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To: Richard MacHott, LEED, Planning Manager, City of Lake Elsinore
From: Nicholas Lowe, P.E., Associate Engineer, Albert. A. Webb Associates
Date: August 29, 2017
Re: East Lake Specific Plan Amendment – Potential Impact to Traffic Analysis (Changes to Roadway Classifications)

Roadway Analysis

The purpose of this memo is to provide high-level analysis and recommendations for further analysis for the East Lake Specific Plan (ELSP) traffic study. The ELSP Amendment Number 11 Draft EIR and traffic study were circulated in early 2017. Since then, further research into property boundaries and wetland areas within the ELSP has shown the potential need to change the roadway classifications of three proposed streets within the ELSP. The following is an analysis of the roadway classification change and its potential impacts and changes to the existing ELSP traffic study.

Methodology

Each roadway classification type has a specific daily vehicle capacity depending on number of lanes, presence of a median, presence of turn pockets, and terrain.

Major Roadways are characterized in the Lake Elsinore General Plan by 100' right-of-way, 80' curb-to-curb width, 4 travel lanes, 6' bike lanes, and a raised median. The daily vehicle capacity of the Major Roadway is 35,900.

4-Lane Collector Roadways are characterized in the Lake Elsinore General Plan by 68' right-of-way, 48' curb-to-curb width, 4 travel lanes, and no bike lanes or median. However, a modified version of the 4-Lane Collector Roadway is being considered for the ELSP and is used for this analysis. The modified 4-Lane Collector Roadway consists of 68' right-of-way, 58' curb-to-curb width, 4 travel lanes, bike lanes, and no median. The daily vehicle capacity of the modified 4-Lane Collector Roadway is 29,900.

The proposed roadways of Sylvester Street, Lucerne Street, and Cereal Street are classified as Major Roadways in the existing ELSP traffic study. Those three roadways may become modified 4-Lane Collector Roadways due to existing property lines and wetland areas.

Outputs from the traffic model in the previously proposed ELSP amendment were analyzed and compared with the newly proposed roadway capacities to determine if potential traffic impacts could occur due to the change in roadway classification. The Year 2022 and Year 2040 scenarios were used for comparison. Note that none of the analyzed roadways currently exist.

Level of Service

For roadway analysis, level of service (LOS) is determined by the daily roadway volume to daily roadway capacity ratio (V/C). Roadways experiencing LOS E and LOS F are considered to be roadways that are over maximum daily capacity. Peak hour volumes are not used for roadway capacity analysis.

Roadway Analysis Results

Weekday Daily Traffic Volumes in Year 2022:

#27 Sylvester Street – 9,894 Daily Vehicles / 35,900 Vehicle Capacity

#28 Lucerne Street – 8,623 Daily Vehicles / 35,900 Vehicle Capacity

#29 Cereal Street – 5,602 Daily Vehicles / 35,900 Vehicle Capacity

All roadways operate above LOS C in Year 2022.

Weekday Daily Traffic Volumes in Year 2040:

#27 Sylvester Street – 918 Daily Vehicles* / 25,900 Vehicle Capacity

#28 Lucerne Street – 14,630 Daily Vehicles / 25,900 Vehicle Capacity

#29 Cereal Street – 9,353 Daily Vehicles / 25,900 Vehicle Capacity

All roadways operate above LOS C in Year 2040.

* Volumes on Sylvester Street decrease dramatically from Year 2022 to Year 2040 due to the proposed completion of the Lucerne Street bridge. Growth percentages for Lucerne Street and Cereal Street range from 66% to 70% between Year 2022 and Year 2040. With an averaged 68% volume increase, the trips for Sylvester Street without construction of the Lucerne Street Bridge are roughly estimated to be 16,622 daily vehicles.

None of the roadways are expected to operate at unacceptable levels of service with the projected daily traffic volumes after the roadway classification change.

Conclusion

It is not necessary that the traffic analysis for the ELSP amendment be reassessed due to changes in roadway classifications to three proposed roadways. All three roadways are expected to operate acceptably in the Year 2022 and Year 2040 analysis years. Any changes to the ELSP beyond these three roadway classification changes should be reanalyzed to determine if potential impacts may occur.