

ANSWERS TO FREQUENTLY ASKED QUESTIONS:

HOW ARE TRAFFIC SIGNALS WARRANTED?

Martin County uses the criteria established in the Manual on Uniform Traffic Control Devices (MUTCD) to determine whether a traffic signal should be installed. The MUTCD identifies the following factors (warrants) to assist in determining whether the traffic signal is justified¹:

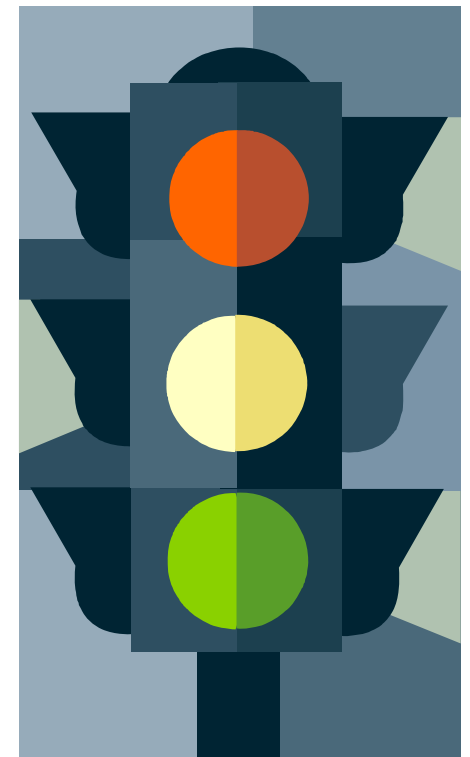
- Warrant 1. Eight-hour vehicle volume
- Warrant 2. Four-hour vehicle volume
- Warrant 3. Peak-hour volume
- Warrant 4. Pedestrian volume
- Warrant 5. School Crossing
- Warrant 6. Coordinated signal system
- Warrant 7. Crash experience
- Warrant 8. Roadway network.

A traffic signal should not be installed unless one or more of the factors are met, nor should a traffic signal be installed if an engineering study indicates that installing a traffic signal will not improve the overall safety and /or operation of the intersection.

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MARTIN COUNTY ENGINEERING DEPT. TRAFFIC DIVISION

Traffic Signals On State & County Roadways



¹ U.S. Department of Transportation and the Federal Highway Administration, Manual on Uniform Traffic Control Devices for Streets and Highways, 2003 ed. (2003 ATSA / ITE / AASHTO), Part 4

Warrant 1, the eight-hour volume, is intended for application where a large volume of intersecting traffic is the principal reason to consider installing the traffic signal or when the volume on the major street is so high that traffic on the minor street suffers *excessive* delay or conflict in entering or crossing the major street.

Warrant 2, the four-hour volume, is intended to be applied where the volume of intersecting traffic is the principal reason to consider installing the traffic signal.

Warrant 3, the peak-hour volume, is intended for use at a location where traffic conditions are such that, for a minimum of one hour of an average day, the minor street suffers *undue* delay when entering or crossing the major street.

Warrant 4, pedestrian volume, is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the street.

Warrant 5, school crossing, is intended for application where the fact that school children crossing the major street is the principal reason to consider installing a traffic signal.

Warrant 6, coordinated signal system, is intended to necessitate proper platooning (grouping) of vehicles to maintain traffic flow on the major street and where more than 1,000 feet would exist between other traffic signals.

Warrant 7, crash experience, is intended for applications where the severity and frequency of crashes are the principal reason for consideration.

Warrant 8, roadway network, is intended to encourage the concentration and organization of traffic flow.

WHO DETERMINES WHERE TRAFFIC SIGNALS CAN GO?

The Martin County Traffic Division monitors vehicular volumes on key roadway links and vehicular and pedestrian volumes at key intersections throughout the County. In addition, the Traffic Division monitors all crashes reported to the Martin County Sheriff's Office, the City of Stuart, the Florida Highway Patrol, the Town of Sewalls Point, and the Town of Jupiter Island. Each year this data is analyzed to identify the intersections (signalized or not) that experience the greatest rate of crashes. Staff uses this data to analyze the warrants and prioritize which intersections could be modified to improve safety and increase traffic capacity, thereby decreasing delays to motorists. Each year, the Board of County Commissioners allocates funds towards traffic signals and intersection improvements. These funds are applied in priority order until the funds are exhausted.

HOW LONG DOES IT TAKE TO GET A TRAFFIC SIGNAL?

Once prioritized and funded, the traffic signal and its components must be designed. Among many other details, the design includes the determination of the structural components, the pole location, the number and placement of the signal heads, coordination with utility companies to minimize or avoid conflicts, and possible right-of-way acquisition. This process can take four to six months, depending on the complexity.

If the traffic signal is proposed along a roadway maintained by the Florida Department of Transportation (FDOT), then permits for construction are required. It usually takes another three to six months to obtain such permits.

Construction can begin after the design is complete and the permits, if required, have been obtained. The contractor must procure the poles and other equipment and then install the necessary components to make the signal operate as intended. The construction process is typically six to eight months.

The total duration can be anywhere between thirteen and twenty months **after** it is determined that the traffic signal is warranted and there are adequate funds available