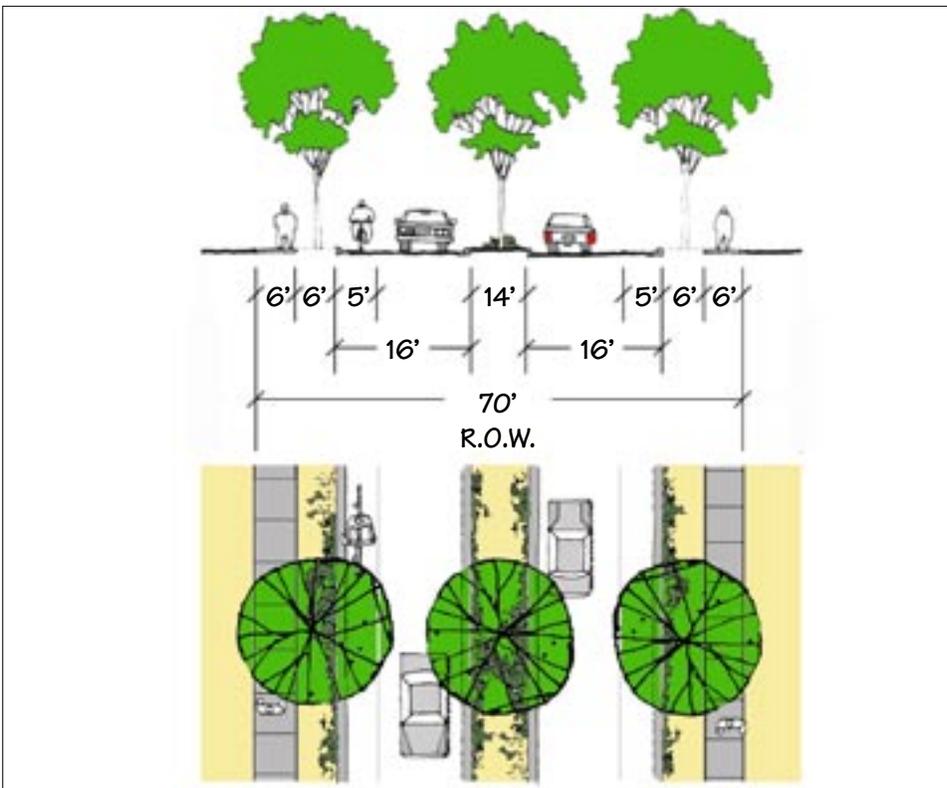


figure 4.15: Res. Collector Street with Median. Paving Dimensions from B.O.C.

Arterial Streets - Arterials reflect the primary image and character of the City, and should be developed and improved as major interconnected landscaped open space corridors. The utilization of the following three arterial street profiles is encouraged for new and existing arterial streets.

– **Minor Arterial Street (facing page)**

- ◆ serves primarily intracity residential and commercial neighborhoods;
- ◆ four-lane divided thoroughfare;
- ◆ a minimum right-of-way width of one hundred and ten-feet (110');
- ◆ a sixteen-foot (16') wide heavily landscaped median with decorative street lighting and a left-turn lane in the median;
- ◆ thirty-two-foot (32') wide, back-of-curb to back-of-curb, paved surfaces for vehicles and bicycle lanes placed on both sides of the median;
- ◆ no parking;
- ◆ a multi-purpose landscape corridor on both sides of the street, each of which should include a pedestrian way, and planting area; and
- ◆ a 6-foot (6') wide bike path

– **Major Arterial Street (facing page)**

- ◆ six-lane divided thoroughfare to serve large volumes of traffic and as the principal means of traveling through the City;
- ◆ minimum right-of-way of one hundred and thirty five-feet (135');
- ◆ twenty-four-foot (24') heavily landscaped median with decorative lighting and left-turn lanes in the median;
- ◆ three (3), twelve-foot (12') vehicular lanes, measured from back-of-curb to back-of-curb, placed on both sides of the median;
- ◆ multi-purpose landscaped corridor on both sides of the street, each of which should contain a pedestrian way, bicycle path and planting area.

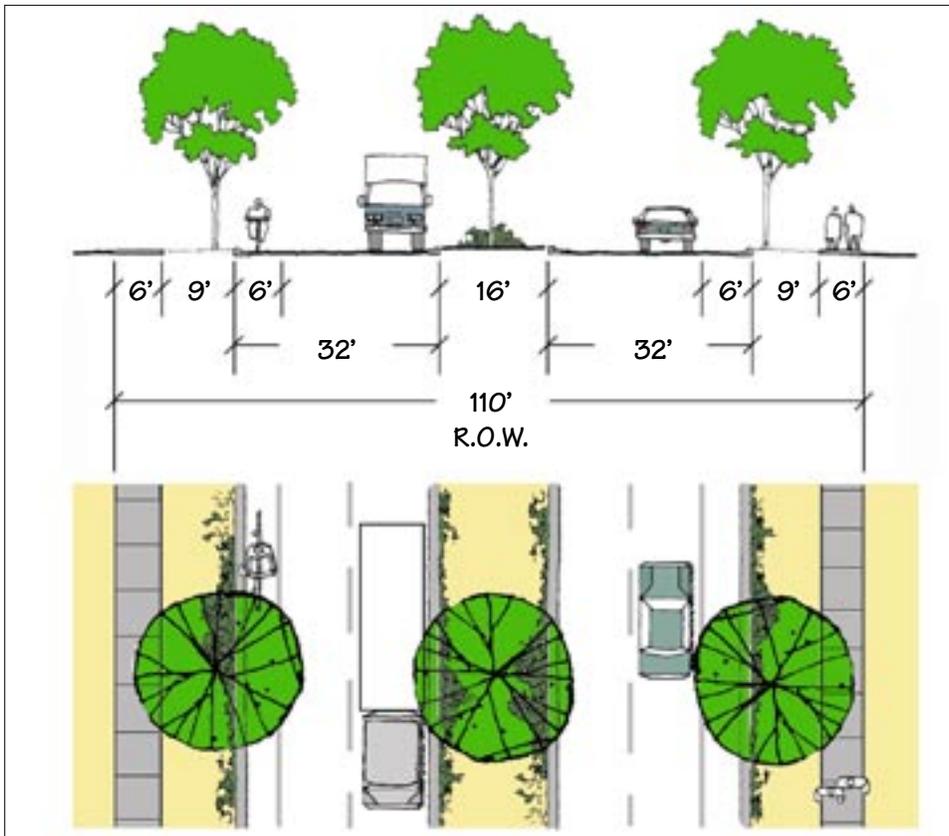


figure 4.17: Minor Arterial - No Parking. Paving Dimensions from B.O.C.

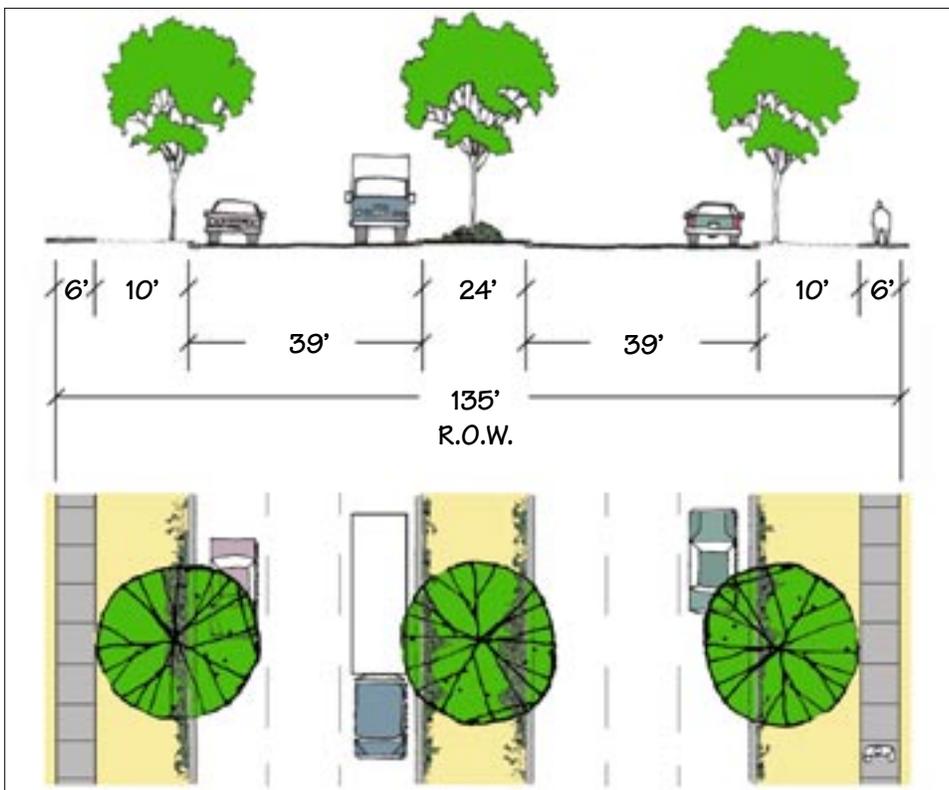


figure 4.18: Major Arterial Street. Paving Dimensions from B.O.C.

