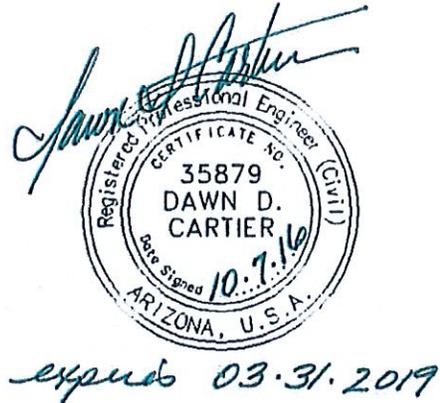




October 7, 2016

Cullum Homes, Inc.  
Attn: Mr. Rod Cullum  
8408 E Shea Blvd, Suite 100  
Scottsdale, Arizona 85260  
Phone: (602) 955-6370  
Fax: (602) 955-7217  
Email: [rod@cullumhomes.com](mailto:rod@cullumhomes.com)



**RE: Nauri Valley Drive and McDonald Drive Intersection Stopping Sight Distance Requirements, Paradise Valley, AZ**

Dear Mr. Cullum:

Civtech has been retained to prepare a sight distance analysis for the existing intersection of Nauri Valley Drive and McDonald Drive in the Town of Paradise Valley, Arizona. The purpose of this letter is to address the minimum sight distances required at this intersection to ensure proper safety.

To maintain intersection safety and operation, there must be sufficient unobstructed sight distance along both approaches of an intersection and across their included corners to allow operators of vehicles to detect approaching vehicles in order to prevent a collision. The sight triangle is the area encompassed by the line of sight from a stopped vehicle on the minor roadway to the approaching vehicle on the major roadway.

The Town has classified McDonald Drive as a minor arterial. The posted speed limit along McDonald Drive is 35 mph. It consists of one (1) lane in each direction, separated by a raised center median. McDonald Drive begins to the west at Tatum Boulevard, continuing east to Loop 101(Pima Freeway).

The American Association of State and Highway Transportation Officials (AASHTO) provides sight distance requirements in the 2011 publication *A Policy on Geometric Design of Highways and Streets*. AASHTO uses a standard set of equations for the case of a minor road stopping at a major road. These calculations provide the sight distance requirements for vehicles making a left-hand turn (Case B1), a right-hand turn and for crossing the roadway (Cases B2 and B3). These calculations assume a stopped position for the vehicle attempting to enter the roadway and are dependent upon the major roadway typical section and design speed. The "decision point" of each sight triangle is desired 18-feet from the edge of the major-road traveled way. Cases B2 and B3 calculate the length of the shorter leg as the distance from the decision point to the center of the width of approaching lanes to the left. Case B1 calculates the shorter leg of the sight distance triangle as the distance from the decision point to the center of the width of approaching lanes to the right. Using this methodology, Case B2/B3 utilizes a shorter leg distance of 24 feet (18 feet + 6 feet) and Case B1 utilizes a shorter leg distance of 45 feet (18 feet + 12 feet + 9 feet + 6 feet).

An intersection site distance analysis was performed to set guidelines for establishing line of sight for the intersection of Nauni Valley Drive and McDonald Drive. Using the guidelines set forth by AASHTO, **Table 1** was generated for the existing intersection. Vehicle travel speed is a primary factor in calculating sight distance. The posted speed limit along McDonald Drive is 35 miles per hour (mph) and a design speed of 40 mph was applied. For the purposes of sight distance calculations, the cross section of McDonald Road was assumed to consist of a 12-foot travel lane and a 9-foot median. **Table 1** below summarizes the length of the longer leg in the sight distance triangles required for this intersection.

**Table 1 – Intersection Sight Distance Analysis**

Intersection	Design Speed (mph)	Required Sight Distance	
		Case B2/B3-Left (ft)	Case B1-Right (ft)
Nauni Valley Drive and McDonald Drive	40	465	405

In summary, the required sight distance for vehicles stopped on Nauni Valley Drive is 465 feet to the left (east) of the intersection and 405 feet to the right (west) of the intersection.

The Town of Paradise Valley Code, provided in **Attachment A**, states that sight distance must promote adequate protection “for the safety of children, pedestrians, and the operators of vehicles”. Although the AASHTO publication does not specifically address pedestrian sight distance, a study conducted by the National Association of City Transportation Officials (NACTO) states that the sight distance triangle “provides the driver of a vehicle approaching an intersection an unobstructed view of any conflicting vehicles or pedestrians.” An excerpt of this study is included in **Attachment B**. To satisfy both vehicle and pedestrian sight distance, it is recommended to utilize the sight distance requirements documented by AASHTO. Sight distance calculations are provided in **Attachment C**.

In addition to the AASHTO sight distance requirements, the application of traffic safety triangles was explored using guidance provided by the City of Phoenix. The *City of Phoenix Zoning Ordinance 702.B7a3* requires standard 10'x20' safety triangles at all driveway entrances. If Nauni Valley Drive is considered a local road instead of a private drive the City of Phoenix would require 15'x33' unobstructed sight triangles at corner lots at local-arterial intersections per City Code *Section 31-13*. The phoenix sight triangle is measured at the lot lines except where dedicated right-of-way is wider than the minimum required per the City's cross section standards. In such cases the triangle is offset 7' from the back of curb. A 5' sidewalk located along the north side of McDonald Drive is offset from the back of curb by 4'. At this location, 7' from the back of the curb is approximately 2' from the outside edge of the sidewalk. Measuring conservatively from the outside edge of the sidewalk, 15' north along Nauni Valley Drive places the triangle vertex approximately 24' from the back of the curb. Note that a 10'x20' triangle measured from the lot line is approximately 25' from the back of the curb and AASHTO sight distance measurements use 14.5' from the face of the cub. It is recommended that the application of unobstructed sight triangles (City of Phoenix), be considered for application at the outside edge of the sidewalk. This would still exceed the necessary site distance for both pedestrians and vehicles. It is recommended that these triangles be staked in the field to locate any obstructions prior to their removal to ensure that the sight distance for pedestrians using the sidewalk is considered. The City of Phoenix guidelines are shown in **Attachment D**.

