

## Appendix F

### Traffic Impact Study

(The appendix to this report is available for review at the Department of City Planning.)

**DRAFT REPORT**

# **Jordan Downs Specific Plan Traffic Impact Study**

Prepared for



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## EXECUTIVE SUMMARY

This Traffic Impact Study summarizes the results of the traffic analyses for the proposed Jordan Downs Specific Plan Redevelopment project (herein known as the “proposed project”). The proposed project is located in the City of Los Angeles community of Watts, with a portion of the site located in an unincorporated portion of the County of Los Angeles. Annexation of this unincorporated land is a component of the overall proposed project. The project site is bounded by Alameda Street to the east, 103rd Street to the south, Grape Street to the west, and 97th Street to the north.

The proposed project includes up to 1,800 dwelling units that would replace the 700 existing public housing units, and would consist of approximately 700 public housing units, 700 affordable rental units, and 400 ownership condominium units. The 1,800 dwelling units include 100 senior housing units. The project also proposes community facilities, open space, potential high school expansion and new elementary schools, commercial and retail space, and the potential redevelopment of existing light-industrial parcels located along Alameda Street. In total, the proposed project is projected to produce approximately 14,150 daily trips, 1,166 AM peak hour trips, and 1,265 PM peak hour trips.

A total of 41 study intersections in the Cities of Los Angeles, South Gate, and Lynwood, and the County of Los Angeles have been evaluated for potential significant impacts resulting from the construction of the proposed Jordan Downs Specific Plan. Potential traffic impacts were evaluated using the City of Los Angeles traffic impact analysis guidelines. Intersections that border multiple jurisdictions were evaluated twice using each jurisdiction’s specified methodology. Analysis of projected operating conditions was completed for the Existing, Existing Plus Ambient Growth Plus Related Projects, and Existing Plus Ambient Growth Plus Related Projects Plus Project scenarios. The following observations and conclusions can be made regarding traffic related impacts:

Per City of Los Angeles CMA methodology, under existing traffic conditions, one signalized study intersection currently operates at LOS E during the AM peak hour and one signalized study intersection is currently operating at LOS E during the PM peak hour. No intersections currently operate at LOS F. The following signalized study intersections are currently operating at LOS E during the AM and/or PM peak hour:

- #3 Alameda Street (W) and Tweedy Boulevard (PM Peak Hour)
- #6 Alameda Street (W) and Imperial Highway (AM Peak Hour)

Per City of Los Angeles CMA methodology, under the Existing Plus Ambient Growth Plus Related Projects scenario, a total of three signalized study intersections are projected to operate at LOS E, and no intersections are projected to operate at LOS F. Two study intersections are projected to operate at LOS E during the AM peak hour, and two study intersections are projected to operate at LOS E during PM peak hour. The following study intersections are projected to operate at LOS E during the AM and/or PM peak hours:

- #1 Alameda Street and Firestone Boulevard (PM Peak Hour)
- #3 Alameda Street (W) and Tweedy Boulevard (AM and PM Peak Hours)
- #6 Alameda Street (W) and Imperial Highway (AM Peak Hour)

Per City of Los Angeles CMA methodology, under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario, four signalized study intersections are projected to experience a significant project-related impact. Of those, three study intersections are projected to experience a significant project-related traffic impact during the AM peak hour, and four study intersections are projected to

experience a significant project-related traffic impact during the PM peak hour under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario, as follows:

- #1 Alameda Street and Firestone Boulevard (PM Peak Hour)
- #5 Alameda Street (W) and Century Boulevard/Martin Luther King Jr. Boulevard (AM and PM Peak Hours)
- #20 Central Avenue and Century Boulevard (AM and PM Peak Hours)
- #35 Long Beach Boulevard and Tweedy Boulevard (AM and PM Peak Hours)

To reduce the overall impacts under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario, the proposed mitigation measures were investigated for the intersections with significant project-related impacts and analyzed using the CMA methodology:

- #20 Central Avenue at Century Boulevard – No feasible physical mitigation measures were identified for this intersection that would reduce the project-related impact to a less than significant level. Therefore, a significant project impact would remain.

The following three intersections experience impacts under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario. All three intersections are located outside the City of Los Angeles. No feasible mitigation measures have been identified that would reduce impacts to a less than significant level, therefore significant project related impacts would remain.

- #1 Alameda Street and Firestone Boulevard – This intersection is located outside the City of Los Angeles under the County of Los Angeles jurisdiction. This intersection is also shown to experience a significant impact using the County of Los Angeles criteria. However, the intersection is scheduled to be improved via the County’s Traffic Signal Synchronization Program (TSSP), which will facilitate the movement of vehicles through the intersection. No feasible physical mitigation measures were identified for this intersection that would reduce the project-related impact to a less than significant level. Therefore, a significant project impact would remain.
- #5 Alameda Street at Century Boulevard/MLK Avenue – This intersection is located outside the City of Los Angeles in the City of Lynwood. While it does show a significant impact under City of Los Angeles criteria, it does not show an impact using the City of Lynwood criteria.
- #35 Long Beach Boulevard at Tweedy Boulevard - This intersection is located outside the City of Los Angeles in the Cities of South Gate and Lynwood. While it does show a significant impact under City of Los Angeles criteria, it does not show an impact using the City of South Gate or Lynwood criteria.

Per City of Los Angeles guidelines, unsignalized study intersections were evaluated using the Highway Capacity Methodology (HCM 2000). Intersections that are projected to operate at LOS E or F during the “Future With Project” condition are evaluated for potential installation of a new traffic signal. Three of the six unsignalized study intersections are projected to operate at LOS F during the AM and PM peak hours. The results from the signal warrant analyses show that all three intersections that are projected to operate at LOS E or F are warranted for signal installation under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario. The following unsignalized study intersections are warranted for signal installation:

- #36 Alameda Street and 97<sup>th</sup> Street
- #37 Alameda Street (E) and Tweedy Boulevard – This intersection has funding identified in the City of South Gate Capital Improvement Program for installation of a traffic signal at this location.
- #41 Wilmington Avenue and Century Boulevard

The proposed project is not projected to have any Congestion Management Program impacts at both the arterial and freeway monitoring stations near the project area.

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## INTRODUCTION

This Traffic Impact Study summarizes the results of the traffic analyses for the proposed Jordan Downs Specific Plan Redevelopment project (herein known as the “proposed project”). The proposed project is located in the City of Los Angeles community of Watts, with a portion of the site located in an unincorporated portion of the County of Los Angeles. Annexation of this unincorporated land is a component of the overall proposed project. The project site is bounded by Alameda Street to the east, 103rd Street to the south, Grape Street to the west, and 97th Street to the north.

## Project Description

The proposed project includes up to 1,800 dwelling units that would replace the 700 existing public housing units, and would consist of approximately 700 public housing units, 700 affordable rental units, and 400 ownership condominium units. The 1,800 dwelling units include 100 senior housing units. The project also proposes community facilities, open space, potential high school expansion and new elementary schools commercial and retail space, and the potential redevelopment of existing light-industrial parcels located along Alameda Street. **Figure 1** illustrates the proposed site plan for the Jordan Downs Redevelopment project.

## Project Analysis

In consultation with the Los Angeles Department of Transportation (LADOT) a total of 41 study intersections in the Cities of Los Angeles, South Gate, and Lynwood, and the County of Los Angeles have been selected for evaluation. The 41 study intersections represent intersections deemed most likely to experience increases in traffic due to the proposed project. The following report provides key traffic information regarding existing traffic volumes, an analysis of impacts at study intersections, and a determination of Levels of Service (LOS). The locations of the study intersections assessed in the traffic analysis are listed below and are shown in **Figure 2**.

### City of Los Angeles

3. Alameda Street (West) and Tweedy Boulevard (after annexation)
7. Grape Street and 103<sup>rd</sup> Street
8. Wilmington Avenue and 103<sup>rd</sup> Street
9. Wilmington Avenue and Santa Ana Boulevard
10. Wilmington Avenue and 108<sup>th</sup> Street
11. Wilmington Avenue and 111<sup>th</sup> Street
15. Compton Avenue and Century Boulevard
16. Compton Avenue and 103<sup>rd</sup> Street
17. Compton Avenue and 108<sup>th</sup> Street
19. Central Avenue and 92<sup>nd</sup> Street
20. Central Avenue and Century Boulevard
21. Central Avenue and 103<sup>rd</sup> Street
22. Central Avenue and 108<sup>th</sup> Street (North)
23. Central Avenue and 108<sup>th</sup> Street (South)
24. Central Avenue and 120<sup>th</sup> Street
25. McKinley Avenue and Century Boulevard
26. Avalon Boulevard and Century Boulevard
27. Avalon Boulevard and 92<sup>nd</sup> Street
28. Avalon Boulevard and 120<sup>th</sup> Street
29. San Pedro Street and Century Boulevard

30. Main Street and Century Boulevard
31. Figueroa Street and Century Boulevard
32. I-110 NB On-Ramp and Century Boulevard
33. I-110 SB Off-Ramp and Century Boulevard
38. Grape Street and 97<sup>th</sup> Street (West)
39. Grape Street and 97<sup>th</sup> Street (East)
40. Grape Street and Century Boulevard
41. Wilmington Avenue and Century Boulevard

#### County of Los Angeles

1. Alameda Street and Firestone Boulevard
2. Alameda Street (West) and 92nd Street
13. Wilmington Avenue and 120<sup>th</sup> Street
18. Compton Avenue and 120<sup>th</sup> Street

#### City of Lynwood

5. Alameda Street (West) and Martin Luther King Jr. Boulevard/ Century Boulevard

#### Multiple Jurisdictions

3. Alameda Street and 103rd Street (City of Los Angeles/Lynwood) – after annexation
6. Alameda Street (West) and Imperial Highway (County of Los Angeles/Lynwood)
12. Wilmington Avenue and I-105 EB Ramps (City of Los Angeles/County of Los Angeles)
14. I-105 WB Ramp and Imperial Highway (City of Los Angeles/County of Los Angeles)
34. Long Beach Boulevard and Century Boulevard (South Gate/Lynwood)
35. Long Beach Boulevard and Tweedy Boulevard (South Gate/Lynwood)
36. Alameda Street and 97<sup>th</sup> Street (City of Los Angeles/County of Los Angeles) – after annexation
37. Alameda Street (East) and Tweedy Boulevard (City of Los Angeles/South Gate) – after annexation

Potential traffic impacts were evaluated using the City of Los Angeles traffic impact analysis guidelines. Intersections that border multiple jurisdictions were evaluated twice using each jurisdiction's specified methodology under the Future With Ambient Growth With Related Projects With Project scenario.

