# Chapter 2 – Transportation

## 2.1 INTRODUCTION

This chapter presents the methodology for, and the conclusions of, the analysis undertaken to assess the potential transportation impacts of the project and its alternatives on transit, traffic, parking, pedestrian and bicycle circulation, and at-grade railroad crossings. Potential impacts are assessed for both the short-term (occurring during construction) and long-term. Proposed mitigation measures for each type of potential impact for the Build alternative project, TSM, and No Build alternative are presented at the conclusion of this chapter.

## 2.2 REGULATORY SETTING

### 2.2.1 State

California Environmental Quality Act (CEQA) guidelines define *significant effect* or *significant impact* as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by a project. The determination of whether a project may have a *significant effect* on the environment calls for careful judgment on the part of the public agency involved, based, to the extent possible, on scientific and factual data. There are few quantitative standards of significance related to transportation effects. The measurement and prediction of level of service (LOS) at potentially affected intersections is one standard commonly used to evaluate the significance of potential traffic impacts. Predicted changes in LOS offer indications of how well road-based traffic movements may function under the different alternatives, which may have implications for vehicular traffic, and certain types of transit and non-motorized transportation, such as pedestrians and bicycles.

The travel forecasting model developed by the Southern California Association of Governments (SCAG) Regional Travel Demand Model was used for this analysis. The travel demand forecast model includes the approved land uses and financially constrained future highway and transit network for 2035. The model estimates future travel demand based on several input criteria:

- SCAG forecasts of population and employment growth.
- SCAG forecasted changes in the sociodemographic characteristics of travelers.
- Future characteristics of the roadway and transit systems, including travel times, costs, and capacity reflective of the No Build, Transportation System Management (TSM), and the Build Alternatives.

Traffic operations at 90 intersections and 35 roadway segments in the Study Area (Figure 2-1) were analyzed. The intersections are located near potential rail stations along the project alignment, adjacent to at-grade railroad crossings, and at intersections of major arterials in the Study Area. The jurisdictions affected by the project were consulted throughout the scoping process and assisted in the selection of study intersections. Detailed AM and PM peak-hour intersection turning movement counts and roadway segment daily traffic volumes were collected in 2010 to represent existing traffic volumes on a typical weekday throughout the Study Area.

## 2.3 METHODOLOGY

This section describes the methodology and assumptions used for the evaluation and analysis of the project's impacts on the transportation environment. The analysis addresses existing transit, traffic circulation, and parking conditions, and it evaluates the No Build, TSM, and Build Alternatives for the forecast year of 2035. Traffic forecasts were developed for the horizon year of 2035 by obtaining model data and post-processing the information to reflect the anticipated growth within the Study Area.

Within the Study Area, one roadway segment traverses two cities; and seven intersections are located on the boundary of two or more cities. For purposes of the traffic analysis, these intersections were assigned to just one jurisdiction (shown in Table 2-1). Fulton Road between Bonita Avenue and Arrow Highway, which includes a Metrolink driveway, spans from City of La Verne on the west to the City of Pomona on the east. For the purpose of this analysis, this roadway segment was assigned to the City of Pomona's jurisdiction.

**Table 2-1. Intersections Located Between Two Jurisdictions**

| North/South Street | East/West Street | West City | East City | Assigned Jurisdiction |
|---|---|---|---|---|
| Lone Hill Avenue | Gladstone Street | Glendora | San Dimas | San Dimas |
| San Dimas Canyon Road | Bonita Avenue | San Dimas | La Verne | San Dimas |
| San Dimas Canyon Road | Arrow Highway | San Dimas | La Verne | San Dimas |
| La Verne Avenue | Arrow Highway | La Verne | Pomona | La Verne |
| Fulton Road | Bonita Avenue | La Verne | Pomona | Pomona |
| Fulton Road | Arrow Highway | La Verne | Pomona | Pomona |
| Claremont Boulevard | First Street | Claremont | Montclair/Upland | Claremont |

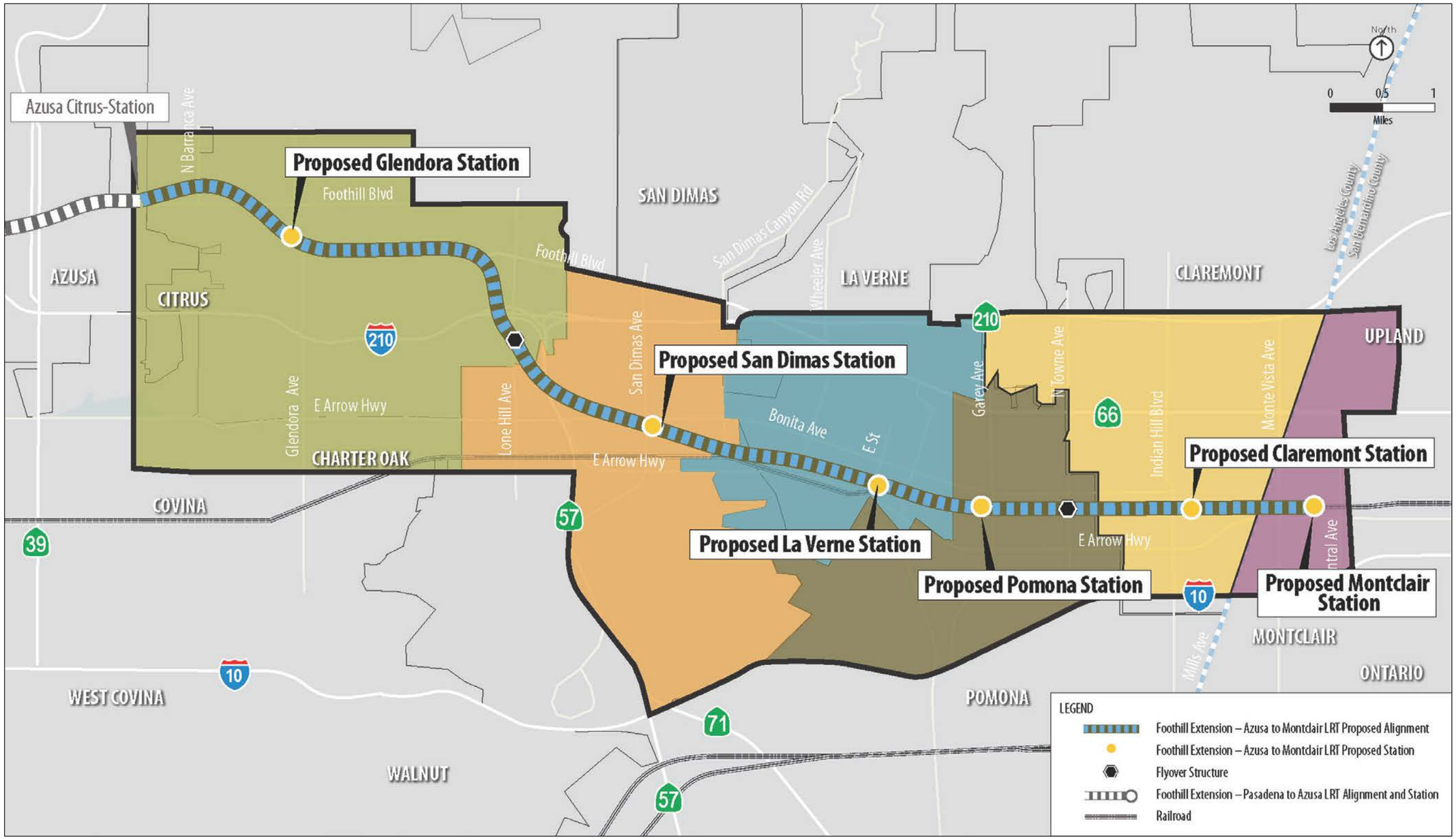
Source: Intueor, 2011

### 2.3.1 Data Sources

To determine the existing traffic operating conditions in the Study Area, manual vehicle turning movement counts were conducted at 90 intersection locations, and daily vehicle traffic volumes were taken at 35 roadway segments. This data was then used to conduct traffic analysis for 2035. The Study Area jurisdictions for the traffic analysis are: Glendora, San Dimas, La Verne, Pomona, and Claremont in Los Angeles County, and Montclair/Upland in San Bernardino County. The roadway segment analysis was performed using average daily traffic volumes taken from the 24-hour machine counts. The intersections were analyzed using AM and PM peak-hour intersection turning movement volumes. Data collection was conducted on a representative weekday (Tuesday, Wednesday, or Thursday) in May 2010 at the locations shown in Figure 2-2 through Figure 2-7.

### 2.3.2 Approach to Estimating Transportation Effects

The performance of an arterial street network is measured in terms of LOS using the *Transportation Research Circular No. 212: Interim Materials on Highway Capacity* (TRB, 1980) or volume-to-capacity ratio (V/C) methodology. LOS is a qualitative measure used to describe the condition of traffic flow, ranging from excellent (LOS A) to overloaded (LOS F). LOS D is typically recognized as the minimum acceptable LOS in urban areas. Each of the 35 roadway segments was analyzed to determine daily traffic operating conditions. Table 2-2 presents the LOS definitions for roadway segments.

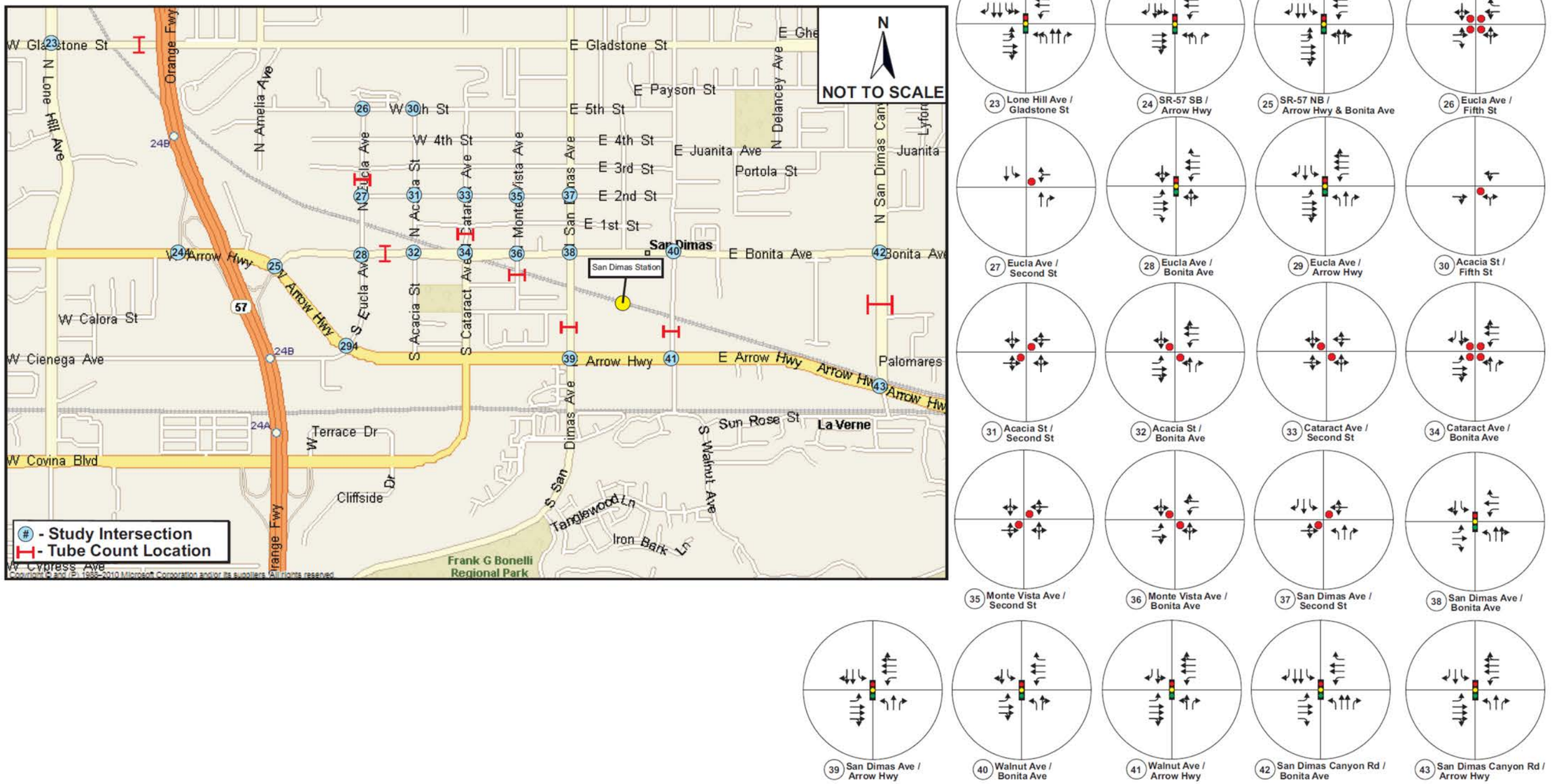



Source: Parsons Brinckerhoff, 2012

***Figure 2-1. Study Area***

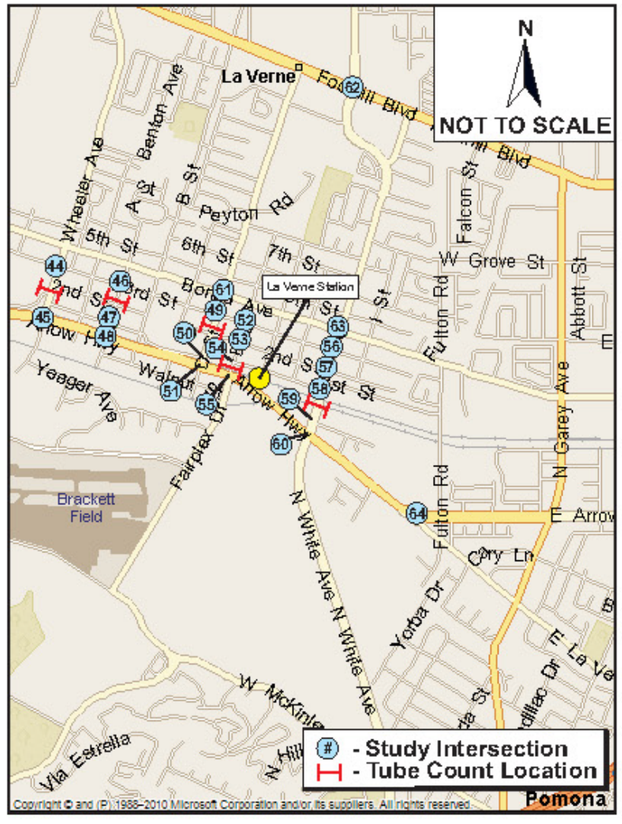

Source: Intueor, 2011, updated January 2013

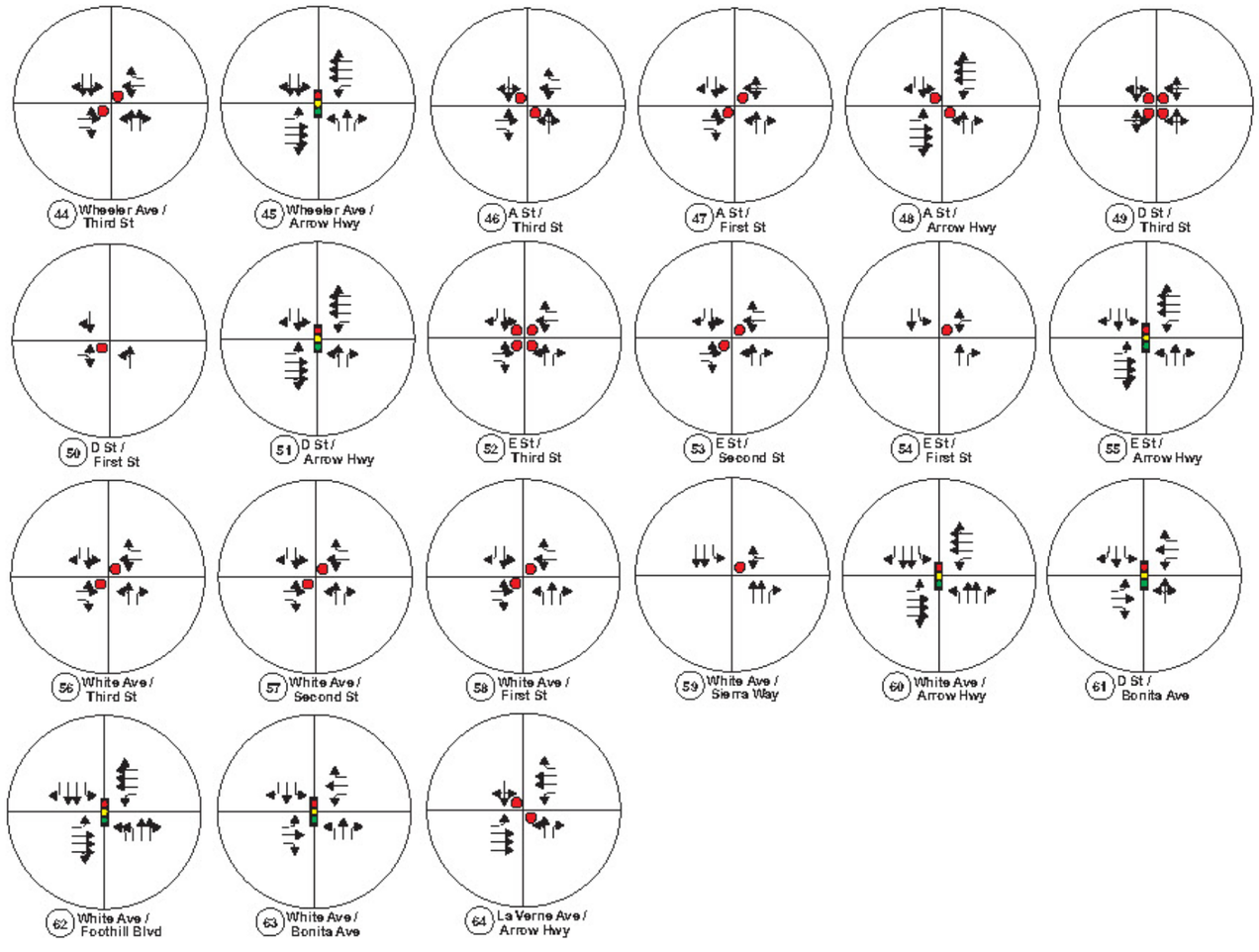
***Figure 2-2. Traffic Analysis Count Locations: Glendora***




Source: Intueor, 2011

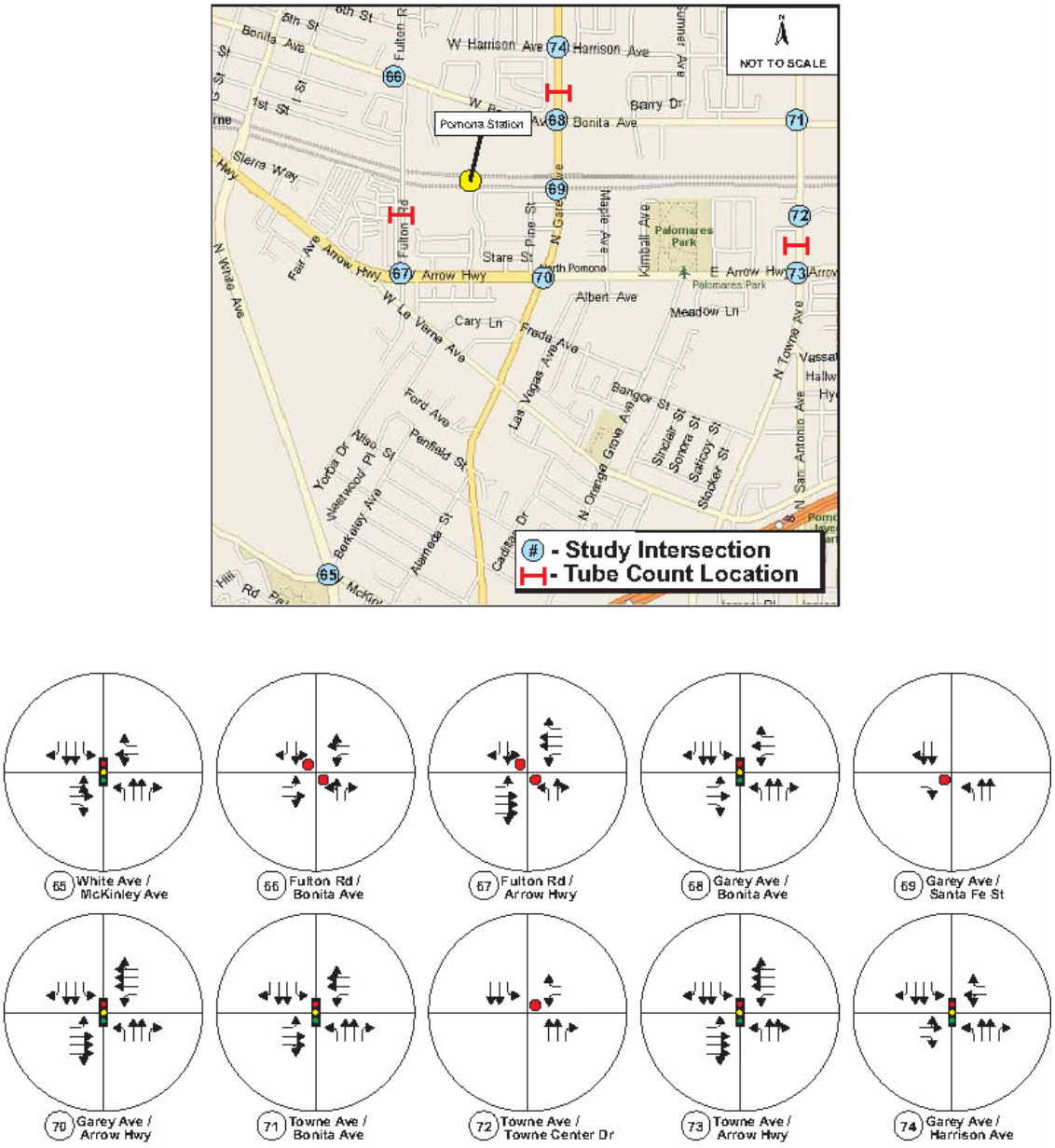
***Figure 2-3. Traffic Analysis Count Locations: San Dimas***



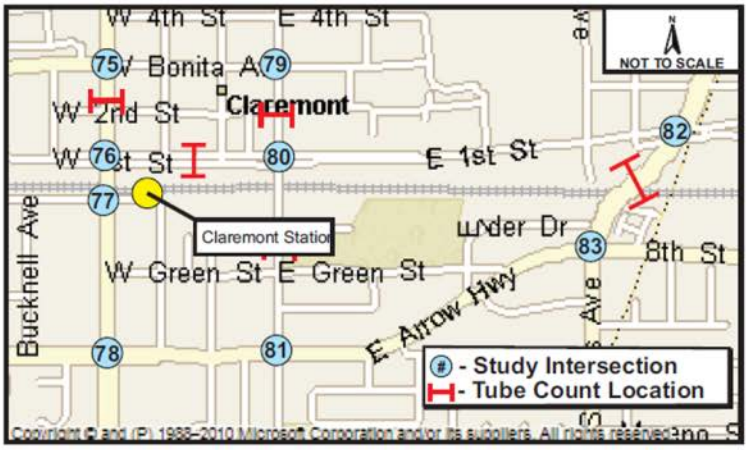

Source: Intueor, 2011, updated January 2013

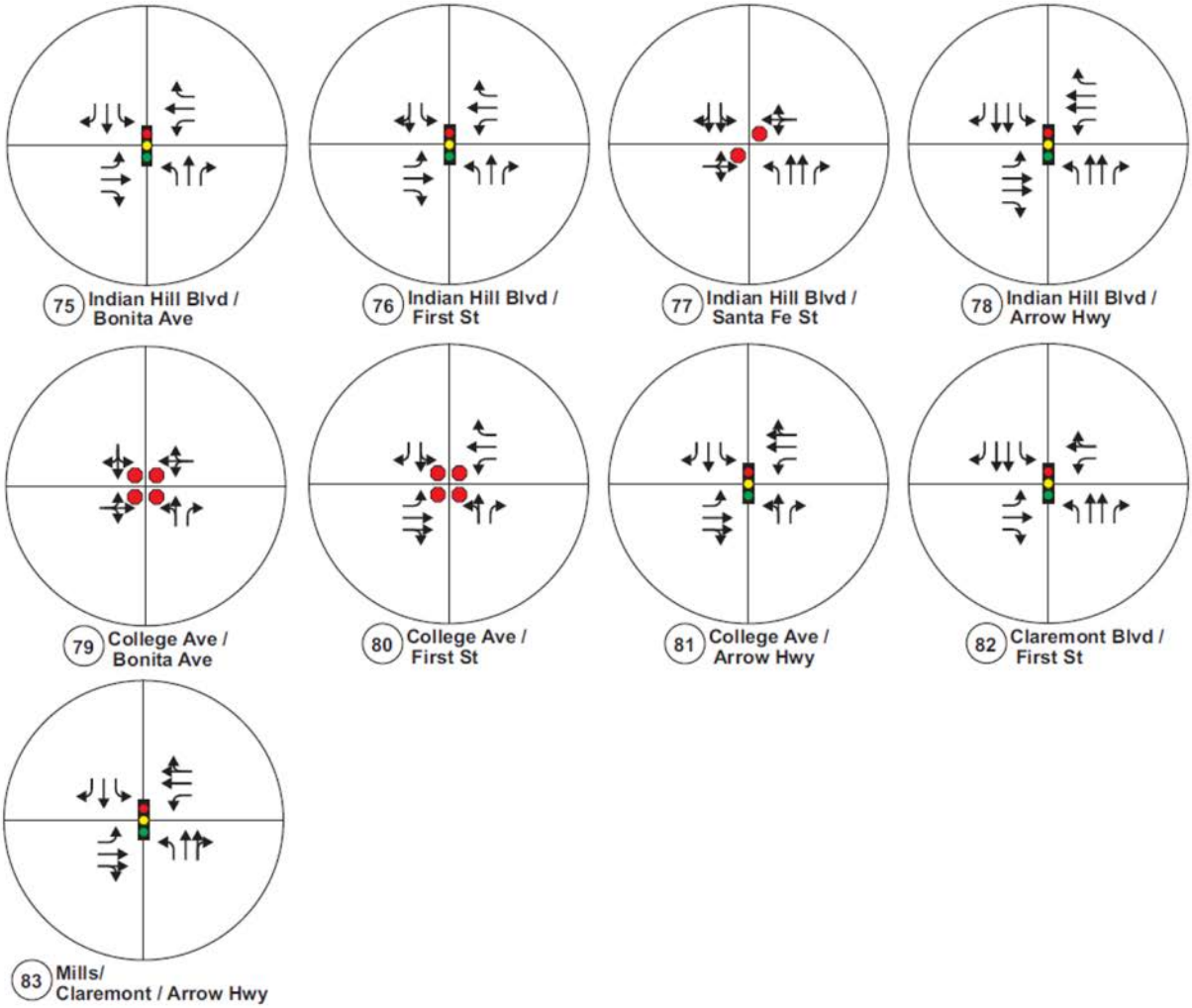
***Figure 2-4. Traffic Analysis Count Locations: La Verne***




Source: Intueor, 2011, updated January 2013

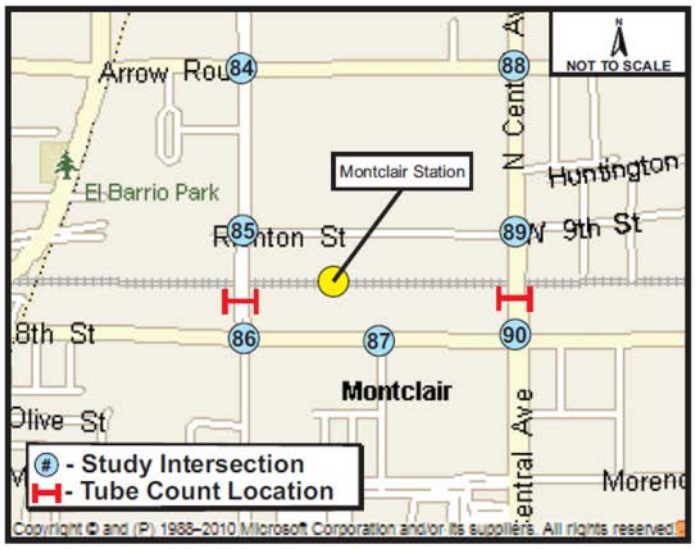
***Figure 2-5. Traffic Analysis Count Locations: Pomona***

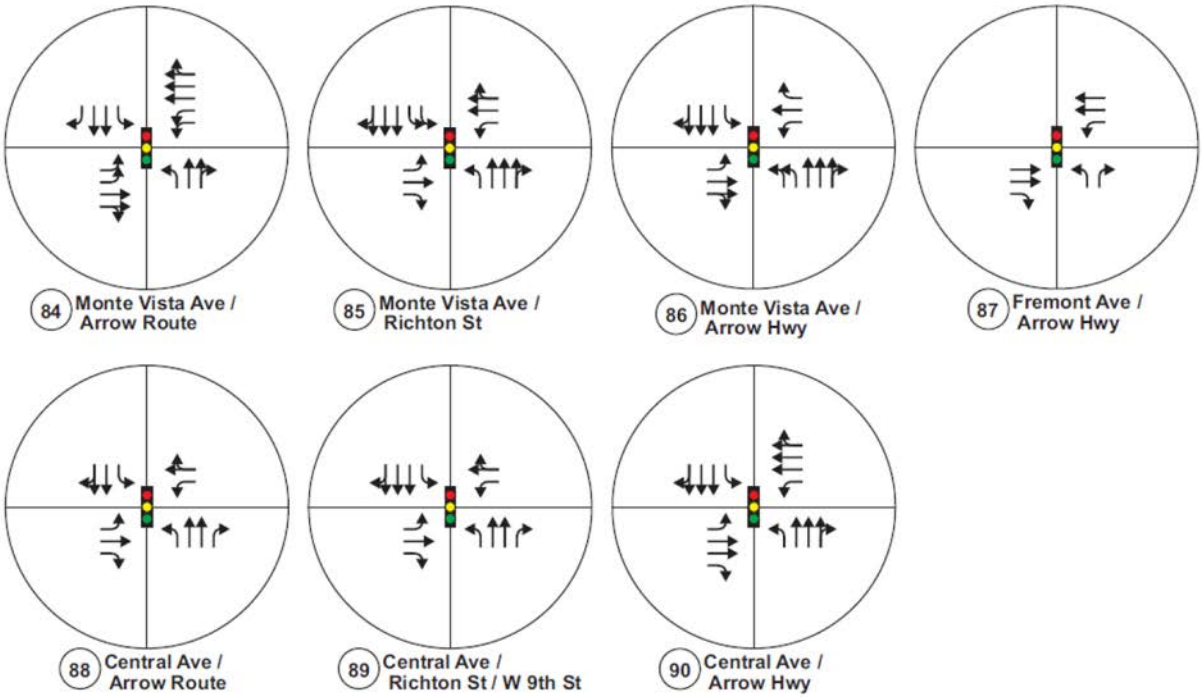



Source: Intueor, 2011

***Figure 2-6. Traffic Analysis Count Locations: Claremont***




Source: Intueor, 2011

***Figure 2-7. Traffic Analysis Count Locations: Montclair***

## Table 2-2. Roadway Segment Level of Service (LOS) Definitions

| Level of Service | V/C Range | Definition |
|---|---|---|
| A | 0.000—0.600 | EXCELLENT. Free flow, light volumes. |
| B | 0.601—0.700 | VERY GOOD. Free to stable flow, light to moderate volumes. |
| C | 0.701—0.800 | GOOD. Stable flow, moderate volumes, freedom to maneuver noticeably restricted. |
| D | 0.801—0.900 | FAIR. Approaches unstable flow, moderate to heavy volumes, limited freedom to maneuver. |
| E | 0.901—1.000 | POOR. Extremely unstable flow, heavy volumes, maneuverability and psychological comfort extremely poor. |
| F | >1.000 | FAILURE. Forced or breakdown conditions, slow speeds, tremendous delays with continuously increasing queue lengths. |

Source: Transportation Research Board, *Transportation Research Circular No. 212: Interim Materials on Highway Capacity*, January 1980.

Each study intersection was analyzed to determine peak-hour operations and LOS. LOS for signalized and unsignalized intersections is generally based on delay values using the Transportation Research Board 2000 *Highway Capacity Manual* methodology. These values are calculated using the average delay (in seconds) per approaching vehicle. Table 2-3 and Table 2-4 present the LOS definition for signalized and unsignalized intersections. The Synchro software, version 7.0, was used to analyze peak-hour intersection traffic operating conditions.

## Table 2-3. Signalized Intersections Level of Service Definitions

| Level of Service | Average Vehicle Delay (Seconds) | Definition |
|---|---|---|
| A | < 10.0 | EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used. |
| B | > 10.0 and < 20.0 | VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles. |
| C | > 20.0 and < 35.0 | GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles. |
| D | > 35.0 and < 55.0 | FAIR. Delays may be substantial during portions of the peak hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups. |
| E | > 55.0 and < 80.0 | POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles. |
| F | > 80 | FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths. |

Source: Transportation Research Board, *Highway Capacity Manual* (2000), Special Report 209, Second Print July 2005.

**Table 2-4. Unsignalized Intersections (Level of Service Definitions)**

| Level of Service | Average Vehicle Delay (Seconds) |
|---|---|
| A | < 10.0 |
| B | > 10.0 and < 15.0 |
| C | > 15.0 and < 25.0 |
| D | > 25.0 and < 35.0 |
| E | > 35.0 and < 50.0 |
| F | > 50.0 |

Source: Transportation Research Board, *Highway Capacity Manual* (2000), Special Report 209, Second Print July 2005.

## 2.4 IMPACT CRITERIA

The methodology used to determine adverse or significant impacts at the study intersections was to identify the change in delay between the TSM or Build Alternatives and the No Build Alternative. Since the Study Area includes several jurisdictions, an impact criterion that can be uniformly applied across all project corridor jurisdictions was selected. Consequently, the impact criteria used for this comparison was based on the *Los Angeles County Traffic Impact Analysis Study Guidelines* (1997).

Based on these guidelines under the TSM or Build Alternative, an intersection is considered to have adverse or significant impacts, if the change in delay from the No Build Alternative is equal to or greater than the criteria shown in Table 2-5. Potential mitigation measures were identified at each affected location.

**Table 2-5. Los Angeles County Intersection Impact Thresholds**

| Control Type | Final LOS with project | Significant Increase in Delay from the No Build (Seconds/Vehicle) |
|---|---|---|
| Unsignalized Intersection | LOS C | ≥ 4 |
| | LOS D | ≥ 2 |
| | LOS E/F | ≥ 1.5 |
| Signalized Intersection | LOS C | ≥ 6 |
| | LOS D | ≥ 4 |
| | LOS E/F | ≥ 2.5 |

Source: Los Angeles County Traffic Impact Analysis Study Guidelines, 1997.

## 2.5 EXISTING CONDITIONS

### 2.5.1 Public Transit

#### 2.5.1.1 Study Area Transit Network

The Study Area has one of the most extensive networks of transit routes in the San Gabriel Valley. These routes generally follow a grid pattern and include many express and local routes. Four public transit agencies operate transit service within the Study Area: Foothill Transit, Omnitrans, Riverside Transit Authority (RTA), and Metrolink. Table 2-6 lists the current transit routes in the Study Area with the end destinations of their services.

**Table 2-6. Public Transit Routes within the Study Area**

| Operator | Line(s) | Destination |
|---|---|---|
| Foothill Transit | 187 | Montclair—Claremont—Glendora—Pasadena |
| | 197 | Pomona—Claremont—Montclair |
| | 281 | Glendora—West Covina—Puente Hills Mall |
| | 284 | West Covina—Covina—San Dimas—Glendora |
| | 291 | La Verne—Pomona—South Pomona |
| | 292 | Claremont—Pomona |
| | 480 | Montclair—Pomona—West Covina |
| | 488 | Glendora—West Covina—El Monte |
| | 492 | Montclair—Arcadia—El Monte |
| | 494 | San Dimas—Glendora—El Monte |
| | 498 | Citrus College—Los Angeles (Express) |
| | 499 | San Dimas Park & Ride—Via Verde Park & Ride—Los Angeles (Express) |
| | 690 | Montclair—Pasadena |
| | 699 | Montclair—Fairplex Park & Ride—Cal State Los Angeles—USC Medical Center—LA (Express) |
| | 851 | Covina—Glendora |
| | 855 | Pomona Transcenter—Claremont |
| Omnitrans | 65 | Montclair—Chino Hills |
| | 66 | Fontana—Foothill—Montclair |
| | 67 | Montclair—Baseline—Fontana |
| | 68 | Chino—Montclair—Chaffey College |
| | 80 | Montclair—Ontario Convention Center—Rancho Cucamonga |
| Riverside Transit Authority (RTA) | 204 | Riverside—Montclair Transit Center |
| Metrolink | San Bernardino Line | Los Angeles—Claremont—San Bernardino |

Source: 2010 Foothill Transit, Omnitrans, RTA and Metrolink timetables.

The predominant flow of transit passengers in the corridor is east-west, so most of the heavily used routes are those that run in an east-west direction. These include bus routes that operate on Foothill Boulevard, I-210, I-10, Bonita Avenue, and Arrow Highway. Many of these routes experience high ridership during peak periods, particularly Foothill Transit Route 498, where headways (frequency of service) during the

morning peak period average five to 10 minutes. Table 2-7 shows the headways for all bus lines in the corridor and illustrates the high demand for service on many of these lines.

#### 2.5.1.2 Station Area Transit Service

##### *Glendora Station*

Foothill Transit Routes 284 and 851 service the area where the proposed Glendora Station would be sited along Glendora Boulevard.

##### *San Dimas Station*

The proposed San Dimas Station would be located between San Dimas and Walnut Avenues. Foothill Transit Routes 492, 494, 499, and 690 service this area.

##### *La Verne Station*

The proposed La Verne Station would be located east of E Street, just north of Arrow Highway. The nearest bus routes are Foothill Transit Routes 197 and 492. Route 197 runs along Arrow Highway and White Avenue, and comes within approximately 0.25-miles east of the station. Route 492 runs along Bonita Avenue, approximately 0.25-miles north of Arrow Highway.

##### *Pomona Station*

The proposed Pomona Station would be located west of Garey Avenue, east of the existing Metrolink station. The new station would be accessible via Foothill Transit Route 197 (on Arrow Highway), Route 291 (on Garey Avenue), and Route 492 (on Bonita Avenue); and via Metrolink.

##### *Claremont Station*

The proposed Claremont Station would be located across from the historic Atchison, Topeka & Santa Fe Depot. The new station would be serviced by Foothill Transit Routes 187, 197, 292, 480, 492, 690 , and 855; and Metrolink.

##### *Montclair Station*

The proposed Montclair Station would be part of the existing Metrolink station at the Montclair Transcenter. The Transcenter area is serviced by Foothill Transit Routes 187, 197, 480, 492, 690, 699; and Silver Streak. The station is also accessible via Omnitrans Routes 65, 66, 67, 68, and 80; RTA 204; and Metrolink.