In summary, the Town's standard traffic safety triangle of 50'x50' can be reduced in this location while maintaining the sight distance requirements established by AASHTO. Using the 15'x33' traffic safety triangle along with the calculated stopping sight distance to the left and to the right will exceed sight distance requirements for Nauni Valley Drive. The 15'x33' traffic safety triangles could be applied at the back of sidewalk in this location. The edge of the travel way for the AASHTO sight triangle should be considered as the back of sidewalk (for consideration of sight distance measurements) to ensure that pedestrians are considered within the sight triangle.

Within designated sight visibility triangles, landscaping should be maintained at a maximum of two (2) feet in height or as otherwise specified by the Town of Paradise Valley. Tree branches lower than ten (10) feet should be trimmed and maintained to meet current acceptable landscape requirements. Improvements can be constructed within the 15'x33' corner visibility requirement without impeding sight distance. Any improvements planned in this area should be staked in the field and gain concurrence by the Town Engineer on location and height.

Should there be any questions regarding the sight distance recommendations for this intersection, please contact me at 480-659-4250.

Sincerely,



Dawn Cartier, P.E.  
Project Manager

**Attachments:**

- A – Paradise Valley Sight Distance Requirements**
- B – NACTO Sight Distance Study Excerpt**
- C – AASHTO Sight Distance Calculations**
- D – City of Phoenix Traffic Driveway Safety Triangle Requirements**

## SAFETY, HEALTH, SANITATION AND NUISANCE

swimming pools, spas, ponds, fountains, sprinklers, hoses, pipes, ditches, standpipes, berms, irrigation structures or equipment, valves or gates.

### Section 8-1-11 Obstruction of Watercourses (Repealed 418 6/13/96)

### Section 8-1-12 Weeds

- A. Every person owning, occupying, or controlling any premises fronting on any street, alley, or public place in the Town shall cut or cause to be cut all grass and weeds growing on such frontage as often as the same may require cutting, to the end that said grasses or weeds shall not attain a height of over six inches, and every person who shall permit grass or weeds to grow to a height exceeding six inches between the property line of such property and the street shall be guilty of a violation of this Code.
- B. Every person owning, occupying, or controlling any lot or lots within the Town shall cause all weeds and other noxious growths to be cut thereon as often as the same may require cutting to prevent the same from attaining a height of over six inches, and every person owning, occupying or controlling any lot or lots within the Town who shall permit on such lot or lots weeds or other noxious growth to grow to a height exceeding six inches, or who shall permit any rubbish, dirt, debris, or other matter to accumulate upon such lot or lots, shall be guilty of a violation of this Code.

### Section 8-1-13 Corner Vision<sup>369 456</sup>

As an aid to safe movement of vehicles at and near street intersections and in order to promote more adequate protection for the safety of children, pedestrians, and operators of vehicles, there shall be limitations on the height of fences, walls, gateways, ornamental structures, hedges, shrubbery and other fixtures, construction and planting on all corner lots.

- A. Such barriers to clear, unobstructed vision at corners of intersecting streets shall be limited to a height of not over two (2) feet above the street elevation of the nearest edge of pavement, for a distance of fifty (50) feet along both the front and side lot lines, measured as indicated below.
- B. Within the triangle formed by connecting the ends of the respective fifty (50) foot distances as illustrated in figure 8-1-13, all the structures, fixtures, construction, hedges, shrubbery and other plantings shall be limited to a height of two (2) feet above the elevation of the nearest edge of pavement at the said intersecting streets.

## SAFETY, HEALTH, SANITATION AND NUISANCE

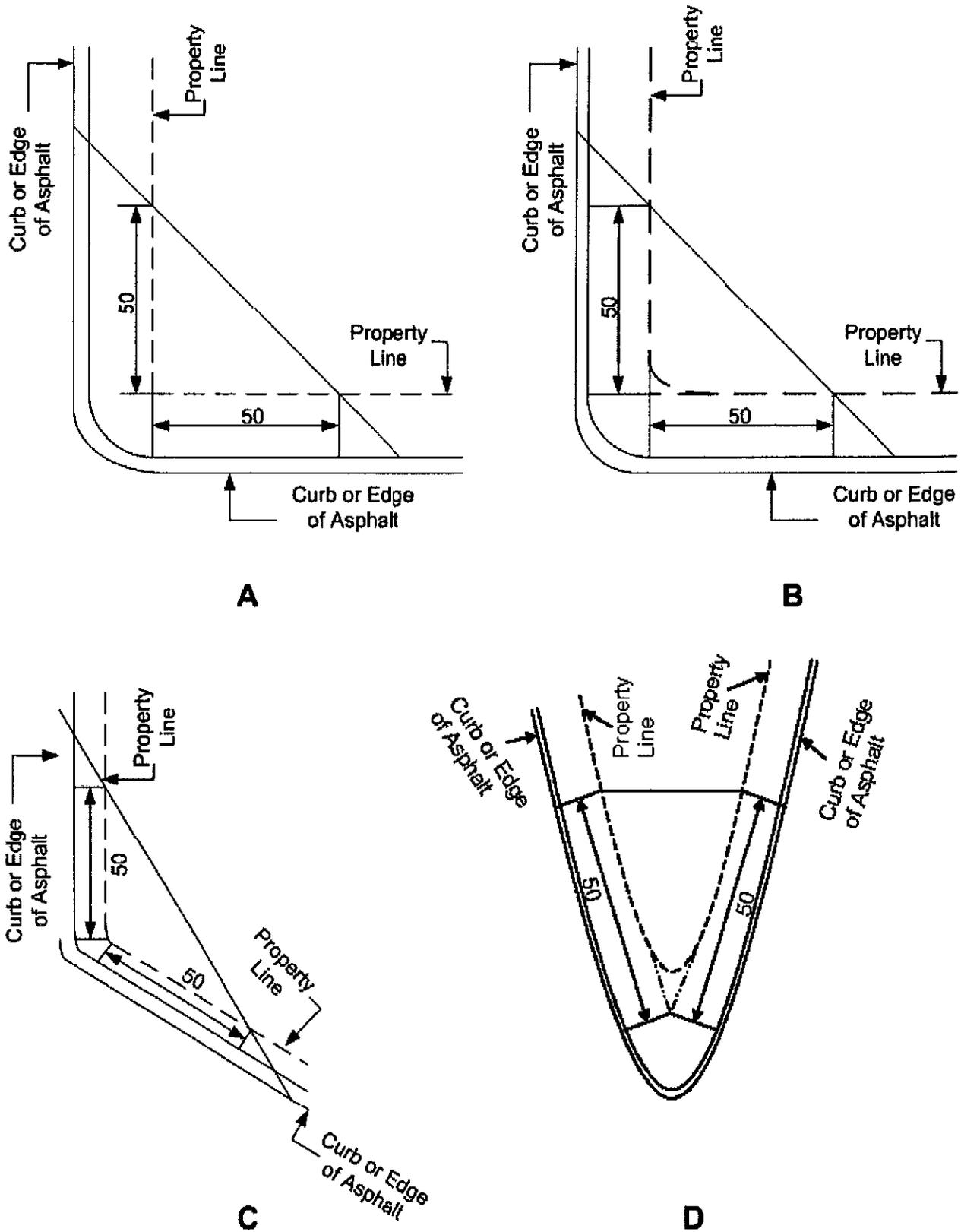
- C. Paragraphs A and B of this Section notwithstanding, trees may be located within the fifty (50) foot clear distance if their trunks are no more than eight (8) inches in diameter at a height of twelve (12) inches from the ground, and the foliage is cleared to a height of eight (8) feet above the ground. <sup>456</sup>
- D. In interpreting this ordinance, the diagrams shown in Figure 8-1-13 shall be utilized to determine the fifty (50) foot segments and the triangle within which structures are limited in height. In any situation not specifically covered in these diagrams, this Section shall be interpreted in a manner to provide maximum sight distance at the intersection.
- E. This Section is applicable to that area within the property, but the property owner is also responsible for that area between the property line and the curb, and to the pavement where no curb exists. <sup>456</sup>
- F. A sight distance triangle shall be eligible for modification by the Town Engineer if one or both of the intersecting streets are controlled by stop signs or traffic signals and no decrease in sight distance would occur as a result of the modification. <sup>456</sup>

