Have you ever thought ...

that a traffic signal light was needed at an intersection? Have you ever wondered who is responsible for determining if a signal was needed? Who would install it? Where should you go to ask for one? How much do they cost and who pays for them? Would a traffic signal be the best solution for a traffic problem or is there another solution that might be more effective? The Texas Department of Transportation (TxDOT) has answers to your questions about signal lights.

Benefits of traffic signals

When properly located and operated, traffic signals are an invaluable tool for the safe and efficient movement of vehicles and pedestrians. Traffic signals assist traffic engineers in controlling traffic in a safe, orderly and efficient manner. They benefit the traveling public by providing orderly movement of vehicles, improved safety, reduced travel times and increasing the amount of traffic that an intersection can handle.

It is TxDOT's job to identify locations where traffic signals will benefit motorists. Providing enhancements to our transportation system is a responsibility we take very seriously. Even though they are valuable tools, traffic signals are not always the answer and not appropriate for use at every intersection.

Who handles traffic signals?

Cities and counties are usually responsible for traffic signals on city streets and county roads. Local governments share responsibilities with TxDOT regarding state highways when a city's population exceeds 50,000. This includes the costs to develop, install and operate traffic signals.

When roadways intersect the state highway system, TxDOT handles the installation, operation and maintenance of traffic signals. Our district employees work hard to evaluate all requests for signal lights.

Evaluating traffic signals

When TxDOT receives a request for a new traffic signal on the state highway system, the local district office conducts an engineering and traffic study of the proposed location. To justify a new signal, traffic conditions must meet at least one of eight minimum standards, also known as "warrants." The *Texas Manual on Uniform Traffic Control Devices* (TMUTCD) specifies these warrants, which are based on guidelines set by the Federal Highway Administration and TxDOT. Examples of information used by traffic engineers to evaluate traffic signal requests include:

- amount of traffic on major and minor streets
- pedestrian activity
- number of school children crossing the site
- crash history of the site
- delay to existing traffic flow
- speed of traffic approaching intersection
- size of the community

Traffic engineers determine if a signal is the proper way to control traffic by carefully evaluating the number of vehicles and pedestrians that use the intersection. They also consider the layout of the intersection, development in the area, delays experienced by motorists during peak hours, average vehicle speeds, future road construction plans and the number and types of traffic crashes recorded.

A traffic signal evaluation can help assess whether a new signal is the correct answer for a particular location. In some instances, traffic signals aren't always the solution. When traffic signals are unwarranted as a result of current conditions, they may reduce the number of right angle crashes, but may actually increase the total number of crashes, particularly rear-end collisions.

Vehicle Imaging Video Detection Systems (VIVDS) are an alternative to traditional ground pavement sensors that activate traffic signals. VIVDS are less expensive and easier to maintain than ground sensors.

How traffic signals are approved

Traffic signal requests are sometimes denied because the location does not meet at least one of the eight warrants specified in the TMUTCD. In some cases, even if a location satisfies one or more of the required warrants, a request may not be approved because it could be more of a hazard than an aid. For example, if a traffic signal is requested near a sharp curve with a limited view of the intersection, a signal installation there may increase occurrences of vehicle crashes, rather than reduce them.

Other reasons for disapproval may be based on the traffic engineer's judgment that an alternative traffic control method is more suitable for the location than a new signal. This could include requesting an increased law enforcement presence at the location, improving visibility and public awareness of the intersection, improving pavement markings at the roadway location, installing flashing warning lights or the installation of additional signs. Our traffic engineers will also consider the possibility that placement of an unnecessary signal could have other undesirable impacts such as creating excessive and unnecessary delays, public disregard of the signal, traffic detouring to less desirable routes and the proximity of the proposed traffic signal to other existing signals.

Traffic signal installation

Each TxDOT district office is headed by a district engineer. This individual has the authority to approve a new traffic signal, pending satisfactory findings of the district traffic engineer's study and evaluation. Several factors impact the time it takes to install a traffic signal, such as the need for city or county coordination, preparation of engineering plans and the complexity of contract awards and installation. If plans proceed smoothly and funds are available, an approved traffic signal could be installed in one to two years.

How much do traffic signals cost?

Traffic signals are much more costly than is commonly realized, even though they represent a sound public investment when justified. A signal can cost between $80,000 and $100,000 to install depending on the complexity of the intersection. In addition to the design and installation costs, electrical power must be provided to the signal 24 hours a day and the signal must be routinely maintained to ensure proper operation.

Requesting a new traffic signal

TxDOT has 25 district offices located across the state to serve your local transportation needs. You can make a traffic signal request by contacting the district office for your particular area. Our district office personnel will also be able to help you determine which public agency is responsible for a specific location.

Who are we?

TxDOT is responsible for building and maintaining the state highway system. We have no authority to cite vehicle violations of any kind. That jurisdiction falls under the Texas Department of Public Safety and local law enforcement authorities.

For more information

To learn more about TxDOT and how to request a new traffic signal, contact your local TxDOT district office.