## Table 2-7. Existing Frequency of Transit Service (in minutes) (2010)

| Operator | Line | Days | AM Peak 6-9 AM | Midday 9 AM-3 PM | PM Peak 3-7 PM | Evening 7 PM-11 PM | Owl 11 PM-6 AM | Dir. | Hours of Service |
|---|---|---|---|---|---|---|---|---|---|
| Foothill Transit | 187 | Weekday | 20 | 20 | 20 | 20 | No Service | EB/WB | 4 AM-11 PM |
| | | Weekend | 30 | 30 | 30 | 30 | No Service | | 5 AM-10 PM |
| | 197 | Weekday | 30 | 30 | 30 | 60 | No Service | NB/SB | 5:30 AM-8 PM |
| | | Weekend | 60 | 60 | 60 | 60 | No Service | | 7 AM-7 PM |
| | 281 | Weekday | 30 | 30 | 30 | 30 | No Service | NB/SB | 5 AM-8:30 PM |
| | | Weekend | 60 | 60 | 60 | 60 | No Service | | 6 AM-6 PM |
| | 284 | Weekday | 60 | 90 | 45 | 45 | No Service | NB/SB | 6 AM-8 PM |
| | | Weekend | 80 | 40 | 80 | No Service | No Service | | 6:30 AM-5 PM |
| | 291 | Weekday | 20 | 15-20 | 15 | 30 | No Service | NB/SB | 4:30 AM-10 PM |
| | | Weekend | 30 | 30 | 30 | No Service | No Service | | 6 AM-6 PM |
| | 292 | Weekday | 30 | No Service | 30 | No Service | No Service | NB/SB | 6 AM-4 PM |
| | 480 | Weekday | 30 | 30 | 30 | 30 | 60 | EB/WB | 5 AM-12 AM |
| | | Weekend | 30 | 60 | 30 | 30 | No Service | | 5 AM-10 PM |
| | 488 | Weekday | 30 | 60 | 30 | 60 | No Service | EB/WB | 4 AM-9 PM |
| | | Weekend | 60 | 60 | 60 | 60 | No Service | | 6:30 AM-7 PM |
| | 498 | Weekday | 10-15 | 30 | 5-15 | No Service | No Service | EB/WB | 2 PM-7 PM |
| | 492 | Weekday | 30 | 30 | 30 | 60 | No Service | EB/WB | 5 AM-9 PM |
| | | Weekend | 30 | 30 | 30 | No Service | No Service | | 6 AM-6 PM |
| | 494 | Weekday | 30 | No Service | 30 | No Service | No Service | EB/WB | 4 PM-6 PM |
| | 499 | Weekday | 12 | No Service | 15-30 | No Service | No Service | EB/WB | 2:45 PM-6:40 PM |
| | 690 | Weekday | 10-20 | No Service | 30 | No Service | No Service | EB/WB | 3:30 PM-6:30 PM |
| | 699 | Weekday | 10-20 | 40 | 10-15 | No Service | No Service | EB/WB | 2 PM-6:30 PM |
| | 851 | Weekday | 30 | No Service | 60 | No Service | No Service | NB/SB | 6:30 AM-4:30 PM |
| | 855 | Weekday | 15-20 | No Service | 15-30 | No Service | No Service | NB/SB | 6:30 AM-3:30 PM |

**Table 2-7. Existing Frequency of Transit Service (in minutes) (2010) (continued)**

| Operator | Line | Days | AM Peak 6-9 AM | Midday 9 AM-3 PM | PM Peak 3-7 PM | Evening 7 PM-11 PM | Owl 11 PM-6 AM | Dir. | Hours of Service |
|---|---|---|---|---|---|---|---|---|---|
| Omnitrans | 65 | Weekday | 60 | 60 | 60 | 60 | No Service | NB/SB | 4:30 AM-10 PM |
| | | Saturday | 60 | 60 | 60 | No Service | No Service | | 6:30 AM-6:30 PM |
| | | Sunday | 60 | 60 | 60 | No Service | No Service | | 6:30 AM-6:30 PM |
| | 66 | Weekday | 15 | 15 | 15 | 30 | No Service | EB/WB | 4 AM-10:30 PM |
| | | Saturday | 30 | 30 | 30 | No Service | No Service | | 6 AM-9 PM |
| | | Sunday | 30 | 30 | 30 | No Service | No Service | | 6 AM-6 PM |
| | 67 | Weekday | 60 | 60 | 60 | No Service | No Service | EB/WB | 5:30 AM-7 PM |
| | 68 | Weekday | 30 | 30 | 30 | 60 | No Service | NB/SB | 5 AM-10:30 PM |
| | | Saturday | 60 | 60 | 60 | 60 | No Service | | 6 AM-6 PM |
| | 80 | Weekday | 60 | 60 | 60 | 60 | No Service | NB/SB | 6 AM-8 PM |
| | | Saturday | 60 | 60 | 60 | No Service | No Service | | 7 AM-7 PM |
| | | Sunday | 60 | 60 | 60 | No Service | No Service | | 7 AM-7 PM |
| RTA | 204 | Weekday | 40-50 | No Service | 50 | No Service | No Service | NB/SB | 5 AM-7 PM |

Source: 2010 Foothill Transit, Omnitrans, and RTA timetables.
NB = northbound
SB = southbound
EB = eastbound
WB = westbound

#### 2.5.1.3 Conditions for Transit Operations

Greater Los Angeles is one of the most congested urban areas in the country. Consequently, existing bus transit service often operates in congested traffic conditions. Typical weekday peak hours within the Study Area extend from 6:00 to 9:00 AM and from 3:00 to 7:00 PM. With the exception of the Metrolink commuter service, mixed flow transit operations account for all transit service in the Study Area; therefore, traffic conditions, such as long peak periods, congested operations, and vehicular queues, also affect bus service. Although ridership on some of the bus routes is high, congestion on arterial streets and freeways affects bus travel times and reliability, resulting in less than optimal service conditions. Congested roads and high transit demand make it difficult to reduce bus headways (improved frequency of service) and result in overcrowded buses.

Due to the economic downturn, all the major transit agencies serving the Study Area have shown a recent decrease in ridership for the primary bus service agencies (Foothill Transit and Omnitrans). Foothill Transit had a system ridership for the Fiscal Year (FY) 2009 of 14,970,000 passenger boardings and FY 2010 ridership of 14,280,600, a decrease of 4.6 percent. Omnitrans had an overall system ridership of 15,452,794 in 2009 and 14,751,260 in 2010, a decrease of 4.5 percent. Omnitrans ridership in FY 2011 was 15,037,317, a small 1.9 percent increase over 2010.

Metrolink provides commuter rail service in the area. Annual ridership on the Metrolink system in 2009 was 12,241,830. Ridership in 2010 was 12,005,849, a decrease of 1.9 percent.

### 2.5.2 Freeways and Arterials

Traffic conditions were examined on major and secondary north-south arterials between Barranca Avenue in Glendora and Central Avenue in Montclair. In addition, the major and secondary east-west arterials located within 1,000 feet of the existing rail right-of-way were evaluated.

The following freeways and arterials provide primary access to the Study Area, as shown in Figure 2-1:

- **I-210/SR 210—**This east-west 10-lane freeway is known as the Foothill Freeway and connects Los Angeles with its northeastern suburbs beyond the San Gabriel Mountain foothills. The western freeway segment is I-210, extending from I-5 in Sylmar to SR 57 in Glendora, where it becomes SR 210. SR 210 continues eastward through the Study Area. The proposed LRT extension would generally run parallel to this freeway; north of I-210, and south of SR 210. The average daily traffic is approximately 225,000 vehicles per day.
- **SR 57—**This is known as the Orange Freeway, a major 8-lane north–south state highway in the greater Los Angeles area. It runs through Pomona and San Dimas and links I-10, SR 71, and I-210/SR 210, ending at the I-210/SR 210 interchange in Glendora. The average daily traffic on SR 57 is approximately 125,000 vehicles per day.
- **I-10—**This is a 10-lane east-west freeway to the south of both I-210/SR 210 and the project alignment. The segment between downtown Los Angeles and the Inland Empire is known as the San Bernardino Freeway. It serves the following Study Area cities: San Dimas, La Verne, Pomona, Claremont, and Montclair. The average daily traffic is approximately 230,000 vehicles per day.
- **South Grand Avenue –**This is a major 4-lane north-south highway. It is a two-way street carrying about 12,000 vehicles per day.

- **South Glendora Avenue—**This is a 4-lane major north-south highway. It is a two-way street carrying about 16,000 vehicles per day.
- **Arrow Highway—**This is a major 4- to 6-lane east-west highway for most of the study area. It is a main two-way street carrying about 28,000 vehicles per day.
- **Historic Route 66 Highway (West Alosta Avenue)—**This is a major 4-lane east-west highway. It is a two-way street carrying about 30,000 vehicles per day.
- **Lone Hill Avenue—**This is a major 4-lane north-south highway. It is a two-way street carrying about 24,000 vehicles per day.
- **Foothill Boulevard—**This is a major 4-lane east-west highway. It is a two-way street that carries about 11,000 vehicles per day.
- **Bonita Avenue—**This is a 4-lane secondary east-west highway for most of the study area. It is a two-way carrying about 13,000 vehicles per day.
- **San Dimas Avenue—**This is a major 4-lane north-south highway. It is a two-way street carrying about 10,000 vehicles per day.
- **San Dimas Canyon Road—**This is a major 4-lane north-south highway. It is a two-way street carrying about 7,700 vehicles per day.
- **White Avenue—**This is a major 4-lane north-south highway for most of the study area. It is a two-way street carrying about 16,000 vehicles per day.
- **North Garey Avenue—**This is a major 4-lane north-south highway. It is a two-way street carrying about 21,000 vehicles per day.
- **North Towne Avenue—**This is a major 4-lane north-south highway. It is a two-way street carrying about 25,000 vehicles per day.
- **Indian Hill Avenue—**This is a 4-lane secondary arterial between Base Line Road and Foothill Boulevard, a 2-lane secondary arterial between Foothill Boulevard and First Street, a 4 -lane secondary highway between First Street and Arrow Highway, and a 4-lane major arterial south of Arrow Highway~~highway north of Bonita Avenue and a major highway south of Bonita Avenue~~. It is a two-way, north-south street and carries about 19,000 vehicles per day.
- **South Mills Avenue/Claremont Boulevard—**This is a major 4-lane ~~north-south highway~~secondary arterial north of Arrow Highway and 2-lane collector roadway south of Arrow Highway. It is a two-way street carrying about 7,600 vehicles per day.
- **Monte Vista Avenue—**This is a major 4-lane north-south highway. It is a two-way street carrying about 19,000 vehicles per day.

#### 2.5.2.1 Programmed Improvements

No programmed major or secondary arterial roadway improvements are anticipated within the Study Area.

#### 2.5.2.2 Daily Traffic Volumes

In May 2010, average daily traffic counts were taken at 35 roadway segments within the Study Area. The 24-hour manual machine counts at the 35 roadway segments were collected on a representative weekday

to determine existing daily traffic operations. Four of the segments are east-west roadways, and the remaining 31 are north-south roadways.

The existing conditions analysis was performed for all 35 roadway segments. The analysis showed that all roadway segments currently operate at LOS D~~C~~ or better, except White Avenue between Arrow Highway and Third Street, which would operate at LOS F. Table 2-8 shows capacities, volumes, volume-to-capacity ratios, and corresponding LOS for each segment analyzed.

#### 2.5.2.3 Study Intersections and Existing Levels of Service

Turning movement counts were collected at 90 intersections in the Study Area to assess existing peak-hour traffic conditions. The chosen intersections are located both along the proposed LRT alignment and adjacent streets. The AM and PM peak hours were identified as the critical time periods for an assessment of existing conditions. Detailed vehicle turning movement data are illustrated in Figure 2-8 to Figure 2-13.

The intersection analysis showed that ~~6~~ 5 of the 90 locations operate at LOS E or F. Table 2-9 lists these ~~six~~ five intersection locations. The remaining ~~84~~ 85 intersections operate at LOS D or better during both AM and PM peak hours. Table 2-10 presents the results of the existing AM and PM traffic operations and corresponding LOS at each of the study intersections.

### 2.5.3 Parking

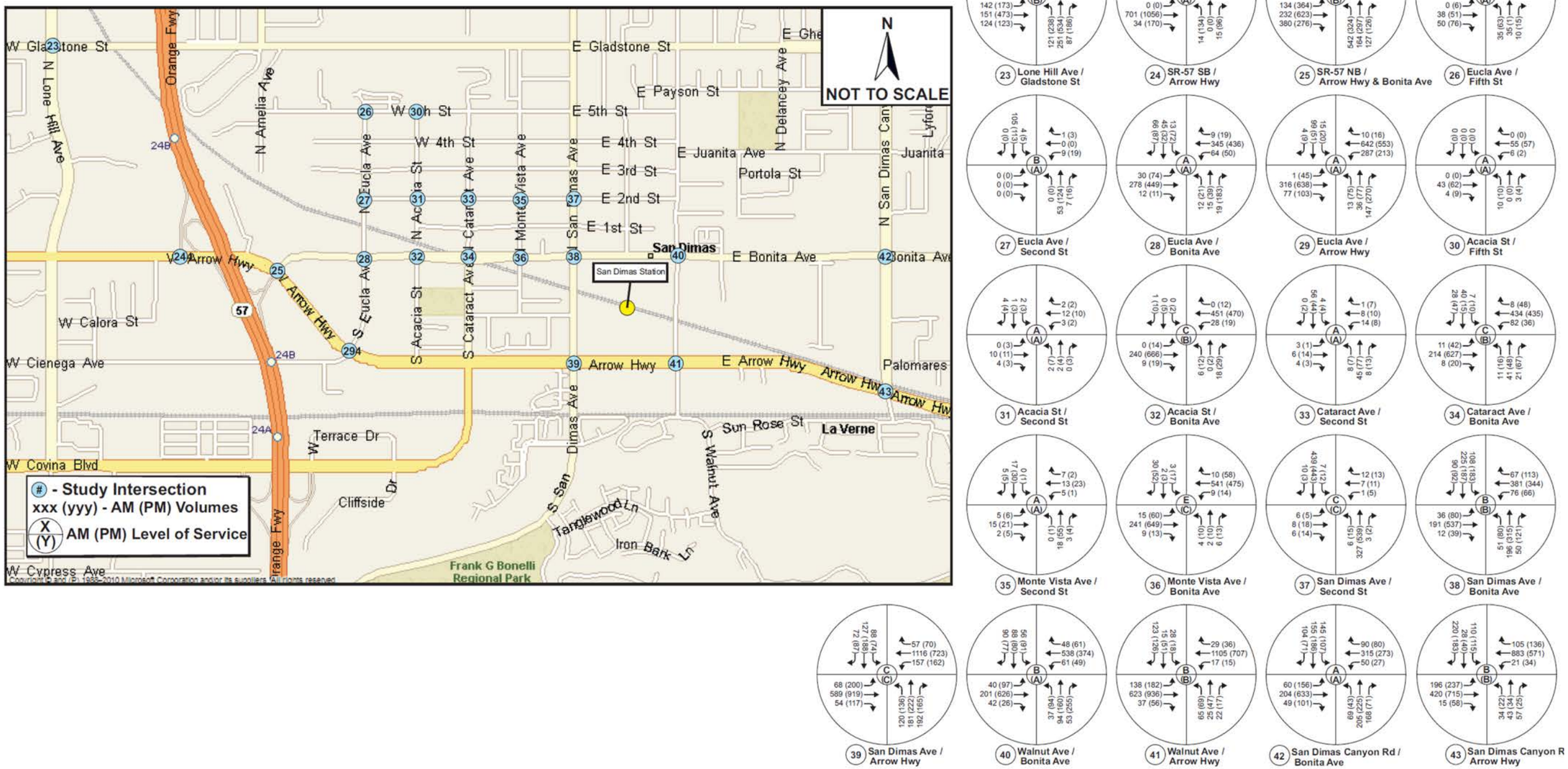
On-street parking is available near the proposed station~~s~~ at ~~Glendora and~~ La Verne. The existing Metrolink stations at Pomona and Claremont also provide on-street parking near the stations. Limited or ~~N~~no on-street parking is provided near the proposed Glendora or San Dimas station~~s~~ or near the Montclair Transcenter; however, sufficient off-street parking is available for current and future operations.

### 2.5.4 Pedestrian and Bicycle Facilities

According to the *2012 County of Los Angeles Bicycle Master Plan*, three of the six proposed station locations would be within the vicinity of existing bike lanes. Glendora Avenue has a Class III bike route near the location of the proposed Glendora Station. Arrow Highway has a Class III bike route near the proposed San Dimas Station, while San Dimas Avenue has a Class III bike route north of Arrow Highway and a Class II bike lane south of Arrow Highway. College Avenue has a Class II bike lane near the proposed Claremont Station.

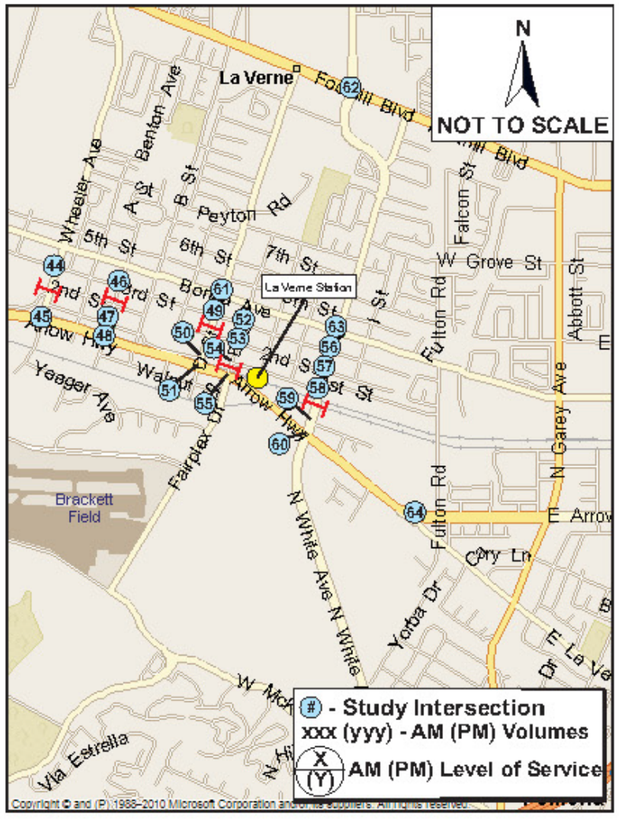

Source: Intueor, 2011, updated January 2013

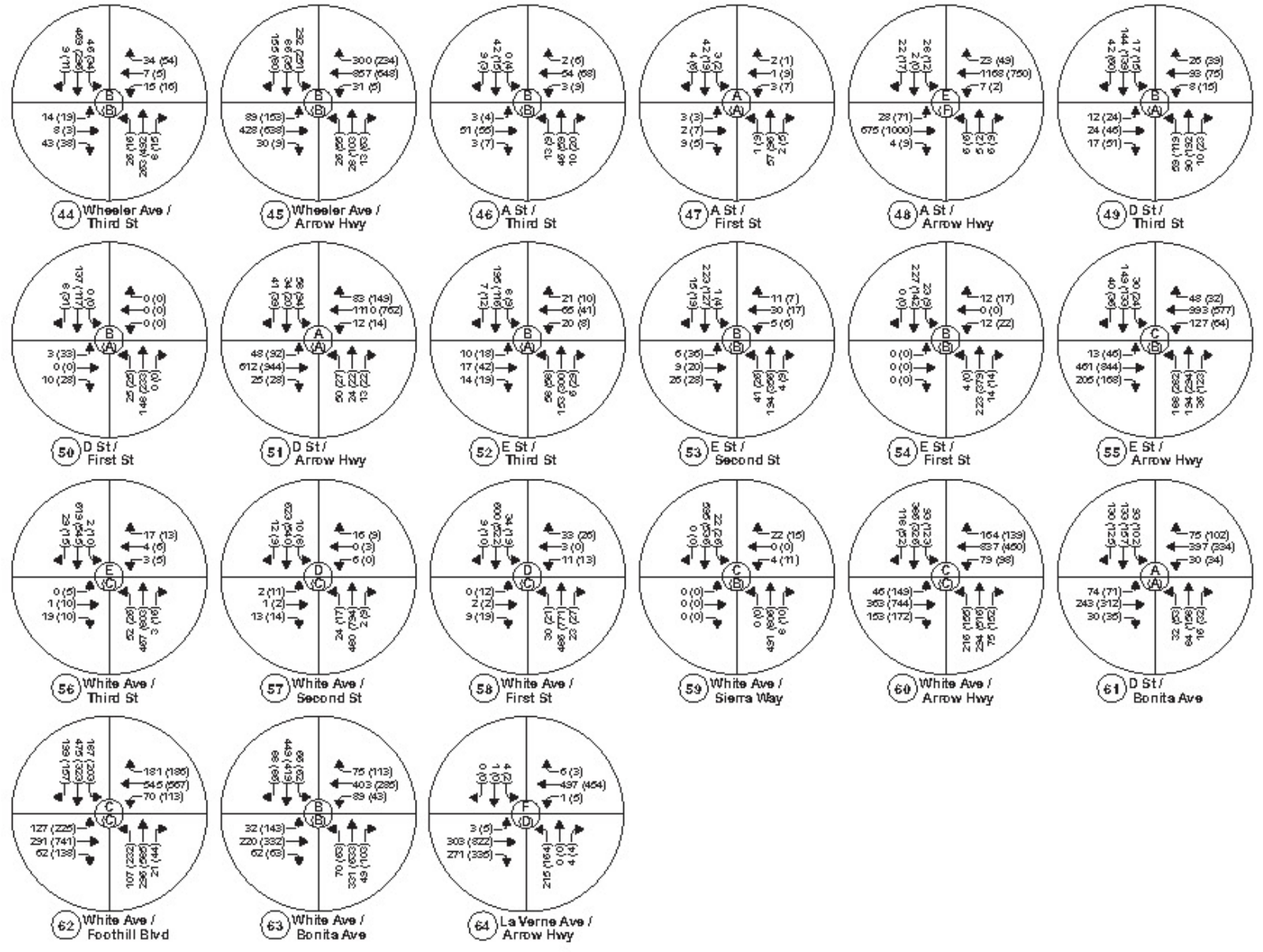
***Figure 2-8. Existing (2010) AM/PM Peak Hour Volumes: Glendora***




Source: Intueor, 2011

***Figure 2-9. Existing (2010) AM/PM Peak Hour Volumes: San Dimas***




Source: Intueor, 2011, updated January 2013

***Figure 2-10. Existing (2010) AM/PM Peak Hour Volumes: La Verne***

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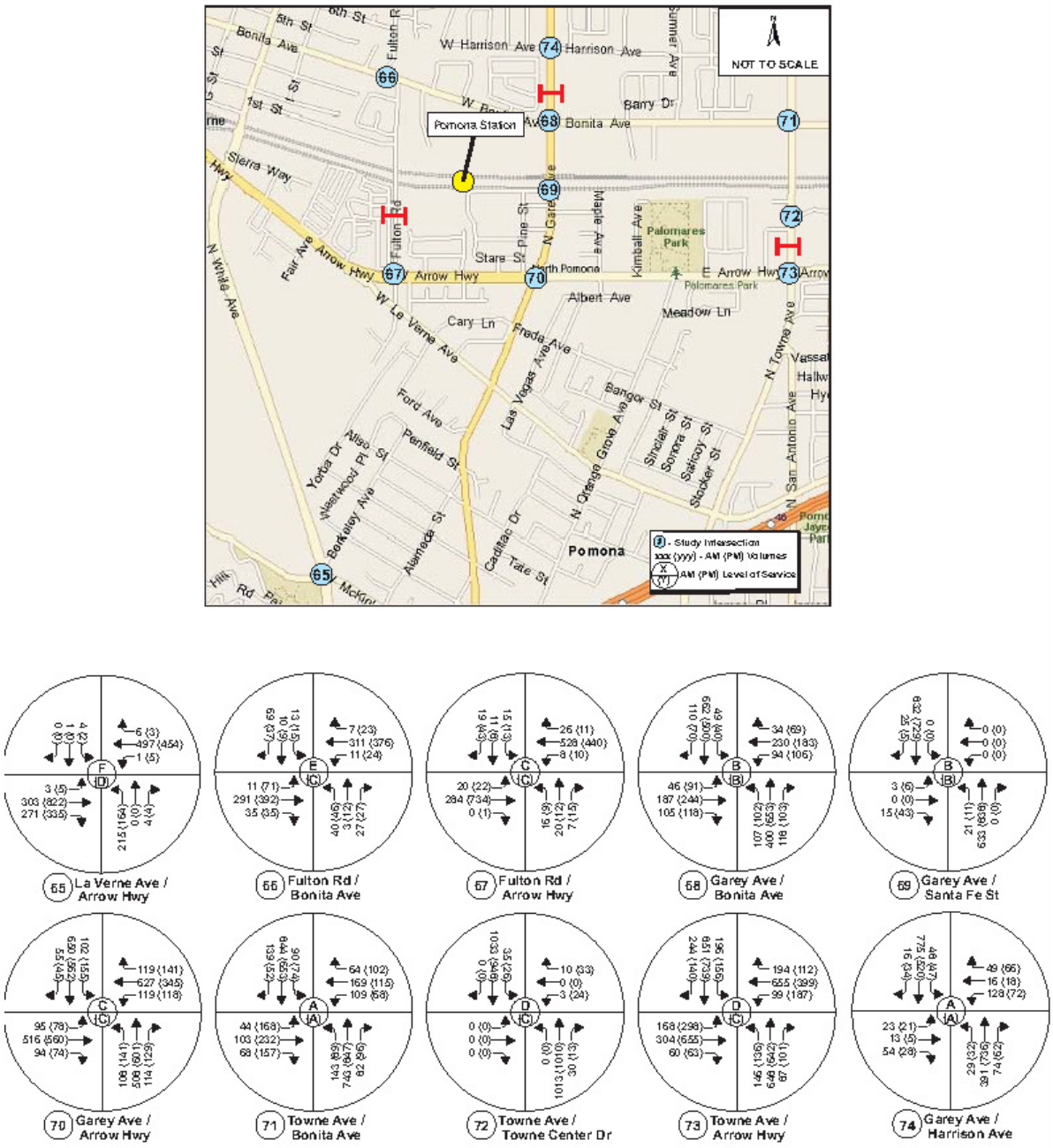
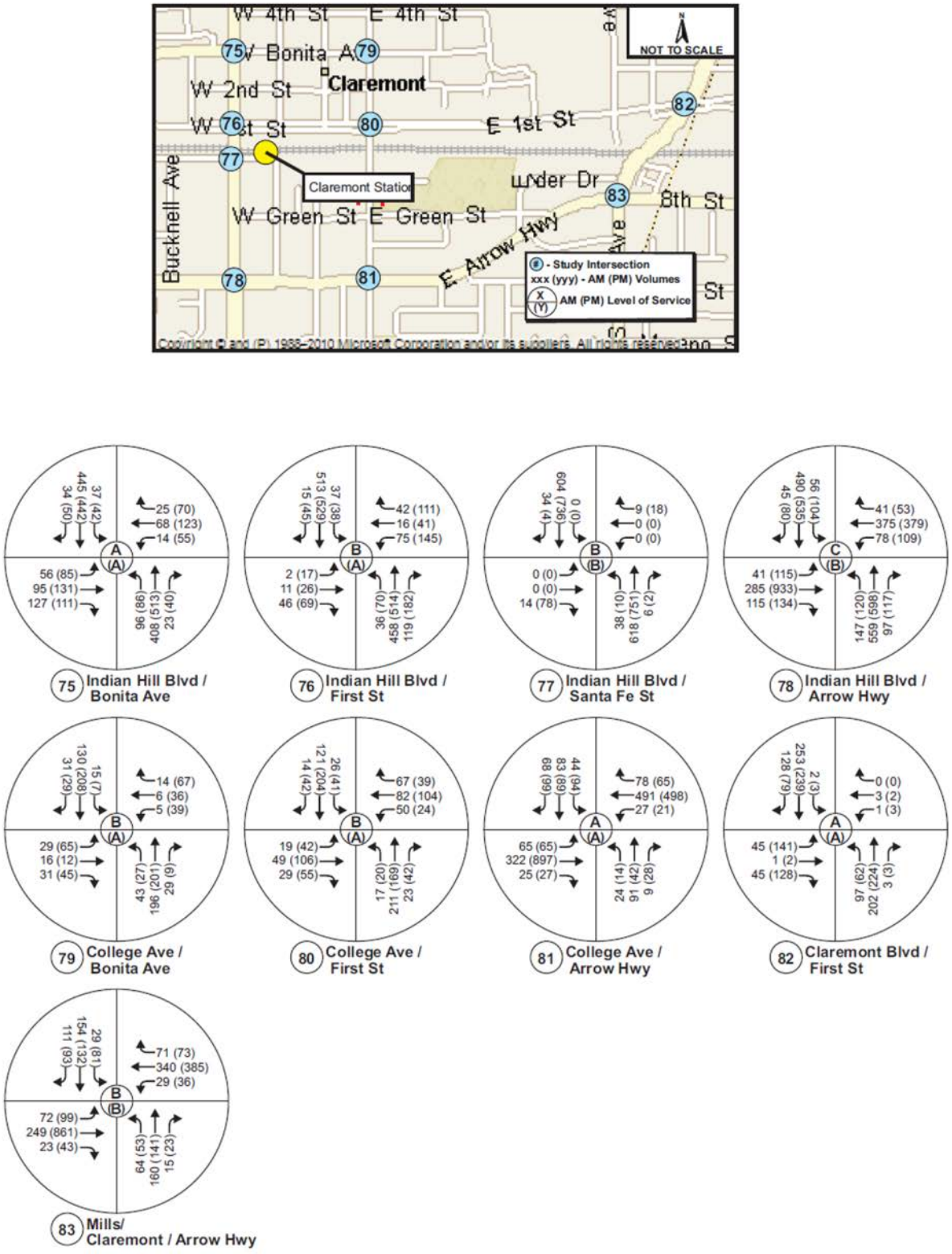






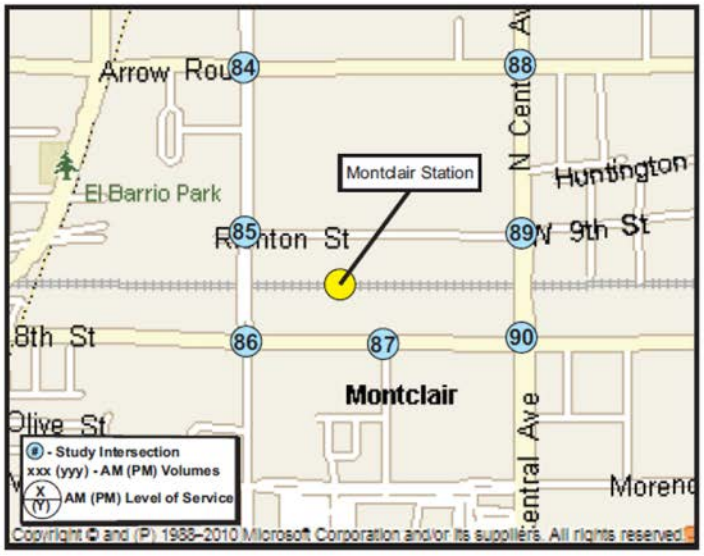
Source: Intueor, 2011, updated January 2013

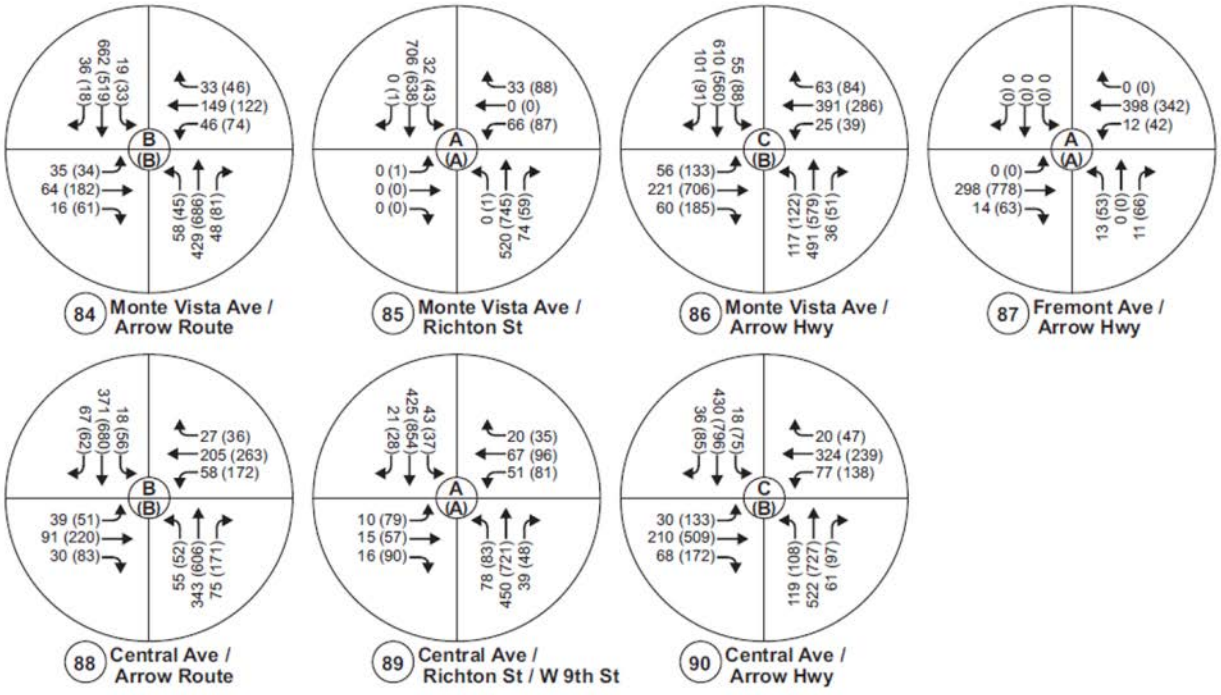
***Figure 2-11. Existing (2010) AM/PM Peak Hour Volumes: Pomona***




Source: Intueor, 2011

***Figure 2-12. Existing (2010) AM/PM Peak Hour Volumes: Claremont***




Source: Intueor, 2011

***Figure 2-13. Existing (2010) AM/PM Peak Hour Volumes: Montclair***

## Table 2-8. Existing Roadway Segment Average Daily Traffic Analysis (2010)

| Roadway Segment | From | To | Number of Lanes | Capacity (Vehicles/Day) | Volume (Vehicles/Day) | V/C | LOS |
|---|---|---|---|---|---|---|---|
| **Glendora** | | | | | | | |
| South Lone Hill Avenue | West Gladstone Street | Auto Centre Drive | 4 | 32,000[1] | 24,167 | 0.76 | C |
| South Loraine Avenue | Route 66 | East Lemon Avenue | 4 | 32,000 | 9,205 | 0.29 | A |
| South Elwood Avenue | Route 66 | East Lemon Avenue | 2 | 12,000[4] | 2,361 | 0.20 | A |
| South Glenwood Avenue | Route 66 | East Lemon Avenue | 2 | 12,000 | 2,437 | 0.20 | A |
| South Pasadena Avenue | Route 66 | East Lemon Avenue | 2 | 12,000 | 2,307 | 0.19 | A |
| South Glendora Avenue | Route 66 | Foothill Boulevard | 4 | 32,000 | 15,969 | 0.50 | A |
| South Vermont Avenue | Route 66 | West Foothill Boulevard | 2 | 12,000 | 3,715 | 0.31 | A |
| Grand Avenue | Route 66 | West Leadora Avenue | 4 | 32,000 | 12,383 | 0.39 | A |
| Foothill Boulevard | Barranca Avenue | Glendora Avenue | 4 | 32,000 | 10,569 | 0.33 | A |
| North Barranca Avenue | West Foothill Boulevard | West Leadora Avenue | 4 | 24,000[2] | 7,235 | 0.30 | A |
| **San Dimas** | | | | | | | |
| San Dimas Canyon Road | Arrow Highway | Bonita Avenue | 4 | 32,000 | 7,652 | 0.24 | A |
| Walnut Avenue | East Arrow Highway | East Bonita Avenue | 2 | 16,000[3] | 6,181 | 0.39 | A |
| San Dimas Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 10,122 | 0.32 | A |
| Monte Vista Avenue | Commercial Street | Bonita Avenue | 2 | 12,000 | 448 | 0.04 | A |
| Cataract Avenue | Arrow Highway | First Street | 2 | 12,000 | 2,530 | 0.21 | A |
| Bonita Avenue | Eucla Avenue | San Dimas Avenue | 4 | 32,000 | 13,038 | 0.41 | A |
| Eucla Avenue | Bonita Avenue | Third Street | 2 | 12,000 | 3,128 | 0.26 | A |
| West Gladstone Street | Lone Hill Avenue | Amelia Avenue | 4 | 32,000 | 12,999 | 0.41 | A |
| **La Verne** | | | | | | | |
| White Avenue | Arrow Highway | Third Street | ~~4~~2 | ~~32,000~~16,000 | 16,466 | ~~0.51~~1.03 | ~~A~~F |
| E Street | Arrow Highway | Third Street | 2 | 16,000 | 6,064 | 0.38 | A |
| D Street | Arrow Highway | Third Street | 2 | 12,000 | 4,995 | 0.42 | A |
| A Street | Arrow Highway | Third Street | 2 | 12,000 | 1,174 | 0.10 | A |
| Wheeler Avenue | Arrow Highway | Third Street | 4 | 32,000 | 9,067 | 0.28 | A |

## Table 2-8. Existing Roadway Segment Average Daily Traffic Analysis (2010) (continued)

| Roadway Segment | From | To | Number of Lanes | Capacity (Vehicles/Day) | Volume (Vehicles/Day) | V/C | LOS |
|---|---|---|---|---|---|---|---|
| **Pomona** | | | | | | | |
| North Towne Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 25,298 | 0.79 | C |
| North Garey Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 20,918 | 0.65 | B |
| Fulton Road | Metrolink Driveway | Bonita Avenue | 2 | 16,000 | 1,345 | 0.08 | A |
| Fulton Road | Arrow Highway | Metrolink Driveway | 2 | 16,000 | 1,635 | 0.10 | A |
| **Claremont** | | | | | | | |
| South Mills Avenue/Claremont Boulevard | Arrow Highway | East First Street | 4 | 32,000 | 7,577 | 0.24 | A |
| Indian Hill Boulevard | Arrow Highway | Bonita Avenue | 4 | 32,000 | 18,889 | 0.59 | A |
| College Avenue | East Arrow Highway | East First Street | 2 | 12,000 | 5,068 | 0.42 | A |
| College Avenue | East First Street | Bonita Avenue | 2 | 12,000 | 5,553 | 0.46 | A |
| Cambridge Avenue | West Arrow Highway | Bonita Avenue | 2 | 12,000 | 4,580 | 0.38 | A |
| First Street | Indian Hill Boulevard | College Avenue | 2 | 12,000 | 7,363 | 0.62 | B |
| **Montclair** | | | | | | | |
| Monte Vista Avenue | Richton Street | Arrow Highway | 4 | 32,000 | 18,837 | 0.59 | A |
| Central Avenue | Richton Street | Arrow Highway | 4 | 32,000 | 22,382 | 0.70 | B |

Source: Wiltec, 2010.
[1] Capacity of 32,000 assumes 800 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[2] Capacity of 24,000 assumes 600 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[3] Capacity of 16,000 assumes 800 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[4] Capacity of 12,000 assumes 600 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
k-factor= The ratio of design hour traffic to average annual daily traffic.