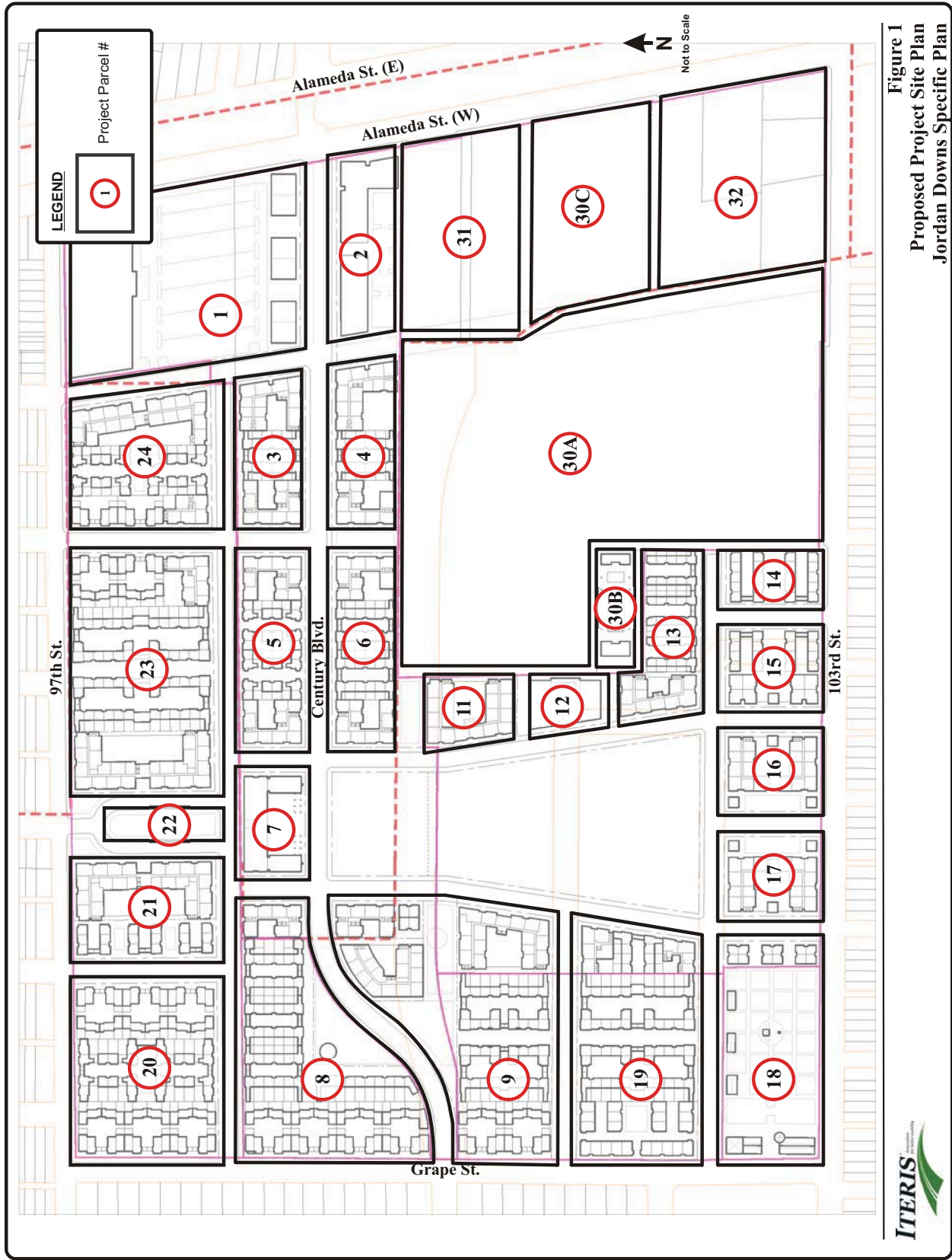


Figure 1  
Proposed Project Site Plan  
Jordan Downs Specific Plan

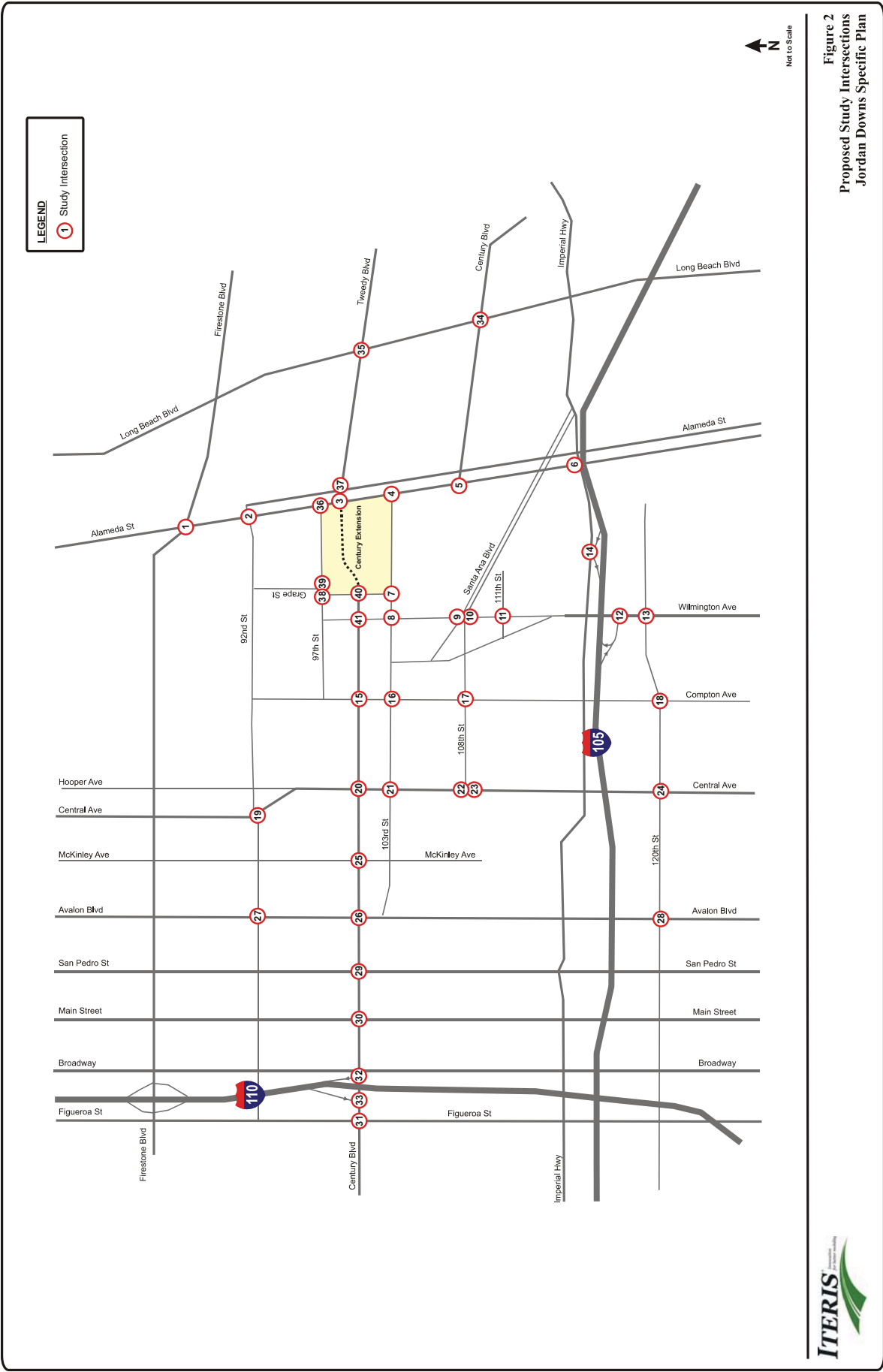


Figure 2  
Proposed Study Intersections  
Jordan Downs Specific Plan

## EXISTING ROADWAY CONDITIONS

### Regional Freeway Access

Regional access from the freeway system to Jordan Downs is provided by the I-105 and I-110 freeways. Ramp access to I-105 is provided at Wilmington Avenue. Westbound, the ramps enter and exit Imperial Highway at Croesus Avenue, north of I-105. The eastbound ramps enter and exit Wilmington Avenue, south of I-105.

Ramp access to I-110 is provided at Century Boulevard for the southbound off-ramp and northbound on-ramp. Southbound on-ramp access and northbound off-ramp access is not provided due to the proximity of the ramps to the I-110/I-105 interchange. It is likely that the residents of Jordan Downs would use the I-105 ramps at Wilmington Avenue for southbound trips on I-110.

### Street System

The street network surrounding the Jordan Downs site is part of the City of Los Angeles' grid system. The on-site roadway system does not follow the surrounding grid system, but rather contains one loop roadway (99<sup>th</sup> Place) serving the north portion of the site, and two loop roadways (101<sup>st</sup> Street and 102<sup>nd</sup> Street connected by Juniper Street) serving the south portion of the site. These internal roadways are connected to the surrounding roadway system at offset intersections. There is no north-south roadway connection through the site; north-south connectivity occurs at the periphery of the site along Grape Street and Alameda Street.

The streets serving the project site are located in the City of Los Angeles, the County of Los Angeles, the City of Lynwood, and the City of South Gate. Each of these jurisdictions classifies their streets in their General Plans.

### Adjacent Roadways

**97<sup>th</sup> Street** is an east-west two lane roadway classified as a Collector Street in the City of Los Angeles Transportation Element.

**103<sup>rd</sup> Street** is an east-west two lane roadway classified as a Collector Street in the City of Los Angeles Transportation Element.

**Grape Street** is a north-south two lane roadway classified as a Local Street in the City of Los Angeles Transportation Element.

**Alameda Street** is a north-south diagonal roadway that runs along the eastern edge of the project site. Alameda Street borders the County of Los Angeles and the Cities of South Gate and Lynwood. Adjacent to the project site, Alameda Street has three separate components within its right-of-way:

- South Alameda Street on the west side is classified as a Secondary four-lane roadway that serves properties to the west of the Alameda Corridor and intersects with 97th Street and 103rd Street. It currently falls under the jurisdiction of Los Angeles County, but after annexation it will be under the jurisdiction of the City of Los Angeles.
- The Alameda Corridor, a regional freight rail corridor below the street grade in an uncovered trench.

- Alameda Street, a four-lane roadway that serves parcels to the east of the Alameda Corridor. It ends at 92nd Street, north of the project site.

**Century Boulevard** is an east-west roadway classified as a Major Highway Class II in the City of Los Angeles Transportation Element. Currently, Century Boulevard is a four-lane roadway west of Wilmington Avenue, and a two-lane roadway from Wilmington Avenue to its termination at Grape Street. The City of Los Angeles Transportation Element shows Century Boulevard connecting from Grape Street to the eastern City limit with the County land, approximately 500 feet west of Alameda Street.

**Tweedy Boulevard** is a four-lane Secondary roadway with parking on both sides of the roadway located in the City of South Gate. Tweedy Boulevard has an unsignalized intersection with Alameda Street and a signalized intersection with South Alameda Street.

### **Planned Roadway Improvements**

#### ***City of Los Angeles***

Completion of Century Boulevard between Grape Street and Alameda Street as a Major Highway – Class II is listed in the City of Los Angeles Circulation Element; however there are no current plans to extend this roadway. The County of Los Angeles Master Plan of Highways does not include a planned extension of Century Boulevard to Alameda Street.