- Existing City streets should, where appropriate, be improved to coincide with the character/ image profiles provided herein.
- Sun Valley Parkway, beginning at McMicken Dam, and extending westward to the Surprise City Limits should be designated a “Scenic Corridor” having a right-of-way of one hundred and fifty feet (150) on both sides of the roadway.

TRANSIT SYSTEM – *Guidelines set forth approaches for integrating a future public transit system with higher density commercial and mixed-use development corridors, significant employment centers, major activity centers and the overall community pedestrian and bicycle circulation system.*



THE REGIONAL LEVEL

- The City of Surprise is committed to becoming a leader and full participant in developing a regional public transportation system to serve the West Valley as well as the City of Surprise.
- Every effort will be made by the City to implement, as soon as practical, a public transit bus feeder system linking the City directly to any and all regional bus and light-rail transit systems in order to facilitate travel throughout the region by residents and non-residents of the City; provide regional access to major league spring training facilities and provide an economic development stimulus to attract new employment opportunities to the community.



THE COMMUNITY LEVEL

- Access to any regional bus and/or light-rail transit systems proposed to serve the City should initially be provided by both Grand Avenue and Bell Road as the major Gateway entries to the City.
- The transit circulation system serving the City of Surprise should consider utilizing a modified grid road system focused on a transit center located at either the southeast or southwest corner of Grand Avenue and Bell Road; with designation of Bell, Greenway, Thunderbird and Cactus Roads as East/West transit routes, and Grand Avenue and Dysart, Litchfield, Bullard, and Reems Roads and Cotton Lane as North/South transit routes.
- Major transit lines should be located along major arterials to serve the highest density of development and the greatest concentration of persons.



- Where appropriate, new higher density office, commercial and mixed-use developments located adjacent to major arterials and transit stops designated to provide express service to the regional transit network, should set aside portions of their parking areas as joint use “Park and Ride” facilities.
- Proposed new Gateway Centers, large scale mixed-use developments, major centers of employment and governmental offices should plan and design their pedestrian and bicycle ways and open space system to link directly with public transit stops.

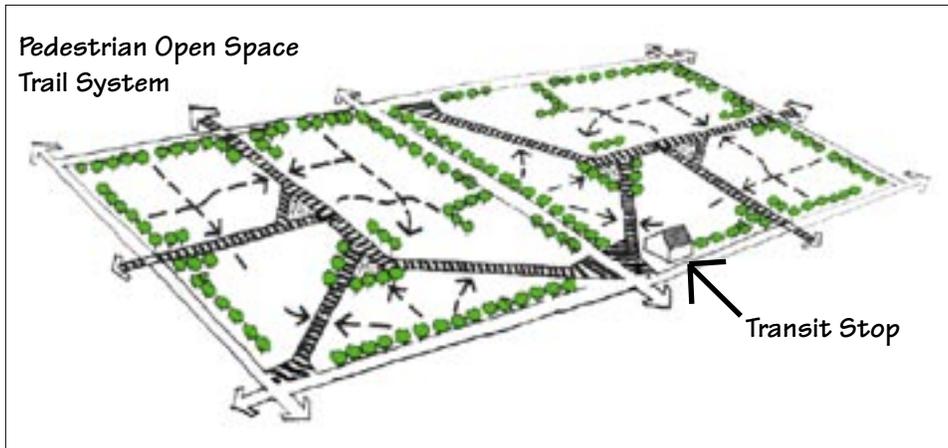


figure 4.19: Transit Stop Linked to Community Pedestrian System

- All new major residential and non-residential development adjacent to proposed and existing public transit lines should provide bus pullout and “Park and Ride” areas that are delineated by changes in street and sidewalk paving patterns; have lighted, landscaped shelter areas; and adjoin the development’s open space and pedestrian and bicycle circulation system.
- All public transit should be readily available to persons with disability.
- Every consideration should be given to utilizing right-of-way within the center of Grand Avenue, or along current rail lines, for placement of a light-rail line to provide a travel link to the region.
- All improvements related to the location and development of a public transit system, including bus shelters, paving patterns, street furnishings, lighting and landscaping should be consistent with the quality of other public improvements within the City; as reflected in the proposed overall character and image of the City set forth in General Plan 2020, and the guidelines included in this manual.

PEDESTRIAN CIRCULATION - *Guidelines address location, character, safety, and development of pedestrian ways as alternative modes of transportation, and as a significant component of the community circulation and open system.*



GENERAL GUIDELINES FOR DESIGN OF THE COMMUNITY PEDESTRIAN SYSTEM

- The existing and proposed pedestrian environment of the City of Surprise should be safe; with its sidewalks, pathways, street crossings and intersections designed and built to:
 - provide clear sight distances and visibility along the pedestrian ways;
 - have adequate lighting;
 - be free of hazards;
 - and minimize conflicts with such external factors as vehicular traffic, noise and protruding architectural, mechanical and utility elements.
- The City’s pedestrian circulation system should:
 - be easy to use and provide high access to adjacent uses;
 - minimize circuitous routes to destinations;
 - ensure the mobility of all users by accommodating all people, regardless of age or ability;
 - and comply with design standards set forth by the Americans with Disabilities Act (ADA).



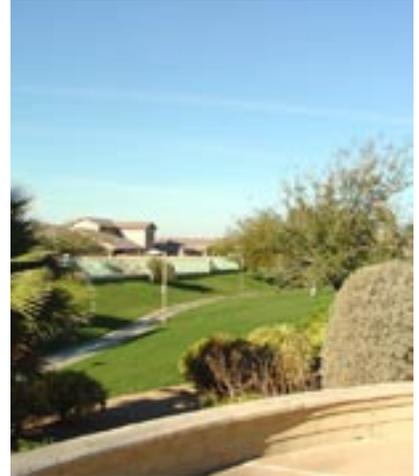
figure 4.20: Pedestrian System Provides Access to Adjacent Uses

- The pedestrian network in all new development should be designed and located to provide continuous direct routes and convenient connections to adjacent developments and the overall community pedestrian and open space system; as well as to places people want to go -- including homes, schools, shopping areas, public services, recreational opportunities and transit.

- Pedestrian ways located within new residential and non-residential developments, and which adjoin the community pedestrian system should be designed to:
 - provide a convenient and attractive walking environment;
 - enhance the look, quality and feel of the overall community open space and
 - pedestrian system; and
 - include such features and amenities as plazas, courtyards, terraces, arcades, arbors, street furniture, fountains, artwork, shaded, planted sitting areas and variety in paving patterns and materials.

- Pedestrian improvements should be economical, and designed to achieve maximum benefit for the cost, including initial costs and maintenance costs.

- The pedestrian environment should be used for a variety of uses and activities, including informational kiosks and outdoor dining; provided such uses and activities do not interfere with the safety of and accessibility by pedestrians.



PEDESTRIAN WAYS

For purposes of this Manual, “pedestrian way” is defined as a continuous, unobstructed hard surface that is separated from vehicular traffic and provides direct pedestrian access and connections to schools, parks, recreation, neighborhood commercial areas and adjoining neighborhood developments and buildings. All new development should contain pedestrian ways that consist of both walking paths and sidewalks that are located and designed in a manner to connect directly to existing and proposed adjacent development; and that are an integral part of the development’s total on-site circulation system.

Pedestrian-Only Walking Paths

Due to the multiple use of pedestrian paths by cyclists, skateboarders, in-line skaters joggers and wheelchair users; pedestrian-only walking paths are rare in most communities. However, in parts of the City, or in special developments where a serene, quiet, contemplative or scenic environment may warrant a walking path limited only to pedestrian use, this Manual provides guidelines for developing pedestrian-only walking paths.





- Pedestrian-only walking paths within the urbanized area of the City should be located to provide quiet, pastoral and scenic areas to walk that are away from vehicular traffic and other noise sources.
- Pedestrian-only walking paths should always be:
 - located where the path and user can be seen at a distance from surrounding, nearby uses to increase pedestrian safety;
 - designed to assure a minimum, clear, sight distance, down and along both sides of the path, of at least three hundred (300') feet, and to avoid such problems as poor drainage, blind corners and steep slopes.

