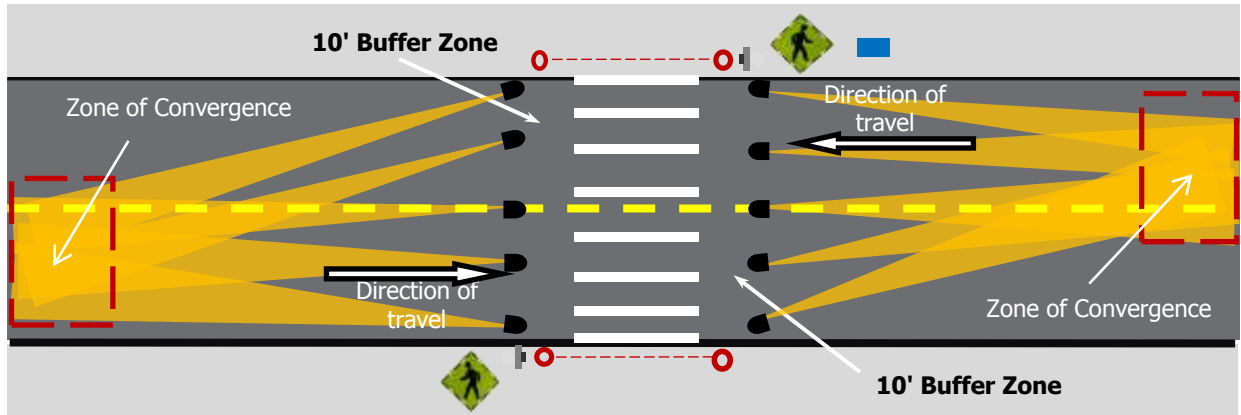


Zone of Convergence

The Zone of Convergence (ZOC) is an area of light created by the merged light beams of the outward facing rows of in-roadway warning lights (IRWLs) on both sides of the crosswalk. When merged, the beams form a blanket of light that floods the approaching traffic lane(s). To achieve the ZOC, the angle of each IRWL must be carefully positioned by pointing each one directly at the eye level of approaching motorists. The result is a slightly different, completely unique angle for each IRWL.



The ZOC is located between 200' to 400' (61m to 122m) ahead of the crosswalk. This distance between the crosswalk and ZOC allows motorists ample time to react and safely slow to a stop based on the vehicle speeds and minimum stopping distance on dry pavement (see chart below).

Each IRWL signal head disperses a wide beam of light in a 30° angle that is visible from a distance of one mile. The angled position of each IRWL signal head changes based on curves in the roadway, hills and other environmental factors that must always be taken into account. Best engineering judgment should always be used. Refer to LightGuard Systems 2-Lane, 4-Lane and other common crosswalk layout diagrams for specific layout recommendations.

Minimum Vehicle Stopping Distance on Dry Pavement



System Components Key

-  In-Roadway Warning Light (IRWL)
-  Pedestrian (W11-2) sign or School crossing sign (S1-1) with LED enhanced border
-  Automatic Activation Bollards
-  Power Control Unit (PCU)
-  Manual push button assembly
-  The *Zone of Convergence*