Section 8-1-14 Landscaping <sup>369</sup> Repealed by Ordinance #448, 1/22/98

Section 8-1-15 Public Utility Walls <sup>396</sup>

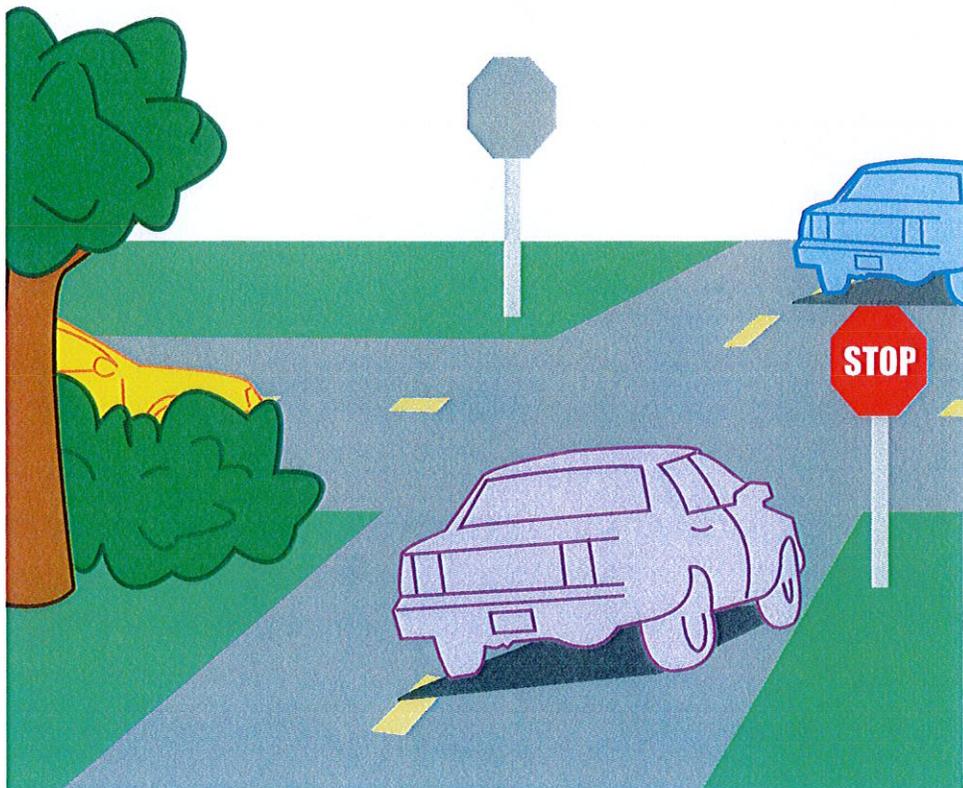
- A. Contrary to any terms in the Paradise Valley Zoning Ordinance, it is permissible for electric utility companies to surround electrical substations with walls eight feet high, measured from finished grade.
- B. all walls built under the terms of Section 8-1-15 must comply with the terms of Section 8-1-13.
- C. These facilities, although necessary for the health, safety and welfare of the citizens, are a hazard to the citizens and especially the children of the community, and are considered by most to be unsightly.