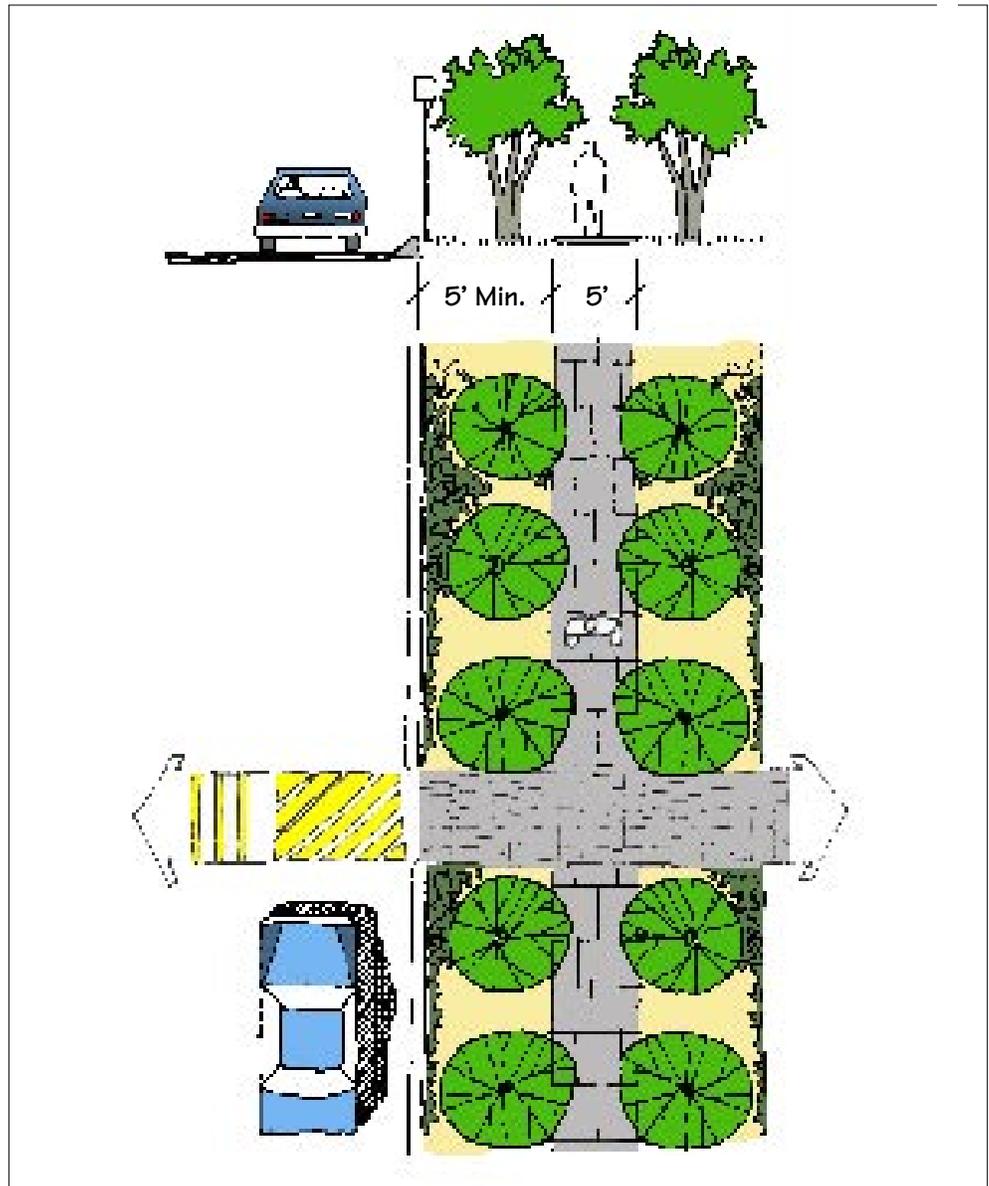


figure 4.21: Pedestrian-Only Walking Path

- The minimum paved width for a pedestrian-only walking path should be not less than five (5) feet, with a grade not to exceed five (5) percent; and constructed with a non-slip, walking surface consisting of one or more materials, including concrete, asphalt, or other low-maintenance, hard surface, permanent material.
- Landscaping of pedestrian-only walking paths should include continuous clusters of low-maintenance, drought-resistant, plant materials that:
 - fit the character of the surrounding area and are adapted to the local climate;
 - require minimum maintenance and can survive without extensive irrigation; and
 - have growth patterns that are low in height with leaf structures and root systems that do not extend into the walkway.
- Trees should be located along the path and clustered to form shade canopies adjacent to seating and rest areas.
- Where possible, seating areas should be integrated into the landscape in the form of retaining walls, planter walls and other such landscape architectural treatments; with the use of freestanding benches discouraged.



figure 4.22: Provide Seating Areas along Paths

- Pedestrian-only paths should be lighted adequately for pedestrian safety and contain free-standing, light fixtures that are compatible with the character of the area, and spaced appropriately to provide an even, non-glare light level along the course of the walking path.
- Where appropriate, drinking fountains should be strategically provided along and walking paths, preferably at seating and rest areas along the path.



- Signage along walking-only pedestrian paths should not be permitted, except for small scale directional signs or signs that provide a local walking map to enable pedestrians to find their way to points of interest along the path.

Multi-Use Pathways

Multi-use pathways are the primary alternative means for providing transportation and mobility. For purposes of this Manual, multi-use pathways are defined as limited access paved areas that are separated from vehicular traffic and developed as part of the total community circulation and open space system. They are located in and around residential neighborhoods and commercial areas, within the right-of-way of major arterials, and in public and private easements and floodways to provide both pedestrians, cyclists and other users alternate means of moving throughout the community. Many of the guidelines set forth for pedestrian-only walking paths related to clear sight distances, connectivity, lighting, placement of landscaping and seating/rest areas, also apply to the multi-use pathway.



- Multi-use pathways should be located and designed to assure complete and continuous separation from vehicular traffic; with a minimum separation from the back of the street curb of five (5) feet where the path is adjacent and parallel to the roadway.

- Multi-use pathways should be located to facilitate shorter trip lengths than those that can be provided by the street network, especially in those areas of a development where the street system is discontinuous, or the blocks are large; and they should provide connections to the community pedestrian circulation system from dead-end streets or cul-de-sacs and serve as short-cuts through open spaces.



- Multi-use pathways should be located and oriented to provide views of surrounding mountains; and offer an aesthetic experience that attracts pedestrians, cyclists and other users.

- All new residential and non-residential development should provide multi-use pathways that connect to the greater community pedestrian system; while at the same time facilitating access to shopping and entertainment areas, schools, neighborhood, community and regional parks and open space areas and other key community destinations.

- Multi-use paths should be located on both sides of a major arterial street where bicycling within the paved area of the street is not permitted. The multi-use path should be designed to accommodate two-way pedestrian and bicycle movements; with either a single or split pathway having a minimum hard-surface width of five (5) feet for pedestrians and five (5) feet for bicycles and skaters; with the optimum width based upon the intensity of use.