## Table 2-9. Intersections Currently Operating at LOS E or F (2010)

| Intersection | Jurisdiction | Control Type |
|---|---|---|
| ~~Glenwood Avenue/Route 66~~ | ~~Glendora~~ | ~~2-Way Stop~~ |
| Monte Vista Avenue/Bonita Avenue | San Dimas | 2-Way Stop |
| A Street/Arrow Highway | La Verne | 2-Way Stop |
| White Avenue/Third Street | La Verne | 2-Way Stop |
| La Verne Avenue/Arrow Highway | La Verne | 2-Way Stop |
| Fulton Road/Bonita Avenue | Pomona | 2-Way Stop |

Source: Intueor, 2011

## Table 2-10. Existing Intersection LOS Analysis (2010)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[2] | LOS | Delay[2] |
| 1 | Barranca Avenue/Bennett Avenue | Glendora | 1-Way Stop | C | 16.5 | B | 11.6 |
| | | | | A[1] | 5.8[1] | A[1] | 1.7[1] |
| 2 | Barranca Avenue/Foothill Boulevard | Glendora | Signalized | A | 9.7 | A | 7.5 |
| 3 | Grand Avenue/Foothill Boulevard | Glendora | Signalized | C | 27.3 | C | 23.9 |
| 4 | Vermont Avenue East/Ada Avenue | Glendora | 1-Way Stop | B | 11.0 | B | 12.3 |
| | | | | A[1] | 4.2[1] | A[1] | 4.7[1] |
| 5 | Vermont Avenue/Route 66 | Glendora | Signalized | A | 6.6 | A | 7.8 |
| 6 | Vermont Avenue/Foothill Boulevard | Glendora | Signalized | A | 6.8 | A | 6.2 |
| 7 | Vermont Avenue West/Ada Avenue | Glendora | 1-Way Stop | B | 10.6 | B | 11.3 |
| | | | | A[1] | 2.5[1] | A[1] | 2.1[1] |
| 8 | Glendora Avenue/Foothill Boulevard | Glendora | Signalized | C | 20.1 | C | 22.3 |
| 9 | Glendora Avenue/Ada Avenue | Glendora | All-Way Stop | B | 10.6 | B | 12.1 |
| 10 | Glendora Avenue/Route 66 | Glendora | Signalized | B | 17.9 | C | 21.2 |
| 11 | Pasadena Avenue/Lemon Avenue | Glendora | All-Way Stop | A | 7.7 | A | 7.6 |
| 12 | Pasadena Avenue/Route 66 | Glendora | Signalized | A | 9.4 | A | 8.7 |
| 13 | Glenwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | A | 9.8 | B | 10.7 |
| | | | | A[1] | 2.3[1] | A[1] | 2.5[1] |
| 14 | Glenwood Avenue/Route 66 | Glendora | Signalized~~2-Way Stop~~ | B~~F~~ | 11.2~~487.7~~ | B~~F~~ | 10.6~~304.7~~ |
| 15 | Elwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 10.4 | B | 10.5 |
| | | | | A[1] | 2.2[1] | A[1] | 2.1[1] |
| 16 | Elwood Avenue/Route 66 | Glendora | Signalized | B | 16.7 | B | 14.3 |
| 17 | Loraine Avenue/Lemon Avenue | Glendora | 2-Way Stop | C | 16.7 | B | 12.4 |
| | | | | A[1] | 1.6[1] | A[1] | 1.1[1] |
| 18 | Loraine Avenue/Route 66 | Glendora | Signalized | B | 13.9 | B | 10.5 |
| 19 | Lone Hill Avenue/Auto Centre Drive | Glendora | Signalized | B | 13.7 | B | 16.7 |
| 20 | Barranca Avenue/Sierra Madre Avenue | Glendora | 1-Way Stop | C | 15.7 | B | 13.7 |
| | | | | A[1] | 3.6[1] | A[1] | 2.8[1] |
| 21 | Glendora Avenue/Sierra Madre Avenue | Glendora | All-Way Stop | C | 23.8 | B | 12.0 |
| 22 | Lone Hill Avenue/Glendora Marketplace | Glendora | Signalized | B | 15.1 | B | 19.5 |

## Table 2-10. Existing Intersection LOS Analysis (2010) (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[2] | LOS | Delay[2] |
| 23 | Lone Hill Avenue/Gladstone Street | San Dimas | Signalized | B | 16.9 | C | 21.7 |
| 24 | SR-57 (southbound)/Arrow Highway | San Dimas | Signalized | A | 5.3 | A | 9.5 |
| 25 | SR-57 (northbound)/Arrow Highway & Bonita Avenue | San Dimas | Signalized | B | 17.6 | B | 19.9 |
| 26 | Eucla Avenue/Fifth Street | San Dimas | All-Way Stop | A | 7.2 | A | 7.2 |
| 27 | Eucla Avenue/Second Street | San Dimas | 1-Way Stop | A | 9.4 | B | 10.0 |
| | | | | A[1] | 0.7[1] | A[1] | 0.9[1] |
| 28 | Eucla Avenue/Bonita Avenue | San Dimas | Signalized | A | 4.7 | A | 6.0 |
| 29 | Eucla Avenue/Arrow Highway | San Dimas | Signalized | A | 7.4 | A | 9.8 |
| 30 | Acacia Street/Fifth Street | San Dimas | 1-Way Stop | A | 9.1 | A | 9.1 |
| | | | | A[1] | 1.4[1] | A[1] | 1.0[1] |
| 31 | Acacia Street/Second Street | San Dimas | 2-Way Stop | A | 9.0 | A | 9.1 |
| | | | | A[1] | 7.3[1] | A[1] | 6.4[1] |
| 32 | Acacia Street/Bonita Avenue | San Dimas | 2-Way Stop | B | 10.4 | C | 18.2 |
| | | | | A[1] | 0.6[1] | A[1] | 1.1[1] |
| 33 | Cataract Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.7 | A | 9.8 |
| | | | | A[1] | 8.3[1] | A[1] | 7.9[1] |
| 34 | Cataract Avenue/Bonita Avenue | San Dimas | All-Way Stop | B | 10.3 | C | 15.0 |
| 35 | Monte Vista Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.2 | A | 9.7 |
| | | | | A[1] | 4.8[1] | A[1] | 3.7[1] |
| 36 | Monte Vista Avenue/Bonita Avenue | San Dimas | 2-Way Stop | C | 15.4 | E | 39.7 |
| | | | | A[1] | 1.0[1] | A[1] | 2.9[1] |
| 37 | San Dimas Avenue/Second Street | San Dimas | 2-Way Stop | C | 16.8 | C | 22.3 |
| | | | | A[1] | 0.9[1] | A[1] | 1.5[1] |
| 38 | San Dimas Avenue/Bonita Avenue | San Dimas | Signalized | B | 10.2 | B | 13.0 |
| 39 | San Dimas Avenue/Arrow Highway | San Dimas | Signalized | C | 23.0 | C | 29.4 |
| 40 | Walnut Avenue/Bonita Avenue | San Dimas | Signalized | A | 5.9 | B | 10.7 |
| 41 | Walnut Avenue/Arrow Highway | San Dimas | Signalized | B | 10.8 | B | 10.4 |
| 42 | San Dimas Canyon Road/Bonita Avenue | San Dimas | Signalized | A | 6.3 | A | 7.3 |
| 43 | San Dimas Canyon Road/Arrow Highway | San Dimas | Signalized | B | 11.4 | B | 10.1 |
| 44 | Wheeler Avenue/Third Street | La Verne | 2-Way Stop | B | 14.4 | B | 13.8 |
| | | | | A[1] | 2.6[1] | A[1] | 2.4[1] |
| 45 | Wheeler Avenue/Arrow Highway | La Verne | Signalized | B | ~~13.3~~15.1 | B | ~~11.6~~13.3 |
| 46 | A Street/Third Street | La Verne | 2-Way Stop | B | 10.1 | B | 10.3 |
| | | | | A[1] | 5.3[1] | A[1] | 4.7[1] |
| 47 | A Street/First Street | La Verne | 2-Way Stop | A | 9.2 | A | 9.8 |
| | | | | A[1] | 1.6[1] | A[1] | 2.3[1] |
| 48 | A Street/Arrow Highway | La Verne | 2-Way Stop | F | 77.2 | E | 40.0 |
| | | | | A[1] | 2.6[1] | A[1] | 1.1[1] |

## Table 2-10. Existing Intersection LOS Analysis (2010) (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[2] | LOS | Delay[2] |
| 49 | D Street/Third Street | La Verne | All-Way Stop | A | 9.1 | B | 11.5 |
| 50 | D Street/First Street | La Verne | 1-Way Stop | A | 9.5 | B | 10.9 |
| | | | | A[1] | 1.0[1] | A[1] | 1.9[1] |
| 51 | D Street/Arrow Highway | La Verne | Signalized~~All-Way Stop~~ | A | 4.7 | A | 4.9 |
| 52 | E Street/Third Street | La Verne | All-Way Stop | A | 9.2 | B | 11.0 |
| 53 | E Street/Second Street | La Verne | 2-Way Stop | B | 13.2 | B | 13.5 |
| | | | | A[1] | 2.6[1] | A[1] | 2.8[1] |
| 54 | E Street/First Street | La Verne | 1-Way Stop | B | 10.9 | B | 11.7 |
| | | | | A[1] | 0.9[1] | A[1] | 0.9[1] |
| 55 | E Street/Arrow Highway | La Verne | Signalized | B | 18.6 | C | 23.5 |
| 56 | White Avenue/Third Street | La Verne | 2-Way Stop | C | 19.6 | E | 41.8 |
| | | | | A[1] | 1.4[1] | A[1] | 1.9[1] |
| 57 | White Avenue/Second Street | La Verne | 2-Way Stop | C | 18.5 | D | 32.5 |
| | | | | A[1] | 1.1[1] | A[1] | 1.2[1] |
| 58 | White Avenue/First Street | La Verne | 2-Way Stop | C | 20.0 | D | 29.7 |
| | | | | A[1] | 1.6[1] | A[1] | 1.8[1] |
| 59 | White Avenue/Sierra Way | La Verne | 1-Way Stop | B | 10.7 | C | 15.3 |
| | | | | A[1] | 0.4[1] | A[1] | 0.5[1] |
| 60 | White Avenue/Arrow Highway | La Verne | Signalized | C | 21.5 | C | 24.7 |
| 61 | D Street/Bonita Avenue | La Verne | Signalized | A | 7.6 | A | 8.0 |
| 62 | White Avenue/Foothill Boulevard | La Verne | Signalized | C | 23.8 | C | 34.2 |
| 63 | White Avenue/Bonita Avenue | La Verne | Signalized | B | 12.2 | B | 13.9 |
| ~~64~~ | ~~White Avenue/McKinley Avenue~~ | ~~La Verne~~ | ~~Signalized~~ | ~~B~~ | ~~10.5~~ | ~~B~~ | ~~12.0~~ |
| ~~65~~ 64 | La Verne Avenue/Arrow Highway | La Verne | 2-Way Stop | D | 28.6 | F | 196.9 |
| | | | | A[1] | 6.2[1] | C[1] | 22.8[1] |
| 65 | White Avenue/McKinley Avenue | Pomona | Signalized | B | 10.5 | B | 12.0 |
| 66 | Fulton Road/Bonita Avenue | Pomona | 2-Way Stop | C | 17.2 | E | 30.8 |
| | | | | A[1] | 3.0[1] | A[1] | 4.2[1] |
| 67 | Fulton Road/Arrow Highway | Pomona | 2-Way Stop | C | 17.9 | C | 24.2 |
| | | | | A[1] | 1.8[1] | A[1] | 1.6[1] |
| 68 | Garey Avenue/Bonita Avenue | Pomona | Signalized | B | 13.2 | B | 13.3 |
| 69 | Garey Avenue/Santa Fe Street | Pomona | 1-Way Stop | B | 11.8 | B | 11.5 |
| | | | | A[1] | 0.3[1] | A[1] | 0.4[1] |
| 70 | Garey Avenue/Arrow Highway | Pomona | Signalized | C | 21.5 | C | 25.8 |
| 71 | Towne Avenue/Bonita Avenue | Pomona | Signalized | A | 7.3 | A | 9.5 |
| 72 | Towne Avenue/Towne Center Drive | Pomona | 1-Way Stop | C | 18.4 | D | 27.9 |
| | | | | A[1] | 0.3[1] | A[1] | 0.9[1] |
| 73 | Towne Avenue/Arrow Highway | Pomona | Signalized | C | 34.9 | D | 37.0 |
| 74 | Garey Avenue/Harrison Avenue | Pomona | Signalized | A | 6.7 | A | 4.7 |
| 75 | Indian Hill Boulevard/Bonita Avenue | Claremont | Signalized | A | 7.3 | A | 8.5 |

## Table 2-10. Existing Intersection LOS Analysis (2010) (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[2] | LOS | Delay[2] |
| 76 | Indian Hill Boulevard/First Street | Claremont | Signalized | A | 9.3 | B | 12.4 |
| 77 | Indian Hill Boulevard/Santa Fe Street | Claremont | 2-Way Stop | B | 10.7 | B | 12.0 |
| | | | | A[1] | 0.4[1] | A[1] | 0.8[1] |
| 78 | Indian Hill Boulevard/Arrow Highway | Claremont | Signalized | B | 18.8 | C | 27.4 |
| 79 | College Avenue/Bonita Avenue | Claremont | All-Way Stop | A | 9.1 | B | 10.8 |
| 80 | College Avenue/First Street | Claremont | All-Way Stop | A | 9.6 | B | 10.7 |
| 81 | College Avenue/Arrow Highway | Claremont | Signalized | A | 5.2 | A | 6.5 |
| 82 | Claremont Boulevard/First Street | Claremont | Signalized | A | 3.4 | A | 5.9 |
| 83 | Mills/Claremont/Arrow Highway | Claremont | Signalized | B | 14.6 | B | 16.3 |
| 84 | Monte Vista Avenue/Arrow Route | Montclair | Signalized | B | 11.9 | B | 12.8 |
| 85 | Monte Vista Avenue/Richton Street | Montclair | Signalized | A | 3.2 | A | 6.4 |
| 86 | Monte Vista Avenue/Arrow Highway | Montclair | Signalized | B | 16.8 | C | 21.3 |
| 87 | Fremont Avenue/Arrow Highway | Montclair | Signalized | A | 1.8 | A | 4.0 |
| 88 | Central Avenue/Arrow Route | Montclair | Signalized | B | 10.9 | B | 17.4 |
| 89 | Central Avenue/Richton Street/West 9th Street | Montclair | Signalized | A | 7.6 | A | 9.1 |
| 90 | Central Avenue/Arrow Highway | Montclair | Signalized | B | 14.3 | C | 21.6 |

Source: Intueor, 2011
[1] Overall intersection LOS and delay at unsignalized (1-way and 2-way stop) intersections is reported to support the air quality analysis.
[2] Average vehicle delay in seconds

### 2.5.5 At-Grade Railroad Crossings

Among the existing railroad crossings, two of the crossings, historic Highway 66 in the City of Glendora and Monte Vista Avenue in the City of Montclair, are currently grade separated. The proposed LRT alignment would maintain these grade separations. Twenty-six crossings were evaluated using the Metropolitan Transportation Authority's (Metro) *Policy for Grade Crossing for Light Rail Transit* (December 4, 2003). This evaluation shows how highway traffic would be affected by proposed train headway operations. It was also used to determine whether an at-grade crossing is feasible or a grade separation should be studied in more detail. Table 2-11 provides the list of analyzed crossings. The results of the analysis are provided in Table 2-32.

**Table 2-11. List of Analyzed Railroad Crossing Locations**

| City | Crossing Intersections | |
|---|---|---|
| Glendora | Barranca Avenue | Glenwood Avenue |
| | Grand Avenue/Foothill Boulevard | Elwood Avenue |
| | Vermont Avenue/Ada Avenue | Loraine Avenue |
| | Glendora Avenue | Lone Hill Avenue/Auto Center Drive |
| | Pasadena Avenue | |
| San Dimas | Gladstone Street | San Dimas Avenue |
| | Eucla Street | Walnut Avenue |
| | Cataract Avenue/Bonita Avenue | San Dimas Canyon Road |
| | Monte Vista Avenue | |
| La Verne | Wheeler Avenue | E Street |
| | A Street | White Avenue |
| | D Street | |
| Pomona | Fulton Road | Towne Avenue |
| | Garey Avenue | |
| Claremont | Cambridge Avenue | College Avenue |
| | Indian Hill Boulevard | Claremont Boulevard/South Mill Road |
| Montclair | Monte Vista Avenue | |

Source: Intueor, 2011

## 2.6 ENVIRONMENTAL IMPACTS

### 2.6.1 No Build Alternative

The No Build Alternative represents the baseline case consisting of existing and committed elements of the region's transportation plan, excluding the proposed project. Consequently, the No Build Alternative is focused on the preservation of existing services and projects.

#### 2.6.1.1 Public Transit

As the population grows, the demand for adequate and reliable transit service will also increase. Existing bus transit service performance will likely worsen because of the projected increase in traffic congestion. This is likely to make travel via bus transit a less attractive option for San Gabriel Valley patrons. For those patrons who have no other travel options, travel times will increase and bus transit usage will be less convenient.

The No Build Alternative would provide no significant improvement in transit services in the Study Area. The plans of local fixed-route bus services are presented below:

- Currently, Foothill Transit does not have any specific plans to implement major changes to the transit services provided.
- Omnitrans has developed a Financially Constrained Service Plan to be implemented over the course of fiscal years 2010 through 2014. This plan takes into account the limited available funding. The plan includes the following changes:
  - Route 65: Reduce weekday evening service from 30 minutes to 60 minutes frequency; restructure Los Seranos loop.
  - Route 66: Reduce mid-weekday service from 15-minutes to 30-minutes frequency.
  - Route 67: Eliminate weekend service or hire a contractor that operates smaller vehicles.
  - Route 68: Eliminate weekend service or hire a contractor that operates smaller vehicles.

With the recent economic downturn, transit operators in the area have experienced a system-wide ridership decrease. Other than the short-term planned changes identified above, respective transit operators will determine future bus routes and frequencies by demand and operating costs. No other significant transit additions are projected for the No Build Alternative.

#### 2.6.1.2 Streets and Highways

##### *Intersection Traffic Conditions*

No Build traffic forecasts for 2035 were developed to provide a description of the Study Area and to establish a basis of comparison with the TSM and Build Alternative. The information includes anticipated changes to intersection operations, growth factors, and the resulting traffic operations for the No Build Alternative.

The 2035 No Build Alternative was analyzed based on historical traffic data, potential population and employment growth, and the long-range traffic projections from this study's modeling efforts. Traffic projections for the No Build Alternative were developed by applying growth factors to the existing peak-hour traffic data for each city.

SCAG models were used to forecast future traffic growth factors applicable for each city. The model growth was interpolated using a linear method to calculate a 2010 annual growth rate for each of the corridor cities. Table 2-12 provides the total growth factor and the annual growth rates. These growth factors were applied to each of the 90 study intersections according to their jurisdiction.

**Table 2-12. No Build Alternative—Growth Factors (2035)**

| City | Annual Growth Rate | Accumulated Growth Factor (2010 to 2035) |
|---|---|---|
| Glendora | 0.7% | 16.6% |
| San Dimas | 0.9% | 21.9% |
| La Verne | 0.6% | 14.3% |
| Pomona | 0.7% | 17.5% |
| Claremont | 0.7% | 17.0% |
| Montclair | 0.7% | 18.0% |
| Upland | 0.9% | 21.7% |

Source: Fehr & Peers, 2010

The growth factors were applied to each of the 90 study intersections according to their jurisdiction. Figure 2-14 to Figure 2-19 show the No Build peak-hour traffic volumes during the AM and PM peak hours. The future No Build Alternative was analyzed; the resulting traffic operating conditions and corresponding LOS are provided in Table 2-13. As noted earlier, no significant highway and transit projects or operations currently exist within the region that SCAG and Metro expect to be in place by 2035.

Under the No Build Alternative, three~~four~~ intersections would operate at LOS E or F in the AM peak hour, and nine~~ten~~ intersections would operate at LOS E or F in the PM peak hour. The others would continue to operate at LOS D or better. All the highlighted intersections would be unsignalized one-way or two-way stop-controlled intersections. Vehicles approaching these intersections from minor streets would not find adequate gaps to perform their maneuvers in a timely manner.

#### *Roadway Segment Traffic Operations*

The same growth factors were also applied to each of the 35 study roadway segments. Table 2-14 presents the results of the analysis. All roadway segments would operate at LOS D or better, except North Towne Avenue between Arrow Highway and Bonita Avenue, which would operate at LOS E, and White Avenue between Arrow Highway and Third Street, which would operate at LOS F.

### 2.6.1.3 Parking

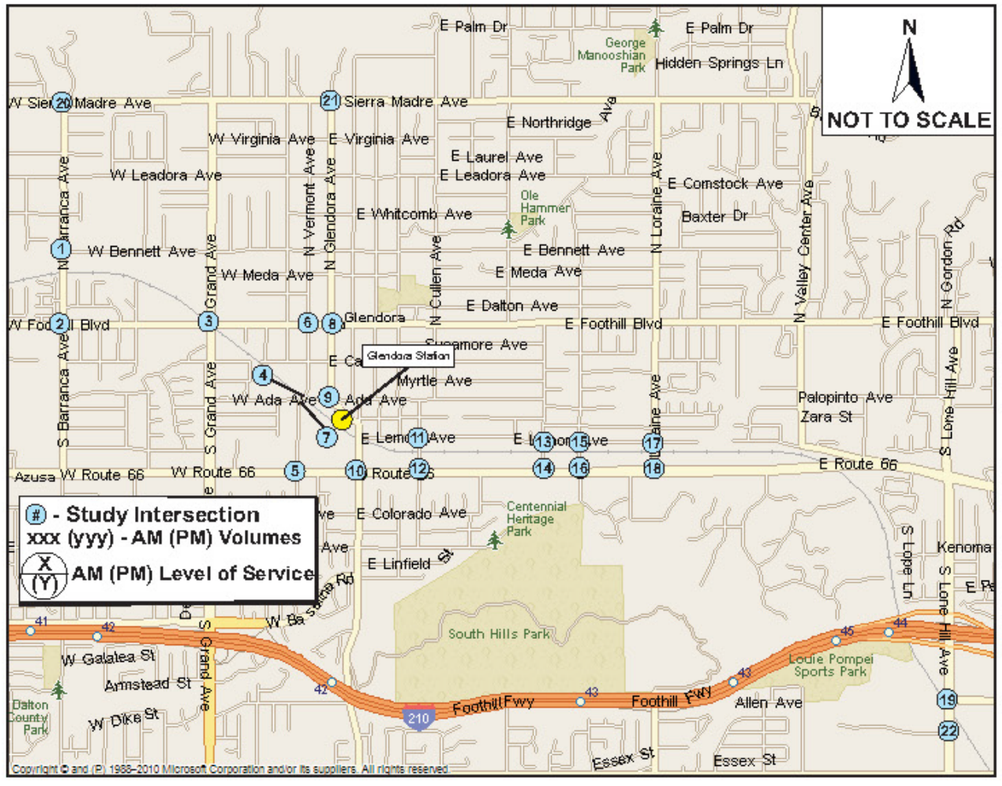
The No Build Alternative would have no impact on the number of on-street parking and loading spaces for the project.

### 2.6.1.4 Pedestrian and Bicycle Facilities

The No Build Alternative would have no impacts on bicycle or pedestrian facilities for the project; however, increased traffic congestion and deterioration of LOS for roadway segments and intersections would result in deterioration of performance of bicycle and pedestrians movements along the project corridor.

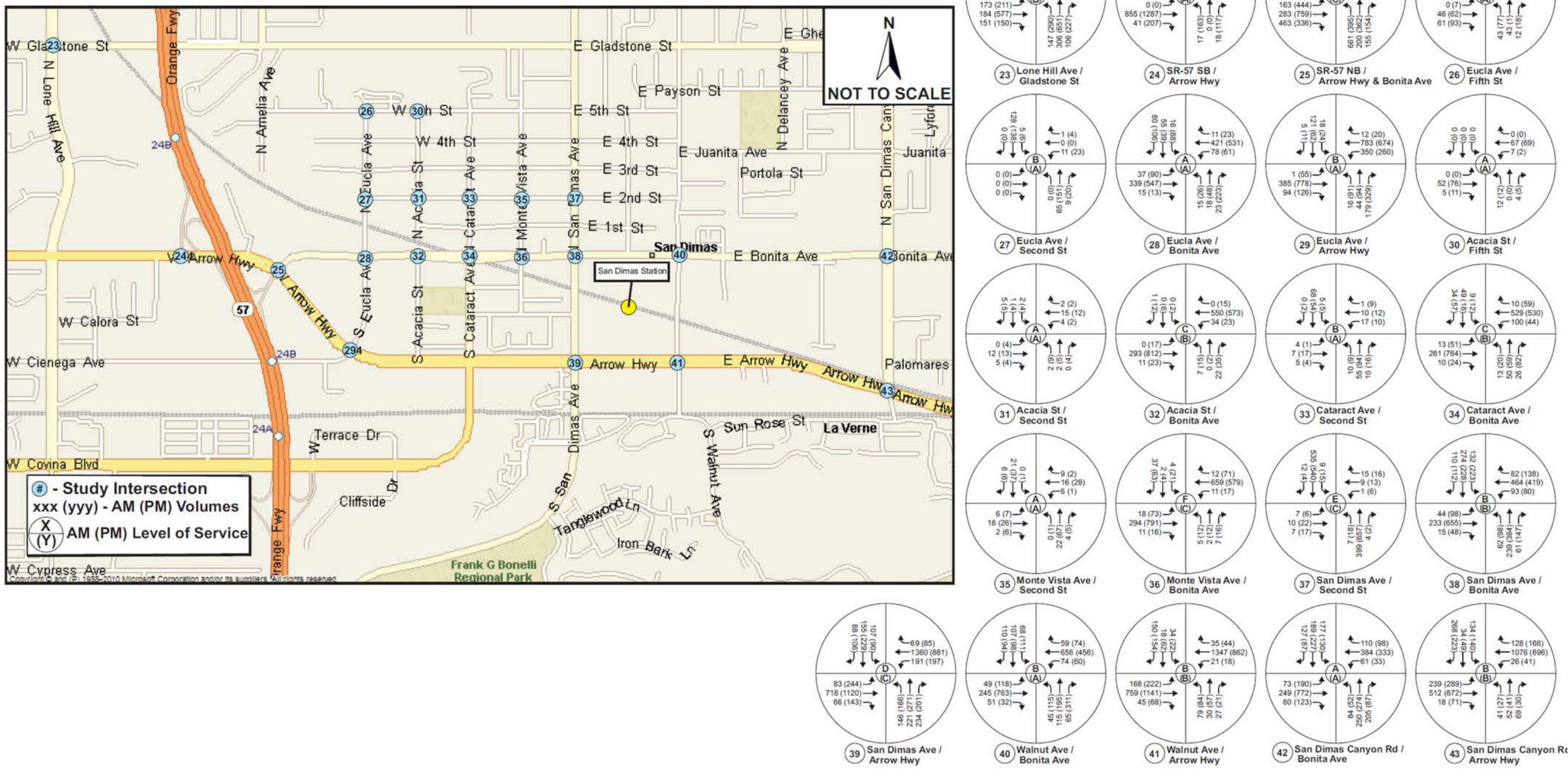
According to the General Plan for each city, the following changes are planned:

- City of Glendora—Construct Class I (off-road facility) along Foothill Boulevard to provide access to Citrus Community College, Azusa Pacific University, and the proposed station.
- City of San Dimas—Incorporate bike amenities, such as long-term bicycle storage and a bike station, into the San Dimas Station. Provide safe cyclist connections.
- City of Claremont—Construct Citrus Regional Bikeway utilizing Bonita Avenue and First Street as primary route to Claremont Boulevard. Connect bikeway to Upland/Montclair trail at county line.
- City of Montclair—Develop a complete bicycle trail system throughout the city, including a regional Class I Bicycle Trail along Metro railroad tracks, connecting Claremont, Pomona, La Verne, and San Dimas.



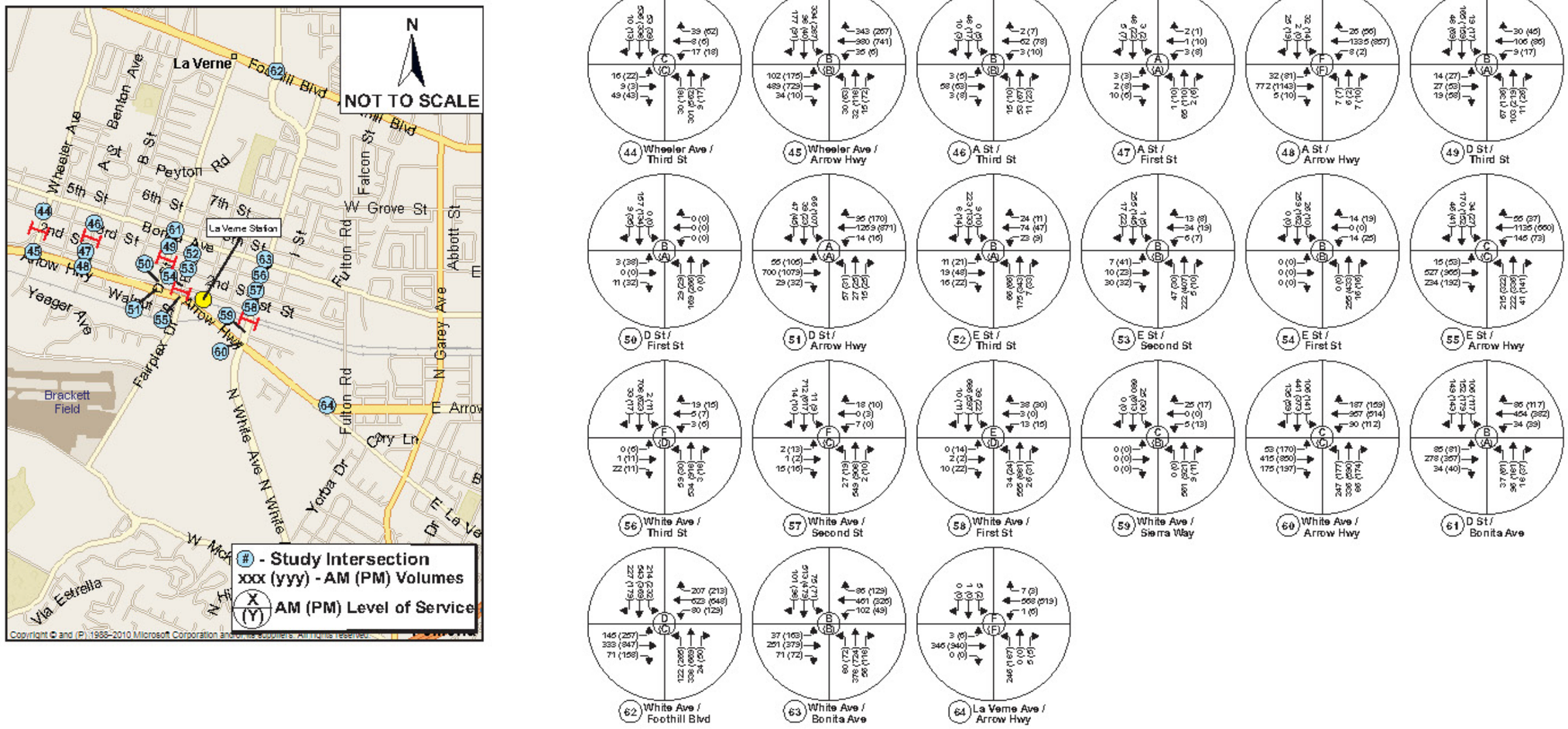

Source: Intueor, 2011, updated January 2013

***Figure 2-14. No Build (2035) AM/PM Peak Hour Volumes: Glendora***




Source: Intueor, 2011

***Figure 2-15. No Build (2035) AM/PM Peak Hour Volumes: San Dimas***




Source: Intueor, 2011, updated January 2013

***Figure 2-16. No Build (2035) AM/PM Peak Hour Volumes: La Verne***

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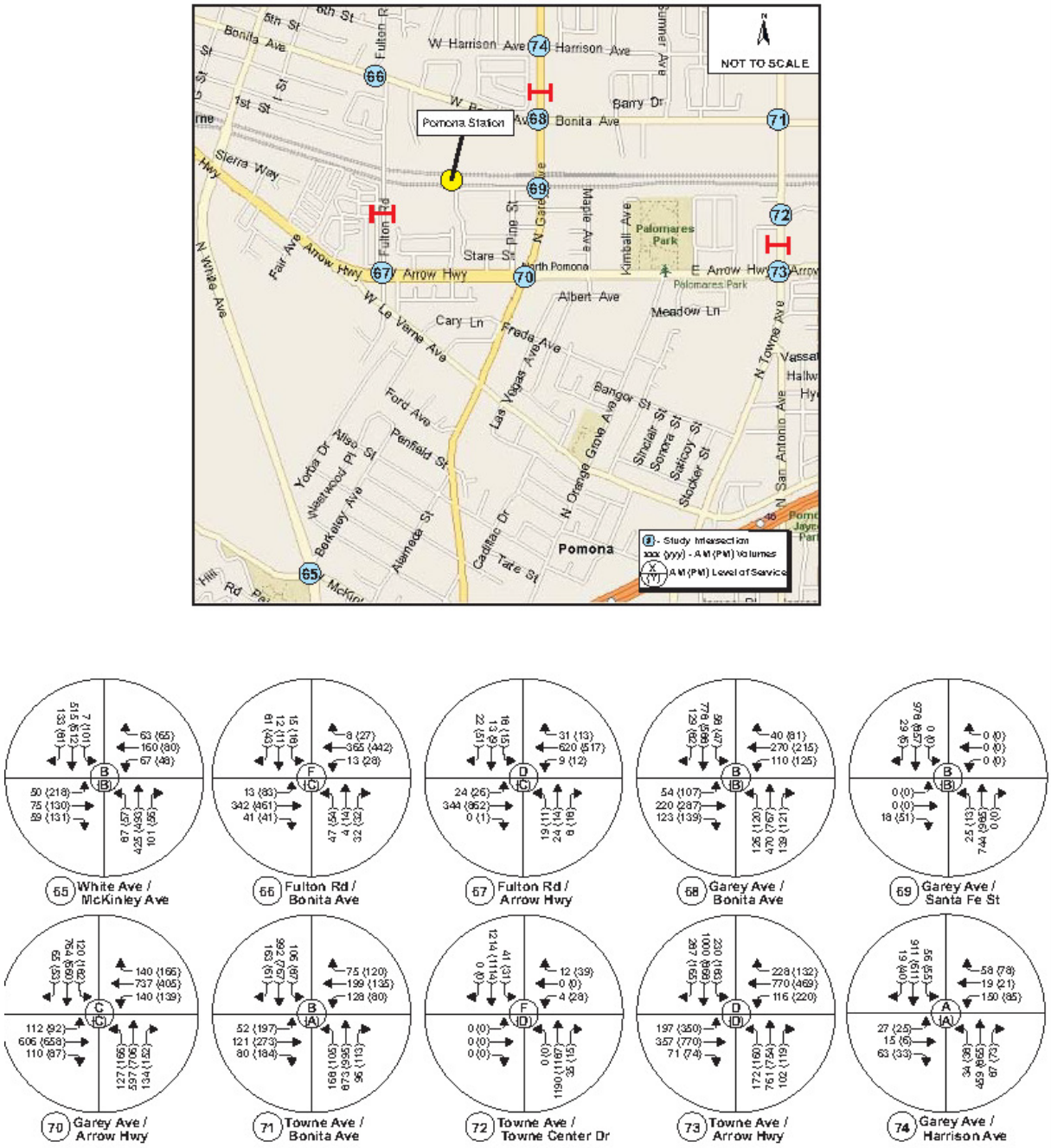
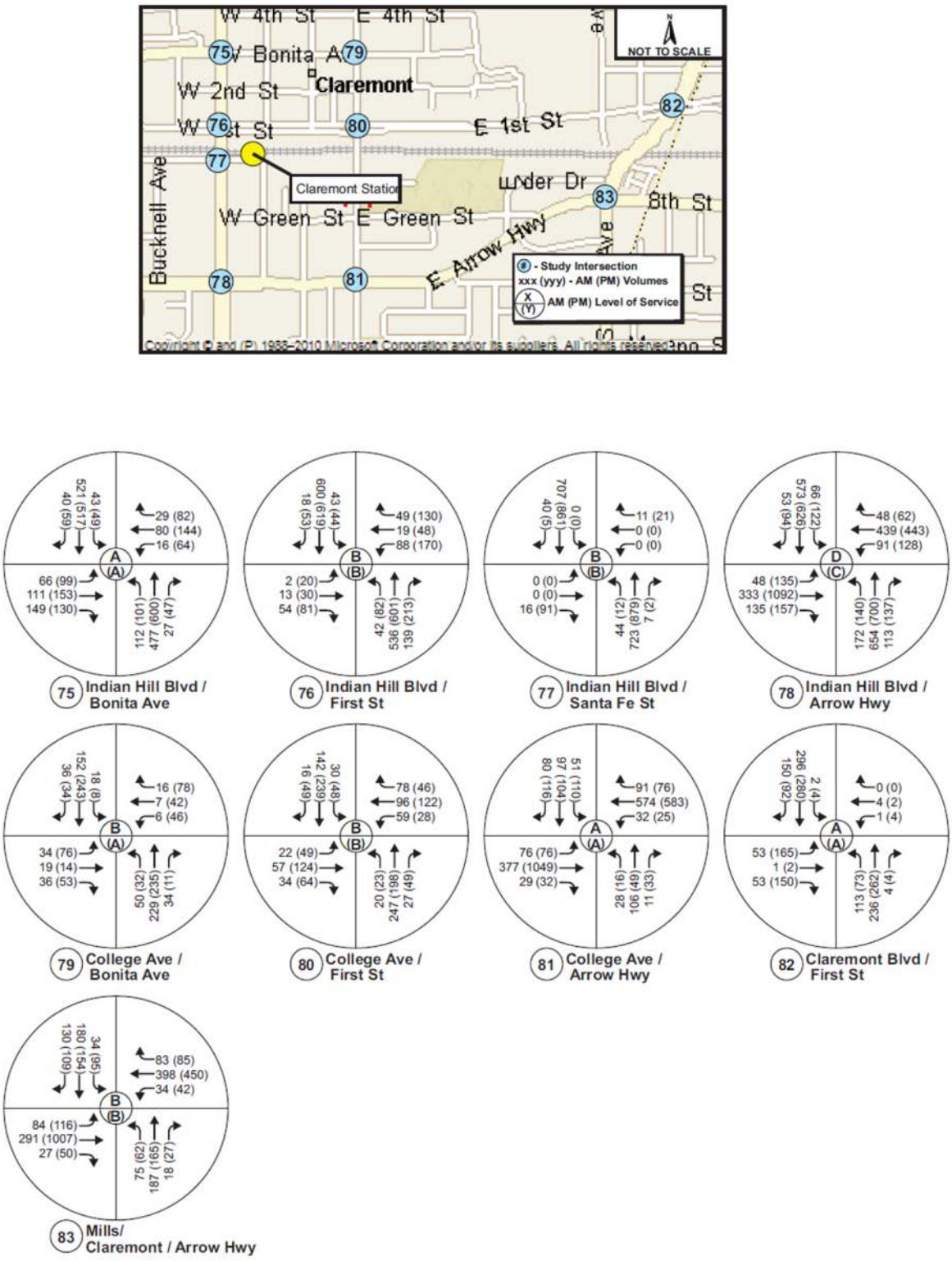


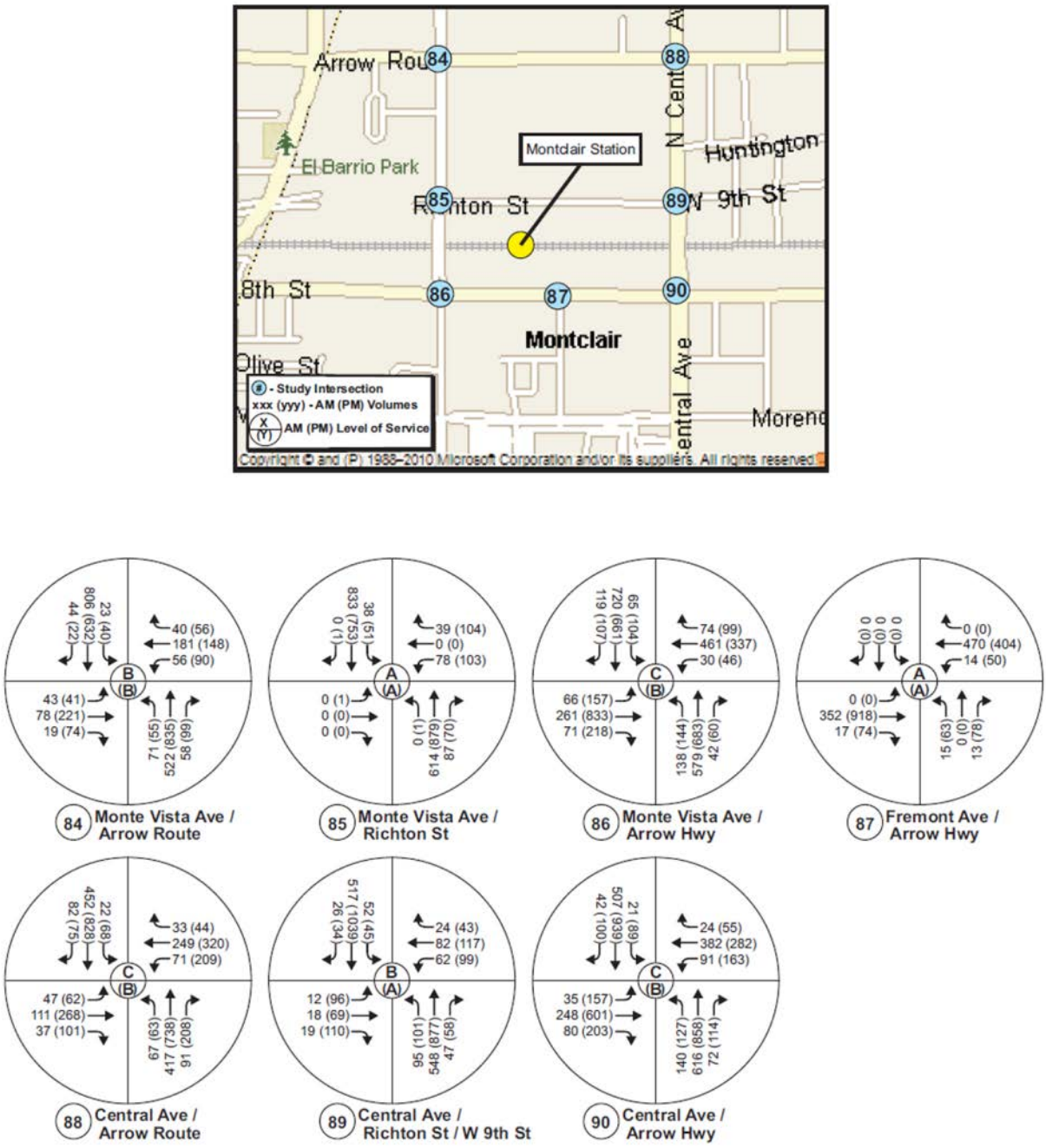

Source: Intueor, 2011, updated January 2013

***Figure 2-17. No Build (2035) AM/PM Peak Hour Volumes: Pomona***




Source: Intueor, 2011

***Figure 2-18. No Build (2035) AM/PM Peak Hour Volumes: Claremont***




Source: Intueor, 2011

***Figure 2-19. No Build (2035) AM/PM Peak Hour Volumes: Montclair***

## Table 2-13. No Build Alternative—Intersection Level of Service (2035)[2]

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] |
| 1 | Barranca Avenue/Bennett Avenue | Glendora | 1-Way Stop | C | 21.1 | B | 12.4 |
| | | | | A | 7.3 | A | 1.8 |
| 2 | Barranca Avenue/Foothill Boulevard | Glendora | Signalized | B | 12.1 | A | 8.4 |
| 3 | Grand Avenue/Foothill Boulevard | Glendora | Signalized | C | 29.5 | C | 34.3 |
| 4 | Vermont Avenue E/Ada Avenue | Glendora | 1-Way Stop | B | 11.8 | B | 13.7 |
| | | | | A | 4.4 | A | 5.2 |
| 5 | Vermont Avenue/Route 66 | Glendora | Signalized | A | 7.5 | A | 8.4 |
| 6 | Vermont Avenue/Foothill Boulevard | Glendora | Signalized | A | 7.7 | A | 7.0 |
| 7 | Vermont Avenue West/Ada Avenue | Glendora | 1-Way Stop | B | 11.1 | B | 12.0 |
| | | | | A | 2.6 | A | 2.2 |
| 8 | Glendora Avenue/Foothill Boulevard | Glendora | Signalized | C | 25.0 | C | 30.2 |
| 9 | Glendora Avenue/Ada Avenue | Glendora | All-Way Stop | B | 12.2 | B | 14.9 |
| 10 | Glendora Avenue/Route 66 | Glendora | Signalized | C | 24.4 | C | 29.5 |
| 11 | Pasadena Avenue/Lemon Avenue | Glendora | All-Way Stop | A | 7.9 | A | 7.8 |
| 12 | Pasadena Avenue/Route 66 | Glendora | Signalized | B | 11.8 | B | 10.7 |
| 13 | Glenwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | A | 9.9 | B | 11.2 |
| | | | | A | 2.3 | A | 2.6 |
| 14 | Glenwood Avenue/Route 66 | Glendora | Signalized~~2-Way Stop~~ | B~~F~~ | 14.3~~OF~~ L[3] | B~~F~~ | 12.6~~10~~ ~~97.3~~ |
| 15 | Elwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 10.7 | B | 10.9 |
| | | | | A | 2.2 | A | 2.1 |
| 16 | Elwood Avenue/Route 66 | Glendora | Signalized | B | 15.4 | B | 16.2 |
| 17 | Loraine Avenue/Lemon Avenue | Glendora | 2-Way Stop | C | 20.0 | B | 13.7 |
| | | | | A | 1.8 | A | 1.2 |
| 18 | Loraine Avenue/Route 66 | Glendora | Signalized | B | 19.3 | B | 11.8 |
| 19 | Lone Hill Avenue/Auto Centre Drive | Glendora | Signalized | B | 15.6 | C | 24.1 |
| 20 | Barranca Avenue/Sierra Madre Avenue | Glendora | 1-Way Stop | C | 20.5 | C | 15.8 |
| | | | | A | 4.3 | A | 3.1 |
| 21 | Glendora Avenue/Sierra Madre Avenue | Glendora | All-Way Stop | E | 47.0 | B | 14.5 |
| 22 | Lone Hill Avenue/Glendora Marketplace | Glendora | Signalized | B | 15.4 | C | 23.1 |
| 23 | Lone Hill Avenue/Gladstone Street | San Dimas | Signalized | B | 18.8 | C | 25.5 |
| 24 | SR-57 (southbound)/Arrow Highway | San Dimas | Signalized | A | 7.5 | C | 20.2 |
| 25 | SR-57 (northbound)/Arrow Highway & Bonita Avenue | San Dimas | Signalized | C | 26.2 | C | 29.2 |
| 26 | Eucla Avenue/Fifth Street | San Dimas | All-Way Stop | A | 7.4 | A | 7.4 |
| 27 | Eucla Avenue/Second Street | San Dimas | 1-Way Stop | A | 9.7 | B | 10.5 |
| | | | | A | 0.7 | A | 1.0 |
| 28 | Eucla Avenue/Bonita Avenue | San Dimas | Signalized | A | 4.7 | A | 8.1 |
| 29 | Eucla Avenue/Arrow Highway | San Dimas | Signalized | A | 8.4 | B | 11.8 |

