

### 3.9.5 Sight Distance

**Comment [RMM1]:** All Figures, tables, section numbers and cross references will be updated and reconciled at final draft.

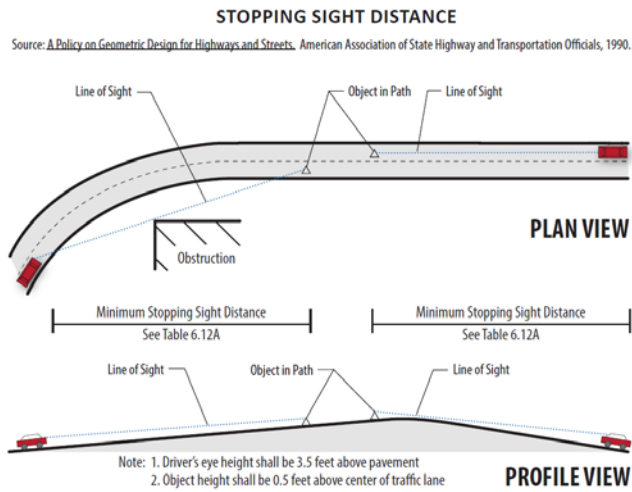
#### 1. General Provision

- 1.1. Roadways, intersections, site entrances, and driveways need to have sufficient visibility to allow motorists to easily travel and enter or exit safely, as well as protect pedestrians and bicyclists.
- 1.2. Visibility must be maintained in accordance with the current AASHTO guidelines for roadway design intersection visibility. The information below is based on the 2011, 6<sup>th</sup> Edition of *A Policy on Geometric Design of Highways and Streets*.
- 1.3. Depending on specific site conditions, adjustments to sight distances may be required. These factors may include, but are not limited to, side street approach grades greater than 3%, median widths of the crossing street, or skewed intersections. Waivers may also be granted for alleyways in Downtown, Urban Centers, and Mixed Use Zones.

#### 2. Stopping Sight Distance

- 2.1. Stopping Sight distance is the length of roadway visible to the driver. The minimum sight distance available on the roadway should be sufficiently long to enable a vehicle traveling at or near the design speed to stop or change lanes before reaching a stationary object in its path.
- 2.2. The method of measuring stopping sight distance along a roadway is illustrated in Figure 1.
- 2.3. Minimum stopping sight distances, as shown in Table 1, shall be provided in both the horizontal and vertical planes for planned roadways as related to assumed driver's eye height and position.
- 2.4. Adequate sight distance shall be provided at all driveway access points.
- 2.5. Where there are sight obstructions (such as walls, cut slopes, buildings, or other hazards) on the inside of curves, changes in roadway alignment may be required to obtain adequate stopping sight distance if the sight obstruction cannot be removed.

**Figure 1. Stopping Sight Distance**



**Comment [RMM2]:** DPS to update figure to reference 2011 AASHTO and table 1

**Table 1. Minimum Stopping Sight Distance**

Design Speed (mph)	Min. Stopping Sight Distance (ft), Street grade (%)						
	Upgrades			Flat	Downgrades		
	9%	6%	3%	0%	-3%	-6%	-9%
25	140	145	150	155	160	165	175
30	180	185	200	200	205	215	230
35	225	230	240	250	260	275	290
40	270	280	290	305	315	335	355
45	320	330	345	360	380	400	430
50	375	390	405	425	450	475	510