#### ***City of Lynwood***

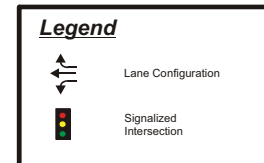
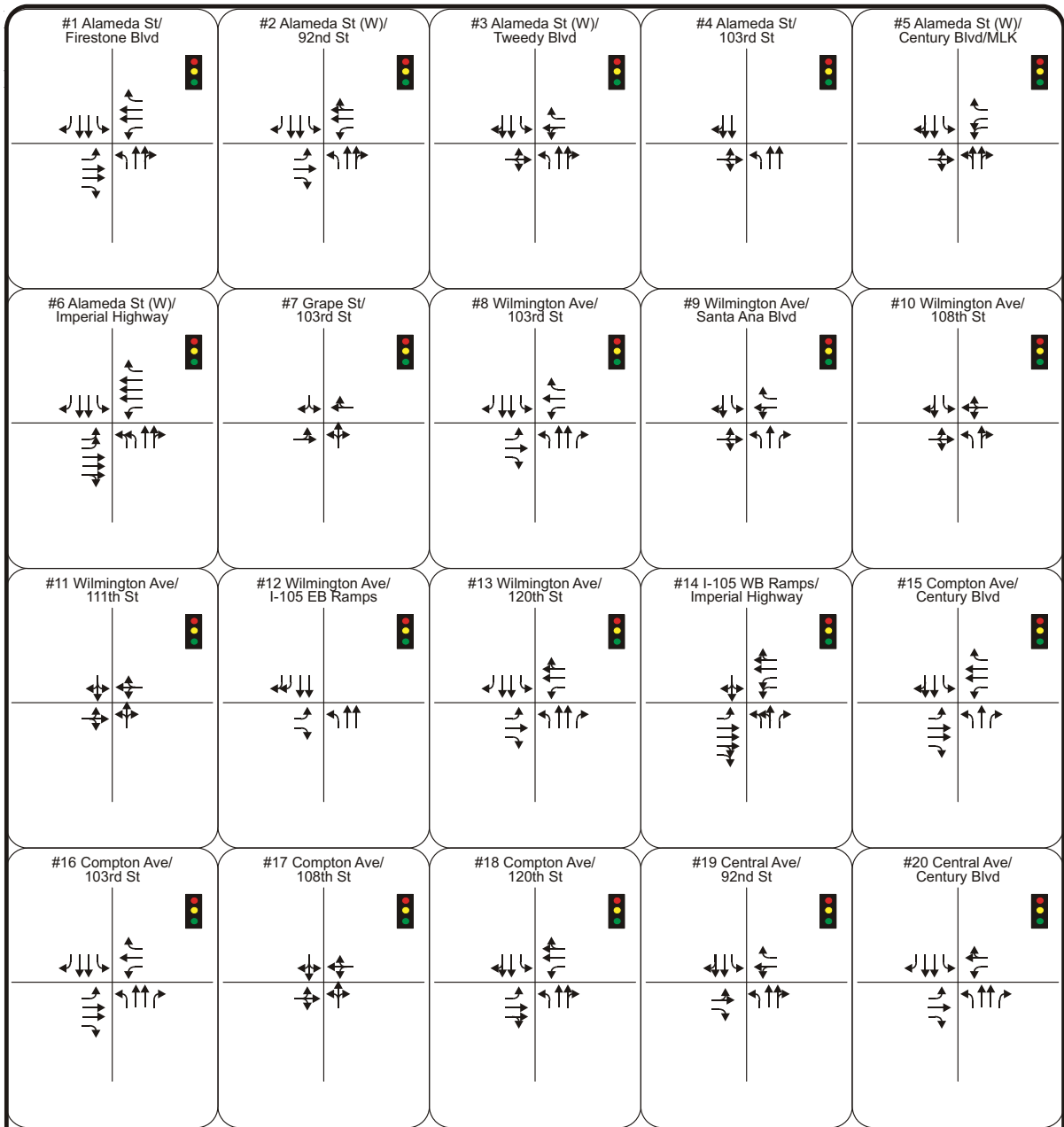
The City of Lynwood plans to reconstruct Long Beach Boulevard with medians and improved drainage from Palm Avenue to Tweedy Boulevard (construction was proposed to begin September 2009).

#### ***City of South Gate***

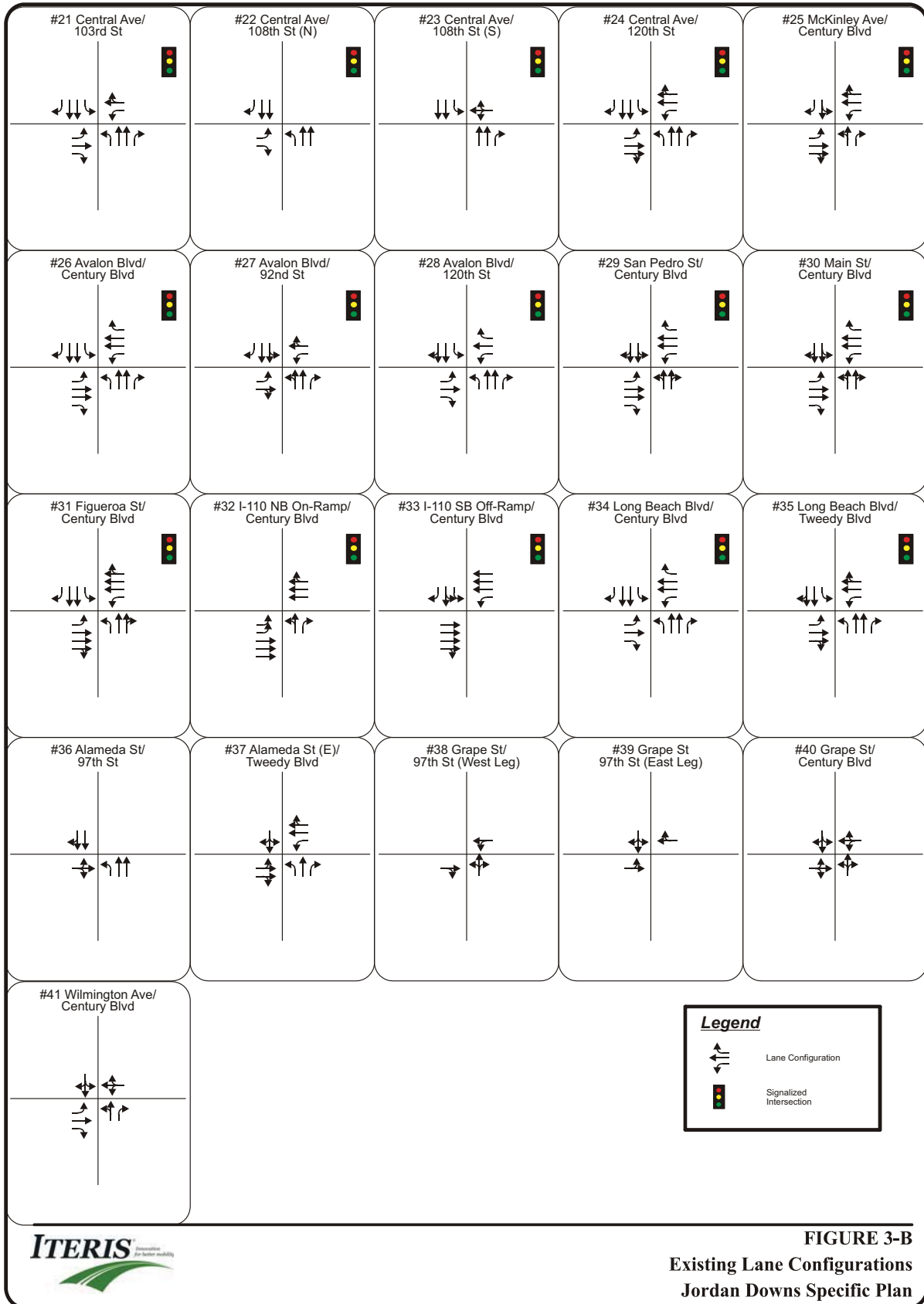
A review of the City of South Gate’s Capital Improvement Plan showed the planned improvement of the traffic signal at Tweedy Boulevard and Alameda Street. The City plans to construct a traffic signal for the Los Angeles Unified School District (LAUSD) as part of the off-site improvements for the new high school and middle school recently constructed in South Gate, on Tweedy Boulevard, east of Alameda Street. The cost of construction will be reimbursed by the LAUSD.

### **Existing Geometrics and Intersection Controls**

A field inventory was conducted at the 41 study intersections. The inventory included a review of intersection geometric layout, traffic control, lane configuration, posted speed limits, transit service, land use and parking. Existing lane configurations and traffic control at the 41 study intersections are provided in **Figure 3**. Where the right hand lane is wide enough to accommodate both through and right turn movements, the lane has been assumed as a de-facto right turn lane per LADOT standards. The intersection geometric information is required for the subsequent traffic impact analysis.



**FIGURE 3-A**  
 Existing Lane Configurations  
 Jordan Downs Specific Plan





## EXISTING TRANSIT FACILITIES

The proposed Jordan Downs site is served by nine public transit operators; Los Angeles County Metro, Hahn's Trolley/Shuttle, the Rosewood Smart Shuttle, Compton Renaissance Transit, the Orange County Transportation Authority (OCTA), Gardena Transit, Torrance Transit, the Los Angeles Department of Transportation (LADOT), and the Lynwood Trolley. Together, these operators run a total of 52 local routes, limited stop routes, express routes, and rapid bus routes within approximately 1½ to two miles of the proposed Jordan Downs site. In addition, the Metro Blue Line 103<sup>rd</sup> Street station is approximately 8/10 of a mile from the center of the proposed site located on the south-west corner of Grandee Avenue and 103<sup>rd</sup> Street. Sidewalks line both sides of 103<sup>rd</sup> Street from the Metro Blue Line Station to Alameda Street. The Metro Green Line is located approximately one mile south of the project site. A description of the 52 bus and two light rail lines is provided below.

### Bus Routes

#### Los Angeles County Metro Transit Service

##### Metro Local Service To/From Downtown Los Angeles

- Metro 45 – Lincoln Heights – Rosewood via Broadway
- Metro 48 – Downtown Los Angeles – Avalon Station via Main Street and South San Pedro Street
- Metro 26/51/52/352 – Hollywood – Compton – Artesia Transit Center via Avalon Boulevard
- Metro 53 – Downtown Los Angeles – CSU Dominguez Hills via Central Avenue
- Metro 55/355 – Downtown Los Angeles – Imperial/Wilmington Station via Compton Avenue
- Metro 60 – Downtown Los Angeles – Artesia Station via Long Beach Boulevard
- Metro 81 – Eagle Rock – Exposition park via Figueroa Street

##### Metro Local Service East/West Routes in Other Areas

- Metro 102 – Baldwin Village – South Gate via Coliseum Street
- Metro 115 – Playa Del Rey – Norwalk via Manchester Avenue, Firestone Boulevard
- Metro 117 – LAX City Bus Center – Downey via Century Boulevard, 103<sup>rd</sup> Street, Tweedy Boulevard, and Imperial Highway
- Metro 120 – El Segundo – Willowbrook via Imperial Highway
- Metro 121 – Imperial/Wilmington Station – Whittwood Mall via Imperial Highway

##### Metro Local Service North/South in Other Areas

- Metro 202 – Willowbrook – Compton - Wilmington
- Metro 204 – Athens – Hollywood via Vermont Avenue
- Metro 205 – Imperial/Wilmington Station – San Pedro via Wilmington Avenue, Vermont Avenue and Western Avenue
- Metro 206 – Athens – Hollywood via Normandie Avenue
- Metro 209 – Athens – Wilshire Center via Van Ness Avenue and Arlington Avenue
- Metro 214 – Artesia Transit Center – Broadway/Main Street Loop – Harbor Freeway Station
- Metro 251/252 – Cypress Park – Lynwood via Soto Street
- Metro 254 – Boyle Heights – 103<sup>rd</sup> Street Station via Lorena Street and Boyle Avenue