**Table 2-13. No Build Alternative—Intersection Level of Service (2035)[2] (continued)**

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] |
| 30 | Acacia Street/Fifth Street | San Dimas | 1-Way Stop | A | 9.2 | A | 9.3 |
| | | | | A | 1.4 | A | 1.0 |
| 31 | Acacia Street/Second Street | San Dimas | 2-Way Stop | A | 9.1 | A | 9.2 |
| | | | | A | 7.4 | A | 6.4 |
| 32 | Acacia Street/Bonita Avenue | San Dimas | 2-Way Stop | B | 11.1 | C | 24.4 |
| | | | | A | 0.7 | A | 1.4 |
| 33 | Cataract Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.9 | B | 10.0 |
| | | | | A | 8.4 | A | 8.0 |
| 34 | Cataract Avenue/Bonita Avenue | San Dimas | All-Way Stop | B | 12.5 | C | 25.0 |
| 35 | Monte Vista Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.3 | A | 9.9 |
| | | | | A | 4.8 | A | 3.7 |
| 36 | Monte Vista Avenue/Bonita Avenue | San Dimas | 2-Way Stop | C | 20.2 | F | 119.5 |
| | | | | A | 1.2 | A | 9.2 |
| 37 | San Dimas Avenue/Second Street | San Dimas | 2-Way Stop | C | 21.2 | E | 36.2 |
| | | | | A | 1.0 | A | 2.3 |
| 38 | San Dimas Avenue/Bonita Avenue | San Dimas | Signalized | B | 12.2 | B | 19.6 |
| 39 | San Dimas Avenue/Arrow Highway | San Dimas | Signalized | C | 28.9 | D | 48.9 |
| 40 | Walnut Avenue/Bonita Avenue | San Dimas | Signalized | A | 6.7 | B | 13.9 |
| 41 | Walnut Avenue/Arrow Highway | San Dimas | Signalized | B | 12.0 | B | 11.8 |
| 42 | San Dimas Canyon Road/Bonita Avenue | San Dimas | Signalized | A | 7.3 | A | 9.0 |
| 43 | San Dimas Canyon Road/Arrow Highway | San Dimas | Signalized | B | ~~13.8~~17.0 | B | ~~12.1~~14.6 |
| 44 | Wheeler Avenue/Third Street | La Verne | 2-Way Stop | C | 16.5 | C | 15.6 |
| | | | | A | 2.9 | A | 2.6 |
| 45 | Wheeler Avenue/Arrow Highway | La Verne | Signalized | B | 14.8 | B | 12.9 |
| 46 | A Street/Third Street | La Verne | 2-Way Stop | B | 10.3 | B | 10.6 |
| | | | | A | 5.4 | A | 4.9 |
| 47 | A Street/First Street | La Verne | 2-Way Stop | A | 9.3 | A | 10.0 |
| | | | | A | 1.5 | A | 2.3 |
| 48 | A Street/Arrow Highway | La Verne | 2-Way Stop | F | 198.6 | F | 62.6 |
| | | | | A | 6.1 | A | 1.6 |
| 49 | D Street/Third Street | La Verne | All-Way Stop | A | 9.6 | B | 13.5 |
| 50 | D Street/First Street | La Verne | 1-Way Stop | A | 9.7 | B | 11.5 |
| | | | | A | 1.0 | A | 2.0 |
| 51 | D Street/Arrow Highway | La Verne | Signalized~~All-Way Stop~~ | A | 5.9 | A | 6.2 |
| 52 | E Street/Third Street | La Verne | All-Way Stop | A | 9.9 | B | 12.9 |
| 53 | E Street/Second Street | La Verne | 2-Way Stop | B | 14.3 | B | 14.8 |
| | | | | A | 2.8 | A | 3.1 |
| 54 | E Street/First Street | La Verne | 1-Way Stop | B | 11.4 | B | 12.6 |
| | | | | A | 0.9 | A | 1.0 |

## Table 2-13. No Build Alternative—Intersection Level of Service (2035)[2] (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] |
| 55 | E Street/Arrow Highway | La Verne | Signalized | C | 22.5 | C | 27.6 |
| 56 | White Avenue/Third Street | La Verne | 2-Way Stop | D | 26.5 | F | 78.9 |
| | | | | A | 1.8 | A | 3.2 |
| 57 | White Avenue/Second Street | La Verne | 2-Way Stop | C | 24.8 | F | 56.4 |
| | | | | A | 1.3 | A | 1.8 |
| 58 | White Avenue/First Street | La Verne | 2-Way Stop | D | 28.4 | E | 49.5 |
| | | | | A | 2.1 | A | 2.8 |
| 59 | White Avenue/Sierra Way | La Verne | 1-Way Stop | B | 11.2 | C | 18.0 |
| | | | | A | 0.4 | A | 0.5 |
| 60 | White Avenue/Arrow Highway | La Verne | Signalized | C | 26.3 | C | 30.6 |
| 61 | D Street/Bonita Avenue | La Verne | Signalized | A | 8.1 | B | 10.2 |
| 62 | White Avenue/Foothill Boulevard | La Verne | Signalized | C | 29.6 | D | 39.9 |
| 63 | White Avenue/Bonita Avenue | La Verne | Signalized | B | 14.0 | B | 17.3 |
| ~~64~~ | ~~White Avenue/McKinley Avenue~~ | ~~La Verne~~ | ~~Signalized~~ | ~~B~~ | ~~11.0~~ | ~~B~~ | ~~14.1~~ |
| 64~~5~~ | La Verne Avenue/Arrow Highway | La Verne | 2-Way Stop | F | 50.6 | F | 471.1 |
| | | | | B | 10.9 | F | 54.3 |
| 65 | White Avenue/McKinley Avenue | Pomona | Signalized | B | 11.0 | B | 14.1 |
| 66 | Fulton Road/Bonita Avenue | Pomona | 2-Way Stop | C | 22.1 | F | 58.1 |
| | | | | A | 3.6 | A | 6.8 |
| 67 | Fulton Road/Arrow Highway | Pomona | 2-Way Stop | C | 22.4 | D | 33.9 |
| | | | | A | 2.2 | A | 2.1 |
| 68 | Garey Avenue/Bonita Avenue | Pomona | Signalized | B | 16.0 | B | 15.8 |
| 69 | Garey Avenue/Santa Fe Street | Pomona | 1-Way Stop | B | 10.8 | B | 12.4 |
| | | | | A | 0.3 | A | 0.4 |
| 70 | Garey Avenue/Arrow Highway | Pomona | Signalized | C | 28.3 | C | 30.9 |
| 71 | Towne Avenue/Bonita Avenue | Pomona | Signalized | A | 9.9 | B | 11.2 |
| 72 | Towne Avenue/Towne Center Drive | Pomona | 1-Way Stop | D | 27.1 | F | 50.9 |
| | | | | A | 0.4 | A | 1.6 |
| 73 | Towne Avenue/Arrow Highway | Pomona | Signalized | D | 44.5 | D | 45.1 |
| 74 | Garey Avenue/Harrison Avenue | Pomona | Signalized | A | 7.5 | A | 6.0 |
| 75 | Indian Hill Boulevard/Bonita Avenue | Claremont | Signalized | A | 8.1 | A | 9.1 |
| 76 | Indian Hill Boulevard/First Street | Claremont | Signalized | B | 10.9 | B | 15.5 |
| 77 | Indian Hill Boulevard/Santa Fe Street | Claremont | 2-Way Stop | B | 11.2 | B | 13.2 |
| | | | | A | 0.5 | A | 0.8 |
| 78 | Indian Hill Boulevard/Arrow Highway | Claremont | Signalized | C | 21.2 | D | 37.3 |
| 79 | College Avenue/Bonita Avenue | Claremont | All-Way Stop | A | 9.9 | B | 12.5 |
| 80 | College Avenue/First Street | Claremont | All-Way Stop | B | 10.8 | B | 12.6 |
| 81 | College Avenue/Arrow Highway | Claremont | Signalized | A | 6.3 | A | 7.3 |
| 82 | Claremont Boulevard/First Street | Claremont | Signalized | A | 3.3 | A | 5.9 |
| 83 | Mills/Claremont/Arrow Highway | Claremont | Signalized | B | 14.9 | B | 19.8 |
| 84 | Monte Vista Avenue/Arrow Route | Montclair | Signalized | B | 13.1 | B | 14.6 |

**Table 2-13. No Build Alternative—Intersection Level of Service (2035)[2] (continued)**

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] |
| 85 | Monte Vista Avenue/Richton Street | Montclair | Signalized | A | 3.3 | A | 6.3 |
| 86 | Monte Vista Avenue/Arrow Highway | Montclair | Signalized | B | 18.7 | C | 31.0 |
| 87 | Fremont Avenue/Arrow Highway | Montclair | Signalized | A | 1.8 | A | 4.1 |
| 88 | Central Avenue/Arrow Route | Montclair | Signalized | B | 12.1 | C | 20.5 |
| 89 | Central Avenue/Richton Street/W 9th Street | Montclair | Signalized | A | 8.4 | B | 10.4 |
| 90 | Central Avenue/Arrow Highway | Montclair | Signalized | B | 15.9 | C | 29.6 |

Source: Intueor, 2011
[1] Average vehicle delay in seconds
[2] Shading shows intersections that, in 2035, would operate at LOS E or F under the No Build Alternative.
[3] Overflow

## Table 2-14. No Build Alternative—Roadway Segment Average Daily Traffic Analysis (2035)

| Roadway Segment | From | To | Number of Lanes | Capacity (Vehicles/Day) | Volume (Vehicles/Day) | V/C | LOS |
|---|---|---|---|---|---|---|---|
| **Glendora** | | | | | | | |
| South Lone Hill Avenue | West Gladstone Street | Auto Centre Drive | 4 | 32,000[1] | 28,179 | 0.88 | D |
| South Loraine Avenue | Route 66 | East Lemon Avenue | 4 | 32,000 | 10,733 | 0.34 | A |
| South Elwood Avenue | Route 66 | East Lemon Avenue | 2 | 12,000[4] | 2,753 | 0.23 | A |
| South Glenwood Avenue | Route 66 | East Lemon Avenue | 2 | 12,000 | 2,842 | 0.24 | A |
| South Pasadena Avenue | Route 66 | East Lemon Avenue | 2 | 12,000 | 2,690 | 0.22 | A |
| South Glendora Avenue | Route 66 | Foothill Boulevard | 4 | 32,000 | 18,620 | 0.58 | A |
| South Vermont Avenue | Route 66 | West Foothill Boulevard | 2 | 12,000 | 4,332 | 0.36 | A |
| Grand Avenue | Route 66 | West Leadora Avenue | 4 | 32,000 | 14,439 | 0.45 | A |
| Foothill Boulevard | Barranca Avenue | Glendora Avenue | 4 | 32,000 | 12,323 | 0.39 | A |
| North Barranca Avenue | West Foothill Boulevard | West Leadora Avenue | 4 | 24,000[2] | 8,436 | 0.36 | A |
| **San Dimas** | | | | | | | |
| San Dimas Canyon Rd | Arrow Highway | Bonita Avenue | 4 | 32,000 | 9,328 | 0.29 | A |
| Walnut Avenue | East Arrow Highway | East Bonita Avenue | 2 | 16,000[3] | 7,535 | 0.47 | A |
| San Dimas Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 12,339 | 0.39 | A |
| Monte Vista Avenue | Commercial Street | Bonita Avenue | 2 | 12,000 | 546 | 0.05 | A |
| Cataract Avenue | Arrow Highway | First Street | 2 | 12,000 | 3,084 | 0.26 | A |
| Bonita Avenue | Eucla Avenue | San Dimas Avenue | 4 | 32,000 | 15,893 | 0.50 | A |
| Eucla Avenue | Bonita Avenue | Third Street | 2 | 12,000 | 3,813 | 0.32 | A |
| West Gladstone Street | Lone Hill Avenue | Amelia Avenue | 4 | 32,000 | 15,846 | 0.50 | A |
| **La Verne** | | | | | | | |
| White Avenue | Arrow Highway | Third Street | ~~4~~2 | ~~32,000~~16,000 | 18,821 | ~~0.59~~1.18 | ~~F~~A |
| E Street | Arrow Highway | Third Street | 2 | 16,000 | 6,931 | 0.43 | A |
| D Street | Arrow Highway | Third Street | 2 | 12,000 | 5,709 | 0.48 | A |
| A Street | Arrow Highway | Third Street | 2 | 12,000 | 1,342 | 0.11 | A |
| Wheeler Avenue | Arrow Highway | Third Street | 4 | 32,000 | 10,364 | 0.32 | A |

**Table 2-14. No Build Alternative—Roadway Segment Average Daily Traffic Analysis (2035) (continued)**

| Roadway Segment | From | To | Number of Lanes | Capacity (Vehicles/Day) | Volume (Vehicles/Day) | V/C | LOS |
|---|---|---|---|---|---|---|---|
| **Pomona** | | | | | | | |
| North Towne Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 29,725 | 0.93 | E |
| North Garey Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 24,579 | 0.77 | C |
| Fulton Road | Metrolink Driveway | Bonita Avenue | 2 | 16,000 | 1,580 | 0.10 | A |
| Fulton Road | Arrow Highway | Metrolink Driveway | 2 | 16,000 | 1,921 | 0.12 | A |
| **Claremont** | | | | | | | |
| South Mills Avenue/Claremont Boulevard | Arrow Highway | East First Street | 4 | 32,000 | 8,865 | 0.28 | A |
| Indian Hill Boulevard | Arrow Highway | East First Street | 4 | 32,000 | 22,100 | 0.69 | B |
| College Avenue | East Arrow Highway | East First Street | 2 | 12,000 | 5,930 | 0.49 | A |
| College Avenue | East First Street | Bonita Avenue | 2 | 12,000 | 6,497 | 0.54 | A |
| Cambridge Avenue | West Arrow Highway | Bonita Avenue | 2 | 12,000 | 5,359 | 0.45 | A |
| First Street | Indian Hill Boulevard | College Avenue | 2 | 12,000 | 8,615 | 0.72 | C |
| **Montclair** | | | | | | | |
| Monte Vista Avenue | Richton Street | Arrow Highway | 4 | 32,000 | 22,228 | 0.69 | B |
| Central Avenue | Richton Street | Arrow Highway | 4 | 32,000 | 27,239 | 0.85 | D |

Source: Intueor, 2011
[1] Capacity of 32,000 assumes 800 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[2] Capacity of 24,000 assumes 600 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[3] Capacity of 16,000 assumes 800 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[4] Capacity of 12,000 assumes 600 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
k-factor= The ratio of design hour traffic to average annual daily traffic.

## 2.6.2 Transportation Systems Management (TSM) Alternative

This alternative proposes a bus rapid transit (BRT) route instead of LRT as a link between the Azusa-Citrus Station and the Montclair Transcenter. The roadway conditions would be the same as those in the No Build Alternative.

Under the same roadway conditions as the No Build Alternative, four intersections would operate at LOS E or F in the AM peak hour, and ten intersections would operate at LOS E or F in the PM peak hour. The others would continue to operate at LOS D or better. All the highlighted intersections would be unsignalized one-way or two-way stop-controlled intersections (Table 2-17). Vehicles approaching these intersections from minor streets would not find adequate gaps to perform their maneuvers in a timely manner.

### 2.6.2.1 Construction Phase

Minor construction with no significant impacts is anticipated; consequently, no significant construction-period impacts would occur.

### 2.6.2.2 Public Transit

This alternative proposes a BRT route instead of LRT as a link between the Azusa-Citrus Station and the Montclair Transcenter. Buses would be powered by diesel, hybrid/electric, compressed natural gas, or fuel cell; and the designed capacity would accommodate 60 to 65 passengers per vehicle. Operational strategies would include transit signal priority and signal synchronization. As a result, this alternative would benefit and help improve the east-west connection between the cities in the Study Area. As detailed in Table 2-15, the total daily ridership (boardings) for the TSM Alternative is projected to be 7,260 passengers per day. The peak headway is anticipated to be 10 minutes.

**Table 2-15. TSM Alternative—System Performance**

| Direction | Running Time (minutes) | Headway (minutes) | | Boardings | | Daily Boardings |
|---|---|---|---|---|---|---|
| | | Peak | Off-Peak | Peak | Off-Peak | |
| Citrus to Montclair | 36 | 10 | 20 | 2,160 | 530 | 2,690 |
| Montclair to Citrus | 33 | 10 | 20 | 3,530 | 1,040 | 4,570 |
| **Total** | | | | **5,690** | **1,570** | **7,260** |

Source: Intueor, 2011

### 2.6.2.3 Streets and Highways

#### *Intersection Traffic Conditions*

Adjustments to traffic flow patterns caused by the BRT line were determined by using projections from the transportation model developed for this study. The peak period link data from the No Build and TSM travel demand model outputs were used in this analysis. Table 2-16 presents the percentage change comparison between 2035 TSM Alternative traffic forecasts and the 2035 No Build traffic forecasts. The table shows the percentage change in traffic volume caused by the change in circulation patterns.

**Table 2-16. TSM Alternative—Percentage Change in Traffic Volumes from the No Build (2035)**

| City | Percentage Change |
|---|---|
| Glendora | -0.241% |
| San Dimas | -0.389% |
| La Verne | -0.212% |
| Pomona | -0.380% |
| Claremont | -0.483% |
| Montclair | -0.258% |

Source: Intueor, 2011
Average AM and PM peak hours

The overall percentage changes in traffic were applied to the 2035 No Build Alternative AM and PM peak-hour turning movement volumes to develop the future AM and PM peak-hour projections for the TSM Alternative at each of the 90 study intersections. In addition, the number of buses operating during the peak hour was added to peak-hour turning movements of the affected intersections to yield a set of 2035 forecasts. Intersection lane configurations were assumed to be the same as the No Build Alternative. Figure 2-20 through Figure 2-25 shows the TSM peak-hour traffic volumes during the AM and PM peak hours.

The results of the traffic analysis for the TSM Alternative and corresponding AM and PM peak-hour LOS, presented in Table 2-17, are similar to the No Build Alternative. Under the TSM Alternative, threefour intersections would operate at LOS E or F in the AM peak hour, and ~~10~~ nine intersections would operate at LOS E or F in the PM peak hour (shown shaded). The others would continue to operate at LOS D or better.

### *Summary of Intersection Impacts*

Using the threshold criteria presented in Table 2-5, intersection operating conditions under the TSM Alternative were compared with the No Build Alternative to identify significantly affected locations. Table 2-18 and Table 2-19 summarize intersection impacts for the AM and PM peak hours, respectively. The intersections that are projected to be adversely affected under either alternative are shaded.

As shown in Table 2-18 and Table 2-19, threefour intersections are anticipated to be significantly affected prior to any mitigation. These are:

- ~~Glenwood Avenue at Route 66 (AM and PM)—Glendora~~
- Monte Vista Avenue at Bonita Avenue (PM)—San Dimas
- A Street at Arrow Highway (AM)—La Verne
- La Verne Avenue at Arrow Highway (PM)—Pomona

### *Roadway Segment Traffic Operations*

The percentage changes that were shown in Table 2-16 were applied to the study roadway segments. The results of the analysis are shown in Table 2-20. Similar to the No Build Alternative, all roadway segments would operate at LOS D or better, except North Towne Avenue between Arrow Highway and Bonita Avenue, which would operate at LOS E, and White Avenue between Arrow Highway and Third Street, which would operate at LOS F.

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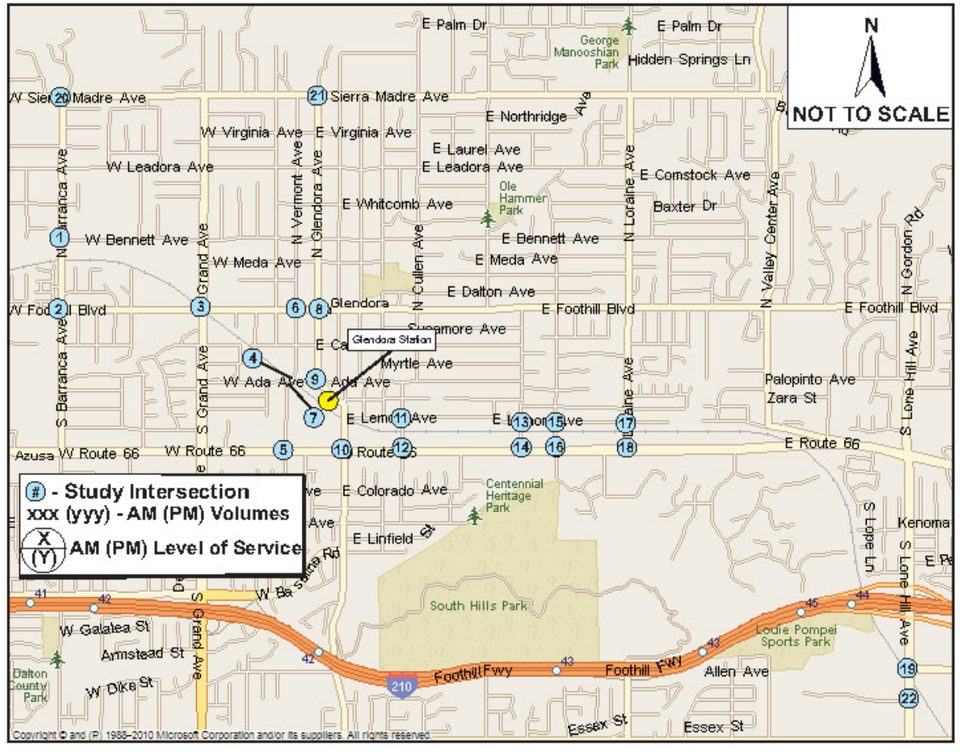
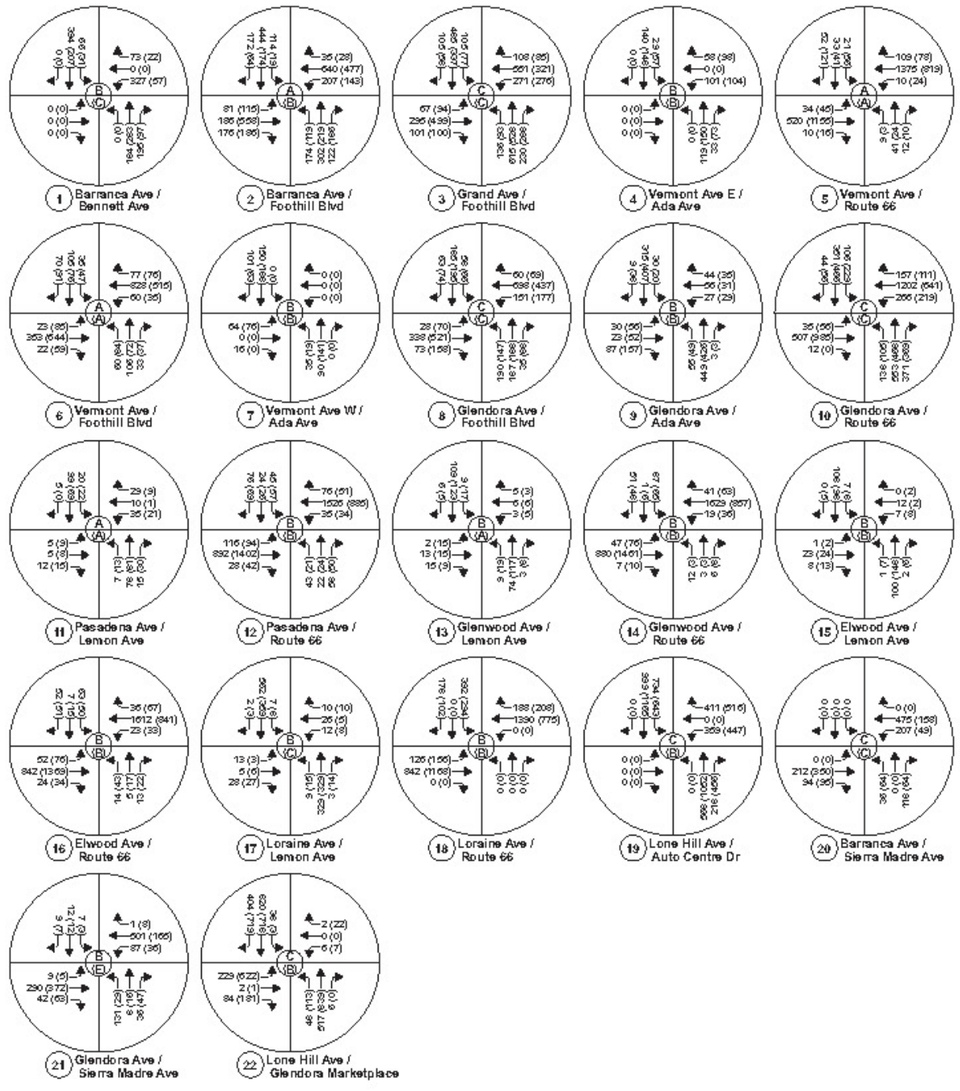
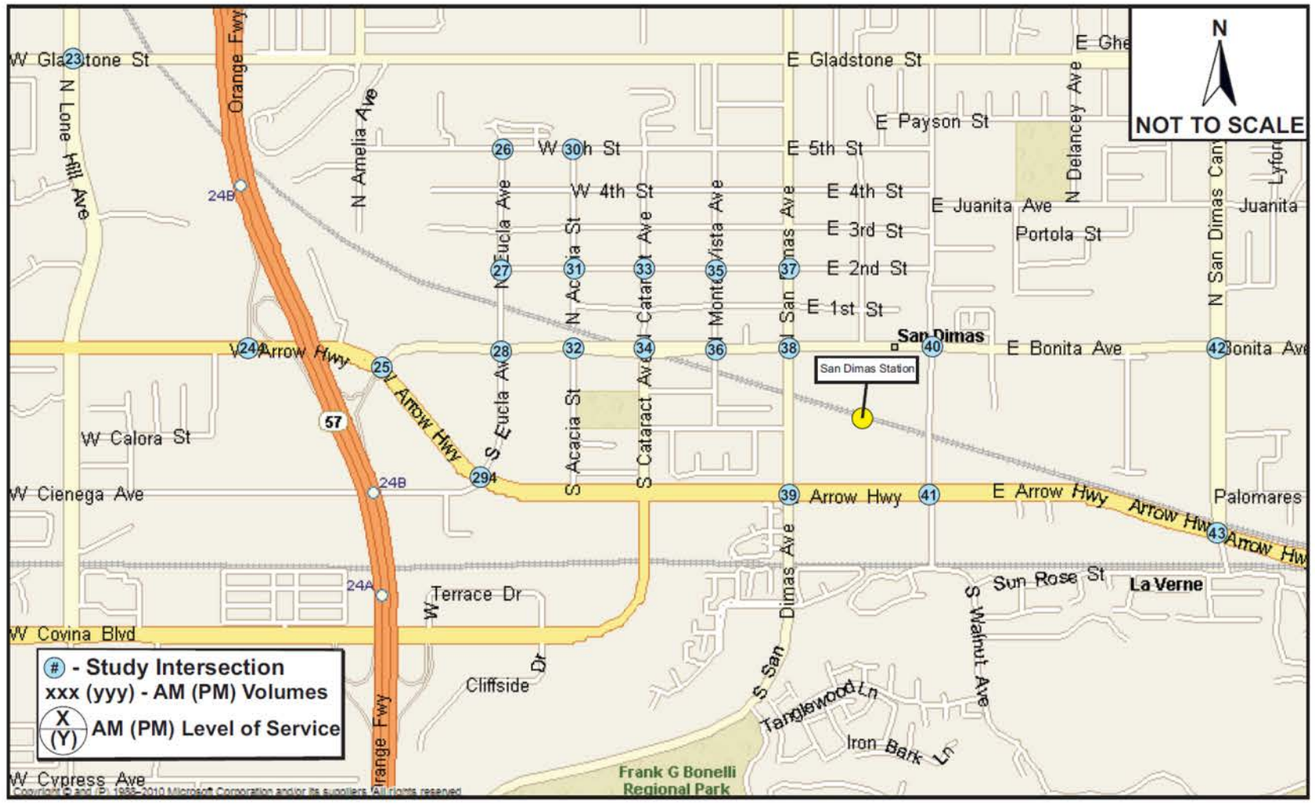
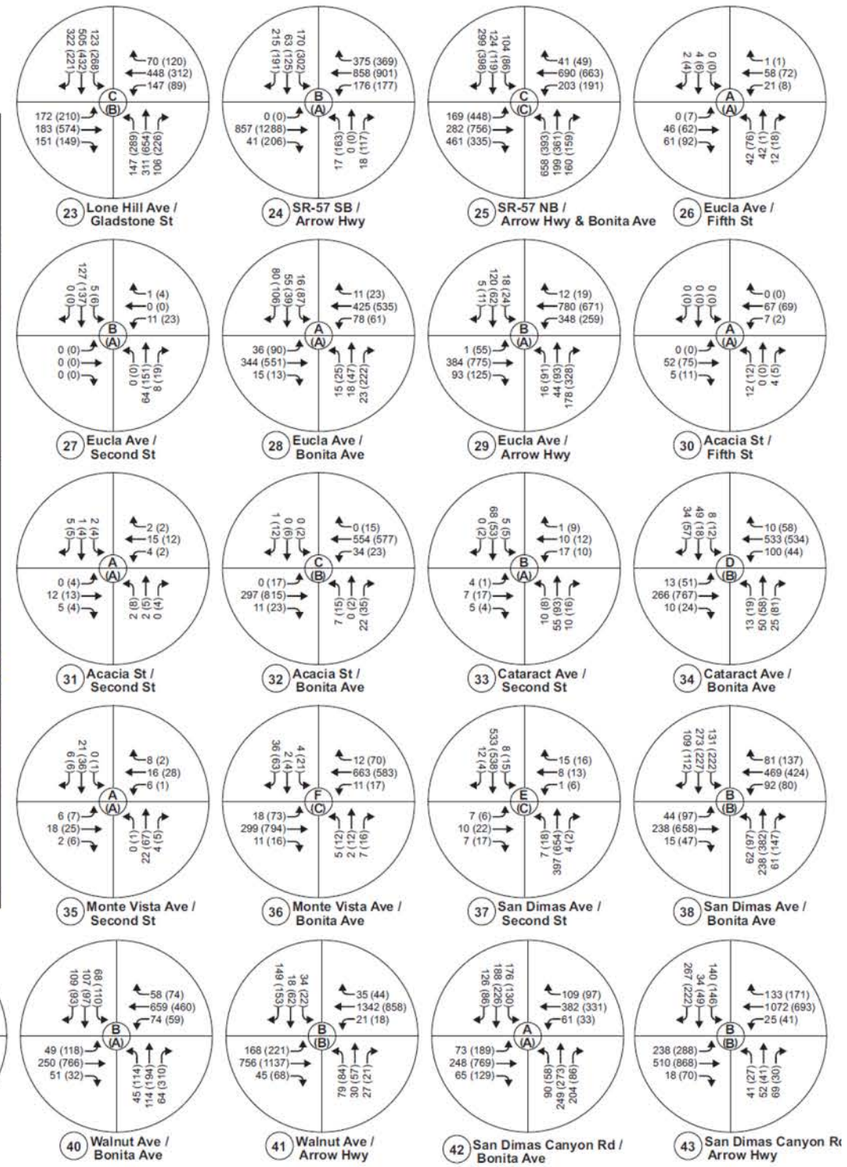



Source: Intueor, 2011, updated January 2013

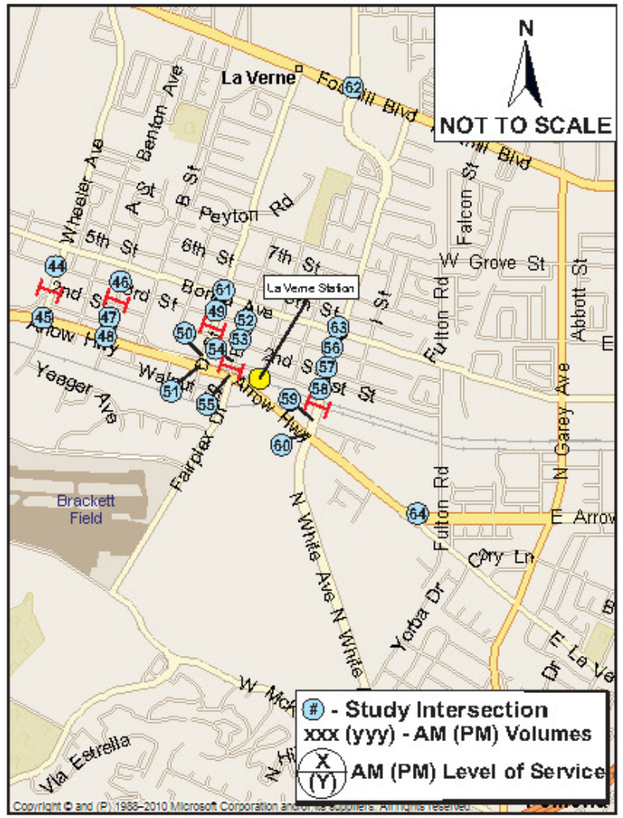
***Figure 2-20. TSM (2035) AM/PM Peak Hour Volumes: Glendora***

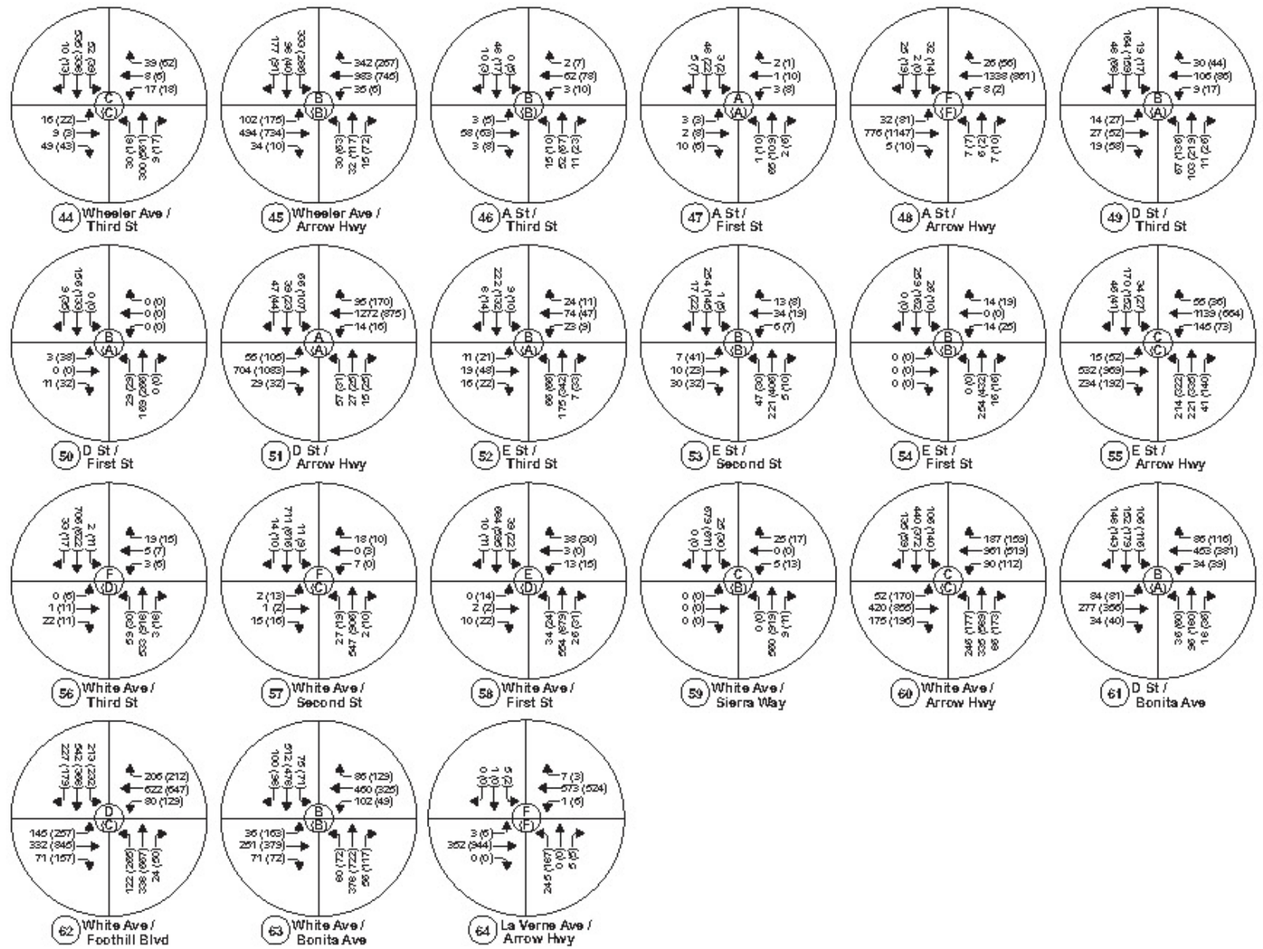



Source: Intueor, 2011

***Figure 2-21. TSM (2035) AM/PM Peak Hour Volumes: San Dimas***




Source: Intueor, 2011, updated January 2013

***Figure 2-22. TSM (2035) AM/PM Peak Hour Volumes: La Verne***

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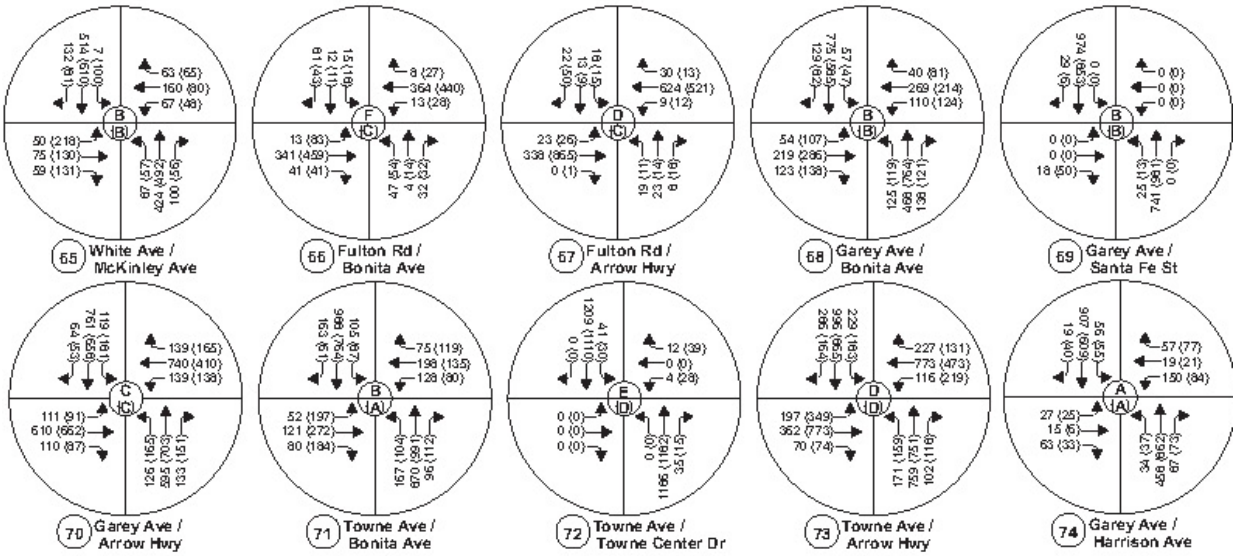
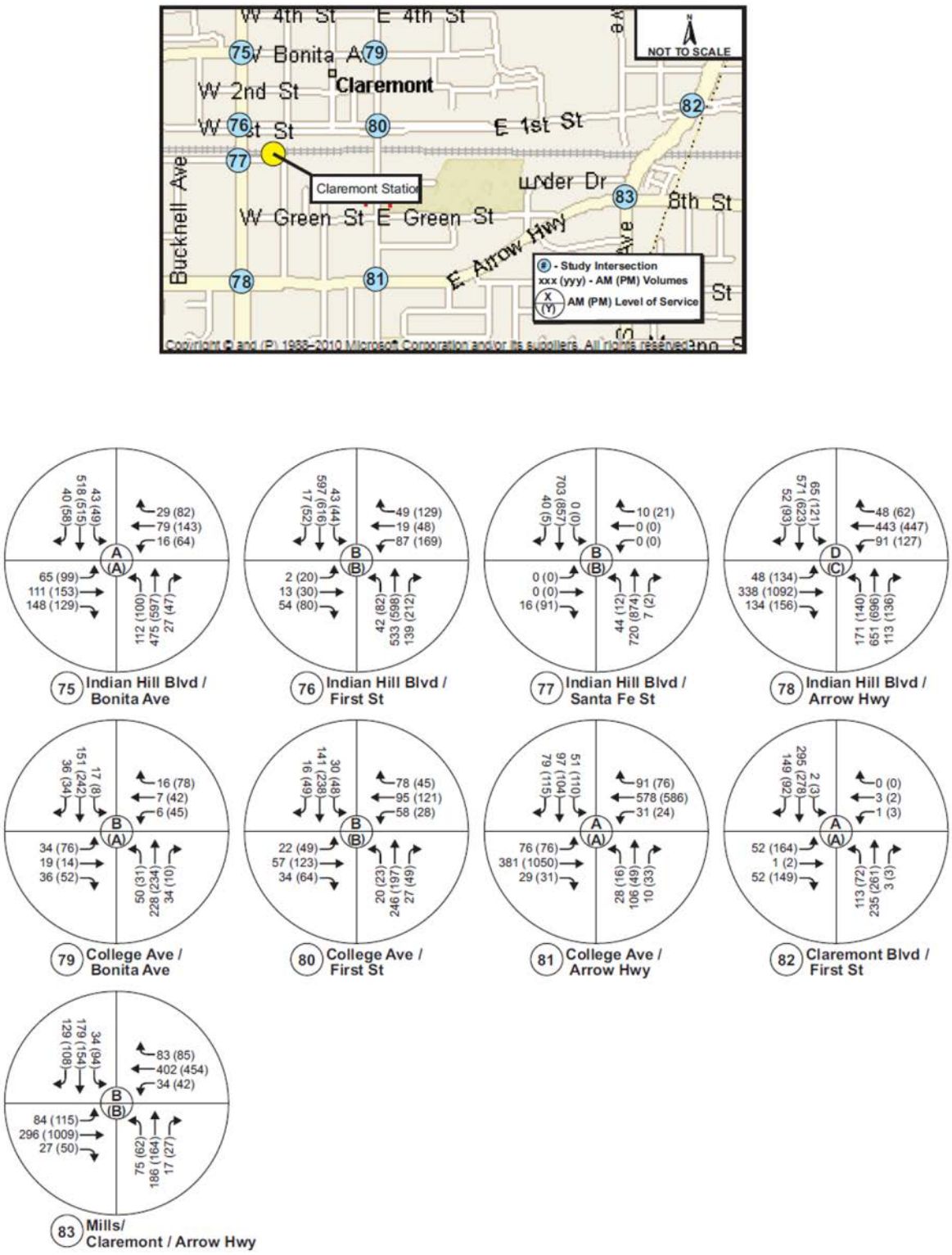