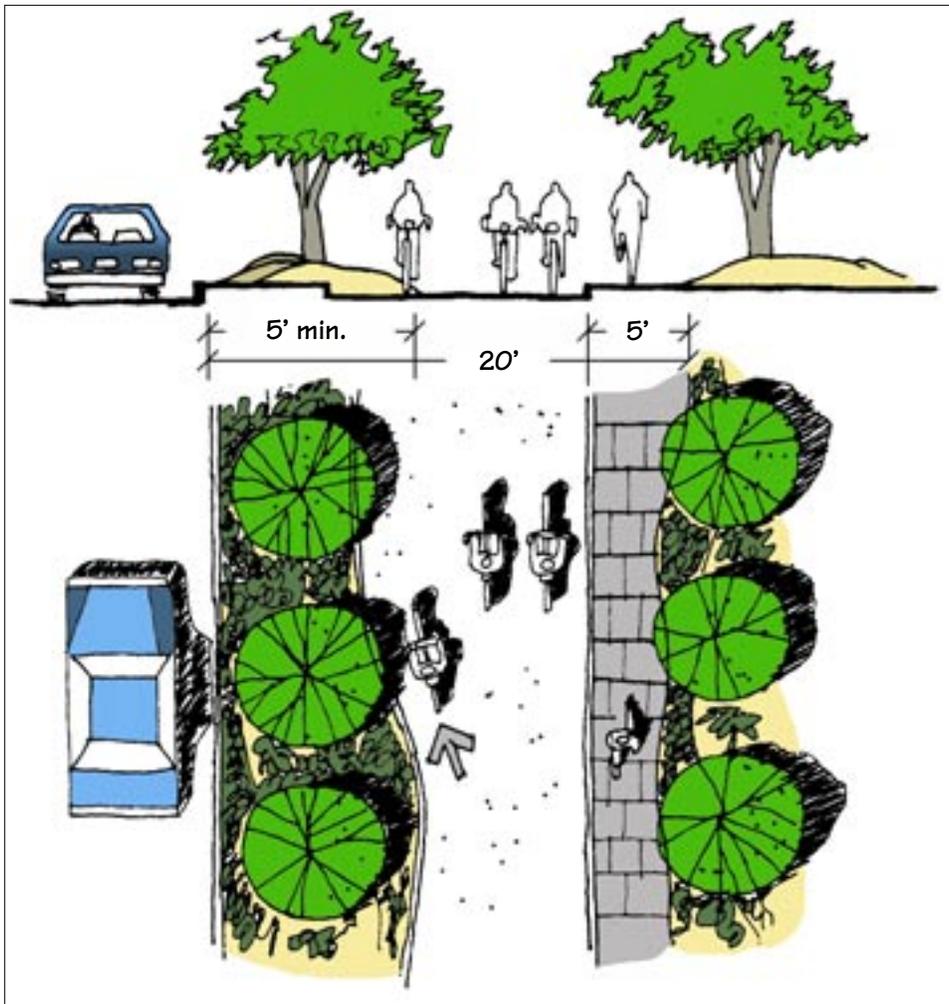


figure 4.23: Multi-Use Pathway



- Where pathway corridors are also used by joggers and equestrians, the minimum width of the total pathway right-of-way, including a minimum landscaped area of five (5) feet should be twenty (20) feet, with the additional five (5) foot portion devoted to joggers and equestrians constructed of a softer-surface treatment consisting of finely ground gravel or other compatible dense, yet soft material.
- A lateral clearance of three (3) feet on both sides of the multi-use path should be provided as a clear distance for safe operation by cyclists; while a minimum overhead clearance along the path should be ten (10) feet.
- A maximum grade of five (5) percent should be maintained for bicycle use, as well as meet the ADA grade requirement to accommodate wheelchair users. The standard cross-slope grade should not exceed two (2) percent.





- Where multi-use pathways cross major arterial streets, the pathway should be well-designed to: minimize modal conflicts; provide clearly marked and separated pedestrian and bicycle paths; provide good sight distance so motor vehicle drivers can clearly see approaching path users; and include such safety measures as bicycle and pedestrian activated signals, median refuges and warning signs for both motor vehicles and pathway users.

- Multi-use pathways that intersect major arterials and highways adjacent to proposed “Gateway Centers”, should be grade-separated and constructed either as an under- or over-crossing of the major arterial.

- The use of under-crossings for multi-use paths should be designed to provide users approaching the under-crossing a clear, well-lighted view through to the other end of the structure to provide increased security for the user.



- Under-crossings for multi-use pathways should be designed to provide a minimum width of fourteen (14) feet, and a minimum overhead clearance of ten (10) feet.

- Over-crossings for multi-use pathways should allow sufficiently long approach ramps to achieve a minimum seventeen (17) foot clearance over the roadway, while maintaining a grade not to exceed five (5) percent.

- Where pathways intersect and cross streets, entries to the pathway should be designed to prevent motor vehicle access by: dividing the walkway into two (2) narrower one-way paths just prior to reaching the roadway; providing short curb radii of five (5) feet; and installing barrier posts (“Bollards”) that are spaced widely enough to permit cyclists and wheelchair users easy passage.

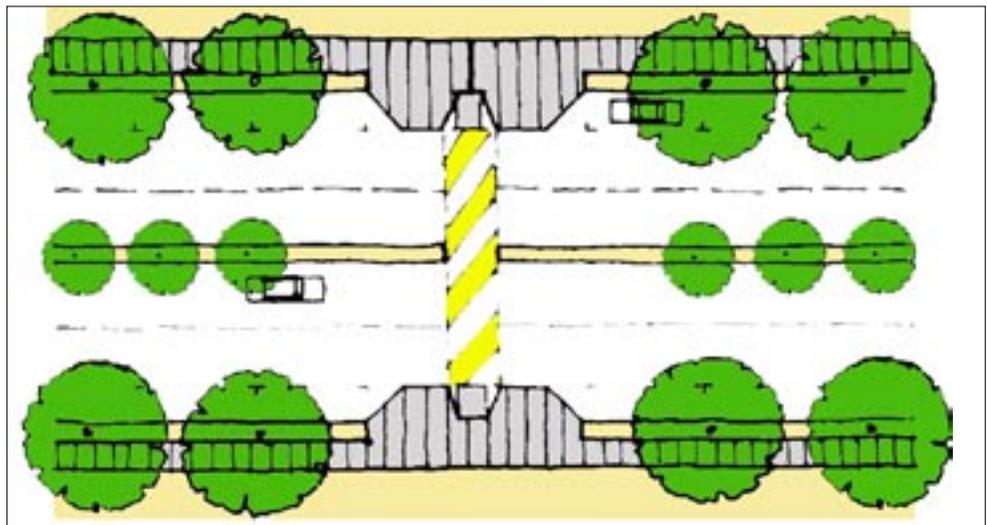


figure 4.26: Special Markings Should be Required Where Pathways Intersect Streets

- Multi-use pathways, especially in secluded areas, should be located and designed to maximize security of users by providing adequate lighting and clear sight distances along the pathway.
- Where the multi-use pathway serves both the pedestrian, cyclist, or other user it should be designed to provide frequent and convenient access to the local road network in order to avoid out-of-the-way travel to enter or exit the road system.
- Landscaping of multi-use pathways should enhance the use of the pathway for pedestrians and other users by utilizing berms, providing a variety of plant material and significant tree clusters to provide shade at seating and rest areas.
- Pathways should be adequately lighted with freestanding, light fixtures that are in keeping with the design quality and character of the area; and appropriately spaced to provide an even, non-glare light level along the course of the pathway.
- Signage along the pathway should be an integral part of the total landscape design of the pathway, with emphasis on directional guides for the user.



figure 4.27: Graphic Signage Reflects Community Image

- Furnishing of pathways should include strategically placed seating areas that are integrated into the landscape, with the use of freestanding benches discouraged.

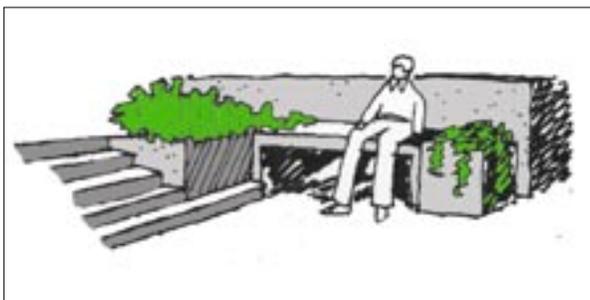


figure 4.27:





Sidewalks

For purposes of this Manual, sidewalks are defined as pedestrian-only paved surfaces located along the sides of streets between the street curb and the property line, and provide direct access to adjoining uses.

- General qualities of new sidewalk construction desired by The City of Surprise include:
 - Sidewalks that are easily accessible to all users, regardless of their level of ability;
 - Safe sidewalks where pedestrians have a sense of safety and predictability and are not threatened by adjacent traffic;
 - Well-landscaped sidewalk environments where plantings and trees create desirable microclimates and contribute to the psychological and visual comfort of the sidewalk user;
 - Widths of sidewalks that are sized according to volume of usage and types of land uses served, and which permit two pedestrians to pass a third pedestrian without having to leave the sidewalk;
 - Sidewalk routes that are continuous and do not require the pedestrian to deviate unnecessarily from the travel path;
 - Social places with sidewalk areas large enough where people can stand, visit, sit and interact;
 - Sidewalk design treatment that is consistent with the character of the neighborhoods and business areas served; and
 - Connectivity to adjoining uses and development and, ultimately, to the overall community pedestrian and open space system.



figure 4.30: Curb Separated Sidewalks Provide a Sense of Safety

- Proposed residential and non-residential sidewalk development, as well as improvements to existing sidewalks, should comply with minimum ADA standards related to access, width, grade, cross-slope and surface treatment.
- Proposed sidewalk improvements in residential and non-residential developments should have a minimum hard-surface width of five-feet (5'); and should be curb-separated from the edge of the roadway by a minimum landscaped area of five-feet (5').
- Requiring the construction of sidewalks along local residential streets should be based upon: the average lot size and number of residential units served by the street; whether or not the street provides direct access to a major arterial; and the designated speed limit on the local street; with no sidewalk required on either side of the street when the average lot size is one-half (1/2) acre or greater.
- Along local residential streets where the average lot size is less than one-half acre, sidewalks should be required on both sides of the street.
- In residential neighborhoods, a minimum five-foot (5') curb-separated sidewalk should be provided within the right-of-way along both sides of a residential collector street..
- Sidewalks should remain level when crossing a driveway, and always placed at the top of the sloped portion of the driveway apron in order to avoid repeated “dips” in the sidewalk.
- Sidewalk surfaces should be firm and stable, resistant to slipping, and permit ease of passage by people using canes, wheelchairs or other devices that assist mobility.
- The grade of sidewalks should always run with that of the parallel street, but should not exceed a grade of five (5) percent, or a cross slope greater than two (2) percent.
- Sidewalks should be free of obstacles to pedestrians, including architectural protrusions, trash bins, fire hydrants, utility equipment and cabinets, signal poles, sign posts, mail drops, outdoor telephone kiosks, trees, and street furnishings; as well as excessive overhang from automobiles parked either diagonally or perpendicularly to the sidewalk.
- Trees planted within the paved area of a sidewalk or pedestrian plaza in commercial and/or office areas having high pedestrian-use, should have tree grates that are flush with the level of the surrounding sidewalk surface, and should be located so as not to impede through pedestrian movement.