##### Metro Limited Stop Service

- Metro 305 – UCLA – Willowbrook via Sunset, San Vicente and Western

#### Metro Express To/From Downtown Los Angeles

- Metro 445 – San Pedro – Union Station via Pacific Avenue, First Street, Harbor Beacon Park and Ride Lot and Harbor Transitway
- Metro 450X – Artesia Transit Center – Downtown Los Angeles via Harbor Transit Way
- Metro 460 – Downtown Los Angeles – Disneyland via Harbor Transitway and I-105 Freeway

#### Metro Express in Other Areas

- Metro 550 – San Pedro – West Hollywood via Harbor Transitway

#### Metro Shuttle/Circulator

- Metro 611 – Huntington Park Shuttle
- Metro 612 – South Gate Shuttle

#### Metro Rapid

- Metro 715 – LAX – Downey via Manchester Avenue and Firestone Boulevard
- Metro 745 – Downtown Los Angeles – Harbor Freeway Station via Broadway
- Metro 753 – Downtown Los Angeles – Imperial/Wilmington Station via Central Avenue
- Metro 754 – Athens – Hollywood via Vermont Avenue
- Metro 760 – Downtown Los Angeles – Artesia Station via Long Beach Boulevard

#### Other Transit Providers

- Hahn’s Trolley and Shuttle
- Rosewood Smart Shuttle
- Compton Renaissance
  - Route 1 – Local Service Loop
  - Route 3 – Local Service
  - Route 5 – Local Service - Loop
- Orange County Transportation Authority
  - Route 701 – Inter-County Express Route
  - Route 702 – Inter-County Express Route
- Gardena Transit
  - Route 1 – Gardena to Los Angeles
  - Route 2 – Western Local
  - Route 5 – Gardena to Blue Line
- Torrance Transit
  - Route 1 – Torrance to Downtown Los Angeles
  - Route 2 – Torrance to Downtown Los Angeles
- Los Angeles Department of Transportation (LADOT) – Dash
  - Watts
  - Vermont/Main
- Los Angeles Department of Transportation (LADOT) – Commuter Express
  - Route 438 – Redondo Beach – Hermosa Beach – Manhattan Beach – El Segundo
  - Route 448 – Rancho Palos Verdes – Torrance – Lomita – Wilmington – Harbor City
- Lynwood Trolley (Lynwood Breeze)
  - Route A – Bullis, Cedar, Josephin, State
  - Route B – Imperial Highway, Atlantic, Lavinia
  - Route C – Fernwood, Carlin
  - Route D – Lynwood – Imperial/Wilmington Station

## Metro Blue Line

The 22-mile Metro Blue Line light rail travels from downtown Los Angeles to downtown Long Beach. In December 2009, the Metro Blue Line handled approximately 70,800 average weekday boardings, 47,700 Saturday boardings, and 42,300 Sunday and holiday boardings.

The closest Metro Blue Line stop to the proposed Jordan Downs site is the 103rd Street Station, which is approximately 8/10 of a mile from the center of the Jordan Downs site via Grape Street and 103rd Street. Sidewalks line both sides of 103rd Street from the Metro Blue Line Station to Alameda Street. At the 103rd Street Station, the Metro Blue Line has direct connections to Metro Local 117, 254, 305, 612, and LADOT Dash – Watts.

Other Metro Blue Line stops in the area include the Firestone Station to the north, and the Imperial/Wilmington Station to the south, which connects to the Metro Green Line.

## Metro Green Line

The 20-mile Metro Green Line light rail is a primarily east-west route from Redondo Beach to Norwalk, and serves El Segundo, Hawthorne, Lynwood, South Gate, and Willowbrook. In December 2009, the Metro Green Line handled approximately 34,300 average weekday boardings, 17,500 Saturday boardings, and 15,000 Sunday and holiday boardings.

The closest Metro Green Line stop to the Jordan Downs site is the Imperial/Wilmington Station, which is slightly over one mile from the center of the proposed Jordan Downs site. At the Imperial/Wilmington Station, the Metro Green Line has direct connections to the Metro Blue Line, Metro Local 55, 120, 121, 124, 202, 205, 305, 612, Hahn Trolley/Shuttle, LADOT Dash – Watts, and the Lynwood Trolley Route D.

Other Metro Green Line stops in the area include the Vermont and Avalon Stations to the west and the Long Beach Station to the east.

**Table 1** describes the service characteristics of the transit routes (type of service, nearest stop, hours of operation, night owl service, weekend service, and peak hour headway), and **Figure 4** shows the public transit routes serving the proposed Jordan Downs site.

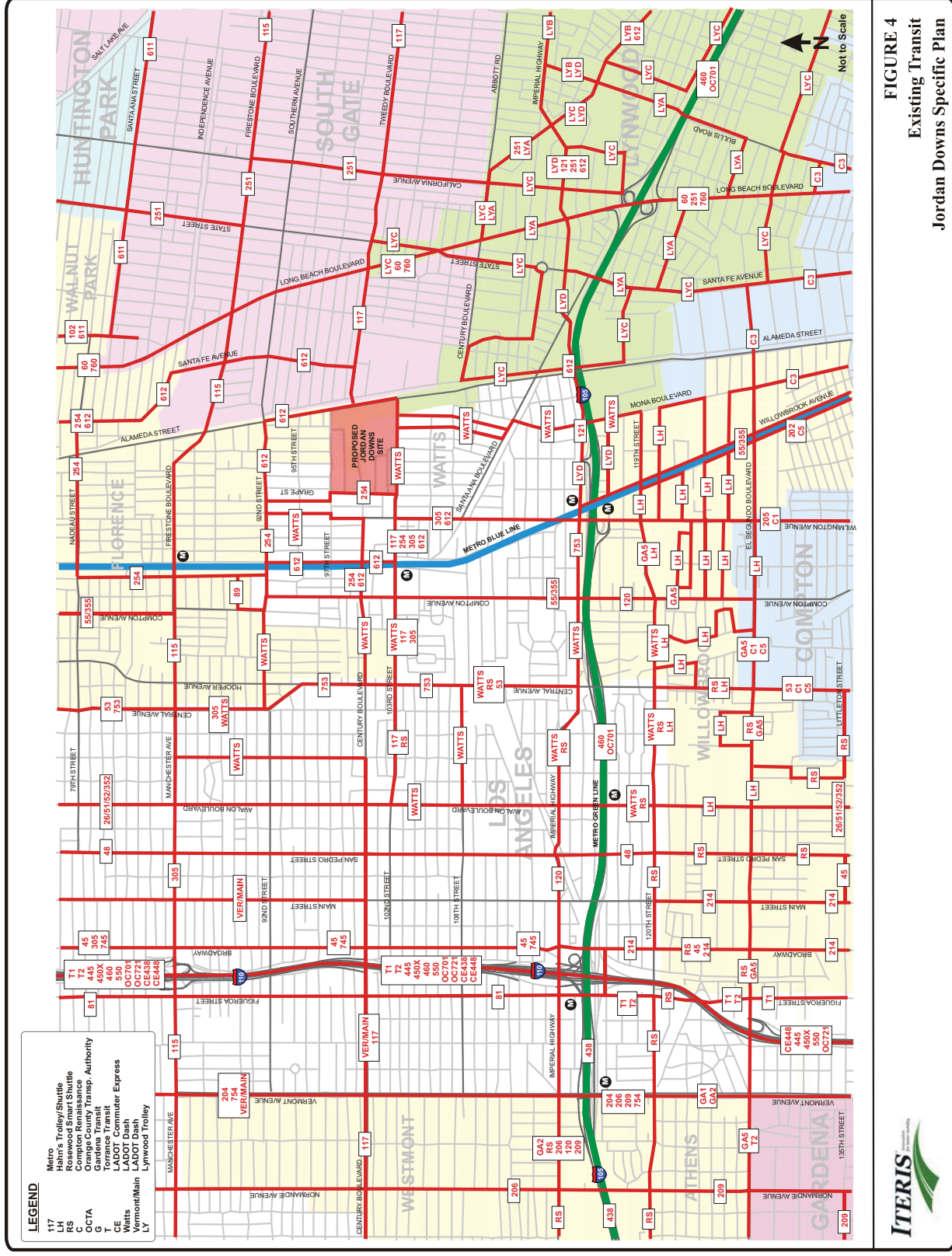
**Table 1 – Transit Service Characteristics**

Line	Type of Service	Nearest Stop	Hours of Operation	Night Owl Service	Weekend Service	Headway	
						AM Peak (7AM-9AM)	PM Peak (4PM to 6PM)
45	Metro Local Service To/From Downtown LA	Broadway/Century	4:35 AM to 5:25 AM	Yes	Saturday and Sunday	5 to 9 min	6 to 10 min
48	Metro Local Service To/From Downtown LA	San Pedro/Manchester	4:40 AM to 11:35 PM	No	Saturday and Sunday	6 to 30 min	9 to 12 min
26/51/52/352	Metro Local Service To/From Downtown LA	Avalon/Century	4:29 AM to 12:32 AM	Yes	Saturday and Sunday	3 to 12 min (b/w all routes)	1 to 11 min (b/w all routes)
53	Metro Local Service To/From Downtown LA	Central Ave	4:20 AM to 12:30 AM	No	Saturday and Sunday	9 to 15 min	10 to 15 min
55/355	Metro Local Service To/From Downtown LA	Compton Ave/103rd St	5:00 AM to 9:30 PM	Yes	Saturday and limited Sunday	20 min	25 to 30 min
60	Metro Local Service To/From Downtown LA	Long Beach/Firestone	4:29 AM to 9:51 PM	Yes	Saturday and Sunday	5 to 20 min	6 to 19 min
81	Metro Local Service To/From Downtown LA	Harbor Fwy Green Line Station	4:32 AM to 1:47 AM	No	Saturday and Sunday	6 to 15 min	7 to 10 min
102	Metro Local Service E/W Routes in Other Areas	Florence Blue Line Station	5:36 AM to 9:29 PM	No	Saturday and Sunday	34 min	37 to 39 min
115	Metro Local Service E/W Routes in Other Areas	Firestone Blue Line Station	5:00 AM to 11:50 PM	No	Saturday and Sunday	20 min	10 to 12 min
117	Metro Local Service E/W Routes in Other Areas	103rd Street from Grape to Alameda Street	5:30 AM to 1:30 AM	No	Saturday and Sunday	20 min	13 to 20 min
120	Metro Local Service E/W Routes in Other Areas	Imperial/Compton	5:40 AM to 12:00 AM	No	Saturday and Sunday	15 to 30 min	25 to 35 min
121	Metro Local Service E/W Routes in Other Areas	Imperial/Wilmington Green Line Station	5:00 AM to 12:00 AM	No	Saturday and Sunday	30 to 45 min	30 min
202	Metro Local Service N/S Routes in Other Areas	Imperial/Wilmington/Rosa Parks Green Line Station	5:26 AM to 7:21 PM (No mid-day service)	Yes	None	29 to 31 min	30 min
204	Metro Local Service N/S Routes in Other Areas	Vermont/Century	4:35 AM to 5:16 AM	Yes	Saturday and Sunday	13 to 25 min	16 to 26 min
205	Metro Local Service N/S Routes in Other Areas	Imperial/Wilmington Green Line Station	4:51 AM to 11:55 PM	No	Saturday and Sunday	31 to 37 min	21 to 25 min
206	Metro Local Service N/S Routes in Other Areas	Vermont Green Line Station	4:24 AM to 1:35 AM	No	Saturday and Sunday	14 to 21 min	12 to 19 min