Figure 8-1-13

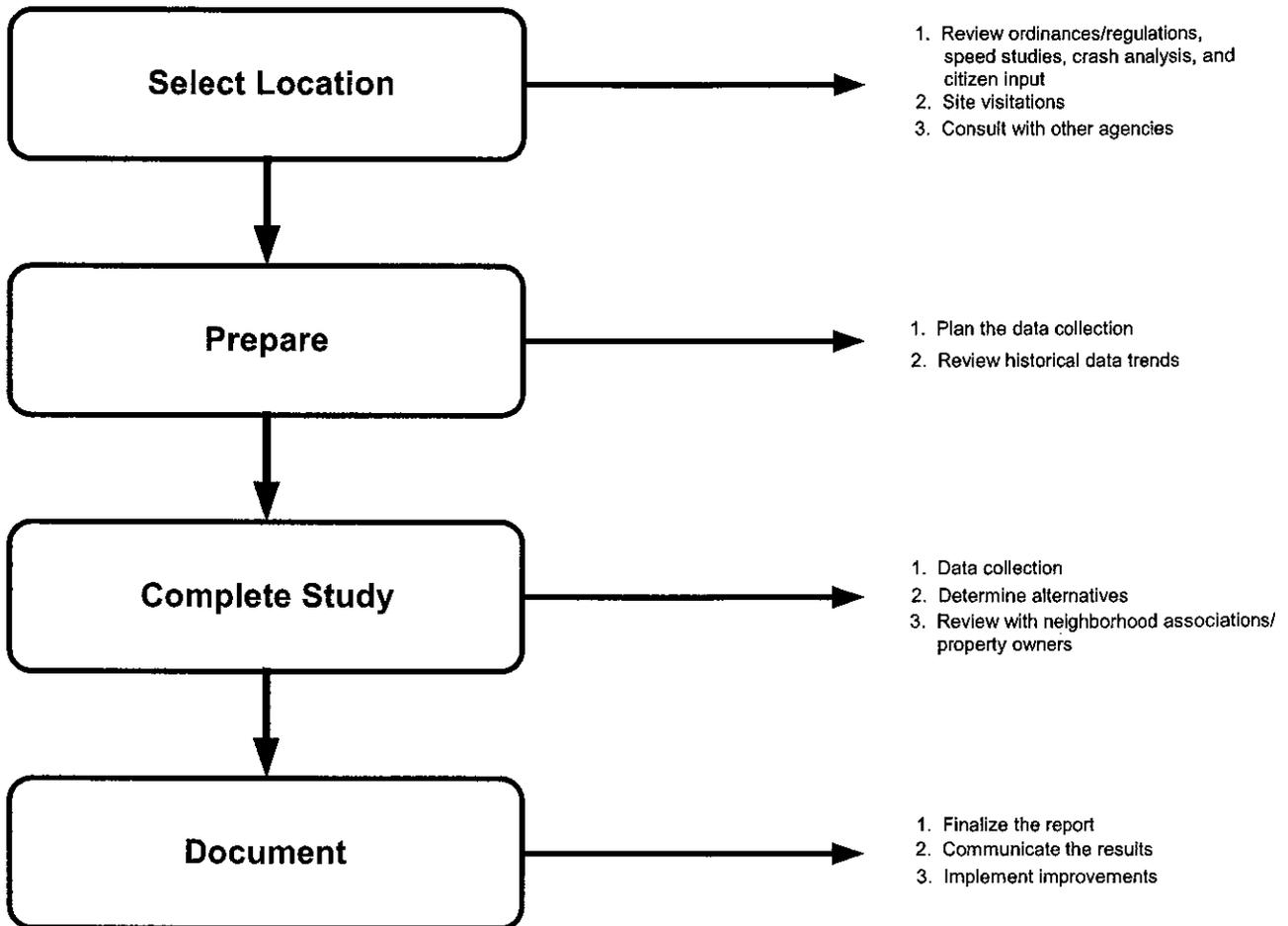


4

# Sight Distance



# Sight Distance



## **INTRODUCTION**

Sight distance is the length of roadway visible to a driver. The three types of sight distance common in roadway design are intersection sight distance, stopping sight distance, and passing sight distance. This handbook will not discuss passing sight distance because it primarily occurs in rural settings and this handbook generally addresses urban areas. (Information on passing sight distance can be found in Chapter 3 of the AASHTO *Green Book* and in the CTRE *Iowa Traffic Control Devices and Pavement Markings* manual.)

## **INTERSECTION SIGHT DISTANCE**

The driver of a vehicle approaching or departing from an intersection should have an unobstructed view of the intersection, including any traffic control devices, and sufficient lengths along the intersecting highway to permit the driver to anticipate and avoid potential collisions (Maze and Plazak 2000). These unobstructed views form triangular areas known as sight triangles.

A typical intersection is divided into areas between each leg known as quadrants. There may be three quadrants, such as for a “T” intersection, or four, such as for a four-legged intersection. Sight triangles are the specified areas along an intersection’s approach legs and across the included corners (see Figures 4.1 and 4.2 for an illustration). These areas should be clear of obstructions that might block a driver’s view of conflicting vehicles or pedestrians. The two types of sight triangles are approach sight triangles and departure sight triangles (AASHTO, *Green Book*, 2001).

### **Approach Sight Triangles**

Approach sight triangles provide the driver of a vehicle approaching an intersection an unobstructed view of any conflicting vehicles or pedestrians. These triangular areas should be large enough that drivers can see approaching vehicles and pedestrians in sufficient time to slow or stop and avoid a crash. Approach sight triangles are illustrated in Figure 4.1.

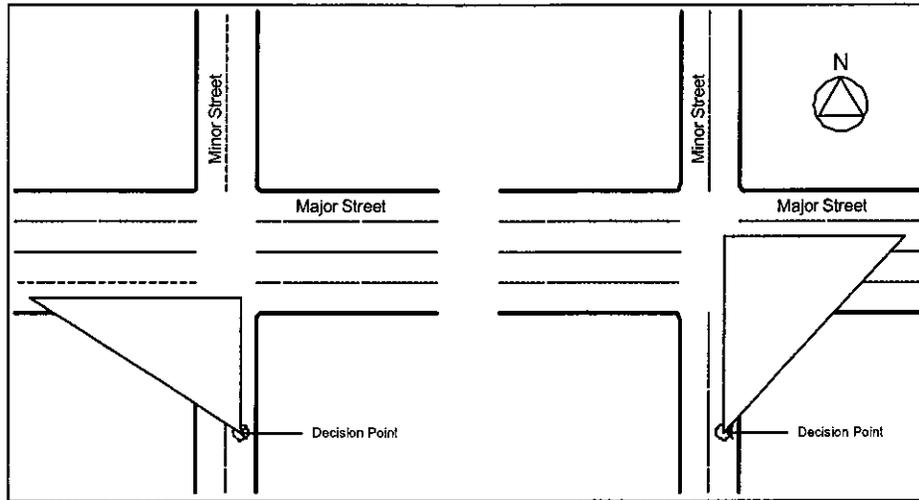


Figure 4.1. Approach Sight Triangles

### Departure Sight Triangles

Departure sight triangles provide adequate sight distance for a stopped driver on a minor roadway to depart from the intersection and enter or cross the major roadway. These sight triangles should be provided in each quadrant of a controlled intersection. Departure sight triangles are illustrated in Figure 4.2.

