

**CITY OF GOODYEAR
CITY COUNCIL ACTION FORM**

SUBJECT: Capital Improvement Program (CIP) Traffic Signals	STAFF PRESENTER: Rebecca Zook and Luke Albert COMPANY: CONTACT:
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RECOMMENDATION:

Provide Mayor and Council with an update on the City's Capital Improvement Program (CIP) traffic signals.

PURPOSE:

The purpose of this presentation is to explain how traffic signals are evaluated and prioritized for inclusion within the traffic signal CIP program.

BACKGROUND AND COMMUNITY BENEFIT:**Background**

The need for the installation of a traffic signal is governed by the Manual on Uniform Traffic Control Devices (MUTCD), which is published by the Federal Highway Administration.

The MUTCD contains nine (9) nationally recognized traffic signal warrants that are a starting point for determining whether or not a traffic signal should be considered to improve an existing traffic condition. The warrants take into consideration such factors as vehicular traffic volumes, pedestrian traffic volumes, travel speed data, traffic accident data, and the physical character of the intersection. Of the nine warrants, seven (7) criterion are most commonly utilized within the industry. Below is a list of the nine traffic signal warrants:

- Warrant 1 - Eight-Hour Vehicular Volume
- Warrant 2 - Four-Hour Vehicular Volume
- Warrant 3 - Peak Hour
- Warrant 4 - Pedestrian Volume
- Warrant 5 - School Crossing
- Warrant 6 - Coordinated Signal System
- Warrant 7 - Crash Experience
- Warrant 8 - Roadway Network
- Warrant 9 - Intersection Near a Grade Crossing

These warrants are only a starting point and traffic signal control is not a solution to every situation. In some instances, a traffic signal may lead to a reduction in operational

efficiency and safety of an intersection. It is important that the analyst consider how the intersection fits against each of the traffic signal warrants before making an installation recommendation.

Evaluation of Traffic Signal Needs and Prioritization

When the installation of a traffic signal is requested, City staff evaluates the history of the intersection to determine if it has been previously evaluated for traffic signal warrants. If the intersection has been studied recently, feedback is provided to the requester regarding the results of the prior study. If the intersection has not been evaluated in the past two years or if traffic patterns have changed since it was last studied, traffic data is collected and a Traffic Signal Warrant Analysis is completed. In addition, traffic signals that have previously been evaluated for warrants are re-evaluated periodically as traffic conditions change that increase traffic at the intersection. Through this evaluation engineering staff determines if the intersection is recommended for the installation of a traffic signal.

Presently, there are no ongoing funds for the installation of traffic signals, so as traffic signal needs are identified, the installation of the traffic signal is requested through the City's Capital Improvement Program (CIP) prioritization process.

Currently, the intersection of Yuma Road and Canyon Trails Boulevard is the most critical intersection in Goodyear specifically recommended for the installation of a traffic signal. Based on the results of a traffic signal warrant analysis completed in June 2015, this intersection is meeting four traffic signal warrants. The City has received funding for 75% of this traffic signal from a developer, and 25% of funding is requested to be included in the City's CIP for FY 15-16.

There are nine intersections that have been studied for traffic signal warrants that are not currently signalized and are considered to be part of the CIP Traffic Signal program. In addition to these intersections, there are others within the City that are evaluated for activation of an installed signal. They are identified below and status of warrants is summarized in Exhibit A:

- Yuma Road and Canyon Trails Boulevard
- Elliot Road and San Gabriel Drive/Starpointe Entrance
- Estrella Parkway and Harrison Street
- 158th Avenue and Van Buren Street
- Estrella Parkway and Romley Road
- Bullard Avenue and Earll Drive
- Estrella Parkway and Vineyard Avenue
- 135th Avenue and Thomas Road
- 152nd Drive and Van Buren Street

The intersection on the list above that is currently being tracked most regularly is the intersection of Elliot Road and San Gabriel Drive/Starpointe Entrance. This intersection had a significant increase in traffic between 2013 and 2015 with the opening of McDonald's in the Safeway shopping center. Traffic is anticipated to continue to increase with the opening of Taco Bell later this year and overall increase in customers to this shopping

center. While a traffic signal is not currently warranted, the volume of pedestrians crossing Elliot Road at San Gabriel Drive/Starpointe Entrance and the future opening of Taco Bell justifies continued attention at this intersection.

As development increases within this area, a signal will become warranted. As such, Engineering is recommending the approval of funding for the installation of a signal. If approved, a design will be completed, a contractor will be identified through procurement procedures and signal equipment/poles will be secured. The installation would occur in spring 2016.

Intersections listed above will be re-evaluated and new intersections will be studied for traffic signal warrants as traffic patterns change, for reasons such as development, the extension of the Loop 303, or possibly the construction of an additional leg of an intersection.

PREVIOUS ACTIONS AND DISCUSSION:

There has been no previous action on this topic.

FISCAL ANALYSIS:

The presentation is for informational purposes only. Staff is providing recommendations that may impact the CIP program.

ATTACHMENTS:

Traffic Signal Warrant Summary