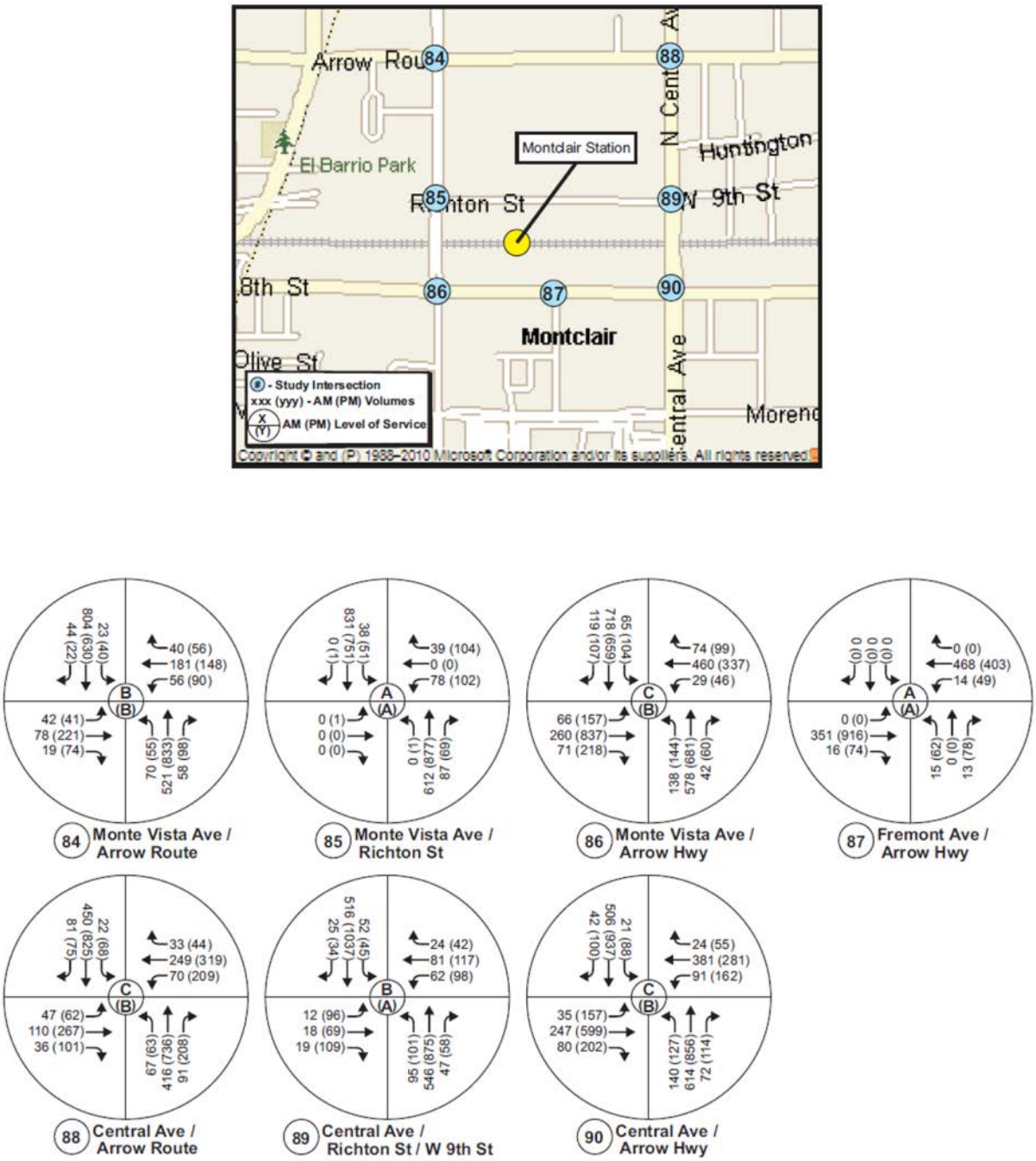

Source: Intueor, 2011, updated January 2013

***Figure 2-23. TSM (2035) AM/PM Peak Hour Volumes: Pomona***




Source: Intueor, 2011

***Figure 2-24. TSM (2035) AM/PM Peak Hour Volumes: Claremont***




Source: Intueor, 2011

***Figure 2-25. TSM (2035) AM/PM Peak Hour Volumes: Montclair***

## Table 2-17. TSM Alternative—Intersection Level of Service (LOS) (2035)[3]

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[2] | LOS | Delay[2] |
| 1 | Barranca Avenue/Bennett Avenue | Glendora | 1-Way Stop | C | 21.0 | B | 12.4 |
| | | | | A[1] | 7.3[1] | A[1] | 1.8[1] |
| 2 | Barranca Avenue/Foothill Boulevard | Glendora | Signalized | B | 12.0 | A | 8.4 |
| 3 | Grand Avenue/Foothill Boulevard | Glendora | Signalized | C | 29.5 | C | 34.3 |
| 4 | Vermont Avenue East/Ada Avenue | Glendora | 1-Way Stop | B | 11.8 | B | 13.7 |
| | | | | A[1] | 4.4[1] | A[1] | 5.2[1] |
| 5 | Vermont Avenue/Route 66 | Glendora | Signalized | A | 7.5 | A | 8.4 |
| 6 | Vermont Avenue/Foothill Boulevard | Glendora | Signalized | A | 7.7 | A | 7.0 |
| 7 | Vermont Avenue West/Ada Avenue | Glendora | 1-Way Stop | B | 11.1 | B | 12.0 |
| | | | | A[1] | 2.6[1] | A[1] | 2.2[1] |
| 8 | Glendora Avenue/Foothill Boulevard | Glendora | Signalized | C | 24.9 | C | 30.0 |
| 9 | Glendora Avenue/Ada Avenue | Glendora | All-Way Stop | B | 12.2 | B | 14.9 |
| 10 | Glendora Avenue/Route 66 | Glendora | Signalized | C | 24.6 | C | 29.5 |
| 11 | Pasadena Avenue/Lemon Avenue | Glendora | All-Way Stop | A | 7.9 | A | 7.8 |
| 12 | Pasadena Avenue/Route 66 | Glendora | Signalized | B | 11.8 | B | 10.7 |
| 13 | Glenwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | A | 9.9 | B | 11.2 |
| | | | | A[1] | 2.3[1] | A[1] | 2.6[1] |
| 14 | Glenwood Avenue/Route 66 | Glendora | ~~2-Way Stop~~Signalized | B~~F~~ | 14.3~~OFL~~[4] | B~~F~~ | 12.6~~OFL~~ |
| 15 | Elwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 10.7 | B | 10.9 |
| | | | | A[1] | 2.2[1] | A[1] | 2.1[1] |
| 16 | Elwood Avenue/Route 66 | Glendora | Signalized | B | 15.4 | B | 16.3 |
| 17 | Loraine Avenue/Lemon Avenue | Glendora | 2-Way Stop | C | 20.0 | B | 13.7 |
| | | | | A[1] | 1.8[1] | A[1] | 1.2[1] |
| 18 | Loraine Avenue/Route 66 | Glendora | Signalized | B | 19.3 | B | 11.8 |
| 19 | Lone Hill Avenue/Auto Centre Drive | Glendora | Signalized | B | 15.6 | C | 24.1 |
| 20 | Barranca Avenue/Sierra Madre Avenue | Glendora | 1-Way Stop | C | 20.4 | C | 15.8 |
| | | | | A[1] | 4.3[1] | A[1] | 3.1[1] |
| 21 | Glendora Avenue/Sierra Madre Avenue | Glendora | All-Way Stop | E | 46.3 | B | 14.5 |
| 22 | Lone Hill Avenue/Glendora Marketplace | Glendora | Signalized | B | 15.4 | C | 23.2 |
| 23 | Lone Hill Avenue/Gladstone Street | San Dimas | Signalized | B | 18.8 | C | 25.4 |
| 24 | SR-57 (southbound)/Arrow Highway | San Dimas | Signalized | A | 7.5 | B | 20.0 |
| 25 | SR-57 (northbound)/Arrow Highway & Bonita Avenue | San Dimas | Signalized | C | 26.3 | C | 29.3 |
| 26 | Eucla Avenue/Fifth Street | San Dimas | All-Way Stop | A | 7.4 | A | 7.4 |
| 27 | Eucla Avenue/Second Street | San Dimas | 1-Way Stop | A | 9.7 | B | 10.4 |
| | | | | A[1] | 0.7[1] | A[1] | 1.0[1] |
| 28 | Eucla Avenue/Bonita Avenue | San Dimas | Signalized | A | 4.7 | A | 8.1 |

## Table 2-17. TSM Alternative—Intersection Level of Service (LOS) (2035)[3] (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[2] | LOS | Delay[2] |
| 29 | Eucla Avenue/Arrow Highway | San Dimas | Signalized | A | 8.4 | B | 11.8 |
| 30 | Acacia Street/Fifth Street | San Dimas | 1-Way Stop | A | 9.2 | A | 9.3 |
| | | | | A[1] | 1.4[1] | A[1] | 1.0[1] |
| 31 | Acacia Street/Second Street | San Dimas | 2-Way Stop | A | 9.1 | A | 9.2 |
| | | | | A[1] | 7.4[1] | A[1] | 6.4[1] |
| 32 | Acacia Street/Bonita Avenue | San Dimas | 2-Way Stop | B | 11.1 | C | 24.6 |
| | | | | A[1] | 0.7[1] | A[1] | 1.4[1] |
| 33 | Cataract Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.9 | B | 10.0 |
| | | | | A[1] | 8.4[1] | A[1] | 8.0[1] |
| 34 | Cataract Avenue/Bonita Avenue | San Dimas | All-Way Stop | B | 12.5 | D | 25.1 |
| 35 | Monte Vista Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.3 | A | 9.8 |
| | | | | A[1] | 4.7[1] | A[1] | 3.7[1] |
| 36 | Monte Vista Avenue/Bonita Avenue | San Dimas | 2-Way Stop | C | 20.5 | F | 123.7 |
| | | | | A[1] | 1.2[1] | A[1] | 9.5[1] |
| 37 | San Dimas Avenue/Second Street | San Dimas | 2-Way Stop | C | 21.0 | E | 35.8 |
| | | | | A[1] | 1.0[1] | A[1] | 2.3[1] |
| 38 | San Dimas Avenue/Bonita Avenue | San Dimas | Signalized | B | 12.2 | B | 19.6 |
| 39 | San Dimas Avenue/Arrow Highway | San Dimas | Signalized | C | 28.8 | D | 48.4 |
| 40 | Walnut Avenue/Bonita Avenue | San Dimas | Signalized | A | 6.6 | B | 13.8 |
| 41 | Walnut Avenue/Arrow Highway | San Dimas | Signalized | B | 12.0 | B | 11.8 |
| 42 | San Dimas Canyon Road/Bonita Avenue | San Dimas | Signalized | A | 7.3 | A | 9.0 |
| 43 | San Dimas Canyon Road/Arrow Highway | San Dimas | Signalized | B | 13.9 | B | 12.2 |
| 44 | Wheeler Avenue/Third Street | La Verne | 2-Way Stop | C | 16.5 | C | 15.5 |
| | | | | A[1] | 2.9[1] | A[1] | 2.6[1] |
| 45 | Wheeler Avenue/Arrow Highway | La Verne | Signalized | B | ~~14.8~~17.0 | B | ~~12.9~~14.6 |
| 46 | A Street/Third Street | La Verne | 2-Way Stop | B | 10.3 | B | 10.6 |
| | | | | A[1] | 5.4[1] | A[1] | 4.9[1] |
| 47 | A Street/First Street | La Verne | 2-Way Stop | A | 9.3 | A | 10.0 |
| | | | | A[1] | 1.5[1] | A[1] | 2.3[1] |
| 48 | A Street/Arrow Highway | La Verne | 2-Way Stop | F | 202.1 | F | 63.4 |
| | | | | A[1] | 6.2[1] | A[1] | 1.6[1] |
| 49 | D Street/Third Street | La Verne | All-Way Stop | A | 9.6 | B | 13.5 |
| 50 | D Street/First Street | La Verne | 1-Way Stop | A | 9.7 | B | 11.5 |
| | | | | A[1] | 1.0[1] | A[1] | 2.0[1] |
| 51 | D Street/Arrow Highway | La Verne | ~~All-Way Stop~~Signalized | A | 5.9 | A | 6.2 |
| 52 | E Street/Third Street | La Verne | All-Way Stop | A | 9.9 | B | 12.9 |
| 53 | E Street/Second Street | La Verne | 2-Way Stop | B | 14.2 | B | 14.8 |
| | | | | A[1] | 2.8[1] | A[1] | 3.1[1] |

## Table 2-17. TSM Alternative—Intersection Level of Service (LOS) (2035)[3] (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[2] | LOS | Delay[2] |
| 54 | E Street/First Street | La Verne | 1-Way Stop | B | 11.4 | B | 12.6 |
| | | | | A[1] | 0.9[1] | A[1] | 1.0[1] |
| 55 | E Street/Arrow Highway | La Verne | Signalized | C | 22.5 | C | 27.7 |
| 56 | White Avenue/Third Street | La Verne | 2-Way Stop | D | 26.3 | F | 78.6 |
| | | | | A[1] | 1.7[1] | A[1] | 3.2[1] |
| 57 | White Avenue/Second Street | La Verne | 2-Way Stop | C | 24.7 | F | 55.9 |
| | | | | A[1] | 1.3[1] | A[1] | 1.8[1] |
| 58 | White Avenue/First Street | La Verne | 2-Way Stop | D | 28.2 | E | 48.9 |
| | | | | A[1] | 2.1[1] | A[1] | 2.8[1] |
| 59 | White Avenue/Sierra Way | La Verne | 1-Way Stop | B | 11.2 | C | 17.9 |
| | | | | A[1] | 0.4[1] | A[1] | 0.5[1] |
| 60 | White Avenue/Arrow Highway | La Verne | Signalized | C | 26.2 | C | 30.6 |
| 61 | D Street/Bonita Avenue | La Verne | Signalized | A | 8.1 | B | 10.1 |
| 62 | White Avenue/Foothill Boulevard | La Verne | Signalized | C | 29.5 | D | 39.8 |
| 63 | White Avenue/Bonita Avenue | La Verne | Signalized | B | 13.9 | B | 17.2 |
| ~~64~~ | ~~White Avenue/McKinley Avenue~~ | ~~La Verne~~ | ~~Signalized~~ | ~~B~~ | ~~11.0~~ | ~~B~~ | ~~14.1~~ |
| ~~65~~64 | La Verne Avenue/Arrow Highway | La Verne | 2-Way Stop | F | 52.5 | F | 481.6 |
| | | | | B[1] | 11.1[1] | F[1] | 55.2[1] |
| 65 | White Avenue/McKinley Avenue | Pomona | Signalized | B | 11.0 | B | 14.1 |
| 66 | Fulton Road/Bonita Avenue | Pomona | 2-Way Stop | C | 22.0 | F | 57.3 |
| | | | | A[1] | 3.6[1] | A[1] | 6.8[1] |
| 67 | Fulton Road/Arrow Highway | Pomona | 2-Way Stop | C | 22.0 | D | 34.2 |
| | | | | A[1] | 2.2[1] | A[1] | 2.1[1] |
| 68 | Garey Avenue/Bonita Avenue | Pomona | Signalized | B | 16.0 | B | 15.7 |
| 69 | Garey Avenue/Santa Fe Street | Pomona | 1-Way Stop | B | 10.8 | B | 12.4 |
| | | | | A[1] | 0.3[1] | A[1] | 0.4[1] |
| 70 | Garey Avenue/Arrow Highway | Pomona | Signalized | C | 28.1 | C | 30.7 |
| 71 | Towne Avenue/Bonita Avenue | Pomona | Signalized | A | 9.9 | B | 11.1 |
| 72 | Towne Avenue/Towne Center Drive | Pomona | 1-Way Stop | D | 26.8 | E | 49.6 |
| | | | | A[1] | 0.4[1] | A[1] | 1.5[1] |
| 73 | Towne Avenue/Arrow Highway | Pomona | Signalized | D | 44.5 | D | 44.8 |
| 74 | Garey Avenue/Harrison Avenue | Pomona | Signalized | A | 7.5 | A | 5.9 |
| 75 | Indian Hill Boulevard/Bonita Avenue | Claremont | Signalized | A | 8.1 | A | 9.1 |
| 76 | Indian Hill Boulevard/First Street | Claremont | Signalized | B | 10.9 | B | 15.4 |
| 77 | Indian Hill Boulevard/Santa Fe Street | Claremont | 2-Way Stop | B | 11.2 | B | 13.1 |
| | | | | A[1] | 0.5[1] | A[1] | 0.8[1] |
| 78 | Indian Hill Boulevard/Arrow Highway | Claremont | Signalized | C | 21.1 | D | 37.2 |
| 79 | College Avenue/Bonita Avenue | Claremont | All-Way Stop | A | 9.8 | B | 12.4 |

## Table 2-17. TSM Alternative—Intersection Level of Service (LOS) (2035)[3] (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[2] | LOS | Delay[2] |
| 80 | College Avenue/First Street | Claremont | All-Way Stop | B | 10.7 | B | 12.5 |
| 81 | College Avenue/Arrow Highway | Claremont | Signalized | A | 6.4 | A | 7.3 |
| 82 | Claremont Boulevard/First Street | Claremont | Signalized | A | 3.3 | A | 5.9 |
| 83 | Mills/Claremont/Arrow Highway | Claremont | Signalized | B | 14.9 | B | 19.8 |
| 84 | Monte Vista Avenue/Arrow Route | Montclair | Signalized | B | 13.1 | B | 14.6 |
| 85 | Monte Vista Avenue/Richton Street | Montclair | Signalized | A | 3.3 | A | 6.3 |
| 86 | Monte Vista Avenue/Arrow Highway | Montclair | Signalized | B | 18.6 | C | 31.0 |
| 87 | Fremont Avenue/Arrow Highway | Montclair | Signalized | A | 1.8 | A | 4.1 |
| 88 | Central Avenue/Arrow Route | Montclair | Signalized | B | 12.1 | C | 20.5 |
| 89 | Central Avenue/Richton Street/W 9th Street | Montclair | Signalized | A | 8.5 | B | 10.4 |
| 90 | Central Avenue/Arrow Highway | Montclair | Signalized | B | 15.9 | C | 29.6 |

Source: Intueor, 2011
[1] Overall intersection LOS and delay at unsignalized intersections is reported to support the air quality analysis
[2] Average vehicle delay in seconds
[3] Shading shows intersections that, in 2035, would operate at LOS E or F under the TSM Alternative
[4] Overflow

## Table 2-18. AM Peak Hour—Intersection Impacts Comparison (TSM and No Build Alternatives)[2]

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 TSM | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 1 | Barranca Avenue/Bennett Avenue | Glendora | 1-Way Stop | B | 21.1 | C | 21.0 | -0.1 | NO |
| 2 | Barranca Avenue/Foothill Boulevard | Glendora | Signalized | B | 12.1 | B | 12.0 | -0.1 | NO |
| 3 | Grand Avenue/Foothill Boulevard | Glendora | Signalized | C | 29.5 | C | 29.5 | 0.0 | NO |
| 4 | Vermont Avenue East/Ada Avenue | Glendora | 1-Way Stop | B | 11.8 | B | 11.8 | 0.0 | NO |
| 5 | Vermont Avenue/Route 66 | Glendora | Signalized | A | 7.5 | A | 7.5 | 0.0 | NO |
| 6 | Vermont Avenue/Foothill Boulevard | Glendora | Signalized | A | 7.7 | A | 7.7 | 0.0 | NO |
| 7 | Vermont Avenue W/Ada Avenue | Glendora | 1-Way Stop | B | 11.1 | B | 11.1 | 0.0 | NO |
| 8 | Glendora Avenue/Foothill Boulevard | Glendora | Signalized | C | 25.0 | C | 24.9 | -0.1 | NO |
| 9 | Glendora Avenue/Ada Avenue | Glendora | All-Way Stop | B | 12.2 | B | 12.2 | 0.0 | NO |
| 10 | Glendora Avenue/Route 66 | Glendora | Signalized | C | 24.4 | C | 24.6 | 0.2 | NO |
| 11 | Pasadena Avenue/Lemon Avenue | Glendora | All-Way Stop | A | 7.9 | A | 7.9 | 0.0 | NO |
| 12 | Pasadena Avenue/Route 66 | Glendora | Signalized | B | 11.8 | B | 11.8 | 0.0 | NO |
| 13 | Glenwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | A | 9.9 | A | 9.9 | 0.0 | NO |
| 14 | Glenwood Avenue/Route 66 | Glendora | Signalized~~2-Way Stop~~ | B~~F~~ | 14.6~~OFL~~[3] | B~~F~~ | 14.6~~OFL~~[3] | 0.0~~N/A~~[4] | NO~~YES~~ |
| 15 | Elwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 10.7 | B | 10.7 | 0.0 | NO |
| 16 | Elwood Avenue/Route 66 | Glendora | Signalized | B | 15.4 | B | 15.4 | 0.0 | NO |
| 17 | Loraine Avenue/Lemon Avenue | Glendora | 2-Way Stop | C | 20.0 | C | 20.0 | 0.0 | NO |
| 18 | Loraine Avenue/Route 66 | Glendora | Signalized | B | 19.3 | B | 19.3 | 0.0 | NO |
| 19 | Lone Hill Avenue/Auto Centre Drive | Glendora | Signalized | B | 15.6 | B | 15.6 | 0.0 | NO |
| 20 | Barranca Avenue/Sierra Madre Avenue | Glendora | 1-Way Stop | C | 20.5 | C | 20.4 | -0.1 | NO |
| 21 | Glendora Avenue/Sierra Madre Avenue | Glendora | All-Way Stop | E | 47.0 | E | 46.3 | -0.7 | NO |
| 22 | Lone Hill Avenue/Glendora Marketplace | Glendora | Signalized | B | 15.4 | B | 15.4 | 0.0 | NO |
| 23 | Lone Hill Avenue/Gladstone Street | San Dimas | Signalized | B | 18.8 | B | 18.8 | 0.0 | NO |
| 24 | SR-57 (southbound)/Arrow Highway | San Dimas | Signalized | A | 7.5 | A | 7.5 | 0.0 | NO |
| 25 | SR-57 (northbound)/Arrow Highway & Bonita Avenue | San Dimas | Signalized | C | 26.2 | C | 26.3 | 0.1 | NO |
| 26 | Eucla Avenue/Fifth Street | San Dimas | All-Way Stop | A | 7.4 | A | 7.4 | 0.0 | NO |

**Table 2-18. AM Peak Hour—Intersection Impacts Comparison (TSM and No Build Alternatives)[2] (continued)**

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 TSM | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 27 | Eucla Avenue/Second Street | San Dimas | 1-Way Stop | A | 9.7 | A | 9.7 | 0.0 | NO |
| 28 | Eucla Avenue/Bonita Avenue | San Dimas | Signalized | A | 4.7 | A | 4.7 | 0.0 | NO |
| 29 | Eucla Avenue/Arrow Highway | San Dimas | Signalized | A | 8.4 | A | 8.4 | 0.0 | NO |
| 30 | Acacia Street/Fifth Street | San Dimas | 1-Way Stop | A | 9.2 | A | 9.2 | 0.0 | NO |
| 31 | Acacia Street/Second Street | San Dimas | 2-Way Stop | A | 9.1 | A | 9.1 | 0.0 | NO |
| 32 | Acacia Street/Bonita Avenue | San Dimas | 2-Way Stop | B | 11.1 | B | 11.1 | 0.0 | NO |
| 33 | Cataract Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.9 | A | 9.9 | 0.0 | NO |
| 34 | Cataract Avenue/Bonita Avenue | San Dimas | All-Way Stop | B | 12.5 | B | 12.5 | 0.0 | NO |
| 35 | Monte Vista Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.3 | A | 9.3 | 0.0 | NO |
| 36 | Monte Vista Avenue/Bonita Avenue | San Dimas | 2-Way Stop | C | 20.2 | C | 20.5 | 0.3 | NO |
| 37 | San Dimas Avenue/Second Street | San Dimas | 2-Way Stop | C | 21.2 | C | 21.0 | -0.2 | NO |
| 38 | San Dimas Avenue/Bonita Avenue | San Dimas | Signalized | B | 12.2 | B | 12.2 | 0.0 | NO |
| 39 | San Dimas Avenue/Arrow Highway | San Dimas | Signalized | C | 28.9 | C | 28.8 | -0.1 | NO |
| 40 | Walnut Avenue/Bonita Avenue | San Dimas | Signalized | A | 6.7 | A | 6.6 | -0.1 | NO |
| 41 | Walnut Avenue/Arrow Highway | San Dimas | Signalized | B | 12.0 | B | 12.0 | 0.0 | NO |
| 42 | San Dimas Canyon Road/Bonita Avenue | San Dimas | Signalized | A | 7.3 | A | 7.3 | 0.0 | NO |
| 43 | San Dimas Canyon Road/Arrow Highway | San Dimas | Signalized | B | 13.8 | B | 13.9 | 0.1 | NO |
| 44 | Wheeler Avenue/Third Street | La Verne | 2-Way Stop | C | 16.5 | C | 16.5 | 0.0 | NO |
| 45 | Wheeler Avenue/Arrow Highway | La Verne | Signalized | B | ~~14.8~~17.0 | B | ~~14.8~~17.0 | 0.0 | NO |
| 46 | A Street/Third Street | La Verne | 2-Way Stop | B | 10.3 | B | 10.3 | 0.0 | NO |
| 47 | A Street/First Street | La Verne | 2-Way Stop | A | 9.3 | A | 9.3 | 0.0 | NO |
| 48 | A Street/Arrow Highway | La Verne | 2-Way Stop | F | 198.6 | F | 202.1 | 3.5 | YES |
| 49 | D Street/Third Street | La Verne | All-Way Stop | A | 9.6 | A | 9.6 | 0.0 | NO |
| 50 | D Street/First Street | La Verne | 1-Way Stop | A | 9.7 | A | 9.7 | 0.0 | NO |
| 51 | D Street/Arrow Highway | La Verne | Signalized~~All-Way Stop~~ | A | 5.9 | A | 5.9 | 0.0 | NO |
| 52 | E Street/Third Street | La Verne | All-Way Stop | A | 9.9 | A | 9.9 | 0.0 | NO |
| 53 | E Street/Second Street | La Verne | 2-Way Stop | B | 14.3 | B | 14.2 | -0.1 | NO |
| 54 | E Street/First Street | La Verne | 1-Way Stop | B | 11.4 | B | 11.4 | 0.0 | NO |

**Table 2-18. AM Peak Hour—Intersection Impacts Comparison (TSM and No Build Alternatives)[2] (continued)**

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 TSM | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 55 | E Street/Arrow Highway | La Verne | Signalized | C | 22.5 | C | 22.5 | 0.0 | NO |
| 56 | White Avenue/Third Street | La Verne | 2-Way Stop | D | 26.5 | D | 26.3 | -0.2 | NO |
| 57 | White Avenue/Second Street | La Verne | 2-Way Stop | C | 24.8 | C | 24.7 | -0.1 | NO |
| 58 | White Avenue/First Street | La Verne | 2-Way Stop | D | 28.4 | D | 28.2 | -0.2 | NO |
| 59 | White Avenue/Sierra Way | La Verne | 1-Way Stop | B | 11.2 | B | 11.2 | 0.0 | NO |
| 60 | White Avenue/Arrow Highway | La Verne | Signalized | C | 26.3 | C | 26.2 | -0.1 | NO |
| 61 | D Street/Bonita Avenue | La Verne | Signalized | A | 8.1 | A | 8.1 | 0.0 | NO |
| 62 | White Avenue/Foothill Boulevard | La Verne | Signalized | C | 29.6 | C | 29.5 | -0.1 | NO |
| 63 | White Avenue/Bonita Avenue | La Verne | Signalized | B | 14.0 | B | 13.9 | -0.1 | NO |
| ~~64~~ | ~~White Avenue/McKinley Avenue~~ | ~~La Verne~~ | ~~Signalized~~ | ~~B~~ | ~~11.0~~ | ~~B~~ | ~~11.0~~ | ~~0.0~~ | ~~NO~~ |
| 64~~5~~ | La Verne Avenue/Arrow Highway | La Verne | 2-Way Stop | F | 50.6 | F | 52.5 | 1.9 | NO |
| 65 | White Avenue/McKinley Avenue | Pomona | Signalized | B | 11.0 | B | 11.0 | 0.0 | NO |
| 66 | Fulton Road/Bonita Avenue | Pomona | 2-Way Stop | C | 22.1 | C | 22.0 | -0.1 | NO |
| 67 | Fulton Road/Arrow Highway | Pomona | 2-Way Stop | C | 22.4 | C | 22.0 | -0.4 | NO |
| 68 | Garey Avenue/Bonita Avenue | Pomona | Signalized | B | 16.0 | B | 16.0 | 0.0 | NO |
| 69 | Garey Avenue/Santa Fe Street | Pomona | 1-Way Stop | B | 10.8 | B | 10.8 | 0.0 | NO |
| 70 | Garey Avenue/Arrow Highway | Pomona | Signalized | C | 28.3 | C | 28.1 | -0.2 | NO |
| 71 | Towne Avenue/Bonita Avenue | Pomona | Signalized | A | 9.9 | A | 9.9 | 0.0 | NO |
| 72 | Towne Avenue/Towne Center Drive | Pomona | 1-Way Stop | D | 27.1 | D | 26.8 | -0.3 | NO |
| 73 | Towne Avenue/Arrow Highway | Pomona | Signalized | D | 44.5 | D | 44.5 | 0.0 | NO |
| 74 | Garey Avenue/Harrison Avenue | Pomona | Signalized | A | 7.5 | A | 7.5 | 0.0 | NO |
| 75 | Indian Hill Boulevard/Bonita Avenue | Claremont | Signalized | A | 8.1 | A | 8.1 | 0.0 | NO |
| 76 | Indian Hill Boulevard/First Street | Claremont | Signalized | B | 10.9 | B | 10.9 | 0.0 | NO |
| 77 | Indian Hill Boulevard/Santa Fe Street | Claremont | 2-Way Stop | B | 11.2 | B | 11.2 | 0.0 | NO |
| 78 | Indian Hill Boulevard/Arrow Highway | Claremont | Signalized | C | 21.2 | C | 21.1 | -0.1 | NO |
| 79 | College Avenue/Bonita Avenue | Claremont | All-Way Stop | A | 9.9 | A | 9.8 | -0.1 | NO |
| 80 | College Avenue/First Street | Claremont | All-Way Stop | B | 10.8 | B | 10.7 | -0.1 | NO |
| 81 | College Avenue/Arrow Highway | Claremont | Signalized | A | 6.3 | A | 6.4 | 0.1 | NO |
| 82 | Claremont Boulevard/First Street | Claremont | Signalized | A | 3.3 | A | 3.3 | 0.0 | NO |

**Table 2-18. AM Peak Hour—Intersection Impacts Comparison (TSM and No Build Alternatives)[2] (continued)**

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 TSM | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 83 | Mills/Claremont/Arrow Highway | Claremont | Signalized | B | 14.9 | B | 14.9 | 0.0 | NO |
| 84 | Monte Vista Avenue/Arrow Route | Montclair | Signalized | B | 13.1 | B | 13.1 | 0.0 | NO |
| 85 | Monte Vista Avenue/Richton Street | Montclair | Signalized | A | 3.3 | A | 3.3 | 0.0 | NO |
| 86 | Monte Vista Avenue/Arrow Highway | Montclair | Signalized | B | 18.7 | B | 18.6 | -0.1 | NO |
| 87 | Fremont Avenue/Arrow Highway | Montclair | Signalized | A | 1.8 | A | 1.8 | 0.0 | NO |
| 88 | Central Avenue/Arrow Route | Montclair | Signalized | B | 12.1 | B | 12.1 | 0.0 | NO |
| 89 | Central Avenue/Richton Street/W 9th Street | Montclair | Signalized | A | 8.4 | A | 8.5 | 0.1 | NO |
| 90 | Central Avenue/Arrow Highway | Montclair | Signalized | B | 15.9 | B | 15.9 | 0.0 | NO |

Source: Intueor, 2011
[1] Average vehicle delay in seconds.
[2] Shading shows intersections that would be significantly impacted as a result of the TSM Alternative.
[3] Overflow
[4] Due to TSM Alternative trips, it is anticipated that the TSM Alternative will produce a significant impact.

## Table 2-19. PM Peak Hour—Intersection Impacts Comparison (TSM and No Build Alternatives)[2]

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 TSM | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 1 | Barranca Avenue/Bennett Avenue | Glendora | 1-Way Stop | B | 12.4 | B | 12.4 | 0.0 | NO |
| 2 | Barranca Avenue/Foothill Blvd | Glendora | Signalized | A | 8.4 | A | 8.4 | 0.0 | NO |
| 3 | Grand Avenue/Foothill Blvd | Glendora | Signalized | C | 34.3 | C | 34.3 | 0.0 | NO |
| 4 | Vermont Avenue E/Ada Avenue | Glendora | 1-Way Stop | B | 13.7 | B | 13.7 | 0.0 | NO |
| 5 | Vermont Avenue/Route 66 | Glendora | Signalized | A | 8.4 | A | 8.4 | 0.0 | NO |
| 6 | Vermont Avenue/Foothill Blvd | Glendora | Signalized | A | 7.0 | A | 7.0 | 0.0 | NO |
| 7 | Vermont Avenue W/Ada Avenue | Glendora | 1-Way Stop | B | 12.0 | B | 12.0 | 0.0 | NO |
| 8 | Glendora Avenue/Foothill Blvd | Glendora | Signalized | C | 30.2 | C | 30.0 | -0.2 | NO |
| 9 | Glendora Avenue/Ada Avenue | Glendora | All-Way Stop | B | 14.9 | B | 14.9 | 0.0 | NO |
| 10 | Glendora Avenue/Route 66 | Glendora | Signalized | C | 29.5 | C | 29.5 | 0.0 | NO |
| 11 | Pasadena Avenue/Lemon Avenue | Glendora | All-Way Stop | A | 7.8 | A | 7.8 | 0.0 | NO |
| 12 | Pasadena Avenue/Route 66 | Glendora | Signalized | B | 10.7 | B | 10.7 | 0.0 | NO |
| 13 | Glenwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 11.2 | B | 11.2 | 0.0 | NO |
| 14 | Glenwood Avenue/Route 66 | Glendora | Signalized~~2-Way Stop~~ | B~~F~~ | 12.6~~1097.3~~ | B~~F~~ | 12.6~~OFL~~[3] | 0.0~~N/A~~ | NO~~YES~~ |
| 15 | Elwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 10.9 | B | 10.9 | 0.0 | NO |
| 16 | Elwood Avenue/Route 66 | Glendora | Signalized | B | 16.2 | B | 16.3 | 0.1 | NO |
| 17 | Loraine Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 13.7 | B | 13.7 | 0.0 | NO |
| 18 | Loraine Avenue/Route 66 | Glendora | Signalized | B | 11.8 | B | 11.8 | 0.0 | NO |
| 19 | Lone Hill Avenue/Auto Centre Drive | Glendora | Signalized | C | 24.1 | C | 24.1 | 0.0 | NO |
| 20 | Barranca Avenue/Sierra Madre Avenue | Glendora | 1-Way Stop | C | 15.8 | C | 15.8 | 0.0 | NO |
| 21 | Glendora Avenue/Sierra Madre Avenue | Glendora | All-Way Stop | B | 14.5 | B | 14.5 | 0.0 | NO |
| 22 | Lone Hill Avenue/Glendora Marketplace | Glendora | Signalized | C | 23.1 | C | 23.2 | 0.1 | NO |
| 23 | Lone Hill Avenue/Gladstone Street | San Dimas | Signalized | C | 25.5 | C | 25.4 | -0.1 | NO |
| 24 | SR-57 (southbound)/Arrow Highway | San Dimas | Signalized | C | 20.2 | B | 20.0 | -0.2 | NO |

**Table 2-19. PM Peak Hour—Intersection Impacts Comparison (TSM and No Build Alternatives)[2] (continued)**

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 TSM | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 25 | SR-57 (northbound)/Arrow Highway & Bonita Avenue | San Dimas | Signalized | C | 29.2 | C | 29.3 | 0.1 | NO |
| 26 | Eucla Avenue/Fifth Street | San Dimas | All-Way Stop | A | 7.4 | A | 7.4 | 0.0 | NO |
| 27 | Eucla Avenue/Second Street | San Dimas | 1-Way Stop | B | 10.5 | B | 10.4 | -0.1 | NO |
| 28 | Eucla Avenue/Bonita Avenue | San Dimas | Signalized | A | 8.1 | A | 8.1 | 0.0 | NO |
| 29 | Eucla Avenue/Arrow Highway | San Dimas | Signalized | B | 11.8 | B | 11.8 | 0.0 | NO |
| 30 | Acacia Street/Fifth Street | San Dimas | 1-Way Stop | A | 9.3 | A | 9.3 | 0.0 | NO |
| 31 | Acacia Street/Second Street | San Dimas | 2-Way Stop | A | 9.2 | A | 9.2 | 0.0 | NO |
| 32 | Acacia Street/Bonita Avenue | San Dimas | 2-Way Stop | C | 24.4 | C | 24.6 | 0.2 | NO |
| 33 | Cataract Avenue/Second Street | San Dimas | 2-Way Stop | B | 10.0 | B | 10.0 | 0.0 | NO |
| 34 | Cataract Avenue/Bonita Avenue | San Dimas | All-Way Stop | C | 25.0 | D | 25.1 | 0.1 | NO |
| 35 | Monte Vista Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.9 | A | 9.8 | -0.1 | NO |
| 36 | Monte Vista Avenue/Bonita Avenue | San Dimas | 2-Way Stop | F | 119.5 | F | 123.7 | 4.2 | YES |
| 37 | San Dimas Avenue/Second Street | San Dimas | 2-Way Stop | E | 36.2 | E | 35.8 | -0.4 | NO |
| 38 | San Dimas Avenue/Bonita Avenue | San Dimas | Signalized | B | 19.6 | B | 19.6 | 0.0 | NO |
| 39 | San Dimas Avenue/Arrow Highway | San Dimas | Signalized | D | 48.9 | D | 48.4 | -0.5 | NO |
| 40 | Walnut Avenue/Bonita Avenue | San Dimas | Signalized | B | 13.9 | B | 13.8 | -0.1 | NO |
| 41 | Walnut Avenue/Arrow Highway | San Dimas | Signalized | B | 11.8 | B | 11.8 | 0.0 | NO |
| 42 | San Dimas Canyon Rd/Bonita Avenue | San Dimas | Signalized | A | 9.0 | A | 9.0 | 0.0 | NO |
| 43 | San Dimas Canyon Rd/Arrow Highway | San Dimas | Signalized | B | 12.1 | B | 12.2 | 0.1 | NO |
| 44 | Wheeler Avenue/Third Street | La Verne | 2-Way Stop | C | 15.6 | C | 15.5 | -0.1 | NO |
| 45 | Wheeler Avenue/Arrow Highway | La Verne | Signalized | B | ~~12.9~~14.6 | B | ~~12.9~~14.6 | 0.0 | NO |
| 46 | A Street/Third Street | La Verne | 2-Way Stop | B | 10.6 | B | 10.6 | 0.0 | NO |
| 47 | A Street/First Street | La Verne | 2-Way Stop | A | 10.0 | A | 10.0 | 0.0 | NO |
| 48 | A Street/Arrow Highway | La Verne | 2-Way Stop | F | 62.6 | F | 63.4 | 0.8 | NO |
| 49 | D Street/Third Street | La Verne | All-Way Stop | B | 13.5 | B | 13.5 | 0.0 | NO |
| 50 | D Street/First Street | La Verne | 1-Way Stop | B | 11.5 | B | 11.5 | 0.0 | NO |

