

We at Collier County understand the importance of traffic signal timing. It governs how vehicles and pedestrians move through intersections, directly impacting safety and efficiency.

We have two types of signal timings as shown below.

1. **Timing to improve capacity and traffic flow**, which refers to the strategic allocation of green, at signalized intersections; and
2. **Timing to improve safety**, which refers to implementation of special timings/operations or increasing timings beyond minimum standards.

To improve capacity and traffic flow Engineers use timing plans to determine the list of items shown below.

1. **Cycle length**: The total time for one complete sequence of signal phases.
2. **Green time**: Duration of the green light for each movement.
3. **Offset**: The amount of time to delay the start of green at the adjacent intersections to improve progression.
4. **Pedestrian intervals**: Time for “WALK” and flashing “DON'T WALK” signals.

The Collier County Traffic Management Center (TMC) Team is always making timing adjustments to improve traffic flow at various intersections. The team is currently working on Immokalee Road from Collier Blvd. to Oil Well Road to reduce vehicle delay and stops while traveling on Immokalee Road, particularly during the peak hours. Typically, comprehensive timing plan studies are conducted once every three-to-five years for each coordinated section. These studies include collecting traffic counts of all movement at all the intersections in the corridor during season and out of season, conducting detailed capacity analysis of all periods of the day including AM peak, PM peak, mid-day, evening and late evening, for the weekdays, as well as for Saturday and Sunday. Then conducting before and after evaluations.

Recently, the Immokalee Road corridor from Arthrex Blvd. to Quarry Road/Woodcrest Road was retimed, resulting in measurable reductions in delay along the corridor.

It is important to note that signal timing plans are designed with the posted speed limit in mind. Drivers traveling above the speed limit may encounter more frequent stops or delays. In addition, there are external factors—such as emergency vehicles, pedestrians crossing, or other unexpected events—that may temporarily disrupt signal coordination. When this occurs, the signals adjust cycle lengths to restore coordination, which can momentarily increase delay.

To improve safety throughout the corridor, engineers apply both calculations and professional judgment to set timing features such as those listed below.

1. **Yellow and all-red intervals:** Allowing vehicles to safely clear the intersection, taking into account roadway geometry, vehicle speed, vehicle length, and deceleration rates.
2. **Leading pedestrian intervals:** Providing pedestrians a dedicated all-red phase where no vehicles may enter the intersection.
3. **Protected-only movements:** Restricting certain turns to dedicated green arrows to reduce conflict points.

All Collier County traffic signal yellow and all-red intervals are timed using the Florida Dept. of Transportation (FDOT) District 1 calculations.

Traffic signal timing is more than just red, yellow, and green—it's a sophisticated system that balances safety, efficiency, and mobility with smart technologies and thoughtful design.

Also, we wanted to mention besides timing of traffic signals, adding additional roadway corridors can also help relieve congestion. The county is currently in the process of extending Vanderbilt Beach Road further east. The current seven-mile segment that is under construction will be an alternate east-west travel route and is expected to help relieve some of the traffic using Immokalee Road. Additional segments of Vanderbilt Beach Road are being designed to extend the roadway further east in the future which will further assist with traffic flow.