Line	Type of Service	Nearest Stop	Hours of Operation	Night Owl Service	Weekend Service	Headway	
						AM Peak (7AM-9AM)	PM Peak (4PM to 6PM)
209	Metro Local Service N/S Routes in Other Areas	Vermont Green Line Station	5:27 AM to 8:56 PM	No	None	57 min	57 min
214	Metro Local Service N/S Routes in Other Areas	Harbor Fwy Green Line Station	5:30 AM to 7:32 PM	No	None	20 min	20 min
251/252	Metro Local Service N/S Routes in Other Areas	Long Beach Green Line Station	4:19 AM to 5:44 AM	Yes	Saturday and Sunday	15 to 32 min	16 to 36 min
254	Metro Local Service N/S Routes in Other Areas	Grape St/103rd St	4:40 AM to 8:00 PM	No	Saturday and Sunday	60 min	60 min
305	Metro Limited Stop Service	Compton/103rd St	5:10 AM to 10:00 PM	No	Saturday and Sunday	30 min	30 to 45 min
445	Metro Express to/from Downtown LA	Harbor Fwy Green Line Station	5:04 AM to 8:45 PM	No	Saturday and Sunday	31-40 min	1 hr
450X	Metro Express to/from Downtown LA	Harbor Fwy Green Line Station	6:00 AM to 6:53 PM (No mid-day service)	No	None	12 to 20 min	12 to 20 min
460	Metro Express to/from Downtown LA	Manchester /I-110 Fwy	4:22 AM to 1:42 AM	No	Saturday and Sunday	20 to 26 min	27 to 29 min
550	Metro Express in Other Areas	Manchester /I-110 Fwy	4:51 AM to 11:49 PM	No	Saturday and Sunday	28-30 min	25 min
611	Metro Shuttle/Circulator	Florence Blue Line Station	4:47 AM to 10:46 PM	No	Saturday and Sunday	40 min	40 min
612	Metro Circulator	Wilmington Av/103rd St	5:00 AM to 11:00 PM	No	Saturday and Sunday	30 min	30 to 45 min
715	Metro Rapid	Firestone Blue Line Station	5:00 AM to 8:30 PM	No	None	10 min	10 min
745	Metro Rapid	Broadway/Century	4:49 AM to 9:05 PM	No	Saturday and Sunday	7 to 13 min	9 to 13 min
753	Metro Rapid	103rd St/Central Ave	5:00 AM to 9:00 PM	No	None	10 min	10 min
754	Metro Rapid	Vermont/Century	5:07 AM to 9:23 PM	No	Saturday and Sunday	4 to 12 min	4 to 11 min
760	Metro Rapid	Long Beach/Firestone	4:53 AM to 8:45 PM	No	Saturday and Sunday	10 min	12 to 14 min
Hahn's Trolley/Shuttle	Local Service	Kenneth Hahn Plaza	6:30 AM to 6:10 PM	No	Saturday Only	30 min	30 min

Line	Type of Service	Nearest Stop	Hours of Operation	Night Owl Service	Weekend Service	Headway	
						AM Peak (7AM-9AM)	PM Peak (4PM to 6PM)
Rosewood Smart Shuttle	Local Shuttle	Avalon/103rd St	6:00 AM to 7:00 PM	No	None	1 hr	1 hr
Compton Renaissance 1	Local Service - Loop	Central/El Segundo	7:30 AM to 3:21 PM	No	Limited Service on Saturday Only	30 min	N/A
Compton Renaissance 3	Local Service	El Segundo/Santa Fe	7:30 AM to 3:16 PM	No	Limited Service on Saturday Only	30 min	N/A
Compton Renaissance 5	Local Service - Loop	Wilmington/El Segundo	7:30 AM to 3:15 PM	No	Limited Service on Saturday Only	30 min	N/A
OCTA 701	Inter-County Express Route	Manchester /I-110 Fwy	5:32 AM to 7:53 AM - NB 4:14 PM to 6:36 PM - SB (No mid-day service)	No	None	19 to 36 min	20 to 33 min
OCTA 702	Inter-County Express Route	Manchester /I-110 Fwy	5:15 AM to 9:15 AM - NB 4:30 PM to 6:15 PM - NB 6:10 AM to 7:59 AM - SB 3:15 PM to 7:20 PM - SB (No mid-day service)	No	None	30 to 45 min	30 min to 1 hr
Gardena 1	Gardena to Los Angeles	El Segundo/Vermont	8:00 AM to 5:00 PM	No	Saturday and Sunday	15 to 30 min	15 min
Gardena 2	Western Local	120th/Vermont	5:02 AM to 7:30 PM	No	Saturday and Sunday	30 to 31 min	29 to 31 min
Gardena 5	Gardena to Blue Line	Imperial/Wilmington Station	5:21 AM to 8:31 PM	No	None	30 min	30 min
Torrance 1	Torrance to Downtown LA	Harbor Fwy Green Line Station	4:45 AM to 10:10 PM	No	Saturday and Sunday	30 min	30 min
Torrance 2	Torrance to Downtown LA	Harbor Fwy Green Line Station	5:35 AM to 8:40 PM	No	Saturday Only	1 hr	1 hr
438	LADOT Commuter Express	Travels through study area via I-110 Fwy	5:43 AM to 8:54 AM - NB 3:45 PM to 7:27 PM - SB (No mid-day service)	No	None	11 to 16 min	7 to 15 min
448	LADOT Commuter Express	Harbor/Century Transitway Station	5:45 AM to 8:33 AM - NB 3:55 PM to 6:59 PM - SB	No	None	16 to 20 min	15 to 30 min
Watts	LADOT Dash	103rd Street from Grape to Alameda Street	7:00 AM to 6:00 PM	No	Saturday Only	20 min	20 min
Vermont-Main	LADOT Dash	Main/Century	6:58 AM to 7:35 PM	No	Saturday Only	20 min	20 min

Line	Type of Service	Nearest Stop	Hours of Operation	Night Owl Service	Weekend Service	Headway	
						AM Peak (7AM-9AM)	PM Peak (4PM to 6PM)
Lynwood Trolley A	Local Service	Long Beach Blue Line Station	9:00 AM to 5:30 PM	No	None	30 min	30 min
Lynwood Trolley B	Local Service	Imperial Hwy/Bullis	9:00 AM to 5:30 PM	No	None	1 hr	1 hr
Lynwood Trolley C	Local Service	Alameda/Century	9:00 AM to 12:00 PM 12:30 PM to 5:30 PM	No	None	30 min	30 min
Lynwood Trolley D	Local Service	Imperial/Wilmington Station	9:00 AM to 5:30 PM	No	None	30 min	30 min
Blue Line	Metro Rail	103rd Street Blue Line Station	4:20 AM to 1:00 AM	No	Saturday and Sunday	5 to 6 min	5 to 8 min
Green Line	Metro Rail	Imperial/Wilmington Green Line Station	4:00 AM to 1:00 AM	No	Saturday and Sunday	8 min	7 to 9 min





## LEVEL OF SERVICE (LOS) AND IMPACT CRITERIA

The efficiency of traffic operations at a location is measured in terms of Level of Service (LOS). LOS is a description of traffic performance at intersections. The LOS concept is a measure of average operating conditions at intersections during an hour. It is based on a volume-to-capacity (V/C) ratio for signalized intersections and the average delay per vehicle for unsignalized locations. Levels range from ‘A’ to ‘F’, with ‘A’ representing excellent (free-flow) conditions and ‘F’ representing extreme congestion.

Each jurisdiction has prescribed guidelines for traffic studies that were used for the analysis in this report. **Tables 2 and 3** below describe the level of service concept and operating conditions expected under each level of service for signalized and unsignalized intersections, respectively.

**Table 2 – Level of Service Criteria for Signalized Intersections**

Level of Service	Description	Volume to Capacity Ratio
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0.000-.600
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	.601-.700
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	.701-.800
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues. This level is typically associated with design practice for peak periods.	.801-.900
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	.901-1.000
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	Over 1.000

Source: Transportation Research Circular 212: Interim Materials on Highway Capacity. Washington, DC: TRB, 1980

**Table 3 – Level of Service Criteria for Unsignalized Intersections**

Level of Service (LOS)	Highway Capacity Manual Average Control Delay (sec/veh)	Level of Service Description
A	< 10	Little or no delay
B	> 10 and < 15	Short traffic delays
C	> 15 and < 25	Average traffic delays
D	> 25 and < 35	Long traffic delays
E	> 35 and < 50	Very long traffic delays
F	> 50	Severe congestion

Source: Transportation Research Board, Highway Capacity Manual, 2000

## City of Los Angeles Impact Criteria

### Signalized Intersections

Level of Service analyses for all study intersections were conducted using the Transportation Research Board Critical Movement Analysis (CMA), Circular 212 Planning Method, per the City of Los Angeles Traffic Study Policies and Procedures. The CMA method determines the V/C ratio on a critical lane basis and the LOS at signalized intersections. The V/C for the intersection corresponds to a LOS value, which describes the intersection operations.

### Unsignalized Intersections

In reviewing unsignalized intersections, only intersections that are adjacent to the project or are expected to be integral to the project's site access and circulation plan were identified as study intersections. For these intersections, the overall intersection delay is measured pursuant to procedures accepted by LADOT during the scoping process. If, based on the estimated delay, the resultant LOS is "E" or "F" in the "Future With Project" scenario, then the intersection should be evaluated for the potential installation of a new traffic signal. The study includes traffic signal warrant analyses prepared pursuant to Section 353 of LADOT's Manual of Policies and Procedures. Unsignalized intersections are evaluated to determine the need for the installation of a traffic signal or other traffic control device, but are not included in the impact analysis.

In this study, the unsignalized intersections operating conditions were evaluated using the Highway Capacity Methodology (HCM 2000) for unsignalized intersections. This methodology estimates the average total delay for each of the traffic movements and determines the level of service for each movement. The overall average delay is measured in seconds per vehicle, and level of service is then calculated for the entire intersection. The HCM delay value is translated to a LOS estimate, which is a relative measure of the intersection performance.

### Significant Transportation Impact

The following scenarios were evaluated to determine if the addition of the proposed project would result in a significant transportation impact per City of Los Angeles guidelines:

- a) Existing conditions;
- b) Future without Project with ambient growth and related projects;
- c) Future with Project with ambient growth and related projects (Final V/C); and
- d) Future with Project with ambient growth, related projects, and traffic mitigation (if necessary).

A transportation impact at a signalized intersection shall be deemed "significant" in accordance with the criteria in **Table 4** below, except as otherwise specified in a Transportation Specific Plan (TSP), Interim Control Ordinance (ICO), or Congestion Management Program (CMP).

**Table 4 – City of Los Angeles Significant Impact Criteria**

Level of Service	Final V/C Ratio	Project-Related Increase in V/C
C	> 0.701 – 0.800	Equal to or greater than 0.040
D	> 0.801 – 0.900	Equal to or greater than 0.020
E	> 0.901 – 1.000	Equal to or greater than 0.010
F	Greater than 1.000	Equal to or greater than 0.010

Source: City of Los Angeles Department of Transportation, Traffic Policies and Procedures.

### County of Los Angeles Impact Criteria

Analysis of intersections located outside the City of Los Angeles is presented for informational purposes.

#### Signalized Intersections

Level of Service analysis for intersections located within or bordering the County of Los Angeles, City of Lynwood, or City of South Gate were conducted using the Intersection Capacity Utilization (ICU) methodology, as defined in the County of Los Angeles Traffic Impact Analysis Report Guidelines. A maximum of 1,600 vehicles per hour per lane was used (2,880 vehicles per hour for dual left-turn lanes) and a ten percent yellow clearance cycle was included.

