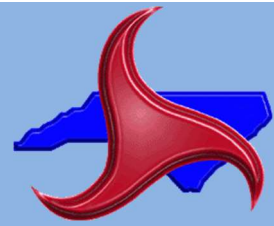


NCDOT Traffic Safety Unit Programs



Rest in Red Evaluation

NCDOT completed a safety study of 11 rest in red sites in North Carolina where the traffic signal is programmed to be RED when no traffic is detected.

Background

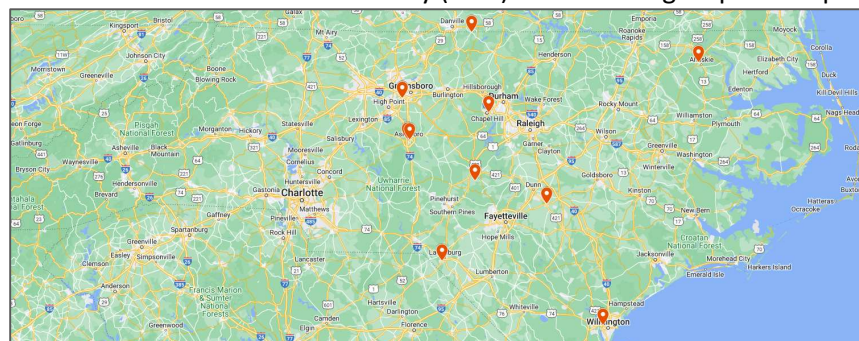
Rest in Red is a countermeasure where the traffic signals are programmed to be Red in all direction if no traffic is detected. This countermeasure has been used at a variety of locations including urban and rural intersections, ramp terminals, locations with varying approach cross sections, and intersections with speed limits of 25 to 55 mph. It can be implemented all day or only during a specific time period (typically through the night).



Rest in Red Site
Source: Google Streetview

This study, using a naive before and after analysis, looked at 5 rest in red sites that had before and after data as they were signals prior to implementation. The other 6 sites only had after data as they were either stop controlled, always rest in red, or newly constructed.

Some of the sites with before and after data had additional changes implemented in addition to rest in red implementation. One location had a time of day (TOD) rest in red signal plan- 10 pm to 6 am.



Studied Rest in Red Locations in North Carolina

Results

The overall results from the before/ after study locations indicate a:

- 43% decrease in total crashes
- 51% decrease in frontal impact crashes
- 69% decrease in angle crashes
- 65% decrease in red light run crashes.

Additional Comments

- The TOD site reported no red light run crashes during operational hours.
- Only 1 pedestrian crash was reported across all 11 sites.
- All 5 intersections experienced a reduction in frontal impact crashes.
- This evaluation is considered to be preliminary due to the small sample size, but current results show promise for this countermeasure and the Safety Evaluation group plans to re-evaluate in the future.