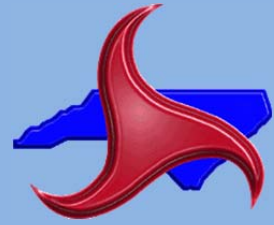


# NCDOT Traffic Safety Unit Programs



## Vehicle Entering When Flashing Evaluation

NCDOT completed a safety study of over 70 two-way stop controlled intersections in North Carolina where “Vehicle Entering When Flashing” (VEWF) intersection conflict warning systems have been installed. The treatment consists of vehicle actuated sign and flasher assemblies placed at or near the intersection to warn motorists on the major and/or minor road of vehicles entering the intersection.

### Background

VEWF are typically used as a treatment for frontal impact crash patterns that may be caused by poor gap acceptance and/or sight distance issues. Four categories of VEWf systems are used based on the direction of the alert and placement from the intersection. All of the warnings depend upon vehicle detection via inductive loops and activate flashing beacons in conjunction with a static sign.

Category 1 – Overhead Signs and Flashers at the Intersection on Major Road (Photo 1)

Category 2 – Overhead Signs and Flashers at the Intersection on Minor Road (Photo 2)

Category 3 – Post Mounted Signs and Flashers in Advance of Intersection on Major Road (Photo 3)

Category 4 – Locations with Combination of Category 1 through Category 3 (Photo 4)



### Results

VEWF appears to be more effective for two-lane at two-lane intersections than four-lane divided at two-lane intersections. For two-lane at two-lane intersections, major road alerts in advance of the intersection (Category 3) and a combination of both major and minor road alerts (Category 4) were determined to be most effective, with a 32% and 25% reduction in total crashes, respectively. Target frontal impact crashes for these categories were also reduced by 32% and 20%, respectively. Significant reductions in total and target crashes were not observed for Category 1 or 2.