- In commercial areas, sidewalks adjacent to the building front should be sufficiently wide to accommodate both through, unimpeded, pedestrian traffic and potential multi-use activities such as outdoor seating and display areas.



figure 4.31: Integrate Sidewalks with Adjoining Plazas to Encourage a Variety of Activities



- Sidewalks within and around the perimeter of commercial shopping or office areas should have widths that are sized to reflect the intensity of pedestrian use, but should always maintain a minimum width of five (5) feet; and be located to provide pedestrian connections to all uses on the site; as well as to adjoining developments, the community open space system and to transit stops serving the commercial area.
- In multi-use commercial areas with eating establishments, outdoor sidewalk dining is encouraged, provided the seating area complies with all health department standards and does not impede through pedestrian movement along the sidewalk.

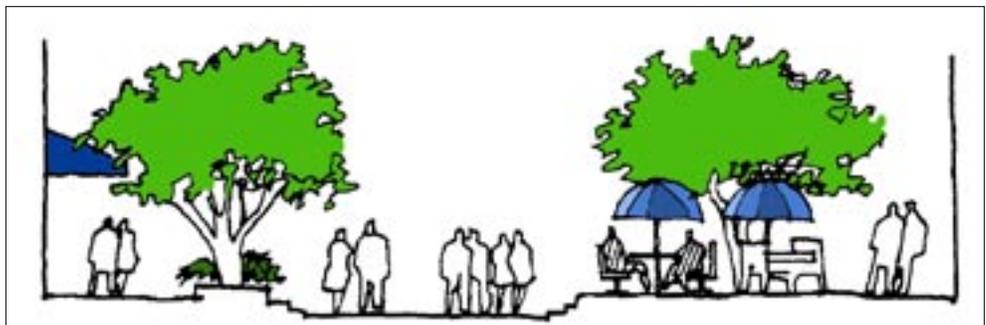


figure 4.32: Outdoor Dining Along Unimpeded Pedestrian Ways

Local Streets and Roadway Shoulders

- Local residential streets in new development that have narrow, paved streets with no sidewalks and a speed limit that does not exceed twenty-five (25) miles per hour, should be used as a pedestrian way to connect to adjoining neighborhood sidewalks and multi-use paths.
- The shoulders of heavily traveled rural roads should be paved and sufficiently wide to permit their use as a multi-use path when no other pedestrian-way alternative exists.

Alleyways As Multi-Use Pathways

- New residential developments are encouraged to incorporate well-landscaped and architecturally-lighted, paved multi-use alleyways into the design and layout of neighborhoods to:
 - provide access for those properties with garages located at the rear of a property;
 - serve as a multi-use pathway linking adjoining neighborhoods and the community open space system; and
 - provide additional alternative modes of travel along the community pedestrian and open space system.

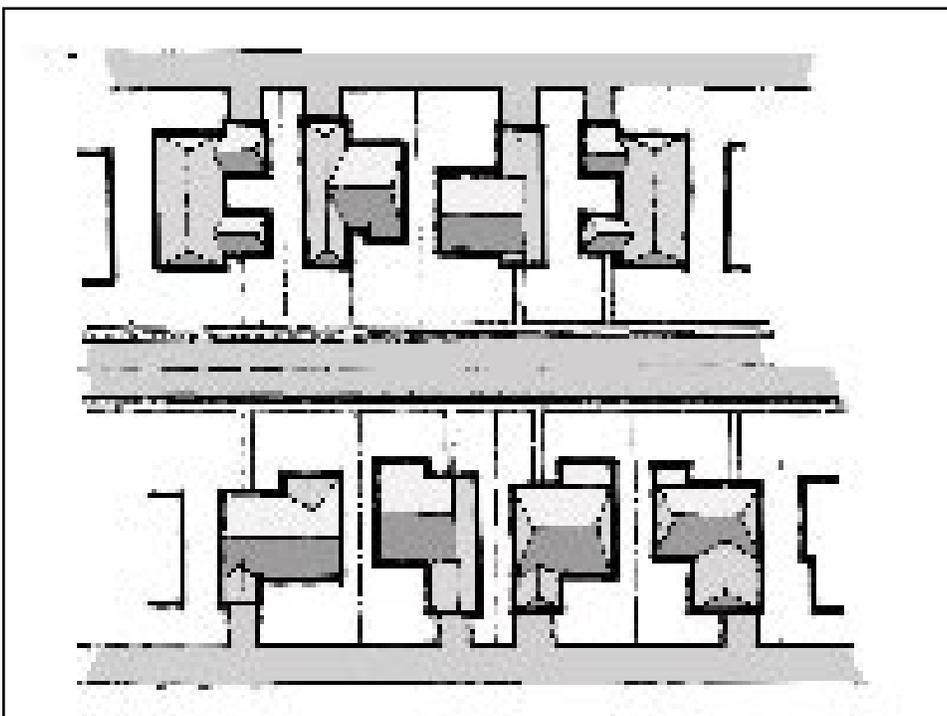


figure 4.33: Alleyways Provide Access to Rear Garages





- Alleyways that are provided in residential developments should have a minimum twenty (20) foot right-of-way, with a paved width of ten (10) feet; and should be landscaped and lighted in a manner that is:
 - consistent with similar improvements for the overall community pedestrian system;
 - enhances the character of the neighborhood;
 - and provides a safe and secure connection to adjoining pedestrian ways and the overall community open space system.
- The location of privacy walls, fencing and structures along an alleyway right-of-way should have variable setbacks and heights in order to create a rhythm of varying widths and clusters of pocket, landscaped, open space areas with architectural lighting along the length of the alleyway.
- Different pavement textures and patterns should be utilized to provide additional definition of the alleyway as a multi-use pedestrian and bicycle way.
- Trash bins should be contained in architecturally screened and landscaped household utility enclosures that can be integrated into the overall design of the alleyway.
- Where alleyways intersect a street, structures and fences adjacent to the corners of the street and alleyway rights-of-way should be set back in order to maintain adequate sight distances for increased pedestrian and cyclist safety when entering and exiting the alleyway.

Street Intersections, Corners, Crosswalk



Street intersections, corners and crosswalks are the places where all elements of the community circulation system come together – the automobile, pedestrian, cyclist, jogger, in-line skater, skateboarder and equestrian. The following guidelines address the importance of street corners, intersections and crosswalks as an important component of the City’s overall community circulation system.

- When developing new streets, or improving existing streets, the street intersection and the components contained therein should be planned and designed to:
 - provide accessible street corners that are clear of obstructions and that provide pedestrians with good visibility and separation from traffic;

- meet all requirements of the American With Disabilities Act (ADA) regarding curb ramps or other aspects of movement having a direct impact on the design of the street corner;
- adequately accommodate the number of pedestrians estimated to be generated by the area served;
- provide obstruction-free street corners by not placing utility poles, signal poles, street lights, fire hydrants, trees, benches, signs, kiosks, utility control boxes and other vertical or horizontal obstructions within the street corner's obstruction-free area.

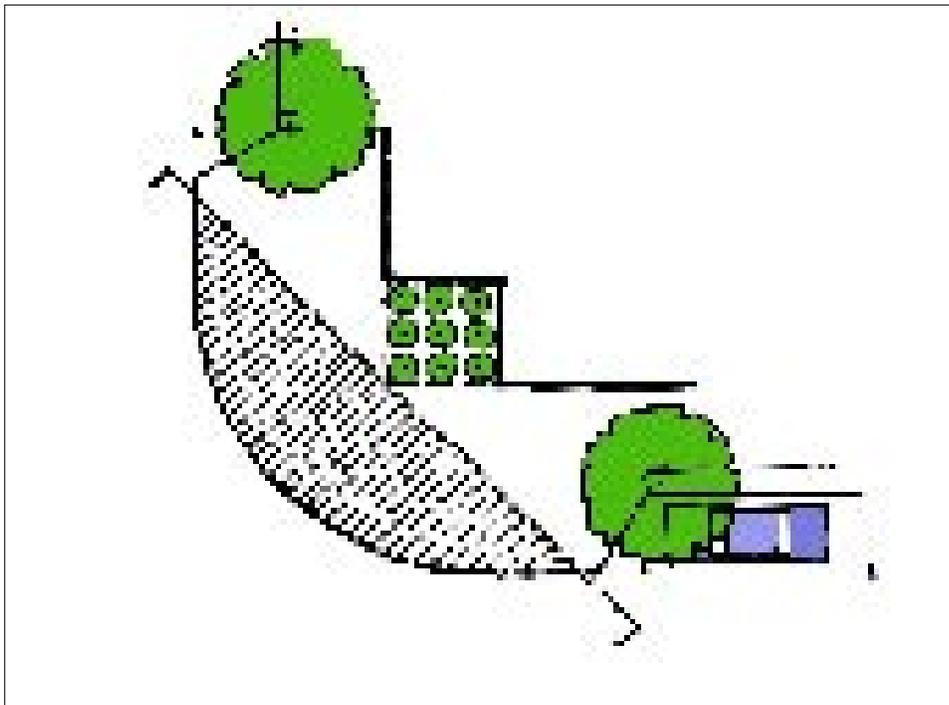


figure 4.33: Street Corner Permits Good Visibility and Free of Obstructions



- All street intersections should be designed to provide pedestrian and bicycle crossings that are no wider than actually necessary; with attention given to the utilization of smaller curb radii to reduce crossing distance at the intersection in those areas with considerable pedestrian traffic.
- Where intersections are signalized, the signals should be timed so that they do not impede pedestrian or bicycle traffic with excessively long waits or insufficient crossing times.
- Where appropriate, curb extensions may be used at any corner or mid-block location where there is a parking lane along the street, in order to shorten the crossing distance and allow the pedestrian to see and be seen before entering the crosswalk.