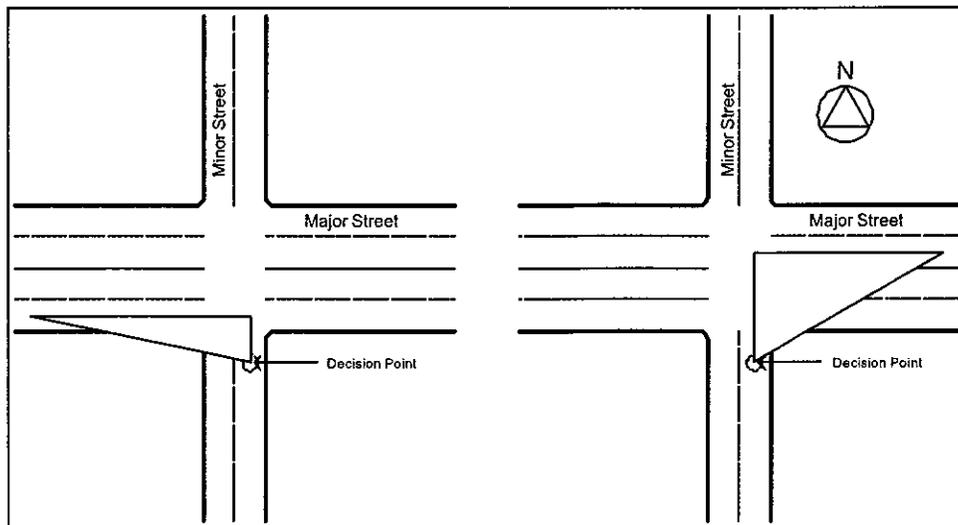


Figure 4.2. Departure Sight Triangles

**Nuani Valley Drive & McDonald Drive**

**Sight Distance Analysis**

**Assumptions and/or Givens**

Elements of Design from AASHTO	6th Edition	AASHTO Ref
Driver Eye Height	3.50 ft	\$3.2.6, p 3-14
Truck	7.60 ft	\$3.2.6, p 3-14
Object Height	2.00 ft	\$3.2.6, p 3-14
Stopping Sight Distance	3.50 ft	\$3.2.6, p 3-14
Passing Sight Distance	4.25 ft	\$3.2.6, p 3-14
Vehicle Height	14.50 ft	9.5.3, B1
Driver Eye Location	N/A ft	
From Edge of Major Rd Traveled Way	11.20 ft/sec <sup>2</sup>	\$3.2.2, p 3-3
Passenger Vehicle	N/A ft	
Truck	2.50 sec	\$3.2.2, p 3-4
Brake reaction time (t)		

**Site Specific Data**

Major Street Design Speed (V <sub>major</sub> )	40 MPH
Grades - Approaching Minor Street from: (= = approaching downhill)	
Left (G <sub>L</sub> )	0.00%
Right (G <sub>R</sub> )	0.00%
Approach Grade Adjustment Factor	Left 1.0 Right 1.0
Major Road Through Lanes on Each Approach	LI LO/Th RO
Median Width (in "Lane Equivalents")	1.0
Bicycle Lane Width (in "Lane Equivalents")	0.75
Minor Road Approach Upgrade, if >3%	0.0
Minor Road Access (check restricted)	0.00%

**Stopping Sight Distance = Brake Reaction Distance + Braking Distance**

$$d = 1.47Vt + 1.075 \frac{V^2}{a}$$

Eq 3-2, p 3-4

Calculated d =	300.6 ft
Design d =	305 ft

$$d = 1.47Vt + \frac{V^2}{30\left(\frac{1}{32.2} - G\right)}$$

Calculated d =	300.3 ft - left 305 ft - right
Design d =	300.3 ft - left 305 ft - right

SSD's do not consider design for truck operations, since better visibility is considered to offset longer braking distance.



**Nuani Valley Drive & McDonald Drive**

**Sight Distance Analysis**

**Intersection Sight Distances**

**Case B - Intersections with Stop Control on the Minor Road**

**Case B1 - Left Turn from the Minor Road**

Design Vehicle	Time Gap (t <sub>g</sub> )	AASHTO Ref
Passenger Car	7.5 sec	\$9.5.3, p 9-36
Single-Unit Truck	9.5 sec	\$9.5.3, p 9-36
Combination Truck	11.5 sec	
Time gap adjustments		
Add'l lanes to cross (1 <sup>st</sup> is assumed)		
Passenger Car	0.5 sec	Tbl 9-5, p 9-37
Trucks	0.7 sec	Tbl 9-5, p 9-37
Minor Approach Upgrade (Per each 1% > 3%)	0.2 sec	Tbl 9-5, p 9-37
See Notes below		
Major Road + Bike Lanes on Left Approach	1.0	\$9.5.3, p 9-37
Minor Road Approach Upgrade, if >3%	0 %	\$9.5.3, p 9-37

**Time Gap based on site data**

Design Vehicle Gap+Adj for Approach Grades > 3% + Adjs for Add'l Lanes & Median	Time Gap (t <sub>g</sub> )
Passenger Car	7.9 sec
Single-Unit Truck	10.0 sec
Combination Truck	12.0 sec

ISD to left & right along Major Road ISD = 1.47V<sub>major</sub>t<sub>g</sub> (ft) Eq 9-1, p 9-37