## Table 2-19. PM Peak Hour—Intersection Impacts Comparison (TSM and No Build Alternatives)[2] (continued)

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 TSM | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 51 | D Street/Arrow Highway | La Verne | Signalized~~All-Way Stop~~ | A | 6.2 | A | 6.2 | 0.0 | NO |
| 52 | E Street/Third Street | La Verne | All-Way Stop | B | 12.9 | B | 12.9 | 0.0 | NO |
| 53 | E Street/Second Street | La Verne | 2-Way Stop | B | 14.8 | B | 14.8 | 0.0 | NO |
| 54 | E Street/First Street | La Verne | 1-Way Stop | B | 12.6 | B | 12.6 | 0.0 | NO |
| 55 | E Street/Arrow Highway | La Verne | Signalized | C | 27.6 | C | 27.7 | 0.1 | NO |
| 56 | White Avenue/Third Street | La Verne | 2-Way Stop | F | 78.9 | F | 78.6 | -0.3 | NO |
| 57 | White Avenue/Second Street | La Verne | 2-Way Stop | F | 56.4 | F | 55.9 | -0.5 | NO |
| 58 | White Avenue/First Street | La Verne | 2-Way Stop | E | 49.5 | E | 48.9 | -0.6 | NO |
| 59 | White Avenue/Sierra Way | La Verne | 1-Way Stop | C | 18.0 | C | 17.9 | -0.1 | NO |
| 60 | White Avenue/Arrow Highway | La Verne | Signalized | C | 30.6 | C | 30.6 | 0.0 | NO |
| 61 | D Street/Bonita Avenue | La Verne | Signalized | B | 10.2 | B | 10.1 | -0.1 | NO |
| 62 | White Avenue/Foothill Blvd | La Verne | Signalized | D | 39.9 | D | 39.8 | -0.1 | NO |
| 63 | White Avenue/Bonita Avenue | La Verne | Signalized | B | 17.3 | B | 17.2 | -0.1 | NO |
| ~~64~~ | ~~White Avenue/McKinley Avenue~~ | ~~La Verne~~ | ~~Signalized~~ | ~~B~~ | ~~14.1~~ | ~~B~~ | ~~14.1~~ | ~~0.0~~ | ~~NO~~ |
| ~~65~~64 | La Verne Avenue/Arrow Highway | La Verne | 2-Way Stop | F | 471.1 | F | 481.6 | 10.5 | YES |
| 65 | White Avenue/McKinley Avenue | Pomona | Signalized | B | 14.1 | B | 14.1 | 0.0 | NO |
| 66 | Fulton Rd/Bonita Avenue | Pomona | 2-Way Stop | F | 58.1 | F | 57.3 | -0.8 | NO |
| 67 | Fulton Rd/Arrow Highway | Pomona | 2-Way Stop | D | 33.9 | D | 34.2 | 0.3 | NO |
| 68 | Garey Avenue/Bonita Avenue | Pomona | Signalized | B | 15.8 | B | 15.7 | -0.1 | NO |
| 69 | Garey Avenue/Santa Fe Street | Pomona | 1-Way Stop | B | 12.4 | B | 12.4 | 0.0 | NO |
| 70 | Garey Avenue/Arrow Highway | Pomona | Signalized | C | 30.9 | C | 30.7 | -0.2 | NO |
| 71 | Towne Avenue/Bonita Avenue | Pomona | Signalized | B | 11.2 | B | 11.1 | -0.1 | NO |
| 72 | Towne Avenue/Towne Center Drive | Pomona | 1-Way Stop | F | 50.9 | E | 49.6 | -1.3 | NO |
| 73 | Towne Avenue/Arrow Highway | Pomona | Signalized | D | 45.1 | D | 44.8 | -0.3 | NO |
| 74 | Garey Avenue/Harrison Avenue | Pomona | Signalized | A | 6.0 | A | 5.9 | -0.1 | NO |
| 75 | Indian Hill Blvd/Bonita Avenue | Claremont | Signalized | A | 9.1 | A | 9.1 | 0.0 | NO |
| 76 | Indian Hill Blvd/First Street | Claremont | Signalized | B | 15.5 | B | 15.4 | -0.1 | NO |
| 77 | Indian Hill Blvd/Santa Fe Street | Claremont | 2-Way Stop | B | 13.2 | B | 13.1 | -0.1 | NO |

**Table 2-19. PM Peak Hour—Intersection Impacts Comparison (TSM and No Build Alternatives)[2] (continued)**

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 TSM | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 78 | Indian Hill Blvd/Arrow Highway | Claremont | Signalized | D | 37.3 | D | 37.2 | -0.1 | NO |
| 79 | College Avenue/Bonita Avenue | Claremont | All-Way Stop | B | 12.5 | B | 12.4 | -0.1 | NO |
| 80 | College Avenue/First Street | Claremont | All-Way Stop | B | 12.6 | B | 12.5 | -0.1 | NO |
| 81 | College Avenue/Arrow Highway | Claremont | Signalized | A | 7.3 | A | 7.3 | 0.0 | NO |
| 82 | Claremont Blvd/First Street | Claremont | Signalized | A | 5.9 | A | 5.9 | 0.0 | NO |
| 83 | Mills/Claremont/Arrow Highway | Claremont | Signalized | B | 19.8 | B | 19.8 | 0.0 | NO |
| 84 | Monte Vista Avenue/Arrow Route | Montclair | Signalized | B | 14.6 | B | 14.6 | 0.0 | NO |
| 85 | Monte Vista Avenue/Richton Street | Montclair | Signalized | A | 6.3 | A | 6.3 | 0.0 | NO |
| 86 | Monte Vista Avenue/Arrow Highway | Montclair | Signalized | C | 31.0 | C | 31.0 | 0.0 | NO |
| 87 | Fremont Avenue/Arrow Highway | Montclair | Signalized | A | 4.1 | A | 4.1 | 0.0 | NO |
| 88 | Central Avenue/Arrow Route | Montclair | Signalized | C | 20.5 | C | 20.5 | 0.0 | NO |
| 89 | Central Avenue/Richton Street/W 9th Street | Montclair | Signalized | B | 10.4 | B | 10.4 | 0.0 | NO |
| 90 | Central Avenue/Arrow Highway | Montclair | Signalized | C | 29.6 | C | 29.6 | 0.0 | NO |

Source: Intueor, 2011
[1] Average vehicle delay in seconds.
[2] Shading shows intersections that would be significantly impacted as a result of the TSM Alternative.
[3] Overflow

## Table 2-20. TSM Alternative—Roadway Segment Average Daily Traffic Analysis (2035)

| Roadway Segment | From | To | Number of Lanes | Capacity (Vehicles/Day) | Volume (Vehicles/Day) | V/C | LOS |
|---|---|---|---|---|---|---|---|
| **Glendora** | | | | | | | |
| South Lone Hill Avenue | West Gladstone Street | Auto Centre Drive | 4 | 32,000[1] | 28,111 | 0.88 | D |
| South Loraine Avenue | Route 66 | East Lemon Avenue | 4 | 32,000 | 10,707 | 0.34 | A |
| South Elwood Avenue | Route 66 | East Lemon Avenue | 2 | 12,000[4] | 2,746 | 0.23 | A |
| South Glenwood Avenue | Route 66 | East Lemon Avenue | 2 | 12,000 | 2,835 | 0.24 | A |
| South Pasadena Avenue | Route 66 | East Lemon Avenue | 2 | 12,000 | 2,683 | 0.22 | A |
| South Glendora Avenue | Route 66 | Foothill Boulevard | 4 | 32,000 | 18,575 | 0.58 | A |
| South Vermont Avenue | Route 66 | West Foothill Boulevard | 2 | 12,000 | 4,321 | 0.36 | A |
| Grand Avenue | Route 66 | West Leadora Avenue | 4 | 32,000 | 14,404 | 0.45 | A |
| Foothill Boulevard | Barranca Avenue | Glendora Avenue | 4 | 32,000 | 12,294 | 0.39 | A |
| North Barranca Avenue | West Foothill Boulevard | West Leadora Avenue | 4 | 24,000[2] | 8,416 | 0.35 | A |
| **San Dimas** | | | | | | | |
| San Dimas Canyon Road | Arrow Highway | Bonita Avenue | 4 | 32,000 | 9,292 | 0.29 | A |
| Walnut Avenue | East Arrow Highway | East Bonita Avenue | 2 | 16,000[3] | 7,505 | 0.47 | A |
| San Dimas Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 12,291 | 0.38 | A |
| Monte Vista Avenue | Commercial Street | Bonita Avenue | 2 | 12,000 | 544 | 0.05 | A |
| Cataract Avenue | Arrow Highway | First Street | 2 | 12,000 | 3,072 | 0.26 | A |
| Bonita Avenue | Eucla Avenue | San Dimas Avenue | 4 | 32,000 | 15,832 | 0.49 | A |
| Eucla Avenue | Bonita Avenue | Third Street | 2 | 12,000 | 3,798 | 0.32 | A |
| West Gladstone Street | Lone Hill Avenue | Amelia Avenue | 4 | 32,000 | 15,784 | 0.49 | A |
| **La Verne** | | | | | | | |
| White Avenue | Arrow Highway | Third Street | ~~4~~2 | ~~32,000~~16,000 | 18,781 | ~~0.59~~1.17 | ~~F~~A |
| E Street | Arrow Highway | Third Street | 2 | 16,000 | 6,916 | 0.43 | A |
| D Street | Arrow Highway | Third Street | 2 | 12,000 | 5,697 | 0.47 | A |
| A Street | Arrow Highway | Third Street | 2 | 12,000 | 1,339 | 0.11 | A |
| Wheeler Avenue | Arrow Highway | Third Street | 4 | 32,000 | 10,342 | 0.32 | A |

**Table 2-20. TSM Alternative—Roadway Segment Average Daily Traffic Analysis (2035) (continued)**

| Roadway Segment | From | To | Number of Lanes | Capacity (Vehicles/Day) | Volume (Vehicles/Day) | V/C | LOS |
|---|---|---|---|---|---|---|---|
| **Pomona** | | | | | | | |
| North Towne Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 29,612 | 0.93 | E |
| North Garey Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 24,485 | 0.77 | C |
| Fulton Road | Metrolink Driveway | Bonita Avenue | 2 | 16,000 | 1,574 | 0.10 | A |
| Fulton Road | Arrow Highway | Metrolink Driveway | 2 | 16,000 | 1,914 | 0.12 | A |
| **Claremont** | | | | | | | |
| South Mills Avenue/Claremont Blvd | Arrow Highway | East First Street | 4 | 32,000 | 8,822 | 0.28 | A |
| Indian Hill Boulevard | Arrow Highway | Bonita Avenue | 4 | 32,000 | 21,993 | 0.69 | B |
| College Avenue | East Arrow Highway | East First Street | 2 | 12,000 | 5,901 | 0.49 | A |
| College Avenue | East First Street | Bonita Avenue | 2 | 12,000 | 6,466 | 0.54 | A |
| Cambridge Avenue | West Arrow Highway | Bonita Avenue | 2 | 12,000 | 5,333 | 0.44 | A |
| First Street | Indian Hill Boulevard | College Avenue | 2 | 12,000 | 8,573 | 0.72 | C |
| **Montclair** | | | | | | | |
| Monte Vista Avenue | Richton Street | Arrow Highway | 4 | 32,000 | 22,170 | 0.69 | B |
| Central Avenue | Richton Street | Arrow Highway | 4 | 32,000 | 27,169 | 0.85 | D |

Source: Intueor, 2011
[1] Capacity of 32,000 assumes 800 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[2] Capacity of 24,000 assumes 600 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[3] Capacity of 16,000 assumes 800 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[4] Capacity of 12,000 assumes 600 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
k-factor= The ratio of design hour traffic to average annual daily traffic.

#### 2.6.2.4 Parking

The TSM Alternative would have no impact on the number of on-street parking and loading spaces for the project. The proposed bus stops located every two to three blocks would be on the near side or far side of an intersection, which would not impact on-street parking and loading spaces.

#### 2.6.2.5 Pedestrian and Bicycle Facilities

The TSM Alternative would have no impacts on bicycle or pedestrian facilities for the project.

### 2.6.3 Build Alternative

The Build Alternative project would be a 12.3-mile LRT line extending from just east of the Azusa-Citrus station (built as part of the Pasadena to Azusa extension) to Montclair. It would operate on two light railroad tracks next to a freight track along the existing Metro-owned right-of-way, which is also used by Metrolink.

#### 2.6.3.1 Short-term Construction Impacts

During construction, it may be necessary for traffic lanes to be temporarily closed. Generally, lane closures would take place at night to minimize traffic disruptions. Construction activities that entail the relocation of utilities and the construction of trackways and stations would require the temporary closure of lanes on roadways with at-grade crossings. Three types of grade-crossing configurations were identified: mid-block locations, locations adjacent to an intersection, and locations where the tracks diagonally cross the intersection. It is anticipated that construction impacts would be minimal at the mid-block and adjacent intersection locations. Since these lane closures are expected to take place during the night hours and outside the AM and PM peak commuting periods, there would be no significant impacts to either transit or traffic operations. Intersection operating conditions would remain at acceptable service levels because of low nighttime traffic volumes. Detour routes would be identified and clearly signed during any lane closures. Some bus routes may require rerouting, and stops may be temporarily relocated. Full closure of the intersection during the night hours is expected at the two locations where the tracks diagonally cross the intersection—Grand Avenue/Foothill Boulevards in Glendora and Cataract Avenue/Bonita Avenue in San Dimas. At these select locations, impacts during construction due to temporary interference with normal traffic flow would be considered significant and would require the implementation of mitigation measures.

Construction staging strategies will be implemented in order to handle freight train operations, as freight trains currently utilize the existing track. Track stage construction sequencing would be proposed to maintain the freight trains operations on the track. The first stage would be to construct the LRT track without overhead catenary. Freight trains would utilize the LRT track during construction or relocation of the freight track. Additional structural requirements for the temporary freight train tracks would be needed; these would be addressed during final design. As a result of the staging strategies, no impacts to freight train operations are anticipated to occur.

### 2.6.3.2 Public Transit

#### *Bus Route Interface and Service Modification*

It is important that the proposed stations are well-served by existing and proposed bus routes to maintain connectivity with other transit operators and bus services in the Study Area. The proposed transit operating plan for the Build Alternative provides a connection to existing bus lines at each station and proposes that certain bus lines be considered for rerouting to improve access to the light rail system. Rerouting considerations would follow the typical bus route changes process for Foothill Transit and Omnitrans, including a public review period for the proposed changes, a comment process, and input from members of the Bus Riders Union. Table 2-21 shows the proposed changes to the frequency of bus service (buses per hour). Table 2-22 shows the proposed bus interface and service modifications.

#### *Metrolink Operation Impacts*

The Build Alternative would overlap with a short segment of the Metrolink San Bernardino Line in Pomona, Claremont, and Montclair. The Build Alternative would run along the same right-of-way as the Metrolink, but LRT trains would operate on separate tracks and use different platforms than the Metrolink commuter trains. The freight track would merge with the Metrolink track, resulting in two LRT tracks and two Metrolink/freight tracks.

## Table 2-21. Build Alternative—Proposed Changes to Bus Service (Buses Per Hour)

| Bus Line | Glendora Station | | | | | | San Dimas Station | | | | | | La Verne Station | | | | | | Pomona Station | | | | | | Claremont Station | | | | | | Montclair Station | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AM Peak | | | PM Peak | | | AM Peak | | | PM Peak | | | AM Peak | | | PM Peak | | | AM Peak | | | PM Peak | | | AM Peak | | | PM Peak | | | AM Peak | | | PM Peak | | |
| | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover | Northbound/Eastbound | Southbound/Westbound | Layover |
| **Foothill Transit** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 188[1] | 3 | 3 | | 3 | 3 | | | | | | | | | | | | | | | | | | | | 3 | 3 | | 3 | 3 | | 3 | | 1 | 3 | | 1 |
| 197 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | 2 | 2 | | 2 | | 1 | 2 | | 1 |
| 492 | | | | | | | 1 | | 1 | 1 | | 1 | 4 | | | 4 | | | | | | | | | 2 | 2 | | 2 | 2 | | 2 | | 1 | 2 | | 1 |
| 291 | | | | | | | | | | | | | | | | | | | 3 | 3 | | 3 | 3 | | | | | | | | | | | | | |
| 292 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 480 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | 2 | 2 | | 2 | | 1 | 2 | | 1 |
| 851 | 1 | 1 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 690 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | 2 | 2 | | 2 | | 1 | 2 | | 1 |
| 699 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 1 | | 4 | 1 |
| 284 | | 1 | 1 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Omnitrans** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | 1 | | 1 |
| 66 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 1 | 4 | | 1 |
| 67 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | 1 | | 1 |
| 68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | 2 | 2 | |
| 80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | 1 | | 1 |
| **RTA** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 204 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | 1 | | 1 |
| Total | **4** | **5** | **1** | **4** | **5** | | **1** | | **1** | **1** | | **1** | | **4** | | | **4** | | **3** | **3** | | **3** | **3** | | | **3** | | | **3** | | **2 5** | **2** | **1 1** | **2 1** | **6** | **1 1** |

Source: Foothill Extension Bus Interface Plan, Parsons Brinckerhoff, 2011

[1] New proposed bus route

## Table 2-22. Build Alternative—Proposed Bus Interface and Service Modification

| City | Improvements |
|---|---|
| Glendora | Foothill Transit Route 187 would be divided into three segments. The segment east of Azusa-Citrus would be designated as Route 188, and would be rerouted from Alosta Avenue between Vermont Avenue and Glendora Avenue. It is recommended that it run on Vermont Avenue, Ada Street and Glendora Avenue. |
| | Move terminus and layover point for Foothill Transit Route 284 to Glendora Avenue and Ada Street. |
| | Consider obtaining a pedestrian way easement through the redevelopment parcel to the north and relocating the existing bus stop at Ada Avenue near the pedestrian way. Additionally, a turnout for the southbound bus stop could be provided along the south side of Glendora Avenue. |
| | The narrow parcel south of the tracks from Vermont Avenue to Glendora Avenue is proposed to be used for ~~either a parking lot with a capacity of about 200 spaces or~~ a two- to three-story parking structure with approximately ~~350 to~~ 400<u>-420</u> spaces. |
| San Dimas | New layover location for Foothill Transit Route 494 and 499 in the vicinity of San Dimas Station. Bus stops at the park-and-ride lot for Routes 494 and 499 would be moved or added in closer proximity to the LRT station. |
| La Verne | Insert loop around the station between White Avenue and Arrow Highway and create a new stop close to the station. In the westbound direction, buses should continue ahead on Arrow Highway, turn right on E or F street, right on 1st Street and then enter White Avenue. Loop in reverse order for the eastbound direction. A bus turnout should be evaluated on Arrow Highway at the station to accommodate a bus stop for Foothill Transit Route 197. |
| | Additional bus service could be provided by a possible city shuttle bus on E street between the Fairplex and the city's Old Towne center to the north including a stop by the station entrance. |
| Pomona | Include a bus stop in the vicinity of the Pomona Station with possible turnout for Foothill Transit Route 291 on Garey Avenue north of the railroad tracks. Because it is a joint Gold Line and Metrolink Station complex, an off-street transit center is also something that should be considered for Pomona Station. |
| | It is proposed that Route 492 be diverted to serve Pomona Station. |
| | Parcels adjacent to the station could be developed to provide park-and-ride and/or related improvements. |
| Claremont | Divide Foothill Transit Route 187 into three segments. The segment east of Azusa-Citrus would be designated as Route 188. |
| | A park-and-ride garage for LRT and Metrolink riders is proposed over the existing Metrolink parking lot east of College Avenue next to the bus transfer/layover facility. |
| Montclair | Foothill Routes 494 and 690 are candidates to be discontinued, as they run parallel to the Gold Line Extension when Phase 2B—Azusa to Montclair is completed. |
| | Introduction of the LRT station together with the specific plan for future development will require moving the existing bus transit center away from its current location eastward, but still on the north side of the railroad tracks. |

Source: Intueor, 2011

#### *LRT Patronage Forecasts*

Table 2-23 shows the projected daily ridership at each LRT station based on the results of the transportation travel demand model for the Build Alternative. The highest number of passengers boarding the system would be at the Montclair Station, with the next highest at the Pomona Station. The model also shows that the stations with the highest patronage would be the ones with the greatest number of connecting transit services. The highest concentration of boardings would occur during the peak periods as people use the system to travel to and from their places of employment. Total daily ridership (boardings) for the Build Alternative is projected to be 17,770 passengers per day by 2035. Of the total boardings, approximately 12,700 would be new transit trips, approximately 3,500 are expected to be diverted from existing bus services, and around 1,500 are anticipated to be redirected from Metrolink.

**Table 2-23. Build Alternative—Daily LRT Ridership**

| Station | Total Daily Ridership |
|---|---|
| Glendora | 1,860 |
| San Dimas | 1,780 |
| La Verne | 1,840 |
| Pomona | 3,010 |
| Claremont | 2,840 |
| Montclair | 6,440 |
| **Total** | **17,770** |

Source: Parsons Brinckerhoff, 2011

### 2.6.3.3 Streets and Highways

#### *Shifts in Traffic Patterns*

Similar to the TSM Alternative, adjustments to traffic flow patterns as a result of the Build Alternative were determined by using projections from the ~~transportation model developed for this study~~SCAG model. The 2035 No Build Alternative and the Build Alternative model data were compared to determine the effects of the Build Alternative on traffic flow and circulation patterns. The peak period link data from each model output were used in this analysis. Table 2-24 presents the percentage change comparison between 2035 Build Alternative forecasts and 2035 No Build Alternative forecasts. The comparison indicates a decrease in traffic volumes for all six cities.

**Table 2-24. Build Alternative—Percentage Change in Traffic Volumes from the No Build (2035)[1]**

| City | Percentage Change |
|---|---|
| Glendora | -1.763% |
| San Dimas | -2.120% |
| La Verne | -0.579% |
| Pomona | -1.380% |
| Claremont | -1.514% |
| Montclair | -0.616% |

Source: Intueor, 2011
[1] Average AM and PM peak hour

The overall decreases in traffic volumes were applied to the 2035 No Build AM and PM peak-hour turning movement volumes to develop the AM and PM peak-hour turning movement traffic projections for the Build Alternative at each of the 90 study intersections.

The turning movement volumes were adjusted to reflect increased vehicular activity in the intersections surrounding the stations. Trips generated to and from the parking area at each station were determined and distributed along the roadway network to reflect station access conditions. The station access analysis assumed a parking occupancy of approximately 95 percent during both the AM and PM peak hours. Also, it was assumed that 70 percent of patrons would arrive within the AM peak hour and that 65 percent would leave within the PM peak hour. In addition, it was assumed that 10 percent of vehicles accessing the station were kiss-and-ride patrons (vehicles dropping off or picking up patrons). There would be 5,150 parking spaces distributed among the six stations. Table 2-25 shows the number of parking spaces for each station. Figure 2-26 to Figure 2-32 show the Build Alternative peak-hour traffic volumes for the AM and PM peak hours.

## Table 2-25. Build Alternative—Parking Space Provisions

| City | Parking Location(s) | Spaces |
|---|---|---|
| Glendora | South of tracks, east of South Vermont Avenue and west of Glendora Avenue | 400-420 |
| San Dimas | Parking structure on north side of Arrow Highway between San Dimas and Walnut Avenues and south of right-of-way. | 400 |
| La Verne | Parking garage in the irregular shaped property just to the south and east of the platform, north of Arrow Highway | 600 |
| Pomona | Parking structure at site west of Garey Avenue, south of Bonita Avenue and north of right-of-way. | ~~1,050~~1,000 |
| Claremont | Structure built on the existing Metrolink surface parking lot east of College Avenue and north of right-of-way. | 1,100 |
| Montclair | Use existing parking at transit center, no structure. | 1,600 |
| **Total** | | **~~5,150~~ 5,100-5,520** |

Source: Intueor, 2011 and Parsons Brinckerhoff 2013

In addition, two intersections—Foothill Boulevard/Grand Avenue, and Cataract Avenue/Bonita Avenue—would be configured such that the LRT tracks would cross the intersection diagonally. At these locations, either existing signals would be modified or, where necessary, new traffic signals would be provided. As a result, Cataract Avenue/Bonita Avenue would be signalized. For both intersections, an exclusive signal phase for the LRT would be provided, whereby all other traffic movements would be stopped. A hold phase of 80 seconds was added to the cycle to represent the worst-case train operating condition based on the following assumptions:

- Operation of two-car trains at 10-minute headway per direction (train length is assumed to be approximately 180 feet).
- A maximum operating speed of 55 miles per hour.
- An average diagonal cross-street width of about 150 feet.
- An additional five Metrolink commuter trains (four in the eastbound direction and one in the westbound direction) per hour in the shared project corridor in La Verne, Pomona, Claremont and Montclair.

### Summary of Improvements with the Build Alternative

The following traffic improvements would be part of the project and are included in the analysis of the 2035 Build Alternative. These improvements are required for safe operation of the LRT system at-grade crossing locations.

**City of San Dimas**

- **Cataract Avenue/Bonita Avenue—**Signalize this intersection.
- **San Dimas Canyon Road/Arrow Highway—**Provide a right-turn pocket for the westbound approach from Arrow Highway. Convert the eastbound and westbound movement phase on Arrow Highway from permissive/protected to protected only.

**City of La Verne**

- **Wheeler Avenue/Arrow Highway—**Provide a right-turn pocket for the westbound approach from Arrow Highway. ~~Convert the eastbound and westbound movement phase on Arrow Highway from permissive/protected to protected only.~~
- **A Street/Arrow Highway—**Signalize this intersection when warranted. Provide a right-turn pocket for the westbound approach from Arrow Highway.
- **D Street/Arrow Highway—**Provide a right-turn pocket for the westbound approach from Arrow Highway. Convert the eastbound and westbound movement phase on A rrow Highway from permissive/protected to protected only.
- **E Street/Arrow Highway—**Provide a right-turn pocket for the westbound approach from Arrow Highway.

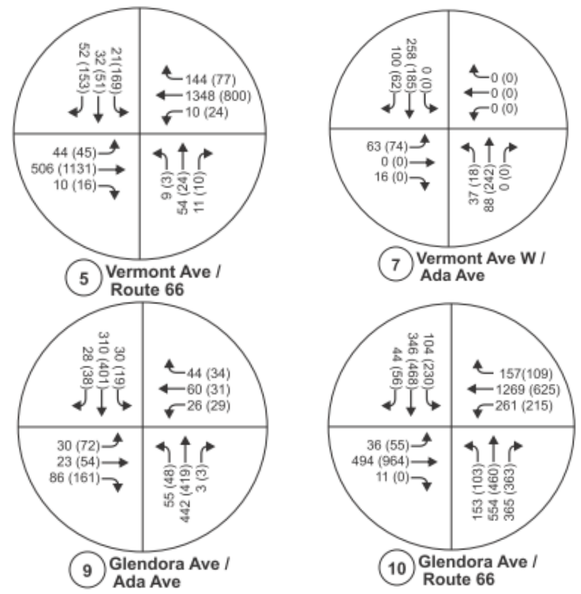
### Intersection Traffic Conditions

Future traffic operations were evaluated by incorporating the volumes, roadway geometrics, type of control, and signal phasing using the Synchro software (Table 2-26). Detailed worksheets are attached as an appendix to the *Transportation Technical Report* prepared by Intueor, dated August 2011. As indicated in the table, three~~four~~ intersections in the AM peak hour and ten~~11~~ intersections in the PM peak hour are anticipated to operate at LOS E or F; the remaining intersections would operate at LOS D or better.


Source: Intueor, 2011, updated January 2013

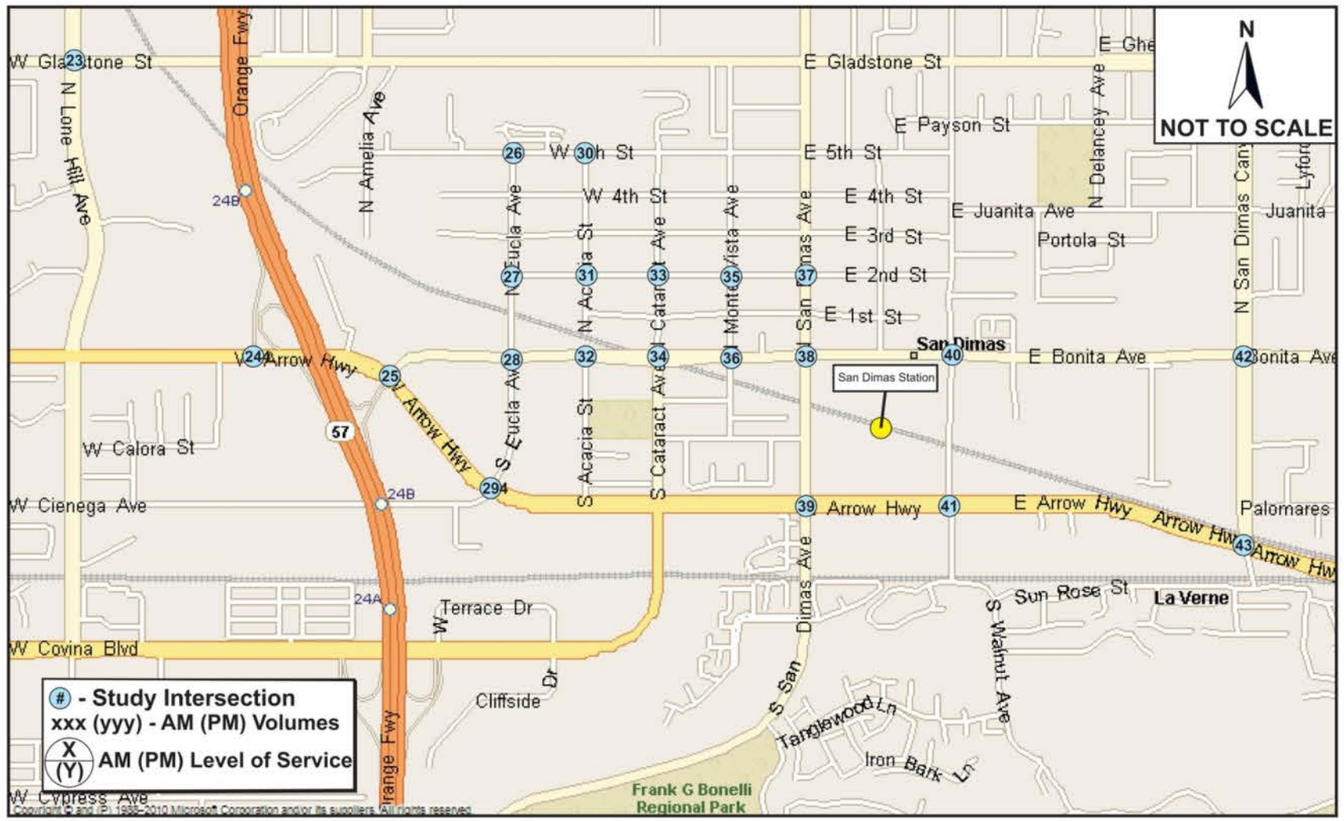
***Figure 2-26. Build (2035) AM/PM Peak Hour Volumes: Glendora (Option 1)***


Source: Intueor, 2011, updated January 2013



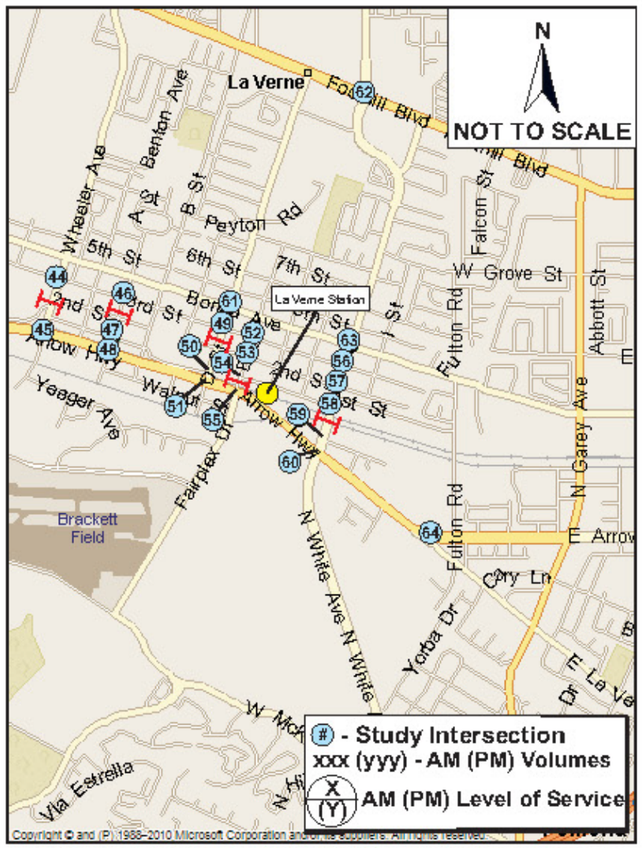

Note: xxx (yyy) – AM (PM) Volumes

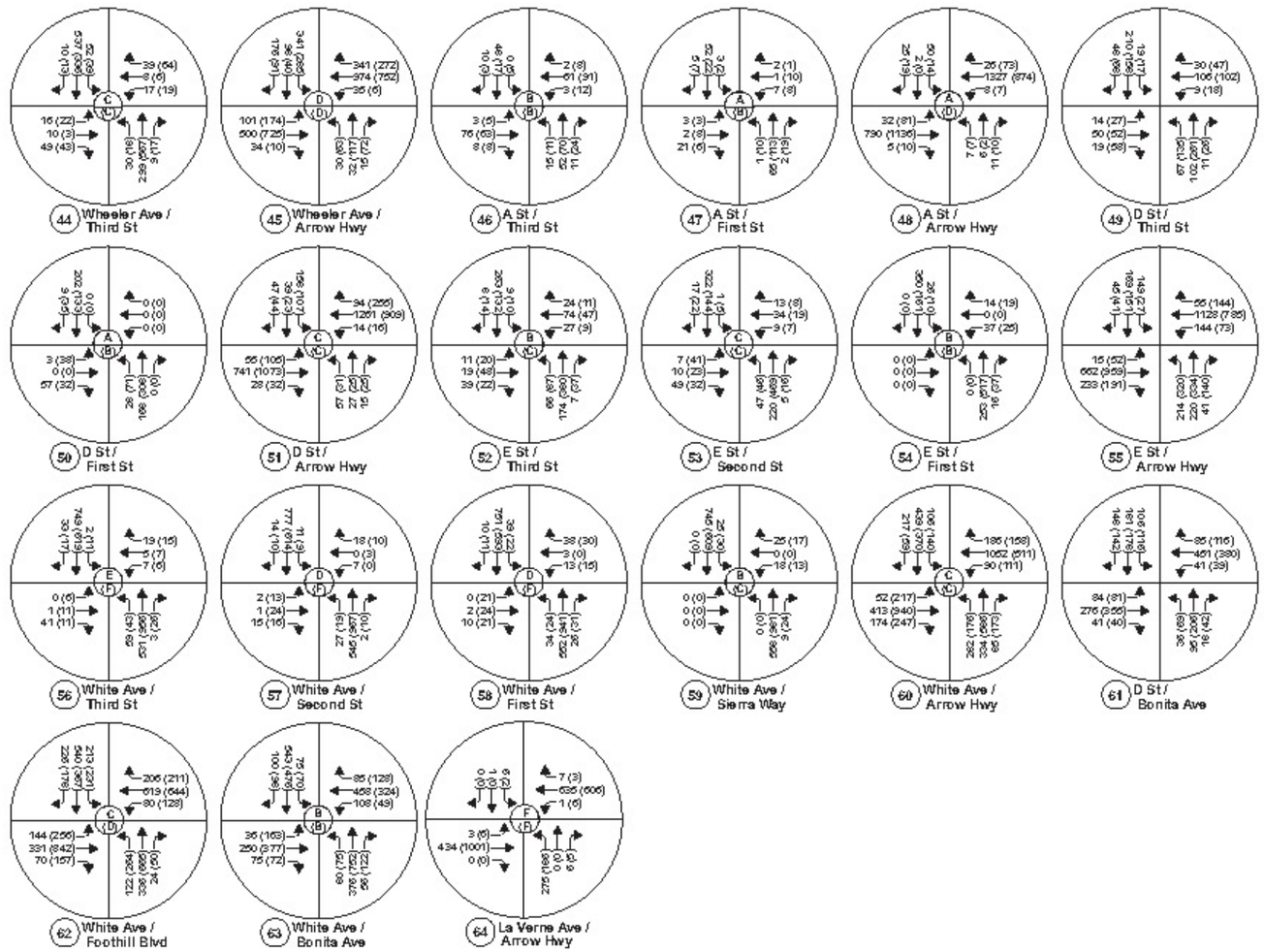
***Figure 2-27. Build (2035) AM/PM Peak Hour Traffic Volumes: Glendora (Option 2)***




Source: Intueor, 2011

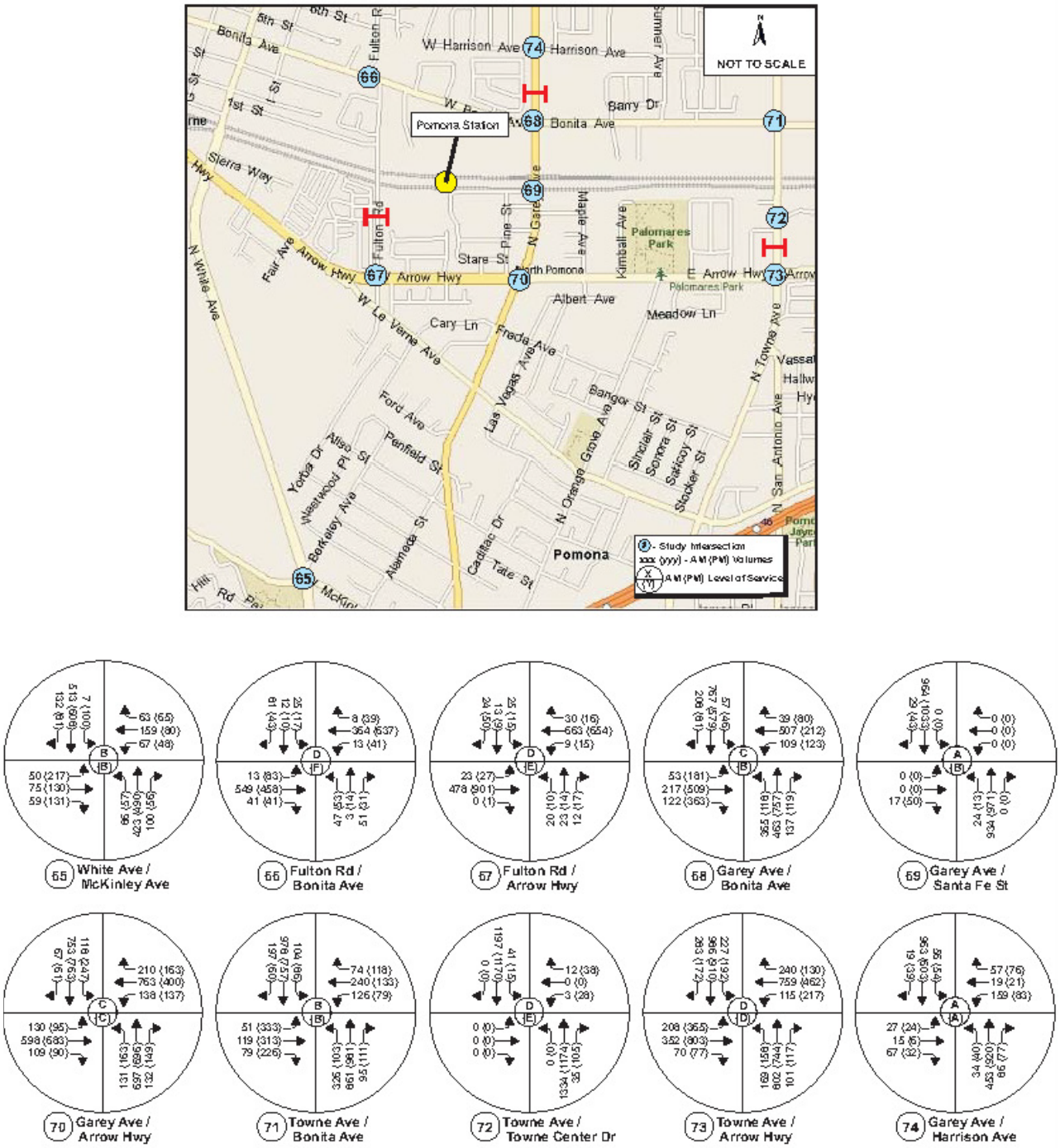
***Figure 2-28. Build (2035) AM/PM Peak Hour Volumes: San Dimas***