- Crosswalks at intersections or other locations along the street should be planned and designed to provide clarity and visibility for both the motorists and pedestrians; and should serve as a direct extension and continuation of the pedestrian’s travel path.

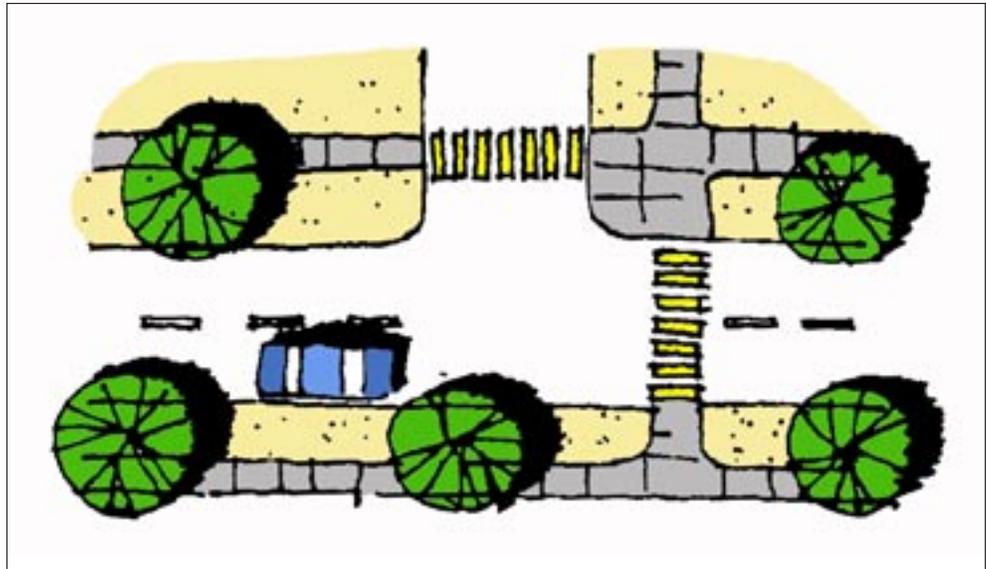


figure 4.34: Paving Patterns and Markings Provide Clarity and Visibility



- The location and the frequency of spacing between non-intersection crosswalks should depend upon the frequency of uses along the street that generate a pedestrian’s need to cross the street; with the opportunities for a crossing more frequent in areas containing high pedestrian generators.

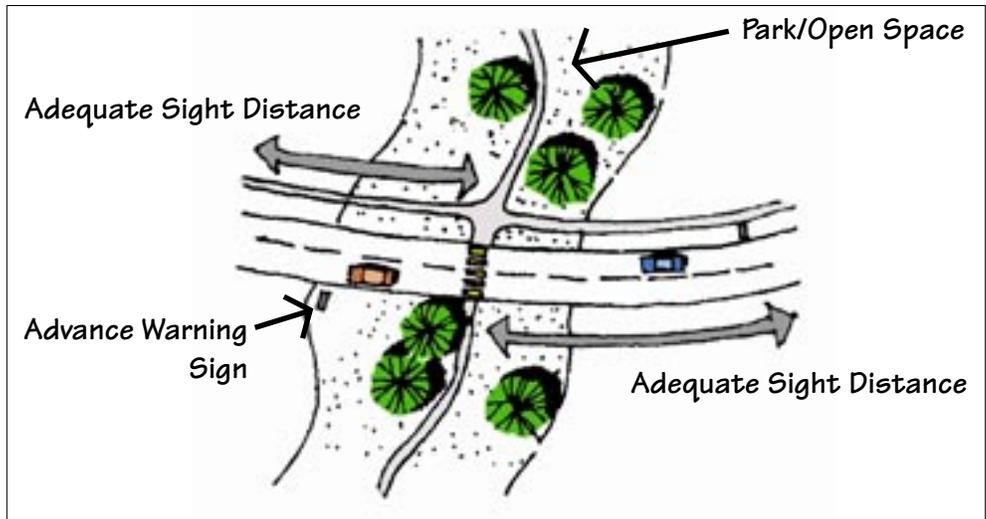


figure 4.35: Clear Markings Enhance Pedestrian Safety



- Major arterial street intersections should include special pavement treatment and markings to further emphasize the pedestrian areas of the intersection; and also contribute to the image enhancement of key development areas.

BICYCLE CIRCULATION – *Guidelines address the growing increase in commuter, recreation and leisure cycling within and through the City of Surprise. They provide approaches to creating a bicycle circulation system that will permit all levels of cyclists to travel in a safe, efficient and highly connected manner to and from local, community, and regional destinations. Many of the guidelines that apply to the development of traffic-separated multi-use pedestrian pathways also apply to the development of the bicycle circulation system, especially as they relate to the design character, lighting, landscaping and safety of the pathway.*

GENERAL GUIDELINES

- A City-wide bicycle route system consistent with General Plan 2020, and composed of a combination of traffic-separated off-street bicycle paths and selected on-street bicycle lanes, should be developed and officially designated to link all parts of the City of Surprise and the region.
- All applicants for new residential and non-residential development must review the City of Surprise’s General Plan 2020 and any other available documents issued by the City to determine if their development adjoins or is crossed by the City’s officially designated bicycle route system.
- Bicycle access to the City’s proposed “through-city” bicycle and multi-modal pedestrian/trail system as delineated in the General Plan 2020, should always be provided in new development in the form of internal local streets, bicycle lanes on collector streets and traffic-separated multi-use pathways, especially where development immediately adjoins the bicycle and multi-modal pedestrian/trail system.
- The officially designated bicycle route system should connect to all major transit stops serving the City.
- Shared use of streets by bicycles and motor vehicles is discouraged, except on residential collector streets and other streets officially designated as part of the bicycle route system and marked by striped bicycle lanes.
- The placement of a multi-use pathway within the right-of-way of a major arterial street should always be guided by the need to ensure a continuous route for cyclists, and the existing location of any improved multi-use paths in adjacent development.
- The location and development character of internal, bicycle paths in new development should be coordinated with those of adjoining developments to enhance connectivity between specific origins and destinations, and provide a consistent landscape and open space theme throughout the City.





- Alignment, configuration and design of a multi-use path and corresponding landscape improvements, should be at the discretion of the developer's site planning and design team; provided the pathway alignment, configuration, character and quality of proposed landscaping and lighting contribute to the further enhancement and implementation of a community-wide bicycle pathway system.

OFF-STREET OR MULTI-USE BICYCLE PATHWAYS

- All off-street or multi-use bicycle pathways must be separated from motor vehicle traffic by an open space barrier, either within the street right-of-way or within an independent right-of-way.

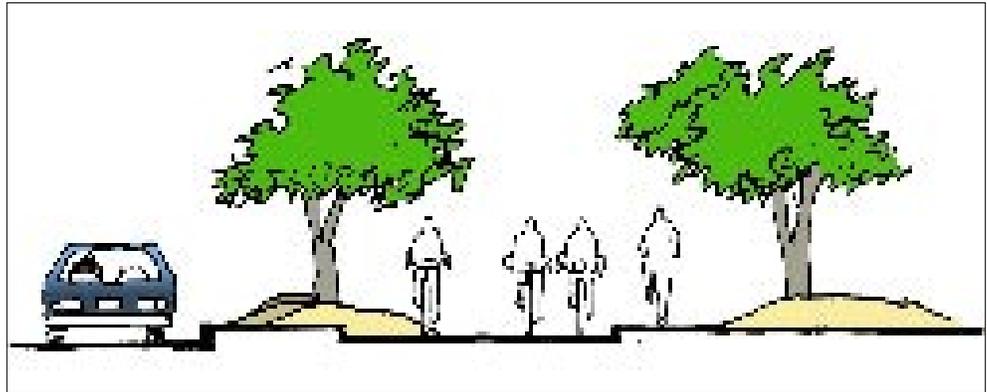


figure 4.37: Off-Street Bike Paths



- Off-street bicycle pathways are an important element of the overall community open space and park and recreation plan; and all new development should locate off-street pathways in conjunction with potential, continuous greenbelts such as retention basins, washes, and railroad corridors to create short-cuts that not only link urban origin and destination points, but also key open space and park and recreation areas.