Vehicle	ISD to Left and Right	ISD to Left and Right
Passenger Car	calculated ISD = 463.1 ft design ISD = 465 ft	465 ft
Single-Unit Truck	calculated ISD = 589.5 ft design ISD = 590 ft	590 ft
Combination Truck	calculated ISD = 707.1 ft design ISD = 710 ft	710 ft



**Nuani Valley Drive & McDonald Drive**

**Sight Distance Analysis**

**Intersection Sight Distances (cont'd)**

*Case B2—Right Turn from the Minor Road*

*Case B3—Crossing Maneuver from the Minor Road*

Design Vehicle  
 Passenger Car  
 Single-Unit Truck  
 Combination Truck

Time Gap (t<sub>g</sub>)  
 6.5 sec  
 8.5 sec  
 10.5 sec

Time gap adjustments - Case B-3 Only\*  
 Add'l lanes to cross (1<sup>st</sup> is assumed)  
 Passenger Car  
 Trucks  
 Minor Approach Upgrade (Per each 1% > 3%)

See Notes  
 below  
 Tbl 9-7, p 9-40  
 Tbl 9-7, p 9-40  
 Tbl 9-7, p 9-40  
 Tbl 9-7, p 9-40

Site data  
 Major Road + Bike Lanes on Left Approach  
 Minor Road Approach Upgrade, if > 3%

1.0  
 0 %

\$9.5.3, p 9-40  
 \$9.5.3, p 9-40

Time Gap based on site data (sec)  
*Design Vehicle Gap+Adj for Approach Grades > 3% (+Adjs for Add'l Lanes & Median for B3)*

Passenger Car  
 Single-Unit Truck  
 Combination Truck

6.9  
 9.0  
 11.0

B2 & B3 B3 Only

ISD to left (B2/B3) & right (B3) along Major RdSD=1.47V<sub>major</sub><sup>1.5</sup> (ft) Eq 9-1, p 9-37

ISD to Left ISD to right  
 (B2 & B3) (B3 Only)

calculated ISD= 404.3 404.3  
 design ISD= 405 405

calculated ISD= 530.7 530.7  
 design ISD= 535 535

calculated ISD= 648.3 648.3  
 design ISD= 650 650

\*Number of major road lanes is irrelevant in Case B2.

The differences between Case B1 and Cases B2 & B3 are reduced time gaps and time gap adjustment for the minor approach upgrade. \$9.5.3, p 9-43

**Nuani Valley Drive & McDonald Drive**

**Sight Distance Analysis**

**Intersection Sight Distances (cont'd)**

*Case F—Left Turns from the Major Road*

*AASHTO Ref*  
 \$9.5.3, p 9-51

Design Vehicle  
 Passenger Car  
 Single-Unit Truck  
 Combination Truck

Time Gap (t<sub>g</sub>)  
 5.5 sec  
 6.5 sec  
 7.5 sec

Time gap adjustments  
 Add'l lanes to cross (1 assumed)  
 Passenger Car  
 Trucks

See Notes to  
 bl 9-13, p 9-51  
 bl 9-13, p 9-51  
 bl 9-13, p 9-51

Site data  
 Opposing Lanes (adj'd for x-wide median)

0.8

Time Gap based on site data  
*Design Vehicle Gap+Adj for Add'l Opposing Lanes*

Passenger Car  
 Single-Unit Truck  
 Combination Truck

5.9 sec  
 7.0 sec  
 8.0 sec

ISD to front along Major Road ISD=1.47V<sub>major</sub><sup>1.5</sup> (ft) Eq 9-1, p 9-37

Passenger Car  
 Single-Unit Truck  
 Combination Truck

calculated ISD= 345.5 ft  
 design ISD= 350 ft

calculated ISD= 413.1 ft  
 design ISD= 415 ft

Combination Truck  
 calculated ISD= 471.9 ft  
 design ISD= 475 ft

The differences between Case F and Cases B1, B2 & B3 are reduced time gaps and no time gap adjustment for any minor approach upgrade. \$9.5.3, p 9-43

**SIGHT DISTANCE SUMMARY**

Sight Distance Type	Governing Case	Car	SU Truck	Combo Truck
Stopping				
Without effect of grade		305	N/A	N/A
With effect of grade on left		305	N/A	N/A
With effect of grade on right		305	N/A	N/A
Intersection				
To Right	B1	465	590	710
To Left	B2/B3	405	535	650
On Major Road	F	350	415	475

space per pick-up window. queuing lengths shall be a linear measurement for the point of service. +18

d. All other drive-through facilities not addressed shall have a minimum of one hundred (100) linear feet of queuing space per bay or pick-up window. Queuing lengths shall be a linear measurement from the point of service. +18

e. Facilities providing multiple bays or points of service shall provide a minimum of two (2) approach lanes. +18

**7. Screening. +18**

a. *Residential districts.* Screening of parking is required in residential districts when the lot serves any use, except single-family units or a multi-family project of less than sixteen (16) units. A screen consisting of a solid wall or landscaping shall be required, detailed as follows: +18

(1) Along that portion of the perimeter of the parking area bounding or within side or rear yards, the wall shall not be less than four (4) feet nor more than six (6) feet in height. Landscaping, when matured, shall be a minimum of four (4) feet in height and shall be maintained in a living condition. +18

(2) Along that portion of the perimeter of the parking area bounding or within a front yard, the wall shall be three (3) feet in height. Landscaping shall, when matured, be a minimum of three (3) feet in height and shall be maintained in a living condition. +18

(3) All landscaping or wall construction adjacent to driveway entrances is not to exceed three (3) feet in height within a triangle measuring ten (10) feet in depth from the property line tapering to the property line twenty (20) feet on either side of the driveway. All landscaping and wall construction shall comply with the vision obscurement requirement of the Phoenix City Code. +18

(4) All required walls and landscaping shall be maintained in a neat and orderly condition. +18

