About Traffic Signals

Will traffic signals help reduce the number of accidents at intersections?



Properly placed and warranted signals can improve the overall flow of traffic, but they do not always prevent accidents. Very often, accidents of certain types increase after traffic signals are installed.

Signals can be very effective in reducing right-angle collisions, but they could lead to increases in "rear-end" type collisions and other kinds of accidents. Some pedestrian-related accidents may occur because pedestrians get a false sense of security when crossing signal-controlled streets.

According to conclusions drawn from two studies conducted in California, signals may have an adverse effect when installed at sites where there were only minor problems prior to the installation of the signals. The first study included more than 1,000 new signals and the second included 24 major California cities.

A related third study, called the Schoene study, warns of a possible increase in accidents whenever signals are installed at intersections where there were fewer than 10 right-angle accidents per year prior to signalization.

Signals installed at collector and local street intersections may be necessary for improving access to major streets, but they can also result in more neighborhood cut-through traffic.

When should Traffic Signals be installed?

The Manual on Uniform Traffic Control Devices (MUTCD) is the governing guidance for all traffic signal installation in Arizona. The following are some points Traffic engineers take into consideration when deciding whether a traffic signal should be installed.

- Is the volume of vehicles entering an intersection creating dangerous confusion or congestion?
- Is traffic on the busy street so heavy that drivers on the side street will try to cross in an unsafe manner?
- Is there often a considerable crowd of pedestrians waiting to cross a wide, busy, and high-speed street?
- Do school children clearly require a traffic signal to cross the street with safety?
- Would the signal affect traffic flow adversely because of incompatibility with another near-by signal?

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These are just a few of the points traffic engineers take into consideration for determining when traffic signals should be installed.

Before making such determination, traffic engineers first assess whether the conditions at potential traffic-signal locations meet the requirements established in nationwide standards.

When the established appropriate standards and conditions for installing a traffic signal are met, the signal

will operate effectively. When those standards and conditions are not met, the signal may only cause more problems.

If you would like to ask questions or discuss further, please call the Public Works Department at 623-349-6800.