#### Significant Transportation Impact

The following scenarios were evaluated to determine if the addition of the proposed project would result in a significant transportation impact per County of Los Angeles guidelines:

- a) Existing conditions;
- b) Existing conditions plus ambient growth to the year the project will be completed (pre-project);
- c) Traffic in (b) plus project traffic;
- d) Traffic in (c) with the proposed mitigation measures (if necessary);
- e) Traffic in (c) plus the cumulative traffic of other known developments; and
- f) Traffic in (e) with the proposed mitigation measures (if necessary).

For intersections, the impact is considered significant if the project-related increase in the volume-to-capacity (V/C) ratio equals or exceeds the thresholds shown in **Table 5** below.

**Table 5 – County of Los Angeles Significant Impact Criteria**

Pre-Project		Project V/C Increase
Level of Service	Pre-Project V/C	
C	0.71 – 0.80	0.04 or more
D	0.81 – 0.90	0.02 or more
E/F	0.91 or more	0.01 or more

Source: County of Los Angeles, Traffic Impact Analysis Report Guidelines.

## City of Lynwood Impact Criteria

### Significant Transportation Impact

Level of Service analysis for intersections located within or bordering the City of Lynwood were conducted using the Intersection Capacity Utilization (ICU) methodology. Impacts to study intersections are considered significant if:

- An unacceptable peak hour Level of Service (LOS) (i.e. LOS E or F) at any of the key intersections is projected. The City of Lynwood considers LOS D (ICU=0.801 – 0.900) to be the minimum desirable LOS for all intersections;
- The addition of project-related traffic causes an increase of 0.020 or greater in the ICU value for signalized intersections, causing or worsening of LOS E or F (ICU>0.900) ; and
- At unsignalized intersections, this report identifies a significant traffic impact when the addition of project-related traffic results in a decrease in LOS by one level or more for those locations operating at LOS D or E.

## City of South Gate Impact Criteria

### Significant Transportation Impact

Level of Service analysis for intersections located within or bordering the City of South Gate were conducted using the Intersection Capacity Utilization (ICU) methodology. Impacts to study intersections are considered significant if:

- The signalized/unsignalized intersection operates at an acceptable LOS (LOS D or better) without the proposed project and operates at an unacceptable LOS E or F with the proposed project;
- The signalized intersection operates at unacceptable LOS E or F without the proposed project and has an increase in the V/C ratio of greater than 0.02; and
- The unsignalized intersection operates at unacceptable LOS E or F without the proposed project and has an increase in the V/C ratio of greater than 0.02.

## EXISTING TRAFFIC OPERATIONS ANALYSIS

The AM and PM peak hour level of service analyses were conducted at the 41 existing study intersections based on the existing traffic volume counts and the methodologies described previously. The level of service analysis was performed using TRAFFIX software, version 7.9.

### Traffic Volumes

The traffic impact analysis is based on the highest single hour of traffic during the AM and PM peak period at the 41 study intersections. New traffic counts were conducted between 7:00 – 9:00 AM and 4:00 – 6:00 PM in March 2009 and April 2010. The existing AM and PM peak hour turning movement volumes at the existing study intersections are shown in **Figure 5**. Traffic count sheets are provided in **Appendix A**.

### Existing Level of Service

Intersections were evaluated using the CMA - Circular Planning 212 methodology for all signalized study intersections. The existing conditions level of service analyses results are summarized in **Table 6**.

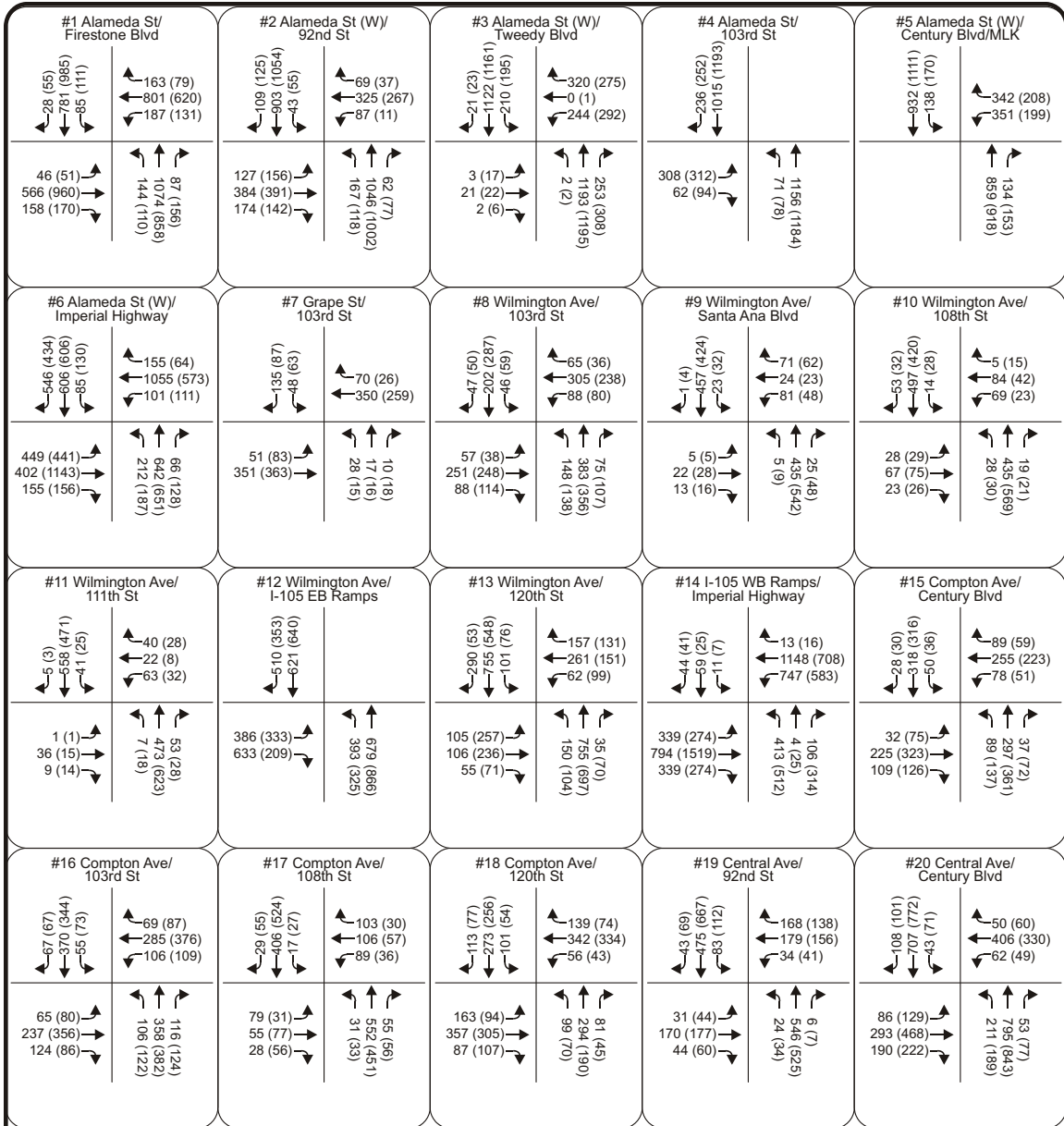
**Table 6 – Existing Peak Hour LOS - (City of Los Angeles Guidelines)**

#	Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
			LOS	V/C	LOS	V/C
1	Alameda St/Firestone Blvd	County of LA	C	0.757	D	0.819
2	Alameda St (W)/92nd St	County of LA	C	0.726	B	0.698
3	Alameda St (W)/Tweedy Blvd **	(future) City of LA	D	0.881	E	0.901
4	Alameda St/103rd St <sup>+</sup>	City of LA/Lynwood	B	0.648	C	0.747
5	Alameda St (W)/Century Blvd/MLK	Lynwood	B	0.685	B	0.641
6	Alameda St (W)/Imperial Highway	County of LA/Lynwood	E	0.917	C	0.786
7	Grape St/103rd St <sup>+</sup>	City of LA	A	0.398	A	0.353
8	Wilmington Ave/103rd St <sup>+</sup>	City of LA	A	0.307	A	0.306
9	Wilmington Ave/Santa Ana Blvd <sup>+</sup>	City of LA	A	0.289	A	0.347
10	Wilmington Ave/108th St <sup>+</sup>	City of LA	A	0.410	A	0.414
11	Wilmington Ave/111th St <sup>+</sup>	City of LA	A	0.391	A	0.409
12	Wilmington Ave/I-105 EB Ramps <sup>+</sup>	City of LA/County of LA	D	0.838	A	0.586
13	Wilmington Ave/120th St	County of LA	A	0.561	A	0.548
14	I-105 WB Ramps/Imperial Highway <sup>+</sup>	City of LA/County of LA	D	0.818	C	0.768
15	Compton Ave/Century Blvd <sup>+</sup>	City of LA	A	0.258	A	0.306
16	Compton Ave/103rd St <sup>+</sup>	City of LA	A	0.327	A	0.400
17	Compton Ave/108th St <sup>+</sup>	City of LA	A	0.588	A	0.459
18	Compton Ave/120th St	County of LA	A	0.464	A	0.356
19	Central Ave/92nd St <sup>+</sup>	City of LA	A	0.442	A	0.475
20	Central Ave/Century Blvd <sup>+</sup>	City of LA	B	0.638	B	0.629
21	Central Ave/103rd St <sup>+</sup>	City of LA	A	0.529	A	0.565
22	Central Ave/108th St (N) <sup>+</sup>	City of LA	A	0.421	A	0.473
23	Central Ave/108th St (S) <sup>+</sup>	City of LA	A	0.431	A	0.479
24	Central Ave/120th St <sup>+</sup>	City of LA	A	0.445	A	0.481
25	McKinley Ave/Century Blvd <sup>+</sup>	City of LA	A	0.241	A	0.234
26	Avalon Blvd/Century Blvd <sup>+</sup>	City of LA	A	0.426	A	0.515
27	Avalon Blvd/92nd St <sup>+</sup>	City of LA	A	0.332	A	0.353
28	Avalon Blvd/120th St <sup>+</sup>	City of LA	A	0.385	A	0.436
29	San Pedro St/Century Blvd <sup>+</sup>	City of LA	A	0.463	A	0.505
30	Main St/Century Blvd <sup>+</sup>	City of LA	A	0.491	A	0.499
31	Figueroa St/Century Blvd <sup>+</sup>	City of LA	B	0.671	A	0.518
32	I-110 NB On-Ramp/Century Blvd <sup>+</sup>	City of LA	A	0.353	A	0.284
33	I-110 SB Off-Ramp/Century Blvd <sup>+</sup>	City of LA	A	0.295	A	0.374
34	Long Beach Blvd/Century Blvd	South Gate/Lynwood	C	0.738	C	0.725
35	Long Beach Blvd/Tweedy Blvd	South Gate/Lynwood	C	0.703	B	0.664
36	Alameda St/97th St* **	(future) City of LA/County of LA	-	-	-	-
37	Alameda St (E)/Tweedy Blvd* **	(future) City of LA/South Gate	-	-	-	-
38	Grape St/97th St (W)*	City of LA	-	-	-	-
39	Grape St 97th St (E)*	City of LA	-	-	-	-
40	Grape St/Century Blvd*	City of LA	-	-	-	-
41	Wilmington Ave/Century Blvd*	City of LA	-	-	-	-

