



Pomona Valley ITS Project

Project Deliverable 4.1.3g **Individual City Report -** **City of Walnut**

Prepared by:



Kimley-Horn
and Associates, Inc.

April 19, 2002
099017000.1

Copyright © 2002, Kimley-Horn and Associates, Inc





TABLE OF CONTENTS

INDIVIDUAL CITY REPORT - WALNUT

PROJECT DESCRIPTION..... 1

PURPOSE OF REPORT 1

1.0 WALNUT STUDY AREA CHARACTERISTICS..... 2

 1.1 STUDY ARTERIALS 2

 1.2 TRAFFIC CONGESTION..... 3

2.0 TRAFFIC CONTROL AND MONITORING SYSTEM..... 4

3.0 OPERATIONS AND MAINTENANCE ISSUES..... 4

4.0 INTERAGENCY AND LOCAL CITY ISSUES..... 5

5.0 NEXT STEPS..... 5

Appendix A - Figures

Appendix B - Traffic Signal Equipment Within City of Walnut



PROJECT DESCRIPTION

The County of Los Angeles, in cooperation with the cities within the Pomona Valley, has determined that development of an Intelligent Transportation System (ITS) in the Pomona Valley would help to reduce congestion, enhance mobility, provide traveler information during non-recurring and event traffic congestion, and manage event traffic. The Pomona Valley Intelligent Transportation Systems (PVITS) project was conceived as a recommendation from the Pomona Valley Feasibility Study completed by the MTA in 1995. The ultimate objectives of the Project are to:

- Improve mobility by optimizing traffic management on arterials and freeways;
- Enhance Route 60 capacity by better coordinating freeway traffic with parallel arterials;
- Improve agency efficiency by coordinating management of operations and maintenance efforts among and between agencies; and
- Increase agency staff productivity by providing low-maintenance, high-quality communications and computational tools to assist in daily management and coordination activities.

PURPOSE OF REPORT

The Conceptual Design of the Pomona Valley ITS project includes the preparation of a Stakeholder Operational Objectives Report that summarizes each project stakeholder's needs, objectives, and issues to consider in the planning, design, and implementation of advanced technologies for traffic control, traffic management, and traveler information systems. This Individual City Report document provides a summary of existing, planned (already approved), and desired transportation projects and policies within the City of Walnut. This summary is based upon information in the 1995 Pomona Valley Forum Signal Synchronization Study, and updates to this information based upon city input from recent surveys and coordination meetings. Separate reports of data summaries and stakeholder objectives have been created for each City within the Pomona Valley project area.

This report provides the following information for the City of Walnut:

- Section 1.0: Definition and overview of the study area
- Section 2.0: Existing, planned, and desired traffic control and communications infrastructure
- Section 3.0: Current issues and desired aspects of operations and maintenance
- Section 4.0: Current issues and desired aspects of interagency coordination

Figures illustrating the locations of existing and planned traffic control equipment and congestion issues on regionally significant arterials are included in Appendix A. A list of all existing and proposed signalized intersections on regionally significant arterials within the City is included in Appendix B.

The Stakeholders Operational Objectives Report (Deliverable 4.1.2) is a separate document that will be developed as part of this project. It will provide more specific detail on the ideal operational characteristics of the PVITS equipment and user interfaces.



1.0 WALNUT STUDY AREA CHARACTERISTICS

The Walnut study utilized information from a definition of roadway "significance" that was defined in the 1995 Pomona Valley Forum Signal Synchronization Study. This determination of roadway significance utilized roadway Average Daily Traffic (ADT) levels and Level of Service (LOS) ratings, along with other factors such as roadway inclusion in the Congestion Management Program (CMP), the number of transit routes utilizing the roadway, and local agency preference.

1.1 Study Arterials

Table 1 on the following page provides a summary of the arterials considered as "regionally significant" within Walnut, along with the major factors for prioritization that were utilized in the 1995 Synchronization Study. The locations of these arterials and other roadways in the City are illustrated in **Figure 1** of Appendix A.