(5) Landscaping as required in this Section shall provide at least continuous evergreen (broad leaf or conifer) shrubs or hedges in a planting area which shall be a minimum of three (3) feet in width. +18

b. *Non-residential districts.* Screening of the parking area is required in nonresidential districts, when the following conditions exist: The lot serves any use, except single-family units or a multi-family project of less than sixteen (16) units, and the lot adjoins a residential zoning district or is separated from a residential district by an alley, locale or collector street. A screen consisting of a solid wall or landscaping shall be required along the portions of the parking lot and drives which adjoin or are across the street or alley from the residential zoning district, detailed as follows: +18

- (1) Along that portion of the perimeter of the parking area bounding or within interior, side or rear yards, the wall shall not be less than [than] four (4) feet nor more than six (6) feet in height. Landscaping, when matured, shall be a minimum of four (4) feet in height and shall be maintained in a living condition. +18
- (2) Along that portion of the perimeter of the parking area bounding or within a street side or front yard, the wall shall be three (3) feet in height. Landscaping shall, when matured, be a minimum of three (3) feet in height and shall be maintained in a living condition. +18
- (3) All landscaping or wall construction adjacent to driveway entrances is not to exceed three (3) feet in height within a triangle measuring ten (10) feet in depth from the property line tapering to the property line twenty (20) feet on either side of me [the] driveway. All landscaping and wall construction shall comply with the vision obscurement requirement of the Phoenix City Code. +18
- (4) All required walls and landscaping shall be maintained in a neat and orderly condition. +18
- (5) Landscaping as required in this section shall provide at least continuous evergreen (broad leaf or conifer) shrubs or hedges in a planting area which shall be a minimum of three (3) feet in width. +18

C. **Parking Requirements.** Off-street automobile parking space or area shall be provided according to the following table, except for large scale retail commercial uses (see Section 702.D). The parking ratios in the table identify the minimum level of parking required to serve that use and receive site plan approval. \*18

Type of Land Use	Parking Requirements
+18 Art Gallery	1 space per 300 sq. ft.
+18 Art Studio	1 space per 500 sq. ft. or 1 per 1.5 employees
+12 Basketball and Volleyball Courts	9 spaces per court, 6 spaces per half-court
Batting Cages	1 space per 60 s.f. of batting area (area where batter is standing)
Billiard Parlors	1.5 spaces per table (3 feet around pool tables will not be counted for parking in bars & lounges)
Car Wash, Automated	1 space per 3 non-office employees and 1 space per 300 s.f. of office and sales area and 2 space per 24 feet of wash bay
Churches, Synagogues, Temples, or Other Places of Worship (See Public	1 space per 3 seats or 1 space per 58 lineal inches of pew space

### 31-13 Obstructing visibility at intersections.

**Compile Chapter**

(a) On all corner lots at public street intersections in any area zoned as residential there shall be no fence, wall, hedge or other landscaping higher than three feet, nor any obstruction to vision other than a post, column or tree not exceeding one foot in its greatest cross-sectional dimension between a height of three feet and a height of ten feet above the established grade of either street within that triangular area (unobstructed sight triangle) formed by the lot lines on the street side of such lot and a diagonal line joining points located at distances from the point of their intersection as enumerated in the following table:

**SIZE OF UNOBSTRUCTED SIGHT TRIANGLE AT CORNER LOTS**

Classification of Intersecting Public Streets*	Distance Measured Along Each Street (feet)
Local—Local	33
Local—Collector	33
Collector—Collector	33
Collector—Arterial	33
Arterial—Arterial	33
Arterial—Local	15 along local street 33 along arterial street

\*As defined by the City of Phoenix Street Classification Map.

(b) At all public street intersections in all areas not zoned as residential, there shall be no landscaping higher than three feet, other than a post, column or tree not exceeding one foot in greatest cross-sectional dimension between a height of three feet and a height of ten feet above the established grade of either street within that triangular area (unobstructed sight triangle) formed by the lot lines on the street side of such lot and a diagonal line joining points on such lot lines located at distances from the point of their intersection as provided in subparagraph (a) above. These restrictions shall not apply to structures otherwise permitted by the Zoning Ordinance.

(c) At intersections where over-width right of way exists, the measurement for the unobstructed sight triangle at public street intersections shall be measured from a point seven feet from the back of curb. The unobstructed sight triangle shall be formed by two separate lines parallel to the street property lines, which are offset 7 feet from the back of the street curbs, and joined by a diagonal line connecting the two separate lines at the distance defined in the previous table, and as shown in Illustration 1 below. Over-width right-of-way is defined as the width or right-of-way that exceeds the amount required as shown on the street classification map.