Note:  
\* Unsignalized intersections are analyzed separately under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario  
\*\* Intersection will become partially or fully under the City of Los Angeles jurisdiction with annexation, no ATSAC credit is taken  
<sup>+</sup> City of Los Angeles signalized intersections reflect an ATSAC credit which reduces the final V/C ratio by 0.100

The results indicate that per CMA methodology, one study intersection operates at LOS E during the AM peak hour, and one study intersection operates at LOS E during the PM peak hour. The following study intersections are currently operating at LOS E during the AM and/or PM peak hours:

- #3 Alameda Street (W) and Tweedy Boulevard (PM Peak Hour)
- #6 Alameda Street (W) and Imperial Highway (AM Peak Hour)

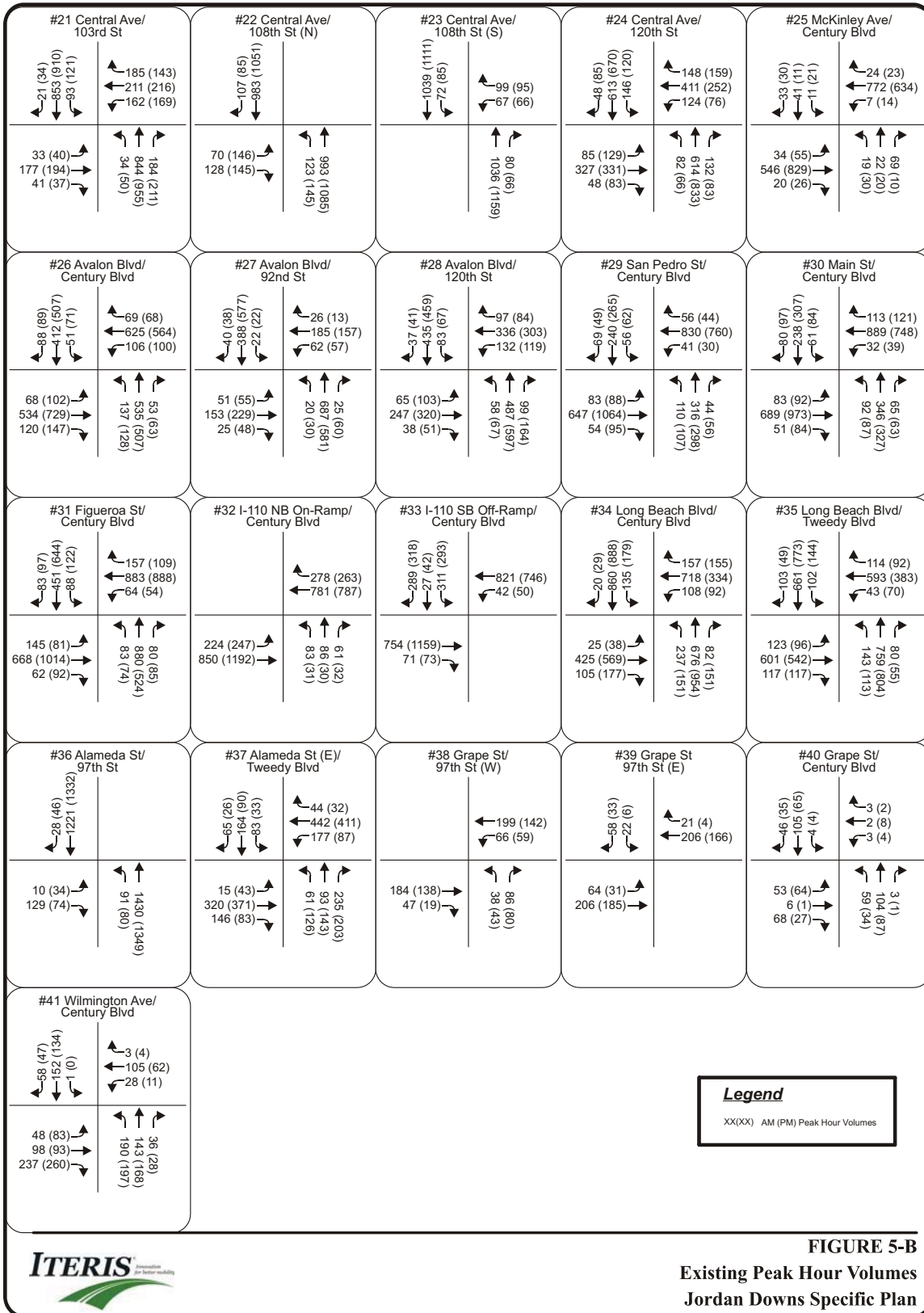


**Legend**  
XX(XX) AM (PM) Peak Hour Volumes



**FIGURE 5-A**  
Existing Peak Hour Volumes  
Jordan Downs Specific Plan





## EXISTING PLUS AMBIENT GROWTH PLUS RELATED PROJECT CONDITIONS

Existing Plus Ambient Growth Plus Related Project conditions represent future traffic growth and operating conditions due to ambient growth and specific, planned or approved development projects in the study area, without consideration of the proposed project. Results from this scenario represent future without project conditions.

### Ambient Growth

Ambient traffic growth is the traffic growth that will occur in the study area due to general employment growth, housing growth and growth in regional through trips in southern California. An ambient growth rate of 0.43 percent per year in the study area was calculated using the SCAG regional model. Local area volumes were obtained for the 2008 and 2035 travel demand model years. The average total growth from 2008 to 2035 was 11.5 percent along these roadways. This results in 0.43 percent ambient growth per year. The project buildout year is 2020, therefore a 4.3 percent growth rate (10 years at 0.43 percent per year) was used.

### Related Projects

The related projects included in this study were compiled for the Cities of Los Angeles, Lynwood, and South Gate, and the County of Los Angeles. Nine planned projects are located within a mile and a half of the proposed project site. The locations of these related projects are shown in **Figure 6** and consist of the following developments:

#### Los Angeles

- 10341 Graham Ave, Los Angeles, CA 90002-3667: Proposed 1,040 seat movie theater with matinee and 12,000 square foot education center. Existing site is vacant. Built-out year 2011.
- 11300 Monitor Ave, Los Angeles, CA 90059-1938: Proposed 500 student public high school. Existing site is vacant. Built-out year 2009.

#### South Gate

- The Gateway in South Gate: 600,000 square foot lifestyle, retail and entertainment destination located at the intersection of Atlantic Avenue and Firestone Boulevard in South Gate.
- Atlantic Park Plaza: 50,000 square foot shopping center at the corner of Atlantic Boulevard and Tweedy Boulevard.
- Firestone Village and Shops - 3125 Firestone Boulevard: 18,090 square foot retail center with 47 townhouse units.
- East Los Angeles College (ELAC) Firestone campus located on the northwest corner of the intersection of Santa Fe Avenue at Firestone Boulevard..
- Los Angeles Unified School District (LAUSD) Elementary School No. 9 on Willow Place between Santa Fe Avenue and Long Beach Boulevard.

## Lynwood

- Triangle Project: 120 single-family units in a location bounded by Alameda Street, Imperial Highway, and Fernwood Avenue.
- Fernwood Estates: 30 single-family units on a redevelopment agency-owned property adjacent to the I-105 freeway.

The total number of vehicle trips generated by these projects is shown in **Table 7**. All related projects trip distributions were based on existing project EIRs and studies, if available. If no earlier studies were available, related project trips were assigned a similar trip distribution as the proposed project, with adjustments depending on the type of development, residential or non-residential, and location. The resulting related project trip assignment is shown in **Figure 7**. Note that some study intersections are not expected to have traffic from the related projects pass through them, based on the trip generation and distribution.