TABLE 1: STUDY AREA ARTERIAL SIGNIFICANCE SUMMARY			
Street	Average Daily Traffic	Number of Transit Routes	CMP Arterial
Amar Road / Temple Avenue	11,426 - 31,311	2	No
Grand Avenue	28,967 - 32,977	2	No
Valley Boulevard	10,535 - 22,103	1	No

Source: Kimley-Horn and Associates, Inc., 2001

Transit Availability

Table 1 also indicates transit availability along the city study arterials. The intersection of Grand Avenue / Temple Avenue / Amar Road is a central point for transit within the City, as from this point lines can easily serve both Mount San Antonio College and Cal Poly to the east. Four transit lines come through this point in the City, and also serve Grand Avenue, Amar Road, Temple Avenue, and Valley Blvd.:

- Foothill Transit Line 178/179 serves Temple Avenue east of Grand Avenue, and Grand Avenue between Temple Avenue and La Puente Road on its route between Cal Poly, Baldwin Park, and El Monte.
- Foothill Transit Line 486 serves Amar Road throughout Walnut, on its route between Cal Poly, El Monte, and downtown Los Angeles via the I-10 Busway.
- The Los Angeles County MTA Line 490 serves Grand Avenue north of Amar Road, on its route between Pomona, West Covina, Baldwin Park, and downtown Los Angeles via the I-10 Busway.



- The Los Angeles County MTA Line 484 serves Grand Avenue south of Amar Road, and Valley Boulevard west of Grand Avenue, on its route between Pomona, Industry, La Puente, and downtown Los Angeles via the I-10 Busway.

Roadway Descriptions

The following text summarizes the characteristics of each of study area arterial within Walnut.

Grand Avenue: This four-lane roadway provides north-south access in Walnut from the West Covina city limits near the I-10 freeway, to the City of Industry boundary at Valley Boulevard on the south side of the city. It also has a full-access interchange with the 57 and 60 freeways in Diamond Bar, as well as a full access interchange with I-10 in West Covina.

Amar Road: This roadway is a major east-west arterial within Walnut. It provides access to Walnut from the West Covina City limits. Amar Road intersects with Nogales Avenue at the north western portion of the City. The eastern end of the roadway intersects with Grand Avenue. East of Grand Avenue, Amar Road becomes Temple Avenue.

Valley Boulevard: This roadway is a major east-west highway. The roadway lies along the southern boundary of the City and parallels the 60 freeway. The roadway provides access outside of the City study area to the I-605, SR 57 and SR 71 freeways. The City of Industry lies on the south side of the roadway.

Existing truck route designations within the study area are illustrated in **Figure 2** of Appendix A.

1.2 Traffic Congestion

This section provides an overview of congestion issues for the city study area arterials and intersections. **Figure 3** in Appendix A illustrates the Average Daily Traffic levels of the study area arterials, as well as the Level of Service (LOS) of key study area intersections.

Figure 4 in the Appendix illustrates the congested areas in the City. The following are congestion trouble spots in Walnut as indicated by City staff during project coordination meetings and correspondence:

- Valley Boulevard is a congested arterial within the City of Walnut. Under normal conditions, Valley Boulevard flows freely except when an incident occurs.
- The most congested intersections in the City are Grand Avenue / Amar Road, and Grand Avenue / Valley Boulevard.

Supplemental traffic counts were made in these areas, in order to gather updated Level of Service (LOS) data at these areas. **Table 2** indicates the LOS of intersections in these areas based on the supplemental counts.



**TABLE 2: LEVEL OF SERVICE (LOS)
OF SELECTED INTERSECTIONS, WALNUT STUDY AREA**

Intersection	AM Peak Period LOS	PM Peak Period LOS
Amar Road / Grand Avenue/Temple Avenue	E	F
Grand Avenue / La Puente Road	D	C
Valley Blvd. / Grand Avenue	F	F
Valley Boulevard / Lemon Avenue	C	D
Valley Boulevard / Pierre Road	C	C

*LOS values are based upon intersection turn movement counts conducted during the week of June 25, 2001.
Data was analyzed utilizing the 1997 Highway Capacity Manual method.*

2.0 TRAFFIC CONTROL AND MONITORING SYSTEM

This section provides an overview of the existing and planned traffic signal equipment, and related communications and monitoring equipment. This represents the core infrastructure from which an ITS system can be conceptualized. The remaining sections of the document provide an overview of traffic operations, and system operations and institutional issues.

