

Electronic Red Light Safety Program

Intersection Selection Process

January 26, 2016

Initial Screening

- 1) Intersections are first ranked (highest to lowest) by the total number of red-light running crashes by approach using the most recent five years of available crash data. Summary crash data is used (i.e., individual police reports are not reviewed during this step). This includes existing ERLSP intersections with approaches that are not currently monitored.
- 2) The following intersections are eliminated from further consideration during the current selection process:
 - a) Locations that were eliminated from consideration in prior years due to site constraints (see Step 5 below)
 - b) Locations where remedial improvements were installed during or after the crash study period that would reduce the potential for red-light running crashes (e.g., signal reconstruction or intersection improvements project)
- 3) Cameras are installed on an intersection approach; therefore, the top-ranked intersections (typically intersections with 5 or more red-light running crashes during the study period) identified in Steps 1 and 2 are then re-ranked (highest to lowest) by the highest number of “at-fault” crashes by approach based on a review of police reports.
- 4) The top-ranked intersections are evaluated to determine whether other types of engineering solutions could address the red-light running crashes.
 - a) If the engineering solutions can be implemented in a relatively short time period, they are implemented based on availability of funding and the intersection is eliminated from consideration during the current selection process.
 - b) If DeIDOT Traffic determines that the solutions cannot be implemented in a timely manner or may require a capital project, the intersection in question may still be considered for red light camera installation.
 - c) For all intersections under consideration, required yellow change and red clearance interval times are calculated and updated based on DeIDOT’s revised engineering practices which went into effect as of February 25, 2015 (*Traffic Design Manual - 2015 Edition* http://www.deldot.gov/information/pubs_forms/manuals/traffic_design/index.shtml).
- 5) Site visits are performed to determine whether it is feasible to install and operate ERLSP equipment at the remaining candidate intersections. Factors considered include:
 - a) Compatibility with site conditions/infrastructure

- b) Availability of right-of-way for ERLSP equipment
- c) Availability of clear lines of sight for camera perspectives
- d) Confirmation that no road construction or intersection upgrades that would disrupt the camera system are planned at the intersection in the near future

Final Screening

- 6) Actual violation data is collected (by the vendor) for the top intersections identified in the initial screening (Steps 1 – 5).
- 7) The violation data is reviewed by DeIDOT and compared to each intersection's red-light running crash data and a determination is made as to which approaches should be monitored based on the following:
 - a) The approach with the highest number of crashes by at-fault approach shall be monitored
 - b) Other approaches with a high frequency of red-light running crashes
 - c) High frequency of violations
 - d) Complementary movements (i.e., for approaches where the left-turn movement and the through movement share a stop line, both movements may be monitored)
- 8) In accordance with the authorizing legislation, prior to the installation of cameras at new intersections, the incumbent state senator and representative for the districts in which such locations are proposed shall be notified.