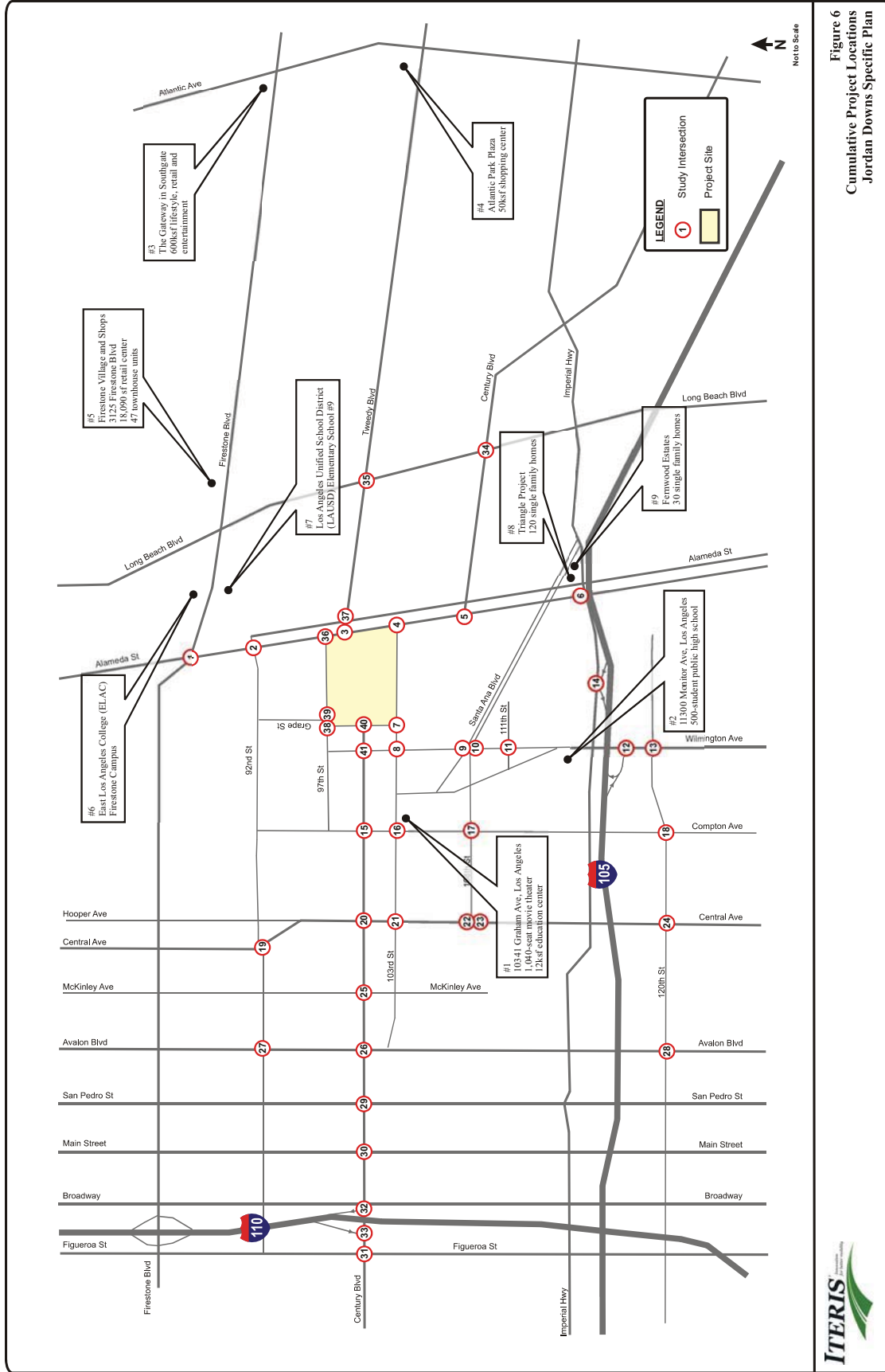


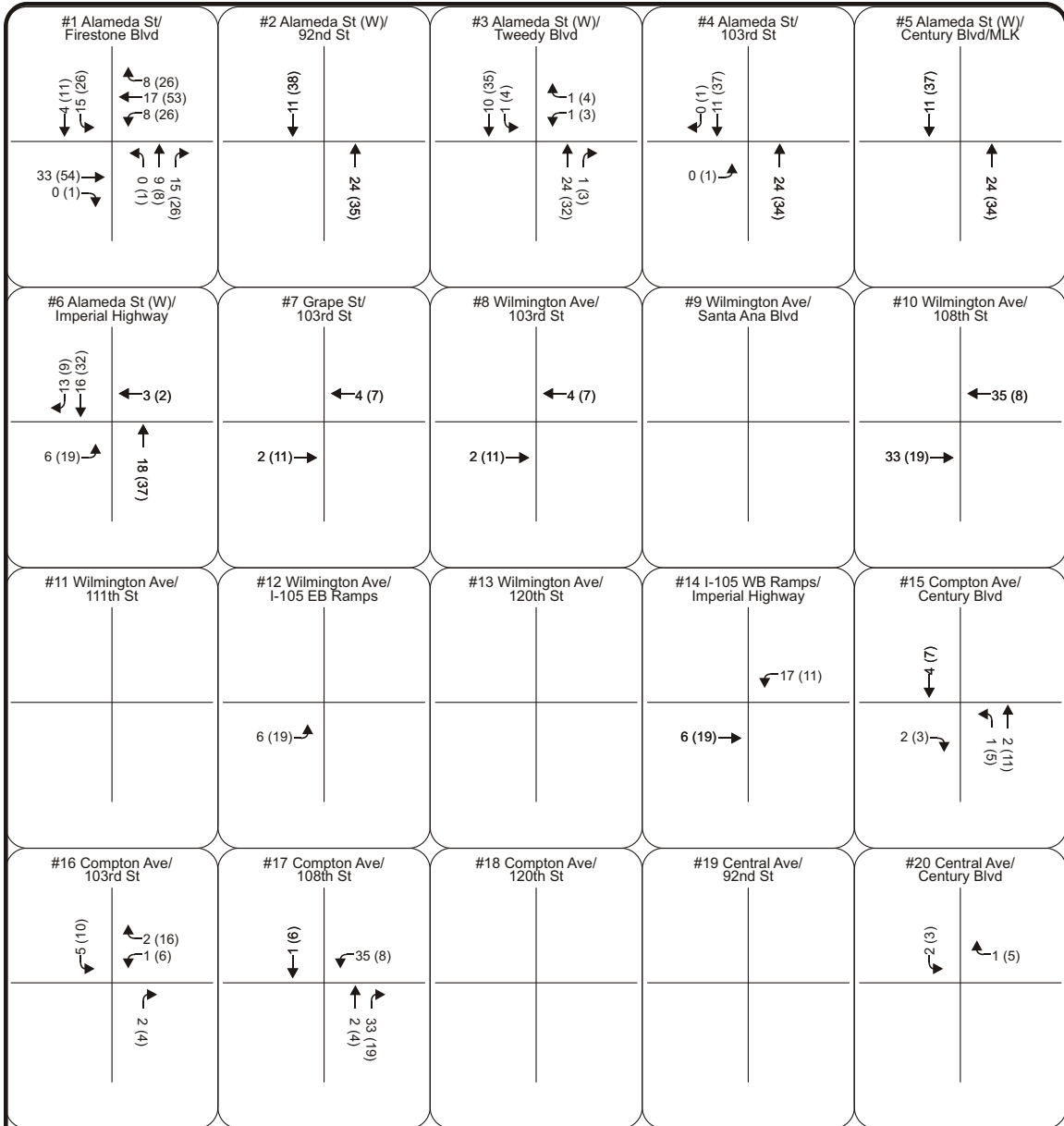
Figure 6  
Cumulative Project Locations  
Jordan Downs Specific Plan



Table 7 – Related Project Trip Generation

Project	Description / Location	Land Use Code	Land Use	Size		Jurisdiction	Daily Trips	WEEKDAY							
								AM peak Hour Trips		PM Peak Hour Trips		AM peak Hour Trips		PM Peak Hour Trips	
								In	Out	Total	In	Out	Total	In	Out
1	10341 Graham Ave, Los Angeles, CA 90002-3667 Proposed 1,040-seat movie theater w/matinee & 12ksf education center. Existing site is vacant. Build-out year 2011.	444	Movie Theater w/Matinee	1,040	Seats	City of Los Angeles	632	14	6	20	28	43	71		
2	11300 Monitor Ave, Los Angeles, CA 90059-1938 Proposed 500-student public high school. Existing site is vacant. Built-out year 2009.	530	High School	500	Students	City of Los Angeles	855	139	66	205	33	37	70		
3	The Gateway in South Gate: 600,000-square-foot lifestyle, retail and entertainment destination located at the intersection of Atlantic Avenue and Firestone Boulevard in South Gate.	820	Shopping Center	600	KSF	City of South Gate	19,503	250	164	414	770	872	1,642		
4	Atlantic Park Plaza: a 50,000 square foot shopping center at the corner of Atlantic Boulevard and Tweedy Boulevard.	820	Shopping Center	50	KSF	City of South Gate	2,147	31	19	50	92	95	187		
5	Firestone Village and Shops: 3125 Firestone Boulevard, an 18,090 square foot retail center with 47 townhouse units.	814 230	Specialty Retail Center Residential Condo/Townhouse	18.09 47	KSF DU	City of South Gate	1,028	15	24	39	37	31	68		
6	East Los Angeles College (ELAC) Firestone campus located on the northwest corner of the intersection of Santa Fe Avenue at Firestone Boulevard.	-	Community College	12,000 163	Students Employees	City of South Gate	8,243	731	160	891	894	599	1,493		
7	Los Angeles Unified School District (LAUSD) Elementary School No. 9 on Willow Place between Santa Fe Avenue and Long Beach Boulevard.	520	Elementary School	650	Students	City of South Gate	482	129	109	238	60	85	145		
8	Triangle Project: 120 single family units in a location bounded by Alameda Street, Imperial Highway, and Fernwood Avenue.	210	SFR	120	DU	City of Lynwood	1,148	23	67	90	76	45	121		
9	Fernwood Estates: 30 single-family units on a redevelopment agency-owned property adjacent to the I-105 freeway.	210	SFR	30	DU	City of Lynwood	287	6	17	23	19	11	30		
<b>TOTAL</b>							<b>34,325</b>	<b>1,338</b>	<b>632</b>	<b>1,970</b>	<b>2,009</b>	<b>1,818</b>	<b>3,827</b>		

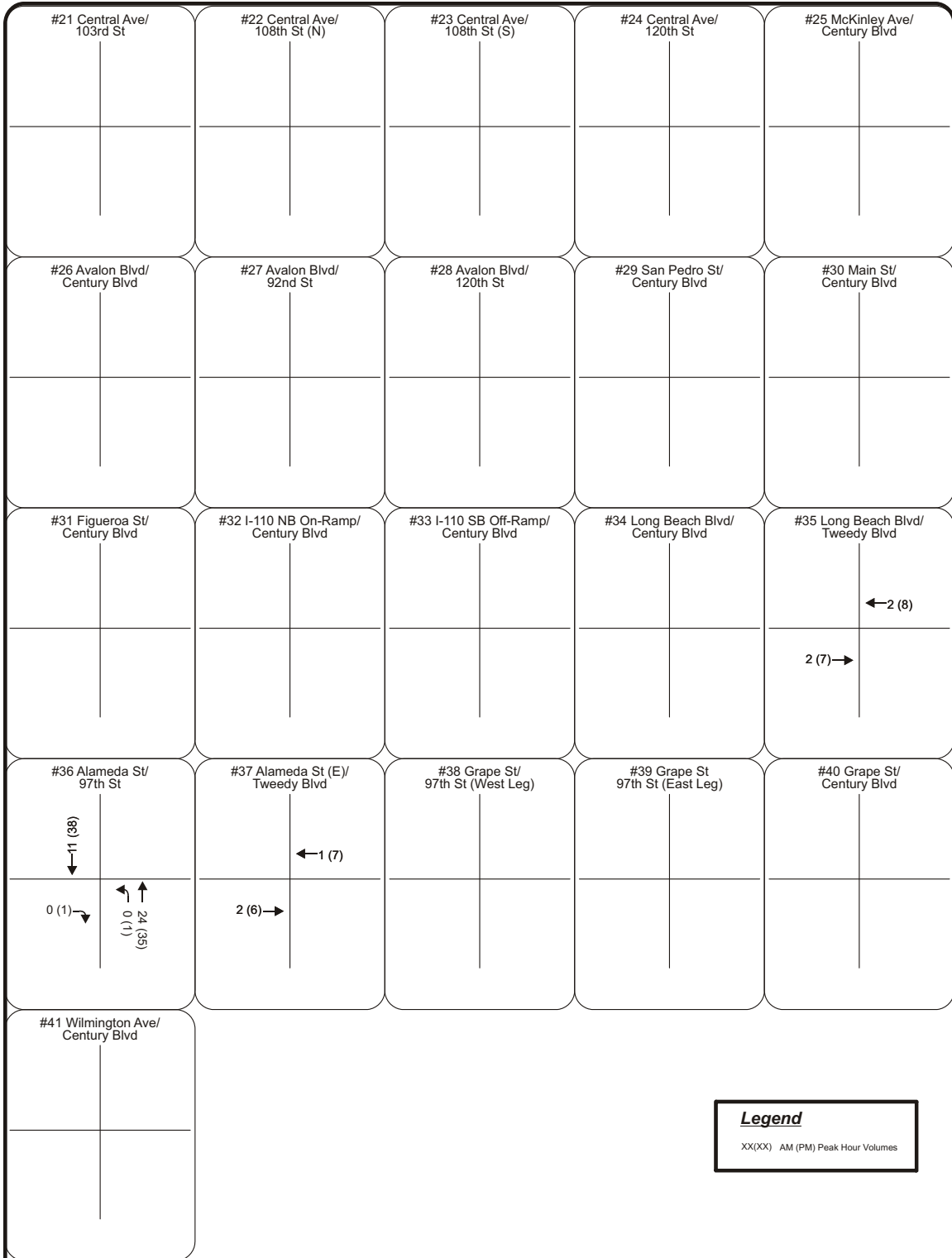
Note: DU – dwelling unit; KSF – 1,000 square feet.  
Sources: Institute of Transportation Engineers, *Trip Generation*, 8<sup>th</sup> Edition.  
City of Los Angeles



**Legend**  
XX(XX) AM (PM) Peak Hour Volumes



**FIGURE 7-A**  
Cumulative Projects Only Peak Hour Volumes  
Jordan Downs Specific Plan



**Legend**  
 XX(XX) AM (PM) Peak Hour Volumes



**FIGURE 7-B**  
 Cumulative Projects Only Peak Hour Volumes  
 Jordan Downs Specific Plan

## Existing Plus Ambient Growth Plus Related Projects Level of Service

All study intersections were evaluated under this scenario using the CMA - Circular Planning 212 methodology. Level of service analyses under the Existing Plus Ambient Growth Plus Related Projects condition were performed for both AM and PM peak hours and are summarized below in **Table 8**.



**Table 8 – Existing Plus Ambient Growth Plus Related Projects Peak Hour LOS – (City of Los Angeles Guidelines)**