Walnut is primarily a developed community with established traffic patterns. **Figure 5** in Appendix A indicates the 15 existing traffic signal control equipment locations on the study area arterials (regionally significant arterials) within Walnut. **Appendix B** provides a list of the locations of this traffic signal equipment.

Existing System

- The City of Walnut operates a total of 20 traffic signals within the city study area.
- All current traffic signals utilize 170-type controllers and WWV antennas for time-of-day coordination. The City currently has no plans to modify or improve this equipment.

3.0 OPERATIONS AND MAINTENANCE ISSUES

The City of Walnut has identified specific system operations and maintenance issues regarding PVITS implementation within the City. The issues discussed during project coordination meetings included

resources and staffing issues as they relate to operations and maintenance of both the current traffic control system, and future control systems such as the PVITS project. The two key items that relate to the PVITS project are the following:

- Los Angeles County maintains all of the traffic signals within the City of Walnut.
- The engineering firm of RKA maintains all of the City's signal timing plans.



4.0 INTERAGENCY AND LOCAL CITY ISSUES

There are no significant interagency or local issues indicated by the City of Walnut.

5.0 NEXT STEPS

The information summarized within this document will be utilized to formulate the Stakeholders and Operational Objectives Report (Deliverable 4.1.2). This document will provide a project-wide evaluation of stakeholder needs and wishes, and provide a basis for the Requirements Analysis under Task 5 of this project. The Stakeholders and Operational Objectives Report will provide the following analyses of PVITS project implementation, from information summarized in the Individual City Reports:

- Anticipated benefits to stakeholders
- Potential cost implications to stakeholders
- Potential impacts on local agency staffing and operation
- Potential impacts on local agency management and maintenance costs

