

*By Jonah Finkelstein,
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According to the American Association of State Highway and Transportation Officials' (aka AASHTO) *A Policy on Geometric Design of Highways and Streets* (aka the Green Book), **"The designer (of a roadway) should provide sight distance of sufficient length that drivers can control the operation of their vehicles to avoid striking an unexpected object in the traveled way."** In an attempt to demystify my industry – it means that a motorist should be able to see cars, deer, kids, etc. in intersections or roadways in enough time to stop before hitting them.

This sight distance explanation can be further broken down depending on the



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specific movement the vehicle is making as well as the location of the vehicle in the roadway. Below are some of AASHTO's sight distance definitions with a quick summary of what it means (in hopefully a less jargony way):

Roadway Sight Distances

Passing Sight Distance

- "The passing driver should be able to see a sufficient distance ahead, clear of traffic, so the passing driver can decide whether to initiate and to complete the passing maneuver without cutting off the passed vehicle before meeting an opposing vehicle that appears during the maneuver."
- Enough sight distance should be provided to assure drivers have sufficient sight distance to perform a safe passing maneuver without cutting off any vehicles.

Stopping Sight Distance

- AASHTO – “The available sight distance on a roadway should be sufficiently long to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path.”
- Sight distance along a roadway should provide enough distance for a driver to come to a complete stop after seeing a condition requiring the stop.

Decision Sight Distance

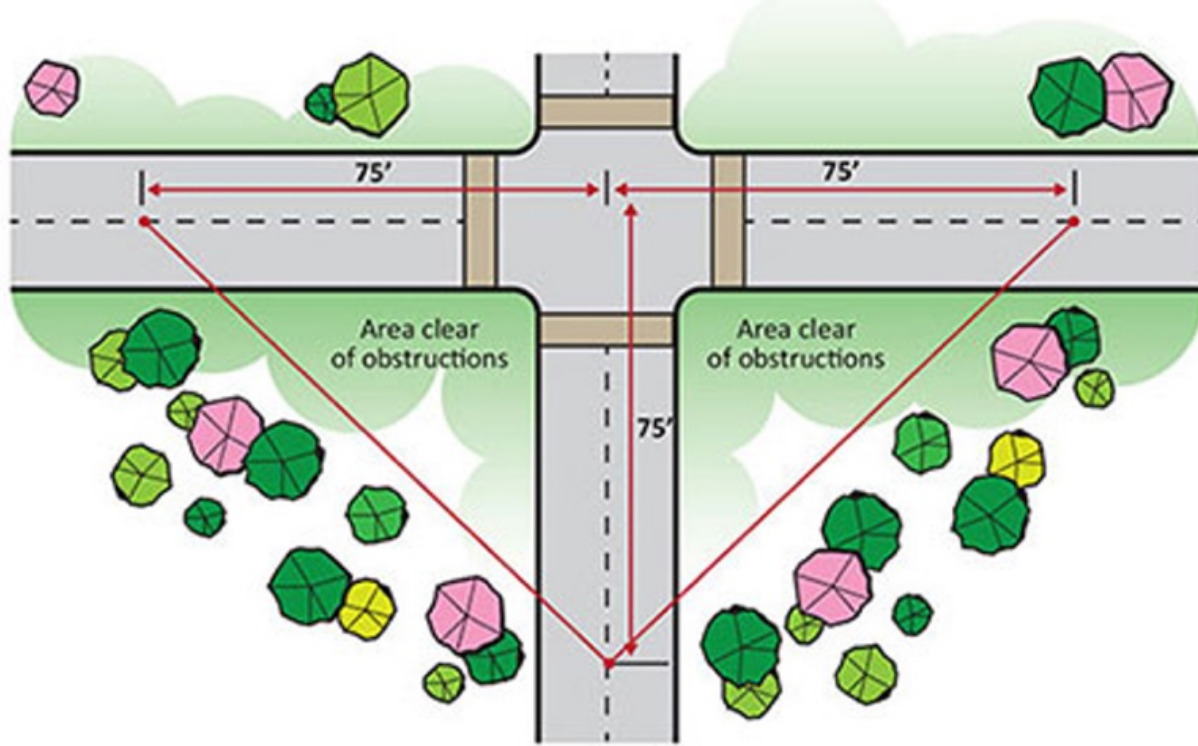
- “Decision sight distance is the distance needed for a driver to detect an unexpected or otherwise difficult-to-perceive information source or condition in a roadway environment that may be visually cluttered, recognize the condition or its potential threat, select an appropriate speed and path, and initiate and complete complex maneuvers”
- This is much like Stopping Sight Distance however occurs in cluttered

and more difficult driving areas, such as interchanges or areas with heavy signage. It assures drivers that enough sight distance is provided to notice a condition requiring a stop in a more complex environment, select a path to proceed or stop, and then complete the chosen maneuver safely.

Intersection Sight Distances (Sight Triangles)

A Sight Triangle is similar to standard sight distance, however is located at an intersection. The distance is defined as a triangle, as each leg of the intersection requires sufficient sight distance to the adjacent approaches creating a triangle. See Figure 1 below for a sight triangle example.

Figure 1: Sight Triangle Example



<http://www.landscapes2.org/transpo-rtation/circulation/20-Intersections.cfm>

Approach Sight Triangles

- “Each quadrant of an intersection should contain a triangular area free of obstructions that might block an approaching driver’s view of potentially conflicting vehicles. The length of the legs of this triangular area, along both intersecting roadways, should be such that the driver can see any potentially conflicting vehicles in sufficient time to slow or stop before colliding within the intersection”

- Sight distance should be provided along intersection approach legs to allow drivers to view potential conflicting vehicles/objects on the intersecting roadway, and complete a safe stopping maneuver.

Departure Sight Triangles

- “(Departure sight triangles) provides sight distance sufficient for a stopped driver on a minor-road approach to depart from the intersection and enter or cross the major road.”
- The sight distance for a stopped vehicle, at an intersection junction, should be enough for the vehicle to view conflicting vehicles/objects approaching on the adjacent/crossing roadway to proceed on or through the intersection without conflict.

Providing sufficient sight distance measures along roadways and intersections is a pretty clear cut way to

improve the safety of roadways, intersections, and pedestrian crossings and benefits all users of our transportation system.



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• in **PROFESSION** by Mike Spack

• | • August 29, 2017 • | • 4

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