- Off-street, or multi-use, bicycle pathways should provide frequent access points to and from the street network to avoid having the cyclist travel excessive distances and out of direction to enter or exit the path.
- When improving existing major arterial streets, or constructing arterials as part of a new development, the right-of way on both sides of the arterial should be sufficiently wide to provide for a minimum twenty-foot (20') wide area, measured from the back of the curb and extending outward toward the property line, to accommodate a traffic-separated, hard surface, ten-foot (10') wide, off-street, or multi-use, pathway for bicycle and pedestrian usage; as well as a minimum five-foot (5') landscaped area located between the back of the curb and the edge of the multi-use path.

- When a curb-separated, multi-use, bicycle path is not feasible due to topography, drainage or other obstacles, a one-directional, clearly marked and striped bike lane having a minimum lane width of five (5) feet should be provided on both sides of the street.
- If an off-street, or multi-use pathway is anticipated to have heavy use, then the pathway should be divided into two, separate, hard surface, five (5) foot paths in order to reduce potential pedestrian/cyclist conflicts; and an additional right-of-way of five (5) feet for landscaping between the two paths should be required.
- Off-street bicycle pathways should be designed with grade-separated, under- or over-crossings at major thoroughfares and highways to minimize conflicts created by at-grade intersections; and to facilitate ease of travel and continued separation from traffic. Guidelines for under- or over-crossings along off-street pathways are provided in this Manual as part of the Pedestrian Circulation System.
- Where off-street bicycle paths are not grade-separated, and they intersect and cross major arterial streets that have four (4) or more traffic lanes with a raised median, a median refuge having a minimum width of at least eight (8) feet should be provided.
- Bicycle crossings at street intersections, or at any other intersection of an off-street path with the street, should be clearly marked by pavement striping, change in pavement color or material, and/or flashing alert and caution signals.
- Street intersections should have well-placed signs to provide the motorist, cyclist and pedestrian specific definition for left- and right-turning movements; as well as any other information necessary to ensure separation between the pedestrian, motorist and cyclist.
- Off-street bicycle pathways should be illuminated at night with light standards that provide an even light level across the path and are compatible with the character of the area through which it passes.



- Off-street, or multi-use bicycle pathways should be designed to include occasional rest stations that are developed in conjunction with clusters of shade trees, a drinking fountain and seating areas.

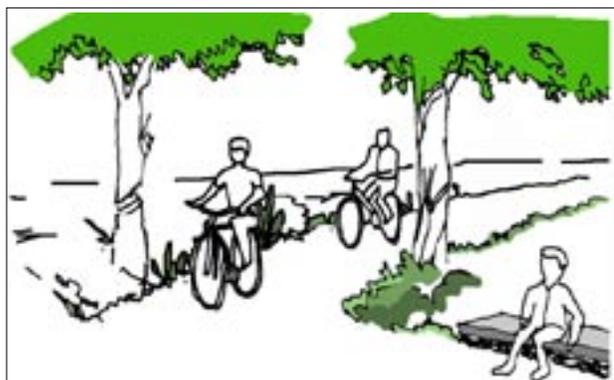


figure 4.38: Seating and Tree Clusters Provide Rest Stop





- When fencing, railings or barriers are required along the off-street bicycle pathway for the safety of the cyclist, they should have a height sufficient to prevent cyclists from falling over the railing or fence, as well as narrow openings in the railing or fence, along with a wide rub-rail, to prevent cyclists handlebars from becoming entangled in the railing or fence.

BICYCLE ROUTES

- The designation of a street as part of the City-wide bicycle route system should be based upon:
 - compatibility of bicycle travel with the street’s traffic volumes and speeds and curb widths;
 - no significant barriers or hazards to abruptly end the bicycle route;
 - access to key street corridors providing links to potentially popular destinations;
 - continuous access to surrounding neighborhoods;
 - existing popularity by current bicycle users; and the lack of nearby alternatives
 - for through access; and
 - potential for the street becoming a segment of an interconnected system of bicycle facilities.



- Implementation of official bicycle routes should be accomplished by installing appropriate directional and informational signage placed frequently along the route to keep cyclists informed of changes in route direction and remind motorists of the presence of cyclists; and by pavement markings and/or lane markings along those existing and proposed streets in the City where bicycle use is anticipated and invited.

BICYCLE LANES

- The shared use of major arterial streets by motor vehicles and bicycles is discouraged, except on residential collector streets and designated as part of the City-wide bicycle route system.
- Bicycle lanes should have clear pavement markings and signage to ensure clear understanding of the presence and purpose of the bicycle lane by both cyclists and motorists.



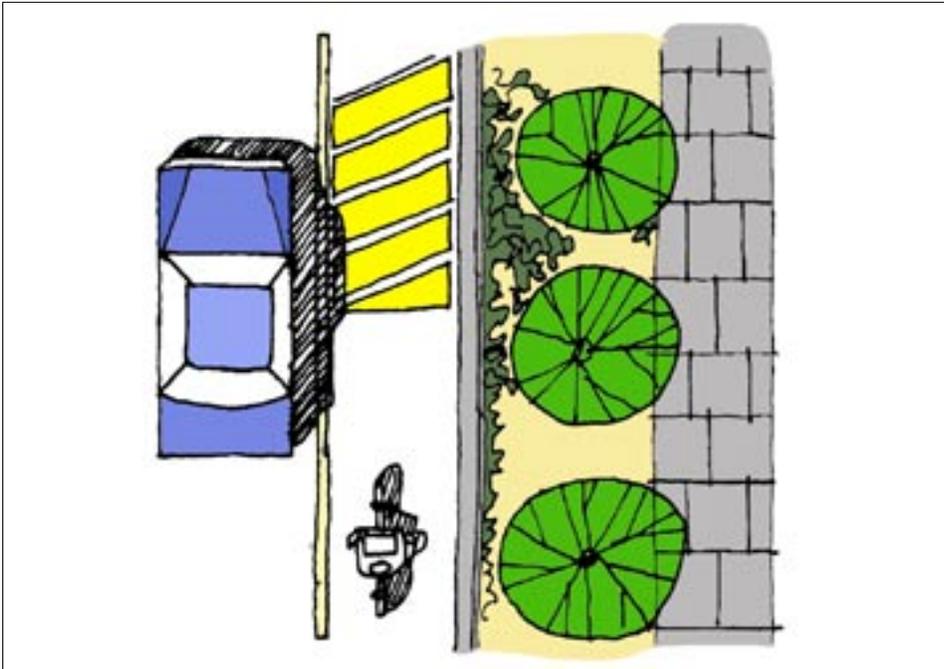
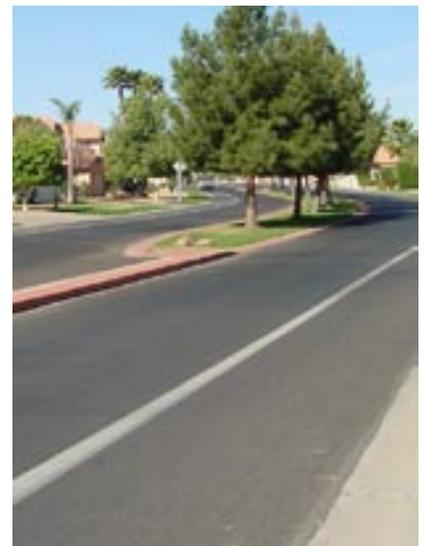


figure 4.39: Well Striped Bike Lane Enhances Cyclist Safety

- Bicycle lanes should be at least five (5) feet wide from the lane stripe to the curb face; with a clear, unobstructed surface of at least four (4) feet between the bicycle lane stripe and the joint between the pavement surface and the gutter pan.
- Special care, treatment and direction regarding turning movements should be provided at all intersections to reduce potential conflicts between cyclists and motorists; with particular emphasis given to bicycle lane striping treatment approaching, through and after right-turn-only intersections.
- On designated bicycle routes where the street carries heavy traffic at speeds in excess of forty-five (45) miles per hour, consideration should be given to increasing the bicycle lane to six (6) feet.
- Any obstructions related to construction activities, potholes, storm drains, or utility appurtenances should be minimized; with any repairs within the lane completed in a timely manner.
- On those two-way streets designated as part of the bicycle route system, as well as on residential collectors, bicycle lanes should be provided on both sides of the street.
- Stable, roadway shoulders having a minimum width of six (6) feet should be provided on rural-type roads that are designated as part of the bicycle route system and where the average daily traffic (ADT) and heavy truck traffic is not considered a detriment to cyclists.