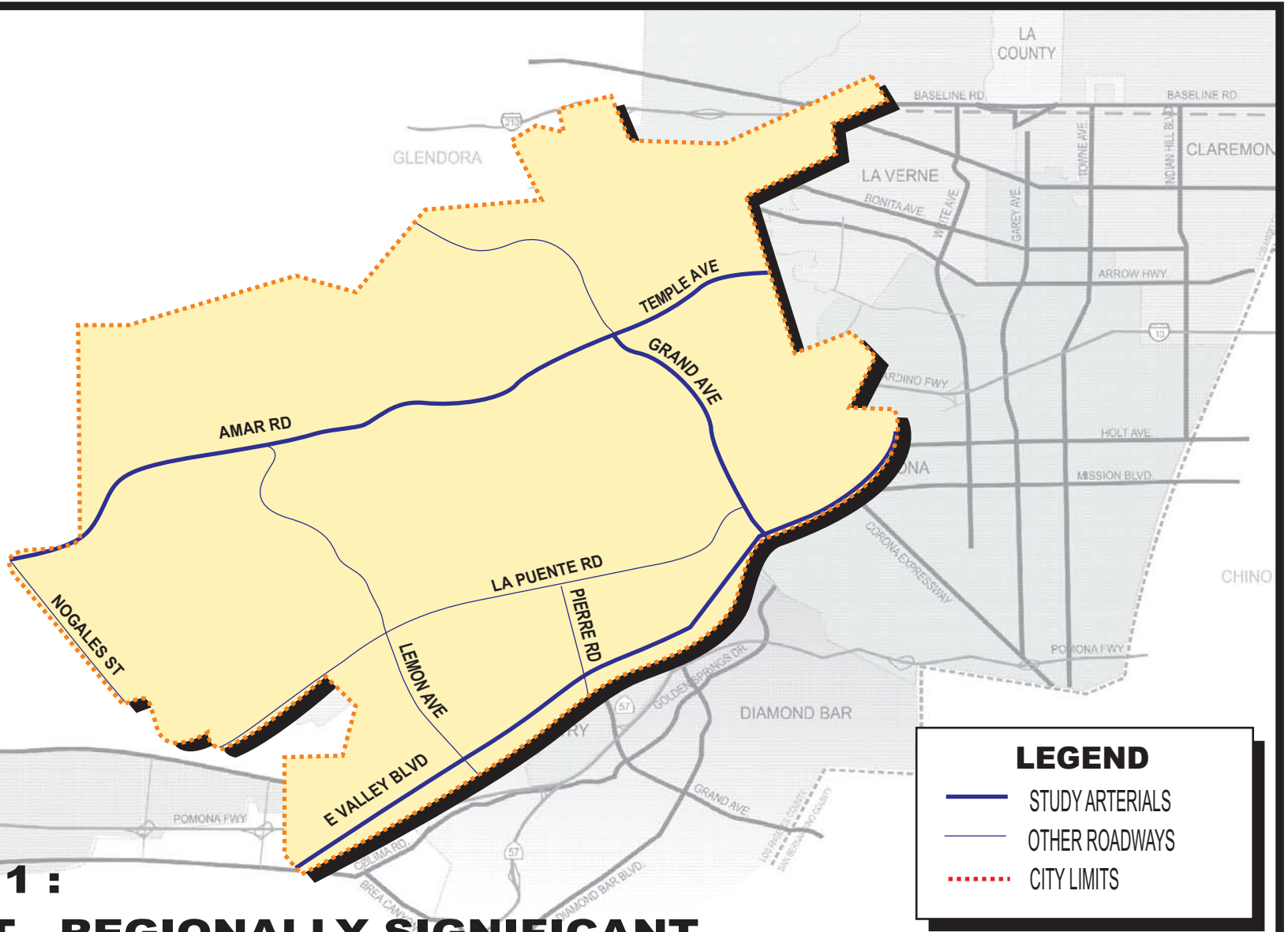
Deliverables from the Addendum Report, Route 60 Feasibility Study, and the Fairplex Traffic Management Plan efforts will also be incorporated into the Requirements Analysis task, and into tasks beyond this, such as the Concept of Operations and Alternatives Analysis.



Kimley-Horn
and Associates, Inc.