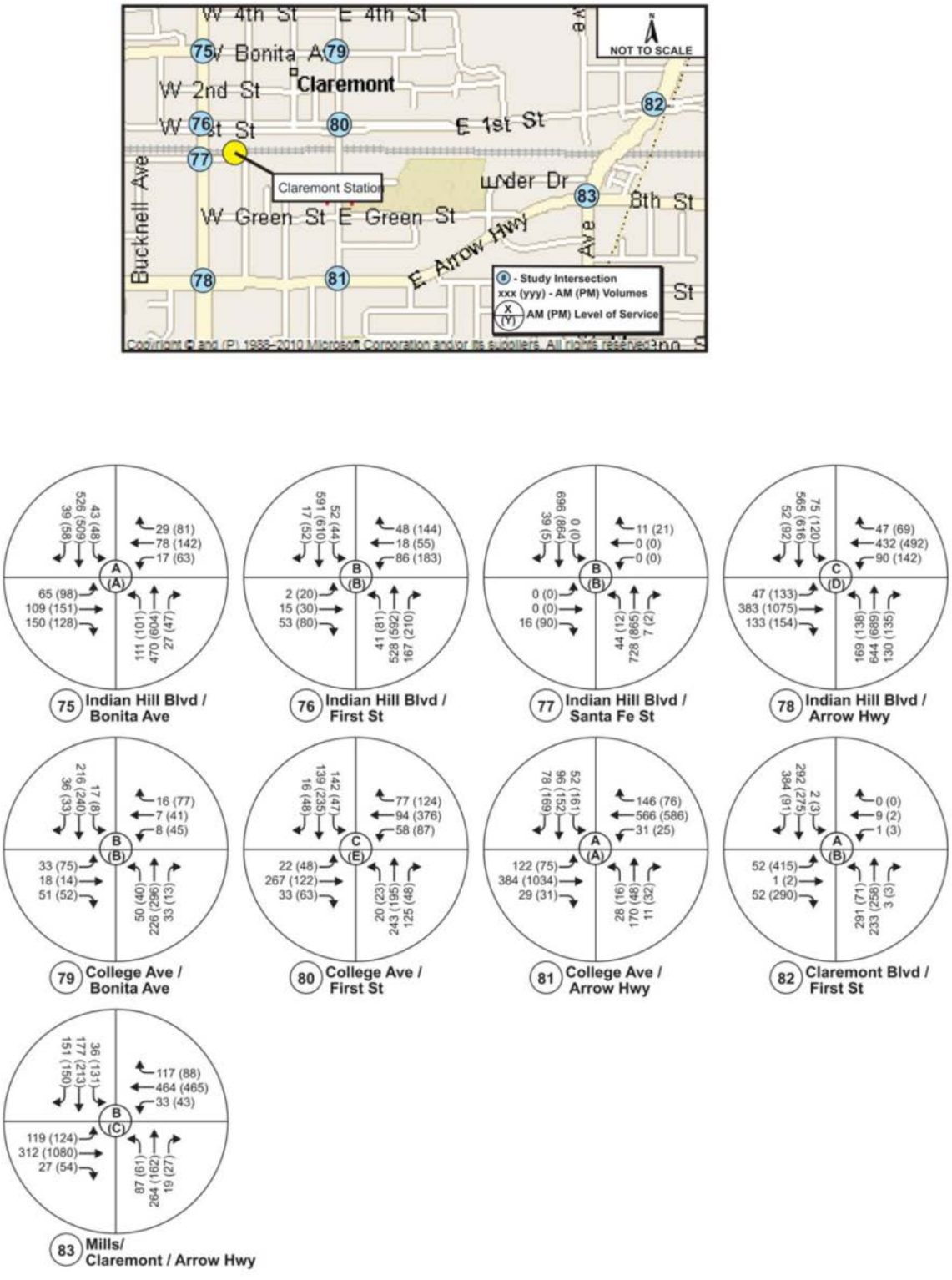

Source: Intueor, 2011, updated January 2013

***Figure 2-29. Build (2035) AM/PM Peak Hour Volumes: La Verne***



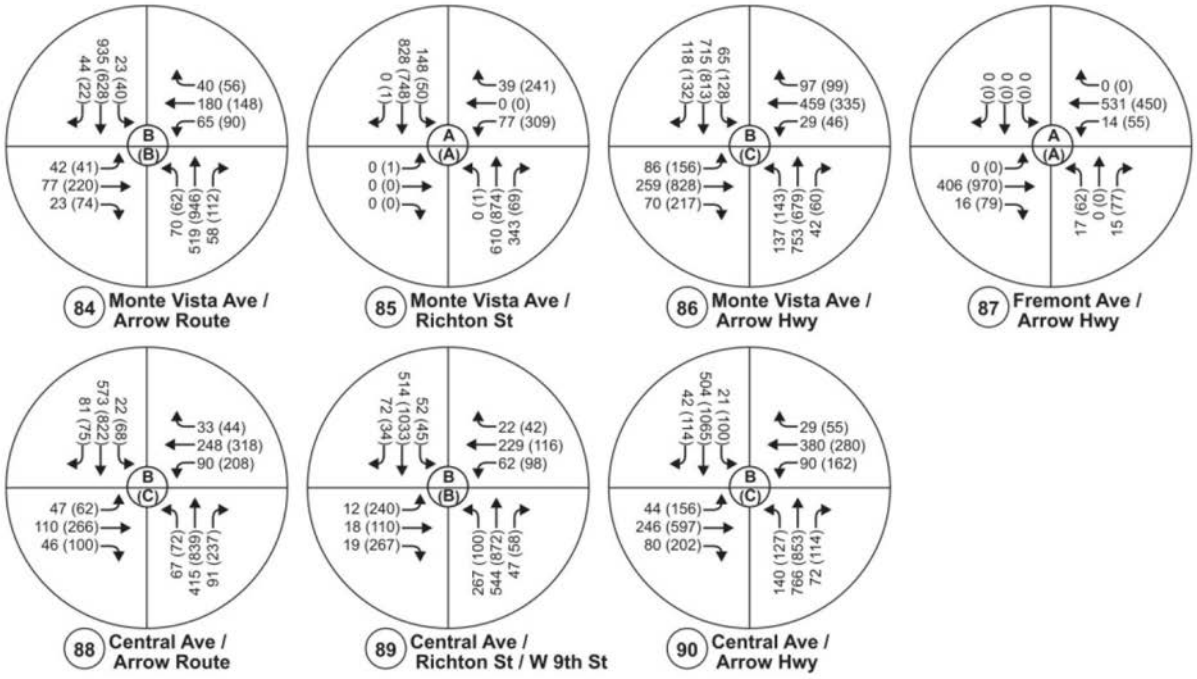

Source: Intueor, 2011, updated January 2013

***Figure 2-30. Build (2035) AM/PM Peak Hour Volumes: Pomona***




Source: Intueor, 2011

***Figure 2-31. Build (2035) AM/PM Peak Hour Volumes: Claremont***


Source: Intueor, 2011

***Figure 2-32. Build (2035) AM/PM Peak Hour Volumes: Montclair***

## Table 2-26. Build Alternative—Intersection Level of Service (LOS) (2035)[2]

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] |
| 1 | Barranca Avenue/Bennett Avenue | Glendora | 1-Way Stop | C | 20.9 | B | 12.4 |
| | | | | A | 7.3 | A | 1.8 |
| 2 | Barranca Avenue/Foothill Boulevard | Glendora | Signalized | B | 11.1 | A | 8.4 |
| 3 | Grand Avenue/Foothill Boulevard | Glendora | Signalized | C | 29.9 | C | 28.5 |
| 4 | Vermont Avenue East/Ada Avenue | Glendora | 1-Way Stop | B | 13.3 | C | 15.3 |
| | | | | A | 4.7 | A | 4.9 |
| 5 | Vermont Avenue/Route 66 | Glendora | Signalized | A | 7.5 | A | 9.1 |
| 5a | Vermont Avenue/Route 66* | Glendora | Signalized | A | 9.8 | B | 13.9 |
| 6 | Vermont Avenue/Foothill Boulevard | Glendora | Signalized | A | 7.5 | A | 7.7 |
| 7 | Vermont Avenue West/Ada Avenue | Glendora | 1-Way Stop | B | 12.3 | B | 13.2 |
| | | | | A | 2.3 | A | 2.0 |
| 7a | Vermont Avenue West/Ada Avenue* | Glendora | 1-Way Stop | B | 12.3 | B | 13.2 |
| 8 | Glendora Avenue/Foothill Boulevard | Glendora | Signalized | C | 28.1 | C | 28.1 |
| 9 | Glendora Avenue/Ada Avenue | Glendora | All-Way Stop | B | 12.3 | C | 15.3 |
| 9a | Glendora Avenue/Ada Avenue* | Glendora | All-Way Stop | B | 13.3 | C | 17.1 |
| 10 | Glendora Avenue/Route 66 | Glendora | Signalized | C | 22.8 | C | 32.4 |
| 10a | Glendora Avenue/Route 66* | Glendora | Signalized | C | 21.1 | C | 28.6 |
| 11 | Pasadena Avenue/Lemon Avenue | Glendora | All-Way Stop | A | 7.9 | A | 7.8 |
| 12 | Pasadena Avenue/Route 66 | Glendora | Signalized | B | 12.4 | B | 11.2 |
| 13 | Glenwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 10.1 | B | 11.3 |
| | | | | A | 2.3 | A | 2.6 |
| 14 | Glenwood Avenue/Route 66 | Glendora | Signalized~~2-Way Stop~~ | B~~F~~ | 14.7~~OFL~~[3] | B~~F~~ | 13.0~~OFL~~[3] |
| 15 | Elwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 10.8 | B | 11.0 |
| | | | | A | 2.2 | A | 2.0 |
| 16 | Elwood Avenue/Route 66 | Glendora | Signalized | B | 15.5 | B | 18.1 |
| 17 | Loraine Avenue/Lemon Avenue | Glendora | 2-Way Stop | C | 19.8 | B | 13.7 |
| | | | | A | 1.8 | A | 1.2 |
| 18 | Loraine Avenue/Route 66 | Glendora | Signalized | B | 19.1 | B | 11.6 |
| 19 | Lone Hill Avenue/Auto Centre Drive | Glendora | Signalized | B | 15.4 | C | 22.7 |
| 20 | Barranca Avenue/Sierra Madre Avenue | Glendora | 1-Way Stop | C | 19.8 | C | 15.5 |
| | | | | A | 4.2 | A | 3.1 |
| 21 | Glendora Avenue/Sierra Madre Avenue | Glendora | All-Way Stop | E | 43.3 | B | 14.2 |
| 22 | Lone Hill Avenue/Glendora Marketplace | Glendora | Signalized | B | 15.2 | C | 23.1 |
| 23 | Lone Hill Avenue/Gladstone Street | San Dimas | Signalized | B | 18.6 | C | 25.5 |
| 24 | SR-57 (southbound)/Arrow Highway | San Dimas | Signalized | A | 7.4 | B | 19.4 |
| 25 | SR-57 (northbound)/Arrow Highway & Bonita Avenue | San Dimas | Signalized | C | 27.5 | C | 29.1 |

## Table 2-26. Build Alternative—Intersection Level of Service (LOS) (2035)[2] (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] |
| 26 | Eucla Avenue/Fifth Street | San Dimas | All-Way Stop | A | 7.4 | A | 7.4 |
| 27 | Eucla Avenue/Second Street | San Dimas | 1-Way Stop | A | 9.8 | B | 10.5 |
| | | | | A | 0.8 | A | 1.0 |
| 28 | Eucla Avenue/Bonita Avenue | San Dimas | Signalized | A | 4.8 | A | 8.0 |
| 29 | Eucla Avenue/Arrow Highway | San Dimas | Signalized | A | 8.8 | B | 11.7 |
| 30 | Acacia Street/Fifth Street | San Dimas | 1-Way Stop | A | 9.2 | A | 9.3 |
| | | | | A | 1.5 | A | 1.1 |
| 31 | Acacia Street/Second Street | San Dimas | 2-Way Stop | A | 9.1 | A | 9.1 |
| | | | | A | 7.5 | A | 6.7 |
| 32 | Acacia Street/Bonita Avenue | San Dimas | 2-Way Stop | B | 10.6 | C | 24.4 |
| | | | | A | 0.8 | A | 1.4 |
| 33 | Cataract Avenue/Second Street | San Dimas | 2-Way Stop | B | 10.0 | B | 10.3 |
| | | | | A | 8.1 | A | 7.5 |
| 34 | Cataract Avenue/Bonita Avenue | San Dimas | Signalized | A | 6.1 | A | 5.2 |
| 35 | Monte Vista Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.5 | A | 9.9 |
| | | | | A | 5.2 | A | 4.4 |
| 36 | Monte Vista Avenue/Bonita Avenue | San Dimas | 2-Way Stop | C | 17.7 | E | 47.9 |
| | | | | A | 1.3 | A | 3.5 |
| 37 | San Dimas Avenue/Second Street | San Dimas | 2-Way Stop | C | 20.5 | E | 38.2 |
| | | | | A | 1.0 | A | 2.6 |
| 38 | San Dimas Avenue/Bonita Avenue | San Dimas | Signalized | B | 12.2 | B | 19.2 |
| 39 | San Dimas Avenue/Arrow Highway | San Dimas | Signalized | C | 34.1 | D | 48.3 |
| 40 | Walnut Avenue/Bonita Avenue | San Dimas | Signalized | A | 6.8 | B | 14.4 |
| 41 | Walnut Avenue/Arrow Highway | San Dimas | Signalized | B | 13.5 | B | 12.9 |
| 42 | San Dimas Canyon Road/Bonita Avenue | San Dimas | Signalized | A | 7.3 | A | 9.0 |
| 43 | San Dimas Canyon Road/Arrow Highway | San Dimas | Signalized | C | 27.6 | C | 28.1 |
| 44 | Wheeler Avenue/Third Street | La Verne | 2-Way Stop | C | 16.7 | C | 15.7 |
| | | | | A | 2.9 | A | 2.7 |
| 45 | Wheeler Avenue/Arrow Highway | La Verne | Signalized | D | 50.6 | D | 37.8 |
| 46 | A Street/Third Street | La Verne | 2-Way Stop | B | 10.4 | B | 10.8 |
| | | | | A | 5.0 | A | 4.8 |
| 47 | A Street/First Street | La Verne | 2-Way Stop | A | 9.5 | B | 10.0 |
| | | | | A | 2.2 | A | 2.1 |
| 48 | A Street/Arrow Highway | La Verne | Signalized | A | 9.8 | D | 39.9 |
| 49 | D Street/Third Street | La Verne | All-Way Stop | B | 10.2 | C | 15.4 |
| 50 | D Street/First Street | La Verne | 1-Way Stop | A | 9.9 | B | 12.7 |
| | | | | A | 1.8 | A | 2.6 |
| 51 | D Street/Arrow Highway | La Verne | Signalized~~All-Way Stop~~ | C | 22.2 | C | 30.4 |

## Table 2-26. Build Alternative—Intersection Level of Service (LOS) (2035)[2] (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] |
| 52 | E Street/Third Street | La Verne | All-Way Stop | B | 10.6 | C | 16.0 |
| 53 | E Street/Second Street | La Verne | 2-Way Stop | C | 15.6 | C | 16.9 |
| | | | | A | 2.9 | A | 3.3 |
| 54 | E Street/First Street | La Verne | 1-Way Stop | B | 13.6 | B | 13.7 |
| | | | | A | 1.3 | A | 0.9 |
| 55 | E Street/Arrow Highway | La Verne | Signalized | C | 27.3 | C | 33.3 |
| 56 | White Avenue/Third Street | La Verne | 2-Way Stop | E | 39.8 | F | 95.9 |
| | | | | A | 2.3 | A | 3.9 |
| 57 | White Avenue/Second Street | La Verne | 2-Way Stop | D | 28.0 | F | 121.4 |
| | | | | A | 1.4 | A | 4.6 |
| 58 | White Avenue/First Street | La Verne | 2-Way Stop | D | 33.1 | F | 142.2 |
| | | | | A | 2.2 | A | 7.7 |
| 59 | White Avenue/Sierra Way | La Verne | 1-Way Stop | B | 14.8 | C | 19.6 |
| | | | | A | 0.6 | A | 0.5 |
| 60 | White Avenue/Arrow Highway | La Verne | Signalized | C | 31.9 | C | 31.7 |
| 61 | D Street/Bonita Avenue | La Verne | Signalized | A | 8.2 | B | 10.8 |
| 62 | White Avenue/Foothill Boulevard | La Verne | Signalized | C | 29.4 | D | 39.6 |
| 63 | White Avenue/Bonita Avenue | La Verne | Signalized | B | 14.3 | B | 17.9 |
| ~~64~~ | ~~White Avenue/McKinley Avenue~~ | ~~La Verne~~ | ~~Signalized~~ | ~~B~~ | ~~10.8~~ | ~~B~~ | ~~14.1~~ |
| ~~65~~64 | La Verne Avenue/Arrow Highway | La Verne | 2-Way Stop | F | 141.3 | F | 652.8 |
| | | | | D | 29.2 | F | 68.8 |
| 65 | White Avenue/McKinley Avenue | Pomona | Signalized | B | 10.8 | B | 14.1 |
| 66 | Fulton Road/Bonita Avenue | Pomona | 2-Way Stop | D | 29.4 | F | 137.4 |
| | | | | A | 4.4 | B | 11.7 |
| 67 | Fulton Road/Arrow Highway | Pomona | 2-Way Stop | D | 27.4 | E | 44.5 |
| | | | | A | 2.6 | A | 2.4 |
| 68 | Garey Avenue/Bonita Avenue | Pomona | Signalized | C | 32.6 | B | 18.5 |
| 69 | Garey Avenue/Santa Fe Street | Pomona | 1-Way Stop | A | 9.4 | B | 13.2 |
| | | | | A | 0.2 | A | 0.4 |
| 70 | Garey Avenue/Arrow Highway | Pomona | Signalized | C | 29.9 | C | 34.5 |
| 71 | Towne Avenue/Bonita Avenue | Pomona | Signalized | B | 18.5 | B | 15.6 |
| 72 | Towne Avenue/Towne Center Drive | Pomona | 1-Way Stop | D | 28.7 | E | 49.0 |
| | | | | A | 0.4 | A | 1.3 |
| 73 | Towne Avenue/Arrow Highway | Pomona | Signalized | D | 45.8 | D | 46.7 |
| 74 | Garey Avenue/Harrison Avenue | Pomona | Signalized | A | 7.9 | A | 5.9 |
| 75 | Indian Hill Boulevard/Bonita Avenue | Claremont | Signalized | A | 8.1 | A | 9.1 |
| 76 | Indian Hill Boulevard/First Street | Claremont | Signalized | B | 11.1 | B | 18.7 |
| 77 | Indian Hill Boulevard/Santa Fe Street | Claremont | 2-Way Stop | B | 11.2 | B | 13.2 |
| | | | | A | 0.5 | A | 0.8 |
| 78 | Indian Hill Boulevard/Arrow Highway | Claremont | Signalized | C | 21.1 | D | 37.3 |

## Table 2-26. Build Alternative—Intersection Level of Service (LOS) (2035)[2] (continued)

| # | Intersection | Jurisdiction | Control Type | AM | | PM | |
|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] |
| 79 | College Avenue/Bonita Avenue | Claremont | All-Way Stop | B | 10.4 | B | 14.2 |
| 80 | College Avenue/First Street | Claremont | All-Way Stop | C | 15.2 | E | 35.6 |
| 81 | College Avenue/Arrow Highway | Claremont | Signalized | A | 7.4 | A | 9.5 |
| 82 | Claremont Boulevard/First Street | Claremont | Signalized | A | 4.0 | B | 10.2 |
| 83 | Mills/Claremont/Arrow Highway | Claremont | Signalized | B | 18.2 | C | 25.2 |
| 84 | Monte Vista Avenue/Arrow Route | Montclair | Signalized | B | 13.3 | B | 14.7 |
| 85 | Monte Vista Avenue/Richton Street | Montclair | Signalized | A | 5.4 | A | 10.0 |
| 86 | Monte Vista Avenue/Arrow Highway | Montclair | Signalized | B | 19.1 | C | 32.9 |
| 87 | Fremont Avenue/Arrow Highway | Montclair | Signalized | A | 1.7 | A | 4.1 |
| 88 | Central Avenue/Arrow Route | Montclair | Signalized | B | 13.0 | C | 21.8 |
| 89 | Central Avenue/Richton Street/West 9th Street | Montclair | Signalized | B | 13.1 | B | 15.2 |
| 90 | Central Avenue/Arrow Highway | Montclair | Signalized | B | 15.8 | C | 31.3 |

Source: Intueor, 2011
[1] Average vehicle delay in seconds
[2] Shading shows intersections that, in 2035, would operate at LOS E or F under the Build Alternative.
[3] Overflow indicates a traffic condition where demand flow rate exceeds capacity.
* Traffic forecast for Glendora Station "Option 2" parking structure

### Summary of Intersection Impacts

Using the thresholds presented earlier in Table 2-5, the intersection operating conditions under the Build Alternative were compared with the No Build Alternative to identify significantly affected locations. Table 2-27 and Table 2-28 show that 9~~10~~ intersections in the AM peak hour and 11~~12~~ intersections in the PM peak hour are anticipated to be significantly affected. Mitigation measures at these intersections are discussed in Section 2.6.

These intersections are:

- ~~Glenwood Avenue at Route 66—City of Glendora~~
- San Dimas Avenue at Second Street—City of San Dimas
- San Dimas Canyon Road at Arrow Highway—City of La Verne
- Wheeler Avenue at Arrow Highway—City of La Verne
- D Street at Arrow Highway—City of La Verne
- White Avenue at Third Street—City of La Verne
- White Avenue at Second Street—City of La Verne
- White Avenue at First Street—City of La Verne
- La Verne Avenue at Arrow Highway—City of La Verne~~Pomona~~
- Fulton Road at Bonita Avenue—City of La Verne
- Fulton Road at Arrow Highway—City of Pomona
- Garey Avenue at Bonita Avenue—City of Pomona
- College Avenue at First Street– City of Claremont

The analysis also shows that some intersections would improve as a result of the decrease in the average vehicular delay.

### Roadway Segment Traffic Operations

The percentage changes in daily traffic volumes shown in Table 2-24 were applied to the study roadway segments. The results are presented in Table 2-29. Similar to the No Build Alternative, all roadway segments would operate at LOS D or better, except North Towne Avenue between Arrow Highway and Bonita Avenue, which would operate at LOS E, and White Avenue between Arrow Highway and Third Street, which would operate at LOS F.

### Additional Traffic Issues at Specific Locations

In addition to the study intersections and roadways, several jurisdictions provided a list of additional areas of concern for further evaluation. An effort was undertaken to evaluate potential impacts at these specific locations and recommend solutions to address them.

The City of Glendora raised concerns about a potential traffic impact near the proposed parking structure for the LRT station located along Glendora Avenue north of Route 66. Currently, the Albertsons shopping plaza is accessed through an existing driveway situated between Route 66 and the proposed parking structure access. The City is concerned that the additional traffic generated by the future LRT parking

structure would compromise the gaps available for vehicles exiting and entering the Albertsons driveway to maneuver safely in and out of the site. A traffic count was conducted at the Albertsons driveway, and existing and future operating conditions were analyzed to determine if any significant impacts would occur as a result of the traffic generated by the project. The analysis showed that no queuing issues would affect vehicles entering or exiting the shopping plaza. In addition, programming of the signal at the intersection of Glendora Avenue and Route 66 would create adequate gaps for vehicles to complete their turn movements.

The City of La Verne is concerned with the access to the station parking from Arrow Highway. An LOS evaluation was performed and it was determined that both ingress/egress intersections would be signalized. Turning pockets would be provided on Arrow Highway for all turning movements entering the parking structure.

The City of Pomona requested a traffic analysis for the access to the station parking from Bonita Avenue. An LOS analysis was conducted and it was concluded that signalization would be required for the Bonita Avenue and Pomona Station Access Driveway intersection. Also, a westbound left-turn pocket lane from Bonita Avenue would be provided along with a protected westbound left turn signal phase.

The Cities of San Dimas, Pomona, and Claremont each identified a grade crossing location previously analyzed using the Metro *Policy for Grade Crossing for Light Rail Transit*. The results of the analysis concluded that all three locations would require improvements to maintain safe operations with an at-grade configuration.

Additional detailed analyses will be performed during the preliminary engineering and design phases of the project. Table 2-30 provides a summary of the traffic impacts and potential recommendations at these locations.

## Table 2-27. AM Peak Hour Intersection Impacts Comparison (Build and No Build Alternatives)

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 Build | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 1 | Barranca Avenue/Bennett Avenue | Glendora | 1-Way Stop | B | 21.1 | C | 20.9 | -0.2 | NO |
| 2 | Barranca Avenue/Foothill Boulevard | Glendora | Signalized | B | 12.1 | B | 11.1 | -1.0 | NO |
| 3 | Grand Avenue/Foothill Boulevard | Glendora | Signalized | C | 29.5 | C | 29.9 | 0.4 | NO |
| 4 | Vermont Avenue East/Ada Avenue | Glendora | 1-Way Stop | B | 11.8 | B | 13.3 | 1.5 | NO |
| 5 | Vermont Avenue/Route 66 | Glendora | Signalized | A | 7.5 | A | 7.5 | 0.0 | NO |
| 6 | Vermont Avenue/Foothill Boulevard | Glendora | Signalized | A | 7.7 | A | 7.5 | -0.2 | NO |
| 7 | Vermont Avenue W/Ada Avenue | Glendora | 1-Way Stop | B | 11.1 | B | 12.3 | 1.2 | NO |
| 8 | Glendora Avenue/Foothill Boulevard | Glendora | Signalized | C | 25.0 | C | 28.1 | 3.1 | NO |
| 9 | Glendora Avenue/Ada Avenue | Glendora | All-Way Stop | B | 12.2 | B | 12.3 | 0.1 | NO |
| 10 | Glendora Avenue/Route 66 | Glendora | Signalized | C | 24.4 | C | 22.8 | -1.6 | NO |
| 11 | Pasadena Avenue/Lemon Avenue | Glendora | All-Way Stop | A | 7.9 | A | 7.9 | 0.0 | NO |
| 12 | Pasadena Avenue/Route 66 | Glendora | Signalized | B | 11.8 | B | 12.4 | 0.6 | NO |
| 13 | Glenwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | A | 9.9 | B | 10.1 | 0.2 | NO |
| 14 | Glenwood Avenue/Route 66 | Glendora | Signalized~~2-Way Stop~~ | B~~F~~ | 14.3~~OFL~~[3] | B~~F~~ | 14.7~~OFL~~[3] | 0.4~~N/A~~ | NO~~YES~~ |
| 15 | Elwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 10.7 | B | 10.8 | 0.1 | NO |
| 16 | Elwood Avenue/Route 66 | Glendora | Signalized | B | 15.4 | B | 15.5 | 0.1 | NO |
| 17 | Loraine Avenue/Lemon Avenue | Glendora | 2-Way Stop | C | 20.0 | C | 19.8 | -0.2 | NO |
| 18 | Loraine Avenue/Route 66 | Glendora | Signalized | B | 19.3 | B | 19.1 | -0.2 | NO |
| 19 | Lone Hill Avenue/Auto Centre Drive | Glendora | Signalized | B | 15.6 | B | 15.4 | -0.2 | NO |
| 20 | Barranca Avenue/Sierra Madre Avenue | Glendora | 1-Way Stop | C | 20.5 | C | 19.8 | -0.7 | NO |
| 21 | Glendora Avenue/Sierra Madre Avenue | Glendora | All-Way Stop | E | 47.0 | E | 43.3 | -3.7 | NO |
| 22 | Lone Hill Avenue/Glendora Marketplace | Glendora | Signalized | B | 15.4 | B | 15.2 | -0.2 | NO |
| 23 | Lone Hill Avenue/Gladstone Street | San Dimas | Signalized | B | 18.8 | B | 18.6 | -0.2 | NO |

## Table 2-27. AM Peak Hour Intersection Impacts Comparison (Build and No Build Alternatives) (continued)

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 Build | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 24 | SR-57 (southbound)/Arrow Highway | San Dimas | Signalized | A | 7.5 | A | 7.4 | -0.1 | NO |
| 25 | SR-57 (northbound)/Arrow Highway & Bonita Avenue | San Dimas | Signalized | C | 26.2 | C | 27.5 | 1.3 | NO |
| 26 | Eucla Avenue/Fifth Street | San Dimas | All-Way Stop | A | 7.4 | A | 7.4 | 0.0 | NO |
| 27 | Eucla Avenue/Second Street | San Dimas | 1-Way Stop | A | 9.7 | A | 9.8 | 0.1 | NO |
| 28 | Eucla Avenue/Bonita Avenue | San Dimas | Signalized | A | 4.7 | A | 4.8 | 0.1 | NO |
| 29 | Eucla Avenue/Arrow Highway | San Dimas | Signalized | A | 8.4 | A | 8.8 | 0.4 | NO |
| 30 | Acacia Street/Fifth Street | San Dimas | 1-Way Stop | A | 9.2 | A | 9.2 | 0.0 | NO |
| 31 | Acacia Street/Second Street | San Dimas | 2-Way Stop | A | 9.1 | A | 9.1 | 0.0 | NO |
| 32 | Acacia Street/Bonita Avenue | San Dimas | 2-Way Stop | B | 11.1 | B | 10.6 | -0.5 | NO |
| 33 | Cataract Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.9 | B | 10.0 | 0.1 | NO |
| 34 | Cataract Avenue/Bonita Avenue | San Dimas | Signalized | B | 12.5 | A | 6.1 | -6.4 | NO |
| 35 | Monte Vista Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.3 | A | 9.5 | 0.2 | NO |
| 36 | Monte Vista Avenue/Bonita Avenue | San Dimas | 2-Way Stop | C | 20.2 | C | 17.7 | -2.5 | NO |
| 37 | San Dimas Avenue/Second Street | San Dimas | 2-Way Stop | C | 21.2 | C | 20.5 | -0.7 | NO |
| 38 | San Dimas Avenue/Bonita Avenue | San Dimas | Signalized | B | 12.2 | B | 12.2 | 0.0 | NO |
| 39 | San Dimas Avenue/Arrow Highway | San Dimas | Signalized | C | 28.9 | C | 34.1 | 5.2 | NO |
| 40 | Walnut Avenue/Bonita Avenue | San Dimas | Signalized | A | 6.7 | A | 6.8 | 0.1 | NO |
| 41 | Walnut Avenue/Arrow Highway | San Dimas | Signalized | B | 12.0 | B | 13.5 | 1.5 | NO |
| 42 | San Dimas Canyon Road/Bonita Avenue | San Dimas | Signalized | A | 7.3 | A | 7.3 | 0.0 | NO |
| 43 | San Dimas Canyon Road/Arrow Highway | San Dimas | Signalized | B | 13.8 | C | 27.6 | 13.8 | YES |
| 44 | Wheeler Avenue/Third Street | La Verne | 2-Way Stop | C | 16.5 | C | 16.7 | 0.2 | NO |
| 45 | Wheeler Avenue/Arrow Highway | La Verne | Signalized | B | ~~14.8~~17.0 | D | 50.6 | ~~35.8~~33.6 | YES |
| 46 | A Street/Third Street | La Verne | 2-Way Stop | B | 10.3 | B | 10.4 | 0.1 | NO |
| 47 | A Street/First Street | La Verne | 2-Way Stop | A | 9.3 | A | 9.5 | 0.2 | NO |
| 48 | A Street/Arrow Highway | La Verne | Signalized | F | 198.6 | A | 9.8 | -188.8 | NO |

## Table 2-27. AM Peak Hour Intersection Impacts Comparison (Build and No Build Alternatives) (continued)

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 Build | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 49 | D Street/Third Street | La Verne | All-Way Stop | A | 9.6 | B | 10.2 | 0.6 | NO |
| 50 | D Street/First Street | La Verne | 1-Way Stop | A | 9.7 | A | 9.9 | 0.2 | NO |
| 51 | D Street/Arrow Highway | La Verne | Signalized~~All-Way Stop~~ | A | 5.9 | C | 22.2 | 16.3 | YES |
| 52 | E Street/Third Street | La Verne | All-Way Stop | A | 9.9 | B | 10.6 | 0.7 | NO |
| 53 | E Street/Second Street | La Verne | 2-Way Stop | B | 14.3 | C | 15.6 | 1.3 | NO |
| 54 | E Street/First Street | La Verne | 1-Way Stop | B | 11.4 | B | 13.6 | 2.2 | NO |
| 55 | E Street/Arrow Highway | La Verne | Signalized | C | 22.5 | C | 27.3 | 4.8 | NO |
| 56 | White Avenue/Third Street | La Verne | 2-Way Stop | D | 26.5 | E | 39.8 | 13.3 | YES |
| 57 | White Avenue/Second Street | La Verne | 2-Way Stop | C | 24.8 | D | 28.0 | 3.2 | NO |
| 58 | White Avenue/First Street | La Verne | 2-Way Stop | D | 28.4 | D | 33.1 | 4.7 | YES |
| 59 | White Avenue/Sierra Way | La Verne | 1-Way Stop | B | 11.2 | B | 14.8 | 3.6 | NO |
| 60 | White Avenue/Arrow Highway | La Verne | Signalized | C | 26.3 | C | 31.9 | 5.6 | NO |
| 61 | D Street/Bonita Avenue | La Verne | Signalized | A | 8.1 | A | 8.2 | 0.1 | NO |
| 62 | White Avenue/Foothill Boulevard | La Verne | Signalized | C | 29.6 | C | 29.4 | -0.2 | NO |
| 63 | White Avenue/Bonita Avenue | La Verne | Signalized | B | 14.0 | B | 14.3 | 0.3 | NO |
| ~~64~~ | ~~White Avenue/McKinley Avenue~~ | ~~La Verne~~ | ~~Signalized~~ | ~~B~~ | ~~11.0~~ | ~~B~~ | ~~10.8~~ | ~~-0.2~~ | ~~NO~~ |
| ~~65~~ 64 | La Verne Avenue/Arrow Highway | La Verne | 2-Way Stop | F | 50.6 | F | 141.3 | 90.7 | YES |
| 65 | White Avenue/McKinley Avenue | Pomona | Signalized | B | 11.0 | B | 10.8 | -0.2 | NO |
| 66 | Fulton Road/Bonita Avenue | Pomona | 2-Way Stop | C | 22.1 | D | 29.4 | 7.3 | YES |
| 67 | Fulton Road/Arrow Highway | Pomona | 2-Way Stop | C | 22.4 | D | 27.4 | 5.0 | YES |
| 68 | Garey Avenue/Bonita Avenue | Pomona | Signalized | B | 16.0 | C | 32.6 | 16.6 | YES |
| 69 | Garey Avenue/Santa Fe Street | Pomona | 1-Way Stop | B | 10.8 | A | 9.4 | -1.4 | NO |
| 70 | Garey Avenue/Arrow Highway | Pomona | Signalized | C | 28.3 | C | 29.9 | 1.6 | NO |
| 71 | Towne Avenue/Bonita Avenue | Pomona | Signalized | A | 9.9 | B | 18.5 | 8.6 | NO |
| 72 | Towne Avenue/Towne Center Drive | Pomona | 1-Way Stop | D | 27.1 | D | 28.7 | 1.6 | NO |
| 73 | Towne Avenue/Arrow Highway | Pomona | Signalized | D | 44.5 | D | 45.8 | 1.3 | NO |

## Table 2-27. AM Peak Hour Intersection Impacts Comparison (Build and No Build Alternatives) (continued)

| # | Intersection | Jurisdiction | Control Type | 2035 No Build | | 2035 Build | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 74 | Garey Avenue/Harrison Avenue | Pomona | Signalized | A | 7.5 | A | 7.9 | 0.4 | NO |
| 75 | Indian Hill Boulevard/Bonita Avenue | Claremont | Signalized | A | 8.1 | A | 8.1 | 0.0 | NO |
| 76 | Indian Hill Boulevard/First Street | Claremont | Signalized | B | 10.9 | B | 11.1 | 0.2 | NO |
| 77 | Indian Hill Boulevard/Santa Fe Street | Claremont | 2-Way Stop | B | 11.2 | B | 11.2 | 0.0 | NO |
| 78 | Indian Hill Boulevard/Arrow Highway | Claremont | Signalized | C | 21.2 | C | 21.1 | -0.1 | NO |
| 79 | College Avenue/Bonita Avenue | Claremont | All-Way Stop | A | 9.9 | B | 10.4 | 0.5 | NO |
| 80 | College Avenue/First Street | Claremont | All-Way Stop | B | 10.8 | C | 15.2 | 4.4 | NO |
| 81 | College Avenue/Arrow Highway | Claremont | Signalized | A | 6.3 | A | 7.4 | 1.1 | NO |
| 82 | Claremont Boulevard/First Street | Claremont | Signalized | A | 3.3 | A | 4.0 | 0.7 | NO |
| 83 | Mills/Claremont/Arrow Highway | Claremont | Signalized | B | 14.9 | B | 18.2 | 3.3 | NO |
| 84 | Monte Vista Avenue/Arrow Route | Montclair | Signalized | B | 13.1 | B | 13.3 | 0.2 | NO |
| 85 | Monte Vista Avenue/Richton Street | Montclair | Signalized | A | 3.3 | A | 5.4 | 2.1 | NO |
| 86 | Monte Vista Avenue/Arrow Highway | Montclair | Signalized | B | 18.7 | B | 19.1 | 0.4 | NO |
| 87 | Fremont Avenue/Arrow Highway | Montclair | Signalized | A | 1.8 | A | 1.7 | -0.1 | NO |
| 88 | Central Avenue/Arrow Route | Montclair | Signalized | B | 12.1 | B | 13.0 | 0.9 | NO |
| 89 | Central Avenue/Richton Street/West 9th Street | Montclair | Signalized | A | 8.4 | B | 13.1 | 4.7 | NO |
| 90 | Central Avenue/Arrow Highway | Montclair | Signalized | B | 15.9 | B | 15.8 | -0.1 | NO |

Source: Intueor, 2011
[1] Average vehicle delay in seconds
[2] Shading shows intersections that would be significantly impacted as a result of the Build Alternative.
[3] Overflow indicates a traffic condition where demand flow rate exceeds capacity.