BICYCLE PARKING FACILITIES

- Short- and long-term bicycle parking facilities should be located in highly visible, well-lighted, destination areas that generate heavy bicycle usage
- Short-term bicycle parking facilities for users parking two hours or less should consist of tamper-proof racks placed outdoors, generally within fifty (50) feet of the main entrance to a commercial, office or institutional facility.
- Special attention should be given to locating and placing short- and long-term bicycle parking in a manner that will not impede free pedestrian movement; or detract from the aesthetic character and quality of the facility served.
- Long-term bicycle parking for users who generally stay at a specific location for several hours, should be located in a secure, visibly, monitored area that is integrated into the interior space of the facility served.



EQUESTRIAN TRAILS – *These guidelines provide approaches to creating equestrian trails in the City of Surprise; with specific attention given to utilizing equestrian trails as buffers between urban and non-urban areas of the City, and as links between equestrian communities, riding schools, boarding stables, equestrian arenas or other areas of concentrated equestrian activity to community and regional trail systems, and ultimately to the White Tank Mountain Regional Park.*



- Applicants desiring to develop residential and/or commercial projects in or adjoining less developed, non-urbanized areas of the City must review the City of Surprise’s General Plan 2020, and any other available documents approved by the City, to determine if an equestrian trail will be required as part of their development.
- Equestrian trails should be provided where:
 - there are significant adjacent tracts of land on which horseback riding is formally sanctioned;
 - equestrian access to a particular property has been granted;
 - links to the proposed City-wide multi-modal trail system, or to potential regional trails providing access to the White Tank Mountains, either exist or are proposed;
 - buffer space is required to protect less-developed lands in those areas designated in the General Plan 2020 as rural; and



- a concentration of commercial stables, riding schools or other high-use equestrian activities are located.
- Where appropriate, a separate equestrian trail should be provided as an integral part of a multi-use pathway in existing or proposed developments that are a part of, or adjacent to rural areas; provided:
 - a right-of way of at least thirty (30) feet exists to accommodate a mix of hikers, pedestrians, cyclists and equestrians, while ensuring separation between the equestrian and cyclist;
 - there is no potential conflict with vehicles;
 - no natural or constructed features will detract the rider from having a peaceful and tranquil riding experience; and
 - there is direct linkage to the City-wide trail system and ultimately to the White Tank Regional Park.



- Equestrian trails should consist of single direction loop or multiple loop trails of varying lengths, with cutovers and/or internal connectors to provide trail options having variations in riding time ranging from one hour to all day; and to permit the user to end the riding experience where they began.
- When developing equestrian trails, the number of motor vehicle and water crossings along the trail should be kept to a minimum; with access points to the trail strategically located to accommodate direct access by the equestrian from adjacent or nearby equestrian neighborhoods, areas set aside for riders with horse-trailers arriving in Surprise for day riding trips, boarding stables and other areas with concentrated equestrian activities.
- Equestrian trails should be located and designed as an interconnecting trail system that provides a variety of scenery and terrain, minimizes encounters with other riders and contains a number of well-placed informational signs providing direction and points of interest to the rider.
- Entry access points to the riding trail should be barrier-free, and invite and encourage trail use by maximizing entry sight distances and minimizing the slope of the terrain at the trail head.
- Loop trails with a single entry/exit should be designed to draw the rider easily onto the trail, while at the same time guiding the rider's direction of travel into a right-hand, or counterclockwise flow.



- The clearing width of equestrian trails should be eight (8) feet for lightly used trails with a one-way travel flow, and twelve (12) feet for more heavily used trails providing two-way travel; with the clearing height of trails twelve (12) feet.

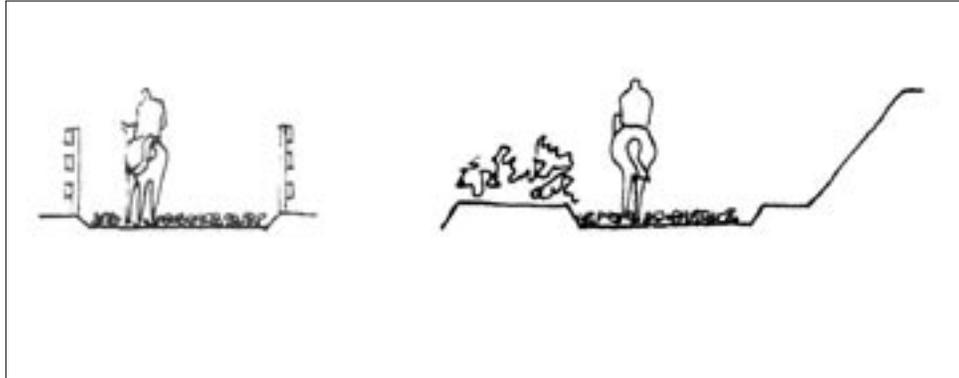


figure 4.40: Adequate Trail Clearing Width Enhances Trail Safety

- Actual tread width for trails should be two (2) to four (4) feet for one-way travel, and five (5) to six (6) feet for two-way travel.
- Equestrian trails should, where possible, have a natural undisturbed surface upon which to travel. Where trails are subject to erosion, the use of compacted materials should be considered to help minimize trail erosion and prevent ponding on poorly drained soils.

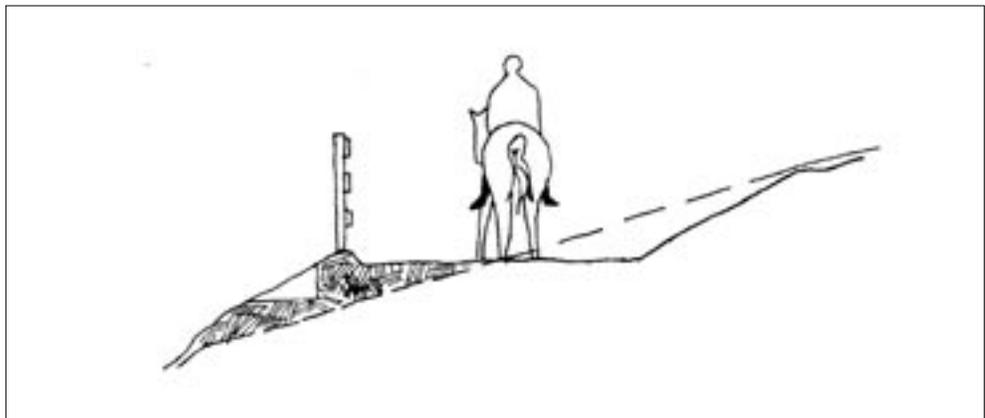


figure 4.41: Cut and Fill Techniques Minimize Trail Erosion on Slopes



- Trail grades should not exceed ten (10) percent; with five hundred (500) foot long resting grades of four (4) percent provided at regular one (1) mile intervals along the trail.
- Where equestrian trail travel is two-way, or hikers share the trail, forward sight distances of fifty (50) to one hundred (100) should be provided. Warning signs alerting riders of motorized road crossings should be provided at least one hundred (100') to two hundred (200) feet in advance of the crossing.

- Where appropriate, equestrian trails in both the urbanized and non-urbanized area of the City should utilize washes and drainage areas that have been improved for use as part of the City-wide multi-use pathway and community open space system.
- In outlying, less-developed areas of the City, and in conjunction with designated equestrian rest stops or vista points, consideration should be given to creating shaded rest areas that provide tether or hitching posts and picnic tables and benches.
- The use of roadways by equestrians is discouraged, except along those two-lane rural lanes that either maintain a minimum eight-foot (8') wide gravel shoulder; or have a trail separated from travel lanes by a drainage ditch or other barrier.



GOLF CARTS – *The City of Surprise General Plan 2020 supports continued use of golf carts within the City, but only if the use of the cart complies with existing State of Arizona law regarding their operation. These guidelines offer direction for accommodating the use of golf carts in the City as an alternative mode of local transportation, while maintaining compliance with State law.*

- The use of golf carts should be restricted to local residential neighborhood streets where speed limits do not exceed twenty-five (25) miles per hour; except in those areas of the City where:
 - a traffic-separated, two-way, path dedicated to the exclusive use of golf carts has been constructed with grade-separated crossings at major streets to connect with adjoining neighborhoods; and
 - the golf cart path is part of a continuous traffic-separated, travel route providing access to and from adjoining neighborhood commercial and office areas, and other residential or non-residential developments.
- Two-way, interconnected and grade-separated cart paths dedicated to the exclusive use of golf carts should have a minimum, hard-surface width of ten (10) feet.
- The use of golf carts on major streets and at major street crossings should be discouraged; except on those streets officially designated by the City and marked by special signage as part of a community-wide golf cart route system. To comply with State of Arizona law, golf cart must not operate on a street where the speed limit exceeds thirty-five (35) miles per hour.