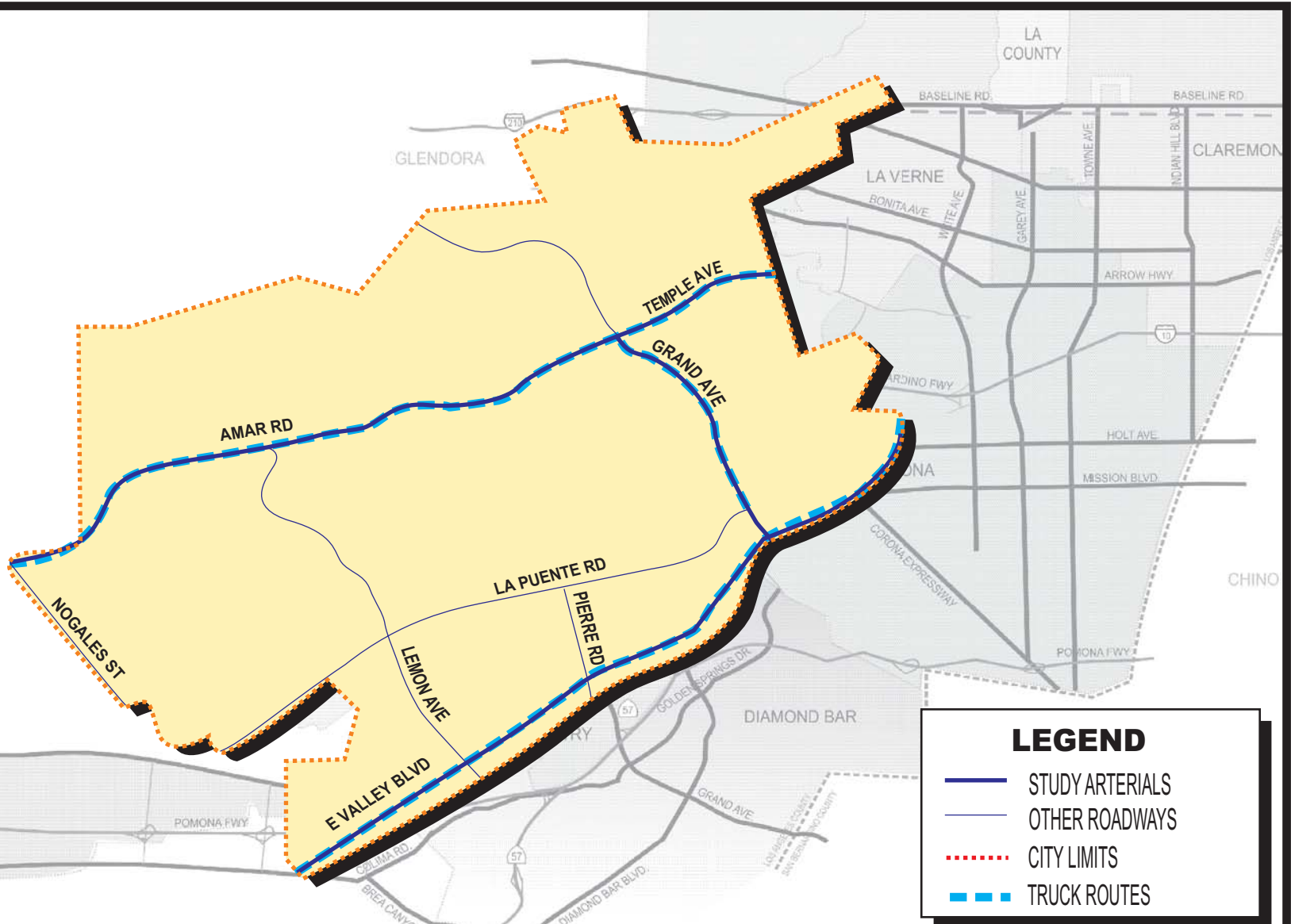
Appendix A



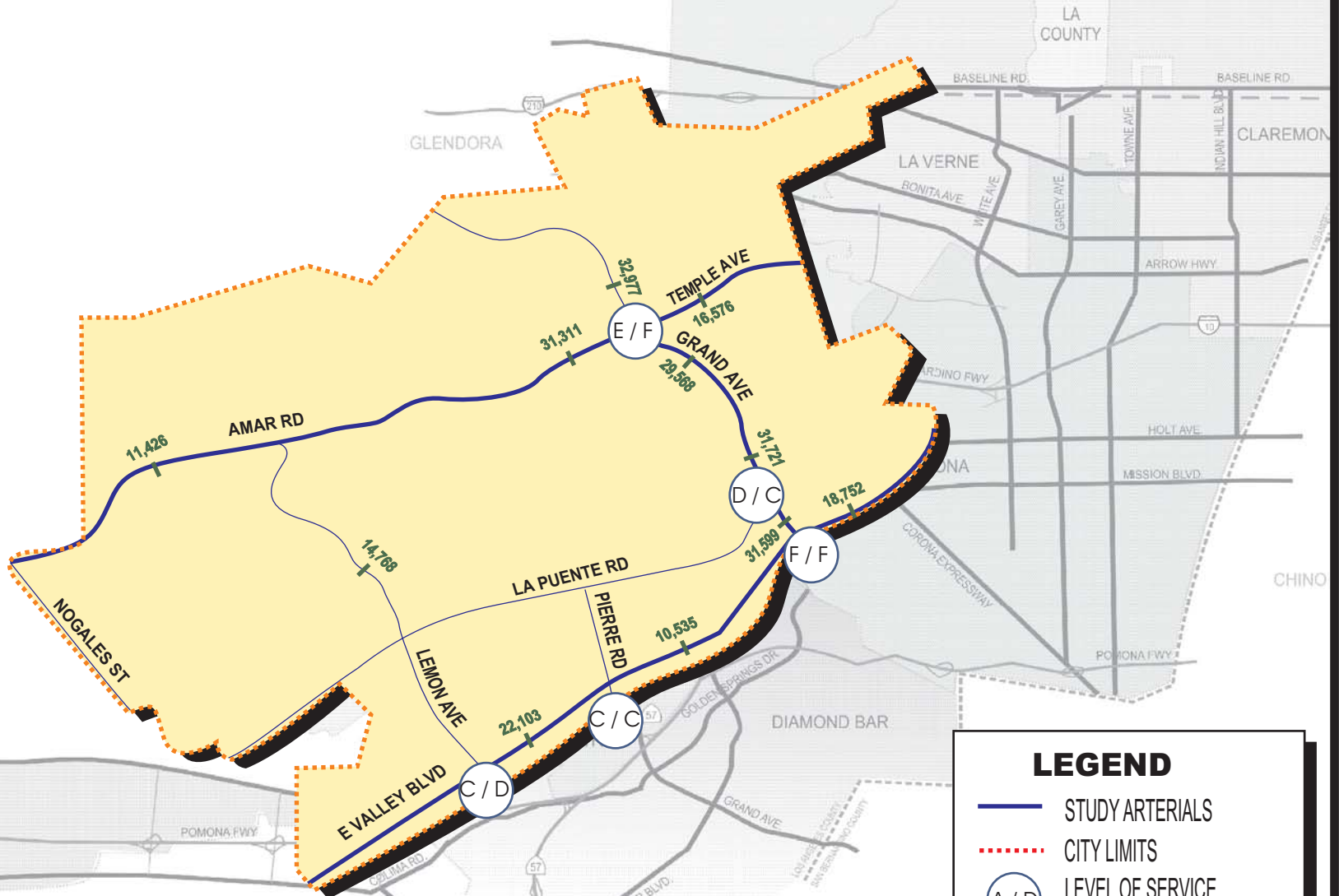
LEGEND

- STUDY ARTERIALS
- OTHER ROADWAYS
- CITY LIMITS

**FIGURE 1 :
WALNUT - REGIONALLY SIGNIFICANT
ARTERIALS**



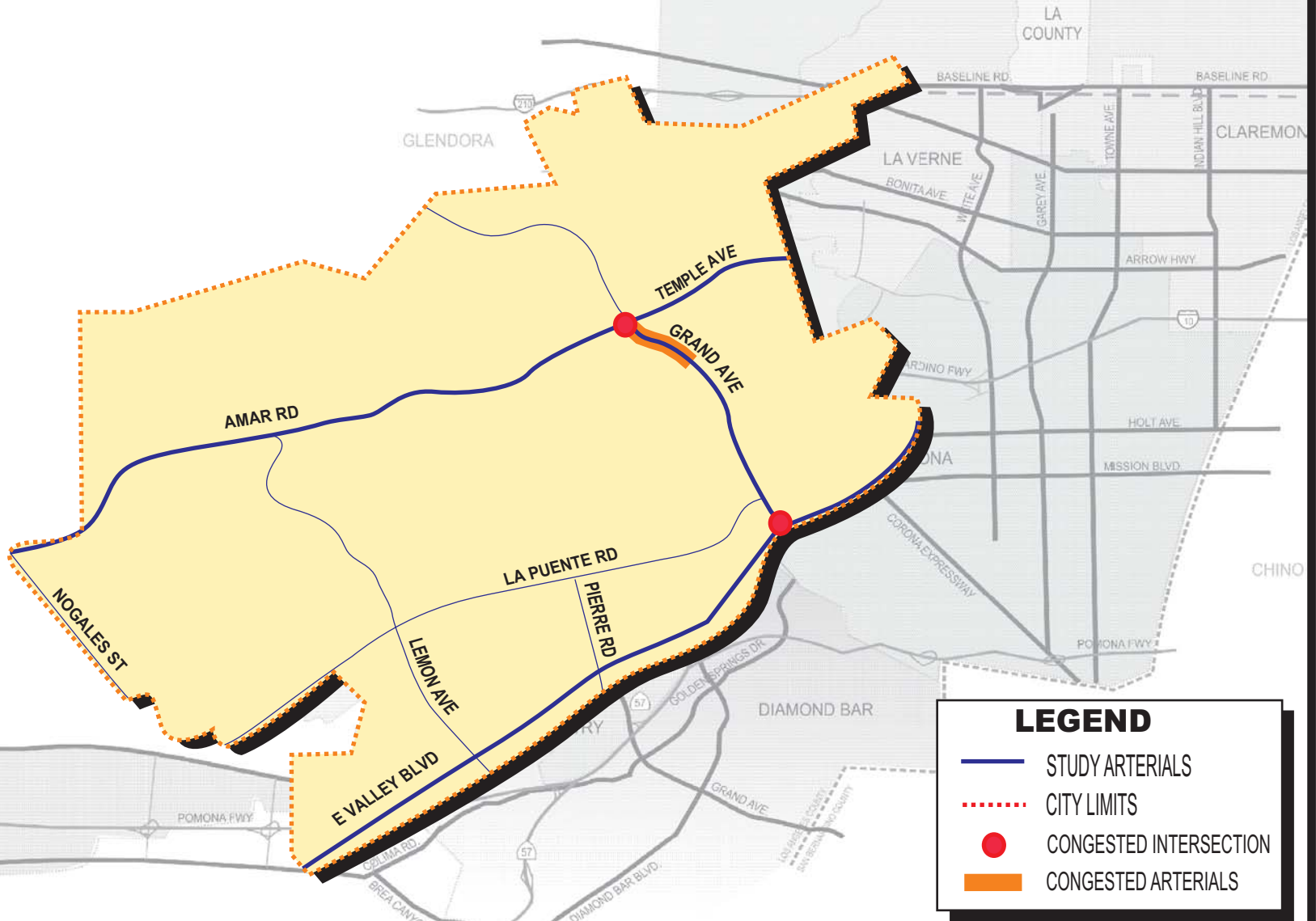
**FIGURE 2 :
WALNUT - EXISTING TRUCK ROUTES**



LEGEND

- STUDY ARTERIALS
- CITY LIMITS
- LEVEL OF SERVICE AM / PM
- 31,238 ARTERIAL ADT

