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Title: Annual update of citywide priority ranking lists for new traffic signal installations and traffic signal left turn phasing modifications.

Sponsors: Public Works Department

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Attachments: 1. 16-311 2016 signal priority list, 2. 16-311 2016 Left Turn Phasing priority List

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REPORT TO THE CITY COUNCIL

March 31, 2016

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SUBJECT

Annual update of citywide priority ranking lists for new traffic signal installations and traffic signal left turn phasing modifications.

RECOMMENDATIONS

Staff recommends that the Council receive the updated citywide priority ranking lists for new traffic signal installations and traffic signal left turn phasing modifications.

EXECUTIVE SUMMARY

Staff has completed the annual update of City-wide priority ranking lists for new traffic signal

installations and left turn phasing installations that are partially or wholly funded through traffic signal mitigation impact fees. The update of the priority ranking lists includes new traffic counts, analysis of accidents during the past year, traffic signals which have gone into construction during the past year, and engineering consideration of other field changes, such as new schools that have opened in the vicinity of the subject intersections. The scoring criteria are based upon traffic engineering criteria established by the Federal Highway Administration (FHWA) and the California Department of Transportation.

BACKGROUND

Every fall, the Traffic Engineering Section in Public Works conducts updated traffic counts, reviews intersection accident reports, and performs an engineering analysis in accordance with standards established by the Federal Highway Administration and California Department of Transportation. This analysis includes 8-hour traffic volumes, peak hour volumes, pedestrian counts, accident history, and proximity of schools to the intersections. Unsignalized intersections are analyzed to determine if installation of a traffic signal is warranted. Warrants are evaluated purely using FHWA standards from the Manual on Uniform Traffic Control Devices (MUTCD). Existing signalized intersections that do not have left turn phasing (i.e., protected left turn movements via green arrows) are analyzed to determine if warrants are met for the installation of left turn phasing, which is based upon the number of peak hour conflicts between through traffic and opposing left turning vehicles, or the number of accidents that would be correctable with installation of left turn phasing.

Intersections where warrants are met are then objectively scored and ranked in priority order citywide. The point system for new traffic signal installations conforms to FHWA requirements and is based on overall traffic volumes for both directions (10 points maximum); peak hour traffic (10 points maximum); three-year history for correctable accidents (5 points per correctable reported collision in the annual average); schools within 0.25 miles (10 points maximum); activity centers within 1,000 feet (3 points maximum); potential signal coordination benefits (5 points maximum); intersection sight distance (2 points maximum); funding opportunities, or cost/benefit ratio (2 points maximum); and engineering judgment of special conditions (3 points maximum). The point system for left turn phasing installations is based upon the peak hour product of left turning vehicles and opposing through traffic (5 points maximum); three-year history for correctable accidents (5 points per correctable reported collision in the annual average); schools within 0.25 miles (10 points maximum); activity centers within 1,000 feet (3 points maximum); intersection sight distance (2 points maximum); funding opportunities, or cost/benefit ratio (2 points maximum); and engineering judgment of special conditions (3 points maximum).

The updated citywide priority ranking lists are included as Attachments "A" and "B." The priority ranking lists also indicate the funding status of each intersection. Some intersections must be signalized as a condition of approval for a specific development and have been noted as "Developer to Install." Other intersections have been funded as capital improvement projects based upon a high ranking in prior years and/or a successful grant application for state and federal funds.

Intersections that have been completed or that have started construction since the 2015 annual report have been removed from the priority ranking lists. It should be noted that this past year, since the last update, one existing signalized intersection was upgraded with left turn phasing and six intersections were signalized. These intersections have been removed from the priority ranking worksheets. The ranking lists will be used to prepare the FY17 capital improvement budget and to apply for grants in an objective manner based on available and projected traffic signal mitigation

impact fees. Council approved an update of the impact fees and the intersections covered by those fees on October 21, 2008. The Department of Public Works is currently in the process of developing an updated impact fee nexus study. Attached to this report are the priority ranking lists for new signal installations, modifications for left turn phasing, and traffic flow improvements.

The construction schedules have been delayed due to a significant decline in traffic signal mitigation impact fee revenues generated from new development. The average monthly revenue for FY16 July to November is \$89,773, which is a decrease from \$93,607/month in FY15.

Previous fiscal year monthly averages are as follows: FY 14 - 81,356/month; FY13 - \$95,243/month; FY12 - \$60,009/month; FY11 - \$75,707/month; FY10 - \$63,885/month; FY09 - \$95,572/month; FY08 - \$124,223/month; FY07 - \$247,024/month; and FY06 - \$258,020/month. As compared to FY06, there are currently a larger proportion of new developments which have construction requirements in excess of their fee obligation, which as a result of the city's construction fee credit policy yields a more limited amount of impact fee revenue. Given the limited impact fees currently available for capital projects, the goal of the Department of Public Works has been to pursue alternative funding sources such as federal and state grants for delivery of these projects.

ENVIRONMENTAL FINDINGS

This is not a "project" for the purposes of the California Environmental Quality Act (CEAQ), pursuant to CEQA Guidelines section 15378, as updating the priority ranking lists will not result in direct or indirect physical changes to the environment.

LOCAL PREFERENCE

Local preference does not apply because updating the priority ranking lists does not include a bid or award a construction or services contract.

FISCAL IMPACT

The annual update of traffic signal priority ranking lists has been accomplished within the operating budget of the Public Works Department. There will be no additional impact on the General Fund.

Attachments:

"A" - Priority Ranking List for New Traffic Signals

"B" - Priority Ranking List for Left Turn Phasing