District	Phone	Address
Abilene	(325) 676-6800	4250 N. Clack
Amarillo	(806) 356-3200	5715 Canyon Dr.
Atlanta	(903) 796-2851	701 E. Main St.
Austin	(512) 832-7000	7901 N. I-35
Beaumont	(409) 898-5745	8350 Eastex Frwy.
Brownwood	(325) 646-2591	2495 US 183 N
Bryan	(979) 778-2165	1300 N. Texas Ave.
Childress	(940) 937-2571	7599 US 287
Corpus Christi	(361) 808-2300	1701 S. Padre Island Dr.
Dallas	(214) 320-6100	4777 E. US 80 (Mesquite)
El Paso	(915) 790-4200	13301 Gateway Blvd. West
Fort Worth	(817) 370-6500	2501 Southwest Loop
Houston	(713) 802-5000	7721 Washington Ave.
Laredo	(956) 712-7400	1817 Bob Bullock Loop
Lubbock	(806) 745-4411	135 Slaton Rd.
Lufkin	(936) 634-4433	1805 N. Timberland Dr.
Odessa	(432) 332-0501	3901 E. Highway 80
Paris	(903) 737-9300	1365 N. Main St.
Pharr	(956) 702-6100	600 W. US 83
San Angelo	(325) 944-1501	4502 Knickerbocker Rd.
San Antonio	(210) 615-1110	4615 NW Loop 410
Tyler	(903) 510-9100	2709 W. Front St.
Waco	(254) 867-2700	100 S. Loop Dr.
Wichita Falls	(940) 720-7700	1601 SW Pkwy.
Yoakum	(361) 293-4300	403 Huck St.

www.txdot.gov

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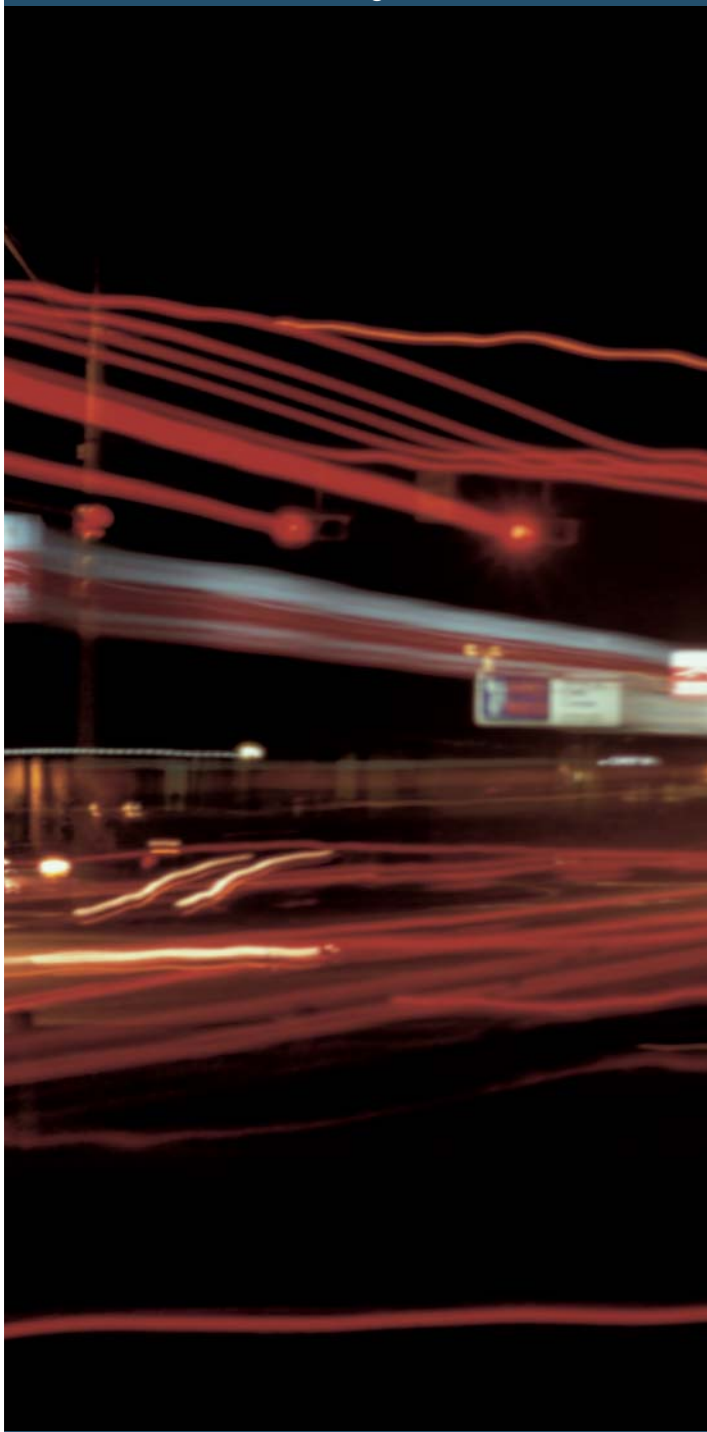
TEXAS DEPARTMENT OF TRANSPORTATION

Traffic Signals



TxDOT Customer Answer Series