

CITY CONNECTION

The Traffic Control Division is responsible for the installation, operation and maintenance of all traffic control devices within the City of Stillwater. The City has approximately 61 signalized intersections and 7,300 traffic signs on over 500 lane miles of roadway.

Many of the City's traffic signals have been installed with new devices to make them more efficient for emergency vehicles. Equipped emergency vehicles have an emitter that broadcasts a visible light or an invisible infrared signal to a receiver, which is mounted on or near the traffic signal. When the receiver detects a recognized signal the traffic signals change to provide a green light, and therefore intersection right-of-way to emergency vehicles.

Video vehicle detection equipment is also being installed on traffic signals for everyday traffic. This new type of technology is replacing older loop detection technology. Loop detection technology relies on a wire coil placed inside a saw cut in the pavement. The coil then detects when a vehicle passes over the site, like a one-way metal detector, to activate the signal. Conversely, video vehicle detection equipment learns to read the entire background of an intersection. The camera detects a change when vehicles enter the background and activates the signal. Video detection equipment makes traffic signals more proficient as it can see the complete intersection, activating signals earlier, instead of relying on a vehicle to pass over one specific site in the pavement.

Timing of the intersections' traffic signals is maintained by a traffic signal controller. The controller is a programmable device that contains and runs the timing for the traffic signal. Each intersection is equipped with a traffic signal controller that communicates with a master controller. For example, intersections from 6th Avenue to McElroy along Perkins Road are programmed to run in coordination with each other. The signals are synchronized with a timing pattern adjusted off a sync (or reference) point. Each intersection, in this example, is offset by a percentage of a cycle length to keep traffic flow consistent. All communication that flows from the master controller to the individual controllers can be accessed from the traffic control office via modem for adjustments.

Traffic signals are also examined for proper operation by an internal device. The internal device, or conflict monitor, is designed to monitor each signal to ensure that it operates correctly. If an improper operation is detected, it immediately puts the intersection into all red flash. As the name implies, one thing that is monitored is possible conflicting signal outputs or in other words, no conflicting green lights.

Traffic control devices are an intricate detail in maintaining our City's traffic flow.

City Connection is brought to you by the City of Stillwater as a public service to provide regular information about City services and to respond to general questions asked by the public about their local government. Today's information is provided by Public Works. For further information, please contact Shannon Cox, Public Works Management Analyst, at 405-742-8270 or by email at scox@stillwater.org