## Table 2-28. PM Peak Hour Intersection Impacts Comparison (Build and No Build Alternatives)

| # | Intersection[2] | Jurisdiction | Control Type | 2035 No Build | | 2035 Build | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 1 | Barranca Avenue/Bennett Avenue | Glendora | 1-Way Stop | B | 12.4 | B | 12.4 | 0.0 | NO |
| 2 | Barranca Avenue/Foothill Boulevard | Glendora | Signalized | A | 8.4 | A | 8.4 | 0.0 | NO |
| 3 | Grand Avenue/Foothill Boulevard | Glendora | Signalized | C | 34.3 | C | 28.5 | -5.8 | NO |
| 4 | Vermont Avenue East/Ada Avenue | Glendora | 1-Way Stop | B | 13.7 | C | 15.3 | 1.6 | NO |
| 5 | Vermont Avenue/Route 66 | Glendora | Signalized | A | 8.4 | A | 9.1 | 0.7 | NO |
| 6 | Vermont Avenue/Foothill Boulevard | Glendora | Signalized | A | 7.0 | A | 7.7 | 0.7 | NO |
| 7 | Vermont Avenue West/Ada Avenue | Glendora | 1-Way Stop | B | 12.0 | B | 13.2 | 1.2 | NO |
| 8 | Glendora Avenue/Foothill Boulevard | Glendora | Signalized | C | 30.2 | C | 28.1 | -2.1 | NO |
| 9 | Glendora Avenue/Ada Avenue | Glendora | All-Way Stop | B | 14.9 | C | 15.3 | 0.4 | NO |
| 10 | Glendora Avenue/Route 66 | Glendora | Signalized | C | 29.5 | C | 32.4 | 2.9 | NO |
| 11 | Pasadena Avenue/Lemon Avenue | Glendora | All-Way Stop | A | 7.8 | A | 7.9 | 0.1 | NO |
| 12 | Pasadena Avenue/Route 66 | Glendora | Signalized | B | 10.7 | B | 11.2 | 0.5 | NO |
| 13 | Glenwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 11.2 | B | 11.3 | 0.1 | NO |
| 14 | Glenwood Avenue/Route 66 | Glendora | Signalized~~2-Way Stop~~ | B~~F~~ | 12.6~~10 97.3~~ | B~~F~~ | 13.0~~OF L~~[3] | 0.4~~N/A~~[3] | NO~~YES~~[3] |
| 15 | Elwood Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 10.9 | B | 11.0 | 0.1 | NO |
| 16 | Elwood Avenue/Route 66 | Glendora | Signalized | B | 16.2 | B | 18.1 | 1.9 | NO |
| 17 | Loraine Avenue/Lemon Avenue | Glendora | 2-Way Stop | B | 13.7 | B | 13.7 | 0.0 | NO |
| 18 | Loraine Avenue/Route 66 | Glendora | Signalized | B | 11.8 | B | 11.6 | -0.2 | NO |
| 19 | Lone Hill Avenue/Auto Centre Drive | Glendora | Signalized | C | 24.1 | C | 22.7 | -1.4 | NO |
| 20 | Barranca Avenue/Sierra Madre Avenue | Glendora | 1-Way Stop | C | 15.8 | C | 15.5 | -0.3 | NO |
| 21 | Glendora Avenue/Sierra Madre Avenue | Glendora | All-Way Stop | B | 14.5 | B | 14.2 | -0.3 | NO |
| 22 | Lone Hill Avenue/Glendora Marketplace | Glendora | Signalized | C | 23.1 | C | 23.1 | 0.0 | NO |
| 23 | Lone Hill Avenue/Gladstone Street | San Dimas | Signalized | C | 25.5 | C | 25.5 | 0.0 | NO |
| 24 | SR-57 (southbound)/Arrow Highway | San Dimas | Signalized | C | 20.2 | B | 19.4 | -0.8 | NO |
| 25 | SR-57 (northbound)/Arrow Highway & Bonita Avenue | San Dimas | Signalized | C | 29.2 | C | 29.1 | -0.1 | NO |
| 26 | Eucla Avenue/Fifth Street | San Dimas | All-Way Stop | A | 7.4 | A | 7.4 | 0.0 | NO |
| 27 | Eucla Avenue/Second Street | San Dimas | 1-Way Stop | B | 10.5 | B | 10.5 | 0.0 | NO |

**Table 2-28. PM Peak Hour Intersection Impacts Comparison (Build and No Build Alternatives) (continued)**

| # | Intersection[2] | Jurisdiction | Control Type | 2035 No Build | | 2035 Build | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 28 | Eucla Avenue/Bonita Avenue | San Dimas | Signalized | A | 8.1 | A | 8.0 | -0.1 | NO |
| 29 | Eucla Avenue/Arrow Highway | San Dimas | Signalized | B | 11.8 | B | 11.7 | -0.1 | NO |
| 30 | Acacia Street/Fifth Street | San Dimas | 1-Way Stop | A | 9.3 | A | 9.3 | 0.0 | NO |
| 31 | Acacia Street/Second Street | San Dimas | 2-Way Stop | A | 9.2 | A | 9.1 | -0.1 | NO |
| 32 | Acacia Street/Bonita Avenue | San Dimas | 2-Way Stop | C | 24.4 | C | 24.4 | 0.0 | NO |
| 33 | Cataract Avenue/Second Street | San Dimas | 2-Way Stop | B | 10.0 | B | 10.3 | 0.3 | NO |
| 34 | Cataract Avenue/Bonita Avenue | San Dimas | Signalized | C | 25.0 | A | 5.2 | -19.8 | NO |
| 35 | Monte Vista Avenue/Second Street | San Dimas | 2-Way Stop | A | 9.9 | A | 9.9 | 0.0 | NO |
| 36 | Monte Vista Avenue/Bonita Avenue | San Dimas | 2-Way Stop | F | 119.5 | E | 47.9 | -71.6 | NO |
| 37 | San Dimas Avenue/Second Street | San Dimas | 2-Way Stop | E | 36.2 | E | 38.2 | 2.0 | YES |
| 38 | San Dimas Avenue/Bonita Avenue | San Dimas | Signalized | B | 19.6 | B | 19.2 | -0.4 | NO |
| 39 | San Dimas Avenue/Arrow Highway | San Dimas | Signalized | D | 48.9 | D | 48.3 | -0.6 | NO |
| 40 | Walnut Avenue/Bonita Avenue | San Dimas | Signalized | B | 13.9 | B | 14.4 | 0.5 | NO |
| 41 | Walnut Avenue/Arrow Highway | San Dimas | Signalized | B | 11.8 | B | 12.9 | 1.1 | NO |
| 42 | San Dimas Canyon Road/Bonita Avenue | San Dimas | Signalized | A | 9.0 | A | 9.0 | 0.0 | NO |
| 43 | San Dimas Canyon Road/Arrow Highway | San Dimas | Signalized | B | 12.1 | C | 28.1 | 16.0 | YES |
| 44 | Wheeler Avenue/Third Street | La Verne | 2-Way Stop | C | 15.6 | C | 15.7 | 0.1 | NO |
| 45 | Wheeler Avenue/Arrow Highway | La Verne | Signalized | B | ~~12.9~~14.6 | D | 37.8 | ~~24.9~~23.2 | YES |
| 46 | A Street/Third Street | La Verne | 2-Way Stop | B | 10.6 | B | 10.8 | 0.2 | NO |
| 47 | A Street/First Street | La Verne | 2-Way Stop | A | 10.0 | B | 10.0 | 0.0 | NO |
| 48 | A Street/Arrow Highway | La Verne | Signalized | F | 62.6 | D | 39.9 | -22.7 | NO |
| 49 | D Street/Third Street | La Verne | All-Way Stop | B | 13.5 | C | 15.4 | 1.9 | NO |
| 50 | D Street/First Street | La Verne | 1-Way Stop | B | 11.5 | B | 12.7 | 1.2 | NO |
| 51 | D Street/Arrow Highway | La Verne | ~~All-Way Stop~~Signalized | A | 6.2 | C | 30.4 | 24.2 | YES |
| 52 | E Street/Third Street | La Verne | All-Way Stop | B | 12.9 | C | 16.0 | 3.1 | NO |
| 53 | E Street/Second Street | La Verne | 2-Way Stop | B | 14.8 | C | 16.9 | 2.1 | NO |

## Table 2-28. PM Peak Hour Intersection Impacts Comparison (Build and No Build Alternatives) (continued)

| # | Intersection[2] | Jurisdiction | Control Type | 2035 No Build | | 2035 Build | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 54 | E Street/First Street | La Verne | 1-Way Stop | B | 12.6 | B | 13.7 | 1.1 | NO |
| 55 | E Street/Arrow Highway | La Verne | Signalized | C | 27.6 | C | 33.3 | 5.7 | NO |
| 56 | White Avenue/Third Street | La Verne | 2-Way Stop | F | 78.9 | F | 95.9 | 17.0 | YES |
| 57 | White Avenue/Second Street | La Verne | 2-Way Stop | F | 56.4 | F | 121.4 | 65.0 | YES |
| 58 | White Avenue/First Street | La Verne | 2-Way Stop | E | 49.5 | F | 142.2 | 92.7 | YES |
| 59 | White Avenue/Sierra Way | La Verne | 1-Way Stop | C | 18.0 | C | 19.6 | 1.6 | NO |
| 60 | White Avenue/Arrow Highway | La Verne | Signalized | C | 30.6 | C | 31.7 | 1.1 | NO |
| 61 | D Street/Bonita Avenue | La Verne | Signalized | B | 10.2 | B | 10.8 | 0.6 | NO |
| 62 | White Avenue/Foothill Boulevard | La Verne | Signalized | D | 39.9 | D | 39.6 | -0.3 | NO |
| 63 | White Avenue/Bonita Avenue | La Verne | Signalized | B | 17.3 | B | 17.9 | 0.6 | NO |
| ~~64~~ | ~~White Avenue/McKinley Avenue~~ | ~~La Verne~~ | ~~Signalized~~ | ~~B~~ | ~~14.1~~ | ~~B~~ | ~~14.1~~ | ~~0.0~~ | ~~NO~~ |
| 64<br>~~5~~ | La Verne Avenue/Arrow Highway | La Verne | 2-Way Stop | F | 471.1 | F | 652.8 | 181.7 | YES |
| 65 | White Avenue/McKinley Avenue | Pomona | Signalized | B | 14.1 | B | 14.1 | 0.0 | NO |
| 66 | Fulton Road/Bonita Avenue | Pomona | 2-Way Stop | F | 58.1 | F | 137.4 | 79.3 | YES |
| 67 | Fulton Road/Arrow Highway | Pomona | 2-Way Stop | D | 33.9 | E | 44.5 | 10.6 | YES |
| 68 | Garey Avenue/Bonita Avenue | Pomona | Signalized | B | 15.8 | B | 18.5 | 2.7 | NO |
| 69 | Garey Avenue/Santa Fe Street | Pomona | 1-Way Stop | B | 12.4 | B | 13.2 | 0.8 | NO |
| 70 | Garey Avenue/Arrow Highway | Pomona | Signalized | C | 30.9 | C | 34.5 | 3.6 | NO |
| 71 | Towne Avenue/Bonita Avenue | Pomona | Signalized | B | 11.2 | B | 15.6 | 4.4 | NO |
| 72 | Towne Avenue/Towne Center Drive | Pomona | 1-Way Stop | F | 50.9 | E | 49.0 | -1.9 | NO |
| 73 | Towne Avenue/Arrow Highway | Pomona | Signalized | D | 45.1 | D | 46.7 | 1.6 | NO |
| 74 | Garey Avenue/Harrison Avenue | Pomona | Signalized | A | 6.0 | A | 5.9 | -0.1 | NO |
| 75 | Indian Hill Boulevard/Bonita Avenue | Claremont | Signalized | A | 9.1 | A | 9.1 | 0.0 | NO |
| 76 | Indian Hill Boulevard/First Street | Claremont | Signalized | B | 15.5 | B | 18.7 | 3.2 | NO |
| 77 | Indian Hill Boulevard/Santa Fe Street | Claremont | 2-Way Stop | B | 13.2 | B | 13.2 | 0.0 | NO |
| 78 | Indian Hill Boulevard/Arrow Highway | Claremont | Signalized | D | 37.3 | D | 37.3 | 0.0 | NO |
| 79 | College Avenue/Bonita Avenue | Claremont | All-Way Stop | B | 12.5 | B | 14.2 | 1.7 | NO |
| 80 | College Avenue/First Street | Claremont | All-Way Stop | B | 12.6 | E | 35.6 | 23.0 | YES |

**Table 2-28. PM Peak Hour Intersection Impacts Comparison (Build and No Build Alternatives) (continued)**

| # | Intersection[2] | Jurisdiction | Control Type | 2035 No Build | | 2035 Build | | Change in Delay | Significant Impact |
|---|---|---|---|---|---|---|---|---|---|
| | | | | LOS | Delay[1] | LOS | Delay[1] | | |
| 81 | College Avenue/Arrow Highway | Claremont | Signalized | A | 7.3 | A | 9.5 | 2.2 | NO |
| 82 | Claremont Boulevard/First Street | Claremont | Signalized | A | 5.9 | B | 10.2 | 4.3 | NO |
| 83 | Mills/Claremont/Arrow Highway | Claremont | Signalized | B | 19.8 | C | 25.2 | 5.4 | NO |
| 84 | Monte Vista Avenue/Arrow Route | Montclair | Signalized | B | 14.6 | B | 14.7 | 0.1 | NO |
| 85 | Monte Vista Avenue/Richton Street | Montclair | Signalized | A | 6.3 | A | 10.0 | 3.7 | NO |
| 86 | Monte Vista Avenue/Arrow Highway | Montclair | Signalized | C | 31.0 | C | 32.9 | 1.9 | NO |
| 87 | Fremont Avenue/Arrow Highway | Montclair | Signalized | A | 4.1 | A | 4.1 | 0.0 | NO |
| 88 | Central Avenue/Arrow Route | Montclair | Signalized | C | 20.5 | C | 21.8 | 1.3 | NO |
| 89 | Central Avenue/Richton Street/W 9th Street | Montclair | Signalized | B | 10.4 | B | 15.2 | 4.8 | NO |
| 90 | Central Avenue/Arrow Highway | Montclair | Signalized | C | 29.6 | C | 31.3 | 1.7 | NO |

Source: Intueor, 2011
[1] Average vehicle delay in seconds
[2] Shading shows intersections that would be significantly impacted as a result of the Build Alternative.
[3] Overflow indicates a traffic condition where demand flow rate exceeds capacity.

## Table 2-29. Build Alternative—Roadway Segment Average Daily Traffic Analysis (2035)

| Roadway Segment | From | To | Number of Lanes | Capacity (Vehicles/Day) | Volume (Vehicles/ Day) | V/C | LOS |
|---|---|---|---|---|---|---|---|
| **Glendora** | | | | | | | |
| South Lone Hill Avenue | West Gladstone Street | Auto Centre Drive | 4 | 32,000[1] | 27,682 | 0.87 | D |
| South Loraine Avenue | Route 66 | East Lemon Avenue | 4 | 32,000 | 10,544 | 0.33 | A |
| South Elwood Avenue | Route 66 | East Lemon Avenue | 2 | 12,000[4] | 2,704 | 0.23 | A |
| South Glenwood Avenue | Route 66 | East Lemon Avenue | 2 | 12,000 | 2,791 | 0.23 | A |
| South Pasadena Avenue | Route 66 | East Lemon Avenue | 2 | 12,000 | 2,643 | 0.22 | A |
| South Glendora Avenue | Route 66 | Foothill Boulevard | 4 | 32,000 | 18,292 | 0.57 | A |
| South Vermont Avenue | Route 66 | West Foothill Boulevard | 2 | 12,000 | 4,255 | 0.35 | A |
| Grand Avenue | Route 66 | West Leadora Avenue | 4 | 32,000 | 14,184 | 0.44 | A |
| Foothill Boulevard | Barranca Avenue | Glendora Avenue | 4 | 32,000 | 12,106 | 0.38 | A |
| North Barranca Avenue | West Foothill Boulevard | West Leadora Avenue | 4 | 24,000[2] | 8,287 | 0.35 | A |
| **San Dimas** | | | | | | | |
| San Dimas Canyon Road | Arrow Highway | Bonita Avenue | 4 | 32,000 | 9,130 | 0.29 | A |
| Walnut Avenue | East Arrow Highway | East Bonita Avenue | 2 | 16,000[3] | 7,375 | 0.46 | A |
| San Dimas Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 12,077 | 0.38 | A |
| Monte Vista Avenue | Commercial Street | Bonita Avenue | 2 | 12,000 | 535 | 0.04 | A |
| Cataract Avenue | Arrow Highway | First Street | 2 | 12,000 | 3,019 | 0.25 | A |
| Bonita Avenue | Eucla Avenue | San Dimas Avenue | 4 | 32,000 | 15,556 | 0.49 | A |
| Eucla Avenue | Bonita Avenue | Third Street | 2 | 12,000 | 3,732 | 0.31 | A |
| West Gladstone Street | Lone Hill Avenue | Amelia Avenue | 4 | 32,000 | 15,510 | 0.48 | A |
| **La Verne** | | | | | | | |
| White Avenue | Arrow Highway | Third Street | ~~4~~2 | ~~32,000~~16,000 | 18,712 | ~~0.58~~ 1.17 | ~~A~~F |
| E Street | Arrow Highway | Third Street | 2 | 16,000 | 6,891 | 0.43 | A |
| D Street | Arrow Highway | Third Street | 2 | 12,000 | 5,676 | 0.47 | A |
| A Street | Arrow Highway | Third Street | 2 | 12,000 | 1,334 | 0.11 | A |
| Wheeler Avenue | Arrow Highway | Third Street | 4 | 32,000 | 10,304 | 0.32 | A |

**Table 2-29. Build Alternative—Roadway Segment Average Daily Traffic Analysis (2035) (continued)**

| Roadway Segment | From | To | Number of Lanes | Capacity (Vehicles/Day) | Volume (Vehicles/ Day) | V/C | LOS |
|---|---|---|---|---|---|---|---|
| **Pomona** | | | | | | | |
| North Towne Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 29,313 | 0.92 | E |
| North Garey Avenue | Arrow Highway | Bonita Avenue | 4 | 32,000 | 24,238 | 0.76 | C |
| Fulton Road | Metrolink Driveway | Bonita Avenue | 2 | 16,000 | 1,558 | 0.10 | A |
| Fulton Road | Arrow Highway | Metrolink Driveway | 2 | 16,000 | 1,894 | 0.12 | A |
| **Claremont** | | | | | | | |
| South Mills Avenue/Claremont Boulevard | Arrow Highway | East First Street | 4 | 32,000 | 8,731 | 0.27 | A |
| Indian Hill Boulevard | Arrow Highway | Bonita Avenue | 4 | 32,000 | 21,765 | 0.68 | B |
| College Avenue | East Arrow Highway | East First Street | 2 | 12,000 | 5,840 | 0.49 | A |
| College Avenue | East First Street | Bonita Avenue | 2 | 12,000 | 6,399 | 0.53 | A |
| Cambridge Avenue | West Arrow Highway | Bonita Avenue | 2 | 12,000 | 5,277 | 0.44 | A |
| First Street | Indian Hill Boulevard | College Avenue | 2 | 12,000 | 8,484 | 0.71 | C |
| **Montclair** | | | | | | | |
| Monte Vista Avenue | Richton Street | Arrow Highway | 4 | 32,000 | 22,091 | 0.69 | B |
| Central Avenue | Richton Street | Arrow Highway | 4 | 32,000 | 27,071 | 0.85 | D |

Source: Intueor, 2011
[1] Capacity of 32,000 assumes 800 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[2] Capacity of 24,000 assumes 600 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[3] Capacity of 16,000 assumes 800 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
[4] Capacity of 12,000 assumes 600 vehicles per hour per lane multiplied by number of lanes, divided by a k-factor of 0.1.
k-factor= The ratio of design hour traffic to average annual daily traffic.

## Table 2-30. Impacts at Specific Locations

| Location | Jurisdiction | Traffic Impact | ~~Proposed Improvements~~Project Elements |
|---|---|---|---|
| Access to proposed parking structure off Glendora Avenue and Vermont Avenue (Option 1) | Glendora | No Impact | • None |
| Access to proposed parking structure off Glendora Avenue (Option 2) | Glendora | No Impact | • None |
| Access to proposed parking structure off Walnut Avenue. | San Dimas | No Impact | • Provide a left-turn pocket for the northbound approach from Walnut Avenue |
| Bonita Avenue / Cataract Avenue grade crossing | San Dimas | No Impact, with incorporation of the proposed Improvements | • Reconfigure the intersection as a traffic island or re-align Bonita Avenue and reduce the median width to reduce the size of the intersection.<br>• Install traffic signals.<br>• Provide four quadrant gates<br>• Provide pedestrian gates<br>• Implement education programs, as appropriate, for the local schools<br>• Provide pre-emption of the traffic control<br>• Adjust device placements and warning signs to provide positive control. |
| Access to proposed parking structure off Arrow Highway | La Verne | No Impact, with incorporation of the proposed improvements | • Signalize the proposed access<br>• Provide a left-turn pocket for the ~~westbound~~ eastbound approach from Arrow Highway<br>• Provide a right-turn pocket for the ~~eastbound~~ westbound approach from Arrow Highway |
| Access to proposed parking structure off Bonita Avenue | Pomona | No Impact, with incorporation of the proposed improvements | • Signalize the proposed access<br>• Provide a left-turn pocket for westbound approach from Bonita Avenue |
| Garey Avenue grade crossing | Pomona | No Impact, with incorporation of the proposed improvements | • Provide four quadrant gates<br>• Address gate timing issues with dual sets of tracks (eliminate bouncing gates)<br>• Provide pedestrian gates<br>• Evaluate whether medians could be extended<br>• Improve street lighting at the crossing |

**Table 2-30. Impacts at Specific Locations (continued)**

| Location | Jurisdiction | Traffic Impact | ~~Proposed Improvements~~Project Elements |
|---|---|---|---|
| Indian Hill grade crossing | Claremont | No Impact, with incorporation of the proposed improvements | • Shift the Metrolink station platform to the east of College Avenue to minimize the gate down time<br>• Provide four quadrant gates<br>• Provide pedestrian gates<br>• Provide pre-emption of the traffic signal at First Street<br>• Provide do not block intersection signs at First Street<br>• Consider use of narrow median along Indian Hill Boulevard north of the crossing<br>• Develop design to prohibit eastbound left turns from west leg of Santa Fe Avenue<br>• Provide right-of-way fencing in vicinity of crossing |

Source: Fehr and Peers & Intueor, 2011, updated January 2013

## 2.6.4 Parking

Parking at the six new stations would be designed for LRT patrons. The parking demand and the number of parking stalls would be partially guided by the boarding projections from the transportation modeling process for this study (2035). It is estimated that ~~more than 5,150~~ 5,100 parking spaces would be required. It is anticipated that existing on-street parking spaces near the stations would not be displaced by the construction of the proposed project alignment. Parking information for each new station follows.

### 2.6.4.1 Glendora Station

The Glendora Station would be sited on a parcel between Glendora Avenue on the east and northeast, East Ada Street on the north, and Vermont Avenue on the west. At this station, parking would be in a two- or three-level parking structure directly south of the station, either ~~and~~ within the Metro right-of-way or directly south of it. Approximately 400 parking spaces would be required by 2035. Depending on which parking structure option is selected, vehicular access and egress would be either via Glendora Avenue on the east end and Vermont Avenue on the west end or via Vermont Avenue only, on the west end. Pedestrian connections between the platform and parking structure would be via sidewalks on Vermont Avenue and Glendale Avenue.

### 2.6.4.2 San Dimas Station

The proposed San Dimas Station would be located between San Dimas and Walnut Avenues, north of Arrow Highway. Approximately 400 parking spaces would be needed by 2035. Parking would located be in a multi-level structure southeast of the station bounded by the railroad tracks to the north, a storage facility to the west, a commercial office building to the south, and Walnut Avenue on the east. Vehicular access and egress would be via Walnut Avenue. Pedestrians would access the platform and parking structure via an elevated walkway at the east end of the station.

### 2.6.4.3 La Verne Station

The La Verne Station would be located east of E Street, just north of Arrow Highway. Approximately 600 parking spaces would be required by 2035. A rectangular four-level sloped-floor parking garage would be provided in the irregularly shaped property just south and east of the platform on the north side of Arrow Highway; the rest of the parcel would be available for commercial development. Vehicular access and egress would be via Arrow Highway. Because of the proximity of the station driveway to E Street, only right turns would be permitted in and out of the site. Pedestrian access would be relatively convenient and require crossing only the eastbound LRT track, either at grade at E Street or at a gate-controlled pedestrian crossing at the east end of the station platform.

### 2.6.4.4 Pomona Station

The Pomona Station would have a center platform located west of Garey Avenue near the existing Metrolink station. A new parking structure would be located on industrial land north of the right-of-way. Approximately ~~1,050~~1,000 spaces would be needed by 2035; the existing Metrolink parking capacity is approximately ~~350~~ 250 spaces. The 750 new spaces would be provided in a shared Gold Line/Metrolink garage just north of the existing Metrolink station platform. This site is currently part of a larger industrial property ~~with an unoccupied building on it~~that is currently occupied. Vehicular access would be via a shared driveway~~s~~ from ~~Garey Avenue~~Bonita Avenue on the north side of the structure that currently services the industrial building to the west of the proposed parking site. Pedestrian access to the Gold

Line and Metrolink platforms would be via a pedestrian bridge over the Burlington Northern Santa Fe (BNSF) Railway freight track and Gold Line tracks.

#### 2.6.4.5 Claremont Station

Claremont has a thriving multi-modal transit center focused on its historic, restored Atchison, Topeka & Santa Fe Depot located north of the tracks to the east of Indian Hill Boulevard. The proposed Claremont Station would include side-platforms located across from the historic station. The combined Gold Line and Metrolink parking demand at Claremont Station would be approximately 1,100 spaces in 2035. Today, approximately 400 parking spaces are located in the Metrolink lot on First Street, east of College Avenue. To accommodate future need, a three-level parking structure is proposed at the current Metrolink surface parking lot. Vehicular access and egress would be via a pair of driveways connected to First Street, which would not interfere with the First Street bus transfer bays. Travel to and from the garage would be via First Street, crossing College Avenue at grade, then continuing along the College Avenue sidewalk to the walkway between the eastbound and westbound LRT tracks to the platform.

#### 2.6.4.6 Montclair Station

The Montclair Station would be located just north of the existing Metrolink station platforms with convenient pedestrian access to Metrolink trains via the existing pedestrian tunnel. The existing Montclair Transcenter, including a major bus transfer facility and adjacent park-and-ride, would also serve the LRT station. Parking needs at the Montclair Station would be 1,600 spaces by 2035. There are currently more than 1,600 surface parking spaces at the Montclair Transcenter where the LRT station is proposed. These spaces are used by Metrolink passengers and bus riders who use the park-and-ride. While the existing spaces would amply serve future needs even with the Build Alternative added, the entire area surrounding the station, including the parking lots, are scheduled for redevelopment as part of the North Montclair Downtown Specific Plan. For the purposes of the environmental analysis, the existing parking site was studied. Future parking lots could be located north and south of the Build Alternative and Metrolink tracks; however, theyit would be constructed only if the surface lots were displaced by future development.

### 2.6.5 On-Street Parking

There are two locations where the Build Alternative would minimally displace on-street parking near the proposed stations. One is D Street in La Verne, where the space occupied by one diagonal stall on the east side of the street (just north of the tracks) would be needed for a pedestrian safety area. The other is Santa Fe Avenue in Claremont, where the space occupied by three parallel parking stalls on the north side of the street (one west of Indian Hill Boulevard and two east of Indian Hill Boulevard) are needed for pedestrian safety areas. Aside from these two locations, current on-street parking configurations and the existing number of on-street parking spaces would remain the same.

It may be necessary to prohibit on-street parking when traffic lanes are temporarily closed due to construction activities. These activities include the relocation of utilities and the construction of trackways and stations. The temporary closure of lanes would be required at roadways with at-grade crossings. Generally, lane closures would take place at night to minimize disruptions. With temporary lane closures at night, it is anticipated that construction impacts would be minimal at the mid-block and adjacent intersection locations. Since these lane closures are expected to take place outside of the AM and PM peak commuting periods, there would be no significant impacts to on-street parking spaces. Existing on-street parking spaces and loading stalls within the traffic control zone of influence that would be affected

by construction activities would be temporarily removed, as directed by the agency with jurisdiction. Track construction at the two locations where they diagonally cross the intersection, would require full closure of the intersection during night hours. On-street parking spaces and loading stalls within the traffic control zone would be temporarily removed. To minimize the loss of crucial commercial parking during the off-peak day time hours, contractors would be required to have all employees park off-street at locations approved by the Construction Authority. Although these construction impacts may be temporary, they would be significant during the off-peak period and would require mitigation measures for the duration of the construction period. During night hours, parking impacts due to construction are considered insignificant because of the low demand for parking during at night.

### 2.6.6 Pedestrian and Bicycle Facilities

The three stations that would be adjacent to existing bike lanes (Glendora, San Dimas, and Claremont) would undergo further evaluation during the next phases of the project to determine the relationship between station operations and operations of existing or future bike lanes.

When construction of tracks or station area encroaches upon a sidewalk, walkway, or crosswalk area, special consideration would be given to pedestrian safety. Pedestrian access to adjoining properties and bicycle traffic movements would be maintained during construction; however, portions of sidewalks may be temporarily closed.

### 2.6.7 At-Grade Railroad Crossings

Metro *Policy for Grade Crossing for Light Rail Transit* provides a framework for assessing traffic safety and operations related to at-grade crossings and identifying the need for safety treatments or grade separations. The policy includes a systematic review process and identifies corresponding "milestones" before determining the feasibility of a grade crossing. The review process includes the following:

- **Initial Screening (Milestone 1)—**The first step is a planning-level assessment to categorize the grade crossings based on roadway volumes conflicting with LRT operations and train frequencies. Each grade crossing is assigned to one of three groups: "At-Grade Should Be Feasible," "Possible At-Grade Operation," and "Grade Separation Usually Required." When a crossing is identified as "At-Grade Should Be Feasible," detailed engineering-level operational and safety analyses can still be triggered for gated crossing with traffic preemption and locations with salient geometry or safety issues.
- **Detailed Analysis (Milestone 2)—**The second step is to provide a further safety and operations analysis to evaluate the potential impacts of LRT train operations (such as preemption or signal priority) on traffic delay and cross-street progression. Review of existing and future site conditions, geometry, intersection volume-to-capacity ratio, traffic control, rail operation design, and options is required. Preliminary disposition from this process is either "At-Grade Operation Should Be Feasible" or "Grade Separation Usually Required." This analysis may also identify potential operational impacts or safety concerns caused by LRT train operations and possible mitigation measures for safety enhancements.
- **Verification (Milestone 3)—**This is the final step before determining the adequacy of an at-grade crossing design and recommending whether a grade separation would be required. This analysis would be required only if an agreement regarding the proposed final design solutions could not be

obtained from Metro and local constituencies (including other involved agencies and the community, as appropriate) because of concerns relating to safety, cost, operations, policy, and/or community desires. This task may involve refinement and validation of projected traffic volumes and rail operations using simulation modeling.

Milestone 1 is usually undertaken during the preliminary planning for a project. Milestones 2 and 3 are typically undertaken during preliminary engineering and environmental clearance. The final decision should be secured in conjunction with final engineering of a project.

The final decision on a crossing configuration for an intersection is based on the preceding technical analysis, engineering studies, and consensus-building. The California Public Utilities Commission must approve each grade-crossing application, and other third-party agreements and requirements must also be met.

Of the 29 at-grade crossing scenarios studied, the Milestone 1 screening indicated that no grade separations would be required, based on proposed train headways and the conflicting traffic volumes per hour, per line. The Monte Vista Avenue crossing in Montclair is grade separated and would remain grade separated (even though the analysis indicated that the traffic volumes crossing the railroad track would not trigger the grade separation). In addition, the Lone Hill Avenue/Auto Center Drive and the Towne Avenue crossings are proposed to be grade separated although the analysis indicated that traffic volumes would not trigger a grade separation at either location. Table 2-31 presents the grade crossing locations where Milestone 1 and Milestone 2 analyses were conducted.

Detailed Analysis Reports (Milestone 2 Analysis) were completed for each crossing identified as "Possible At-Grade Operation" as well as those that were in the borderline between the "At Grade Should be Feasible" and "Possible At-Grade Operation" categories. Using several checks on rail operations, traffic operations, and safety feasible mitigation and crossing treatments for these four crossings were identified. Table 2-32 outlines the treatments that would allow these crossings to be operable at grade. The treatments, as identified in the grade crossing analysis, would be correlated with the proposed mitigation from the traffic analysis in a comprehensive plan for each crossing and adjacent intersection.

At the request of the City of Pomona, further traffic and train operations analysis was conducted for the Garey Avenue grade crossing using VISSIM software. The details of the VISSIM analysis are presented in response to comment 16-4, which can be found in Chapter 7 (pages 7-119 through 7-131). The following intersections were evaluated:

- Garey Avenue and Bonita Avenue
- Garey Avenue and Santa Fe Street
- Garey Avenue and Arrow Highway

The analysis identified that one of the main issues for both the No Build and Build Alternatives is that gates currently go down when no train is present. Typically, the false "gate down" occurs 60 seconds to 90 seconds prior to the arrival of a Metrolink train. This "bouncing gate" condition presents an issue in the Build Alternative, as well. As a result, mitigation measures LTR-6 through LTR-8 will be implemented and were assumed to be in place for the traffic analysis.

## Table 2-31. Grade Crossing Locations Studied in Milestone 1 and 2 Analyses

| City | Grade Crossing Locations (Milestone 1 Report) | Possible At-Grade Operation Crossing (Milestone 2 Report) |
|---|---|---|
| Glendora | Barranca Avenue<br>Grand Avenue/Foothill Boulevard<br>Vermont Avenue/Ada Avenue<br>Glendora Avenue<br>Pasadena Avenue<br>Glenwood Avenue<br>Elwood Avenue<br>Loraine Avenue<br>Lone Hill Avenue/Auto Centre Drive | Grand Avenue/Foothill Boulevard |
| San Dimas | Gladstone Street<br>Eucla Street<br>Cataract Avenue/Bonita Avenue<br>Monte Vista Avenue<br>San Dimas Avenue<br>Walnut Avenue<br>San Dimas Canyon Road | Gladstone Street<br>Cataract Avenue/Bonita Avenue<br>San Dimas Avenue |
| La Verne | Wheeler Avenue<br>A Street<br>D Street<br>E Street<br>White Avenue<br>Fulton Road* | None |
| Pomona | Garey Avenue<br>Towne Avenue | None |
| Claremont | Cambridge Avenue<br>Indian Hill Boulevard<br>College Avenue<br>Claremont Boulevard/Mills Avenue | None |
| Montclair | Monte Vista Avenue | None |

Source: Fehr and Peers, 2011
*also located in Pomona

## Table 2-32. Results of Milestone 2 Grade-Crossing Analysis

| City | Grade-Crossing Locations | Recommended Treatment for At-Grade Operation |
|---|---|---|
| Glendora | Grand Avenue/ Foothill Boulevard | • Provide four quadrant gates<br>• Provide pedestrian gates<br>• Education programs to be implemented as appropriate for the local schools<br>• Revise pedestrian channelization to improve control of movements<br>• Provide pre-emption of the traffic control<br>• Consider use of narrow median along Foothill Boulevard<br>• Incorporate provision to ban right-turn-on-red or provide right turn overlap<br>• Provide potential anti-queuing controls. Include installation of "DO NOT BLOCK INTERSECTION" sign and "KEEP CLEAR" pavement marking at the Grand Avenue / Foothill Boulevard intersection and the side controlled Grand Avenue / Carroll Avenue intersection |
| San Dimas | Gladstone Street | • Provide four quadrant gates<br>• Provide pedestrian gates<br>• Implement education programs, as appropriate, for the local schools<br>• Provide potential anti-queuing controls. Include installation of "DO NOT BLOCK INTERSECTION" sign and "KEEP CLEAR" pavement at the adjacent signalized intersection of Lone Hill Avenue /Gladstone Street |
| San Dimas | Cataract Avenue/ Bonita Avenue | • Reconfigure the intersection as a traffic island or re-align Bonita Avenue and reduce the median width to reduce the size of the intersection<br>• Install traffic signals<br>• Provide four quadrant gates<br>• Provide pedestrian gates<br>• Implement education programs, as appropriate, for the local schools<br>• Provide pre-emption of the traffic control<br>• Adjust device placements and warning signs to provide positive control |
| San Dimas | San Dimas Avenue | • Provide four quadrant gates<br>• Provide pedestrian gates<br>• Provide potential anti-queuing controls. Include installation of "DO NOT BLOCK INTERSECTION" sign and "KEEP CLEAR" pavement nearby intersections, including: San Dimas Avenue/ Bonita Avenue and San Dimas Avenue/West Railway |

Source: Fehr and Peers, 2011

The VISSIM analysis concluded that with the Build Alternative, the greatest queues would occur in the PM peak hour with the maximum Northbound queue length of approximately 441 feet (18 vehicles) and the maximum Southbound queue length of approximately 1,025 feet (41 vehicles), which happens when Metrolink and LRT are scheduled back to back. This Southbound queue backs up through the adjacent signalized intersection of Garey Avenue and Bonita Avenue, which is approximately 750 feet away. However, the backups are short-lived and the maximum Southbound queue length occurs only once.

The intersection LOS of Bonita Avenue and Garey Avenue is worse in the AM than in the PM peak hour because of both traffic and train conditions. In the AM peak hour, the predominant movement is to the West and South, and in the PM peak hour to the East and North. Therefore, when the queues are the longest in the southbound direction in the AM peak hour, movements toward the track are impacted the greatest. These movements are the southbound through and westbound left. These movements are the heaviest in the AM peak hour and experience the longest delay. This causes longer delay, especially for the westbound left movement.

With the identified mitigation measures in place (LTR-6 through LTR-8), the Build Alternative results in LOS D in the AM peak and LOS C at Garey Avenue and Bonita Avenue intersection. With the identified mitigation measures in place (LTR-6 through LTR-8), the Build Alternative also results in LOS D in the AM peak hour and LOS C in the PM peak hour at the intersection of Garey Avenue and Arrow Highway. The intersection at Garey Avenue and Santa Fe Street would remain at LOS A in both the AM and PM peak hours with the Build Alternative. Since the LOS would not worsen below LOS D in either peak hour for any of the three intersection studied, impact at these locations would not be significant.

## 2.7 CUMULATIVE IMPACTS

The SCAG 2012 RTP/SCS Final Program EIR is the most current applicable certified planning document that has a regional cumulative impact assessment for transportation improvements through the year 2035 (including the proposed project). SCAG's analysis concludes that cumulative traffic and transportation impacts would be significant because of the regional increase in vehicle miles traveled (VMT). The methodology used to develop the future traffic volumes and for the traffic analysis of the project included using the SCAG travel demand forecasting model. It is expected that the project would result in a decrease in VMT when compared to the No Build Alternative in 2035. Therefore, the project would not contribute to the significant cumulative impact identified by SCAG in the RTP EIR.

## 2.8 MITIGATION MEASURES

Pedestrian and bicycle facilities would be enhanced as a result of the project and associated stations. Improvements would be implemented for traffic circulation. Some would be an integral part of the Build Alternative, and some would be considered additional mitigation measures to address significant impacts.

A number of intersections would be signalized as part of the mitigation measures for both the TSM and Build Alternatives. It is recommended that traffic signal systemwide operational improvements be made on intersections in progression. The following arterials would be set up for traffic signal systemwide coordination and synchronization:

- Route 66—Glendora
- Bonita Avenue—San Dimas

- Arrow Highway—San Dimas and La Verne
- White Avenue—La Verne

### 2.8.1 Short-Term Construction Mitigation Measures

- **CTR-1**—During final design, site- and street-specific Worksite Traffic Control Plans shall be developed in cooperation with the appropriate departments of transportation in each Azusa-Montclair corridor City and with Los Angeles and San Bernardino Counties, and implemented to accommodate required pedestrian and traffic movements. To the extent practical, traffic lanes will be maintained in both directions, particularly during periods of peak traffic operations. Access to homes and businesses shall be maintained throughout the construction period. To the extent feasible, lane closures shall occur during off-peak, weekend or nighttime hours.
- **CTR-2**—Designated haul routes for trucks shall be identified during final design in cooperation with the corridor Cities and implemented throughout the construction process. These routes shall be situated to minimize noise, vibration, and other possible impacts. Following completion of the project, if slight physical damage to surface of the haul route roads is found, the road shall be treated as necessary.
- **CTR-3—** A Traffic Management Control Plan shall be developed and implemented. The Plan shall be developed in close coordination with local jurisdictions, the local emergency response agencies (including fire departments, police departments, and ambulance services), school districts, and other agencies as appropriate. The Plan shall include, but not be limited to:
  - Providing public information through media alerts, flyers, and the Construction Authority's website to alert and inform the community about construction activities and schedules, including planned street and access closures.
  - Providing traveler information through traffic advisor radio, changeable message signs (CMS) that includes detour routes.
  - Creating a hotline for the community with a direct connection to personnel who can answer questions, provide information, and resolve issues. In addition, field offices shall be opened at specific locations identified as best serving the community and neighborhoods.
  - Developing specific street closures and phasing plans, and other measures.
  - Posting advance notices indicating when access would be closed or limited on city streets
  - Posting signs indicating access routes and alternate access points, as well as announcing that affected businesses are open.
  - Placing newspaper notices to indicate street and access closures
  - Before any significant bus rerouting changes are made, fliers shall be provided on buses at least two weeks in advance notifying riders of route modifications. In addition, hoods shall be placed over bus-stop signs notifying riders of what modifications have been made to the bus route.
  - Posting signage indicating detours for bicycles and pedestrians where roadways and/or sidewalks are closed during construction.
  - Posting temporary signage warning motorists of pedestrians and bicycles where roadway and/or sidewalk closures create "pinch points" on travel lanes.

## 2.8.2 Long-Term Mitigation Measures

For the intersections where significant traffic impacts were identified the following modifications were considered:

- Modifications to intersection geometrics within the existing pavement width, if feasible.
- Changes to signal operations to improve efficiency.
- Signalization of selected two- and four-way stop-controlled intersections.

Within the Study Area, ~~13~~ 12 intersections were found to be significantly affected. The following mitigation measures are considered feasible and can be accommodated within the existing right-of-way. These measures shall be implemented prior to the inauguration of project's operations.

- ~~LTR-1—In Glendora, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to ensure the signalization at the intersection of Glenwood Avenue and US Route 66.~~
- LTR-~~2~~1—In San Dimas, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to ensure the signalization at the intersection of San Dimas Avenue and Second Street when warranted.
- LTR-~~3~~2—In La Verne, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to ensure the signalization of the intersections of White Avenue and First Street, White Avenue and Second Street, Arrow Highway at the Metrolink crossing, Arrow Highway and E Street, and La Verne Avenue and Arrow Highway when warranted.
- LTR-~~4~~3—In Pomona, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to ensure the signalization of the intersection of Fulton Road and Bonita Avenue when warranted.
- LTR-~~6~~4—In Pomona, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary, to modify the Garey Avenue and Bonita Avenue intersection within existing right-of-way. The proposed modification is a restriping of the northbound approach to provide two exclusive left-turn lanes, one through lane, and one shared right-turn/through lane. The "receiving leg" would also be restriped to provide two through lanes.
- LTR-~~7~~5—In Claremont, the Construction Authority shall cooperatively work with the City, and contribute funding as necessary to ensure the signalization of the intersection of College Avenue and First Street when warranted.
- LTR-6 – At the Garey Avenue crossing, the existing Metrolink track circuitry shall be recalibrated to eliminate false gate closures.
- LTR-7 – The signal at the intersection of Garey Avenue and Bonita Avenue shall be interconnected with the railroad signaling and allow for preemption when trains are present.
- LTR-8 – Bonita Avenue shall be protected/permitted in the east/west direction.

## 2.9 LEVEL OF IMPACT AFTER MITIGATION

Results of the intersection operating conditions after implementation of the Build Alternative mitigation measures are provided in Table 2-33. As shown, ~~10~~ 9 of the ~~13~~ 12 affected intersections will be mitigated to a level that is *less than significant*. For the three remaining affected intersections, no improvements can be accommodated within the existing right-of-way. However, even without mitigation, the San Dimas Canyon Road/Arrow Highway and D Street/Arrow Highway would continue to operate at LOS C, while the intersection of Wheeler Avenue/Arrow Highway would operate at LOS D, which are acceptable levels of service in urban areas. Nonetheless, impact at these three intersections is considered to be significant and unavoidable according to the impact criteria.

**Table 2-33. Build Alternative—Mitigated Intersection Level of Service (LOS)**

| # | Intersection | Jurisdiction | AM | | PM | | Residual Impact |
|---|---|---|---|---|---|---|---|
| | | | LOS | Delay[1] | LOS | Delay[1] | |
| ~~14~~ | ~~Glenwood Avenue/Route 66~~ | ~~Glendora~~ | ~~B~~ | ~~10.9~~ | ~~A~~ | ~~7.1~~ | ~~No~~ |
| 37 | San Dimas Avenue/Second Street | San Dimas | A | 2.3 | A | 3.9 | No |
| ***43*** | ***San Dimas Canyon Road/Arrow Highway*** | ***San Dimas*** | ***C*** | ***27.6*** | ***C*** | ***28.1*** | ***Yes*** |
| ***45*** | ***Wheeler Avenue/Arrow Highway*** | ***La Verne*** | ***D*** | ***50.6*** | ***D*** | ***37.8*** | ***Yes*** |
| ***51*** | ***D Street/Arrow Highway*** | ***La Verne*** | ***C*** | ***22.2*** | ***C*** | ***30.4*** | ***Yes*** |
| 56 | White Avenue/Third Street | La Verne | D | 28.4 | F | 77.6 | No |
| 57 | White Avenue/Second Street | La Verne | A | 3.4 | A | 7 | No |
| 58 | White Avenue/First Street | La Verne | A | 5.4 | A | 7.3 | No |
| 65 | La Verne Avenue/Arrow Highway | La Verne | B | 15.3 | A | 8.3 | No |
| 66 | Fulton Road/Bonita Avenue | Pomona | A | 18.1 | A | 9 | No |
| 67 | Fulton Road/Arrow Highway | Pomona | C | 24.5 | D | 32 | No |
| 68 | Garey Avenue/Bonita Avenue | Pomona | C | 21.9 | B | 19.1 | No |
| 80 | College Avenue/First Street | Claremont | A | 7.9 | A | 9.7 | No |

Source: Intueor, 2011
[1] Average vehicle delay in seconds per vehicle
**Bold Italics** indicates there is no feasible mitigation at this location.