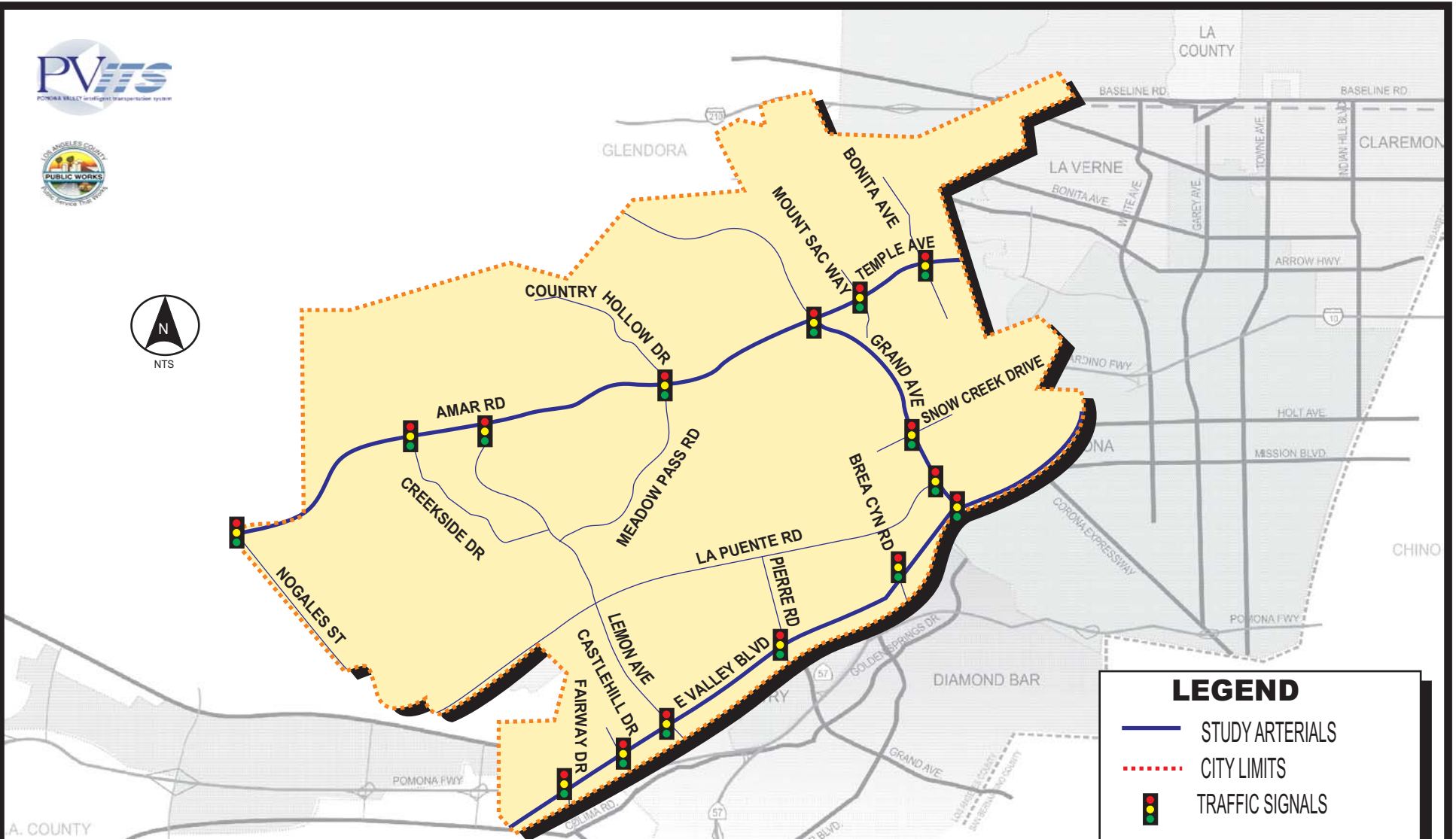
FIGURE 3 : WALNUT - AVERAGE DAILY TRAFFIC AND LEVEL OF SERVICE (LOS)



LEGEND

- STUDY ARTERIALS
- - - CITY LIMITS
- CONGESTED INTERSECTION
- ▬ CONGESTED ARTERIALS

**FIGURE 4 :
WALNUT - TRAFFIC CONGESTION LOCATIONS**



**FIGURE 5 :
WALNUT - TRAFFIC SIGNAL LOCATIONS
ON REGIONALLY SIGNIFICANT ARTERIALS**

LEGEND

- STUDY ARTERIALS
- CITY LIMITS
- 🚦 TRAFFIC SIGNALS



Kimley-Horn
and Associates, Inc.



Appendix B

TRAFFIC SIGNAL EQUIPMENT ON REGIONALLY SIGNIFICANT ARTERIALS WITHIN WALNUT		
Signalized Intersection	Phases	Ownership
Amar Road / County Hallow Drive	3	Walnut
Amar Road / Creekside Drive	4	Walnut
Amar Road / Grand Avenue	5	Walnut
Amar Road / Lemon Avenue	4	Walnut
Amar Road / Meadow Pass Road	3	Walnut
Grand Avenue / Shadow Mountain Road	3	Walnut
Grand Avenue / Snow Creek Drive	3	Walnut
Lemon Avenue / Paseo Del Prado	-	Walnut
Temple Avenue / Bonita Avenue	6	Walnut
Valley Blvd. / Brea Canyon Road	4	Walnut
Valley Blvd. / Camino De Teodor	6	Walnut
Valley Blvd / Fairway Drive	6	Walnut
Valley Blvd / Grand Avenue	8	Walnut
Valley Blvd. / Lemon Avenue	8	Walnut
Valley Blvd. / Pierre Rd.	3	Walnut