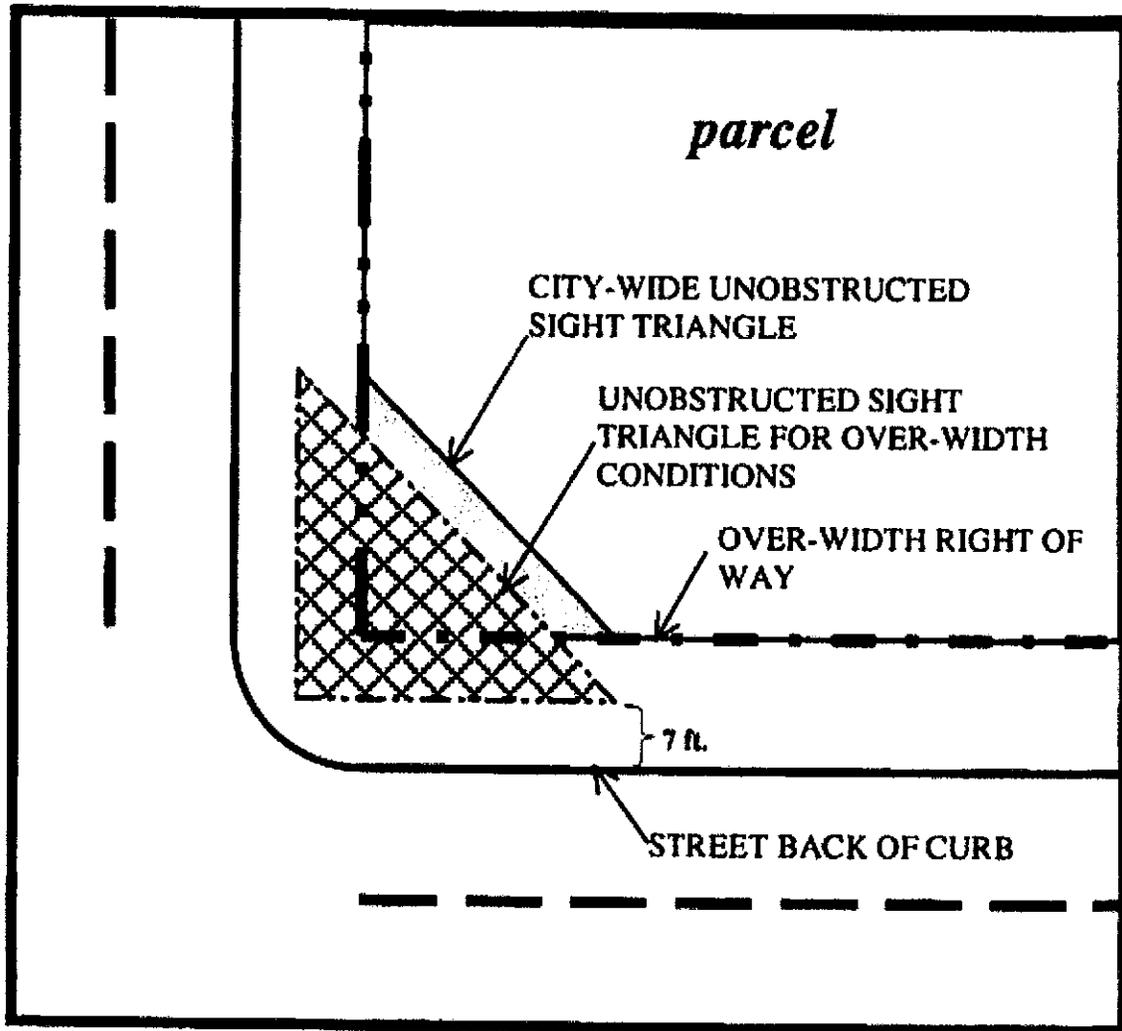


Illustration 1

(d) In the event of any violation of this section, and in addition to the penalty set forth in Section 1-5, Code of the City of Phoenix, the City, at the direction of the Street Transportation Director, is authorized, after giving the owner of the real property fourteen days' notice, to go upon said real property and to take any action reasonably necessary to effect full compliance with the provisions of this section, and a fee totaling twice the cost thereof shall be charged against the owner of said real property and shall be a lien against the property from which such obstruction is removed.

(e) The lien created by this section shall run with the land and the City, in its sole option, may record the lien with the County Recorder.

(f) Service of notice. Notice shall be served on the owner, lessee or person occupying such property by the City's authorized representative by personal service in a manner provided in Rule 4(d) of the Arizona Rules of Civil Procedure, or mailed to the owner, lessee or person occupying such property at his last known address or, if unknown, the address to which the tax bill for the property was last mailed. Such mailed notice shall be certified or registered mail. If the owner does not reside on such property, a duplicate notice shall also be sent to him at his last known address or, if unknown, the address to which the tax bill for the property was last mailed. For service of notice under this section the lessee and the occupant of the property shall each be deemed to be the agent of the owner.

(g) An owner, lessee or occupant (hereinafter referred to as appellant) who objects to the notice or to the amount of the charge may obtain a review by filing his objections in writing with the City Auditor Department within the time specified in the notice or no later than thirty days following the day upon which the first billing was mailed to him. The written objection shall include the following:

- (1) Statement of the amount under protest;
- (2) Statement of the reason why the notice or billing was incorrect and should be adjusted; and
- (3) Request for a hearing if one is desired.

(h) The protest shall be assigned to and considered by a hearing officer permanently assigned to such position within the office of the City Auditor, or a person ("hearing officer") designated by the City Auditor. Such hearing officer or designee shall in no event be an employee of the Street Transportation Department.

If a hearing is not requested, a decision will be made on the protest based on the written evidence submitted.

(i) The hearing officer shall provide to the Street Transportation Department a copy of the appellant's protest and shall request from the Street Transportation Department a response to the issues raised. The Street Transportation Department shall submit to the hearing officer, and to the appellant, a written response to the hearing officer's request within thirty days of receipt of such request.

(j) Upon receiving a written request for an extension of time at any time prior to a deadline in this section, the hearing officer shall be empowered to grant extensions of time.

(k) A hearing, if requested, shall be scheduled as soon as practicable after the response in subsection (h) is submitted. The conduct of the hearing will be in accordance with rules and procedures established by the City Auditor. Hearings shall be conducted informally and the rules of evidence shall not apply, except that the decision of the hearing officer shall be made solely upon substantial and reliable evidence. The appellant shall have the opportunity to appear with witnesses and counsel to present information on behalf of the appellant. All expenses incurred in the hearing, including counsel fees, witness fees, mileage, reproduction of documents, and other similar costs, shall be borne by the party who incurred them.

(l) After the hearing on the matter, the hearing officer shall, within thirty calendar days, make a written determination on the evidence presented. The determination shall consist of findings of fact and the disposition of the dispute.

(m) The hearing officer shall be empowered to make a final decision as to the validity of the appellant's objection. If the hearing officer determines the appellant's objection to be valid, the officer shall be empowered to make an appropriate adjustment to the appellant's bill or notice. The determination of the hearing officer shall be final and conclusive between the City and the appellant as to the objection submitted for determination. If the hearing officer determines that an amount is due from the appellant to the City, the amount shall be immediately due and payable upon issuance of the written determination provided in subparagraph (k).

(Code 1962, § 35-10; Ord. No. G-2094, § 1; Ord. No. G-3077, § 1; Ord. No. G-3313, § 1; Ord. No. G-4736, § 1(Exh. A), adopted 9-7-2005, eff. 10-7-2005)

**Cross reference**—Trees and vegetation, ch. 34; zoning, ch. 41.

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**The Phoenix Charter and City Code are current through Ordinance G-6198, passed August 31, 2016.**

Disclaimer: The City Clerk's Office has the official version of the Phoenix Charter and City Code. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

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