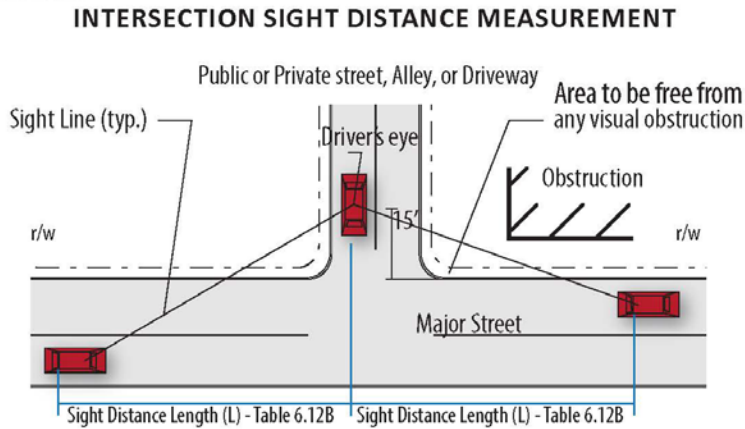
### 3. Intersection Sight Distance

- 3.1. Intersections should be planned and located to provide as much sight distance as possible. A basic requirement for all controlled intersections is that drivers must be able to see the control device well in advance of performing the required action. Stopping sight distance on all approaches is needed at an all-way stop. Obstruction-free sight triangles shall be provided for both left and right turns.
- 3.2. Intersections of local streets with major streets classified as collector or above shall not be located at or near horizontal curves without special evaluation of intersection sight distance. The location of an intersection on the "inside" of a horizontal curve is a situation that will typically result in intersection visibility problems. The location of any property lines, fences, or other obstructions will need to be evaluated to ensure that the minimum sight distance is maintained. See figure IX-40 p 762, A Policy on Geometric Design of Highways and Streets, 2011 AASHTO, or later edition.
- 3.3. At any intersection of two roadways, a sight triangle shall be provided for an unobstructed path of sight. The sight distance triangle can be defined by connecting a point that is along the minor street's edge of pavement and 15 feet from the edge of pavement of the major street, with a point that is distance (L) along the major street's edge of pavement as shown in Figure 2.
- 3.4. Table 2 summarizes the required sight distance (L) along the major road for a stopped vehicle on the minor street to cross the major street. If a roadway is divided with a median width of 20 feet or more for passenger vehicle crossings or 40 feet or more for truck crossings, the required sight distance may be based on a two-stop crossing and consideration given to the width of each one-way section at a time.
- 3.5. Adjustments to the intersection sight distance must be made for side street approach grades greater than 3%, skewed intersections, and other types of roadway geometry in accordance with section 9.5.3 Intersection Control of the AASHTO guidelines (2011) or latest addition.

**Comment [RMM3]:** This section is a proposal to remove the 35' clear sight triangle located in the Traffic Code. The sub-committee debated this change extensively however, we would like the executive committee input.

**Figure 2. Intersection Sight Distance**

Comment [RMM4]: DPS to update figure to reference 2011 AASHTO and table 2



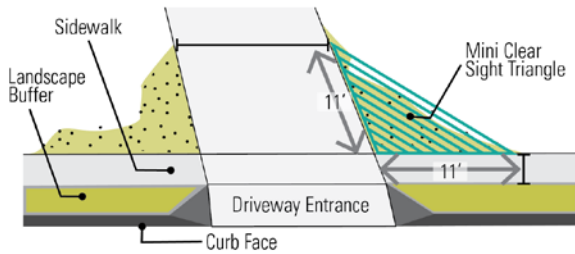
**Table 2. Minimum Intersection Sight Distance**

Speed Limit (mph)	Minimum Intersection Sight Distance (ft)					
	2 Lane Undivided		3 Lane Undivided or 2 Lane Divided w/ 12' Median		4 Lane Undivided	
	Left Turn	Right Turn	Left Turn	Right Turn	Left Turn	Right Turn
20	230	200	240	200	250	200
25	280	240	300	240	320	240
30	340	290	360	290	380	290
35	390	340	420	340	440	340
40	450	390	480	390	500	390
45	500	430	530	430	570	430
50	560	480	590	480	630	480

#### 4. Mini Clear Sight Triangle

Driveways on Residential Streets need to maintain the mini sight triangle as shown in Figure 3. This triangle starts at the sidewalk and measures 11 feet on a side.

**Figure 3. Mini Clear Sight Triangle**



#### 5. Visibility for Site Entrances and Driveways

Site entrances and driveways shall be designed to preserve the clear sight triangle free of visual obstruction as described in section 3 and 4 above.

#### 6. Sight Distance Note

The following note is required in all site plans: Landscaping, signage, walls, fences, trees, and shrubbery between three (3') and eight feet (8') tall (as measured from the gutter pan) are not allowed within the clear sight triangle.

#### 7. Objects permitted in the Clear Sight Triangle

Objects, that may be located in the sight triangle, include, but are not limited to, hydrants, utility poles, utility junction boxes, and traffic control devices provided these objects are located to minimize visual obstruction. Objects under eight inches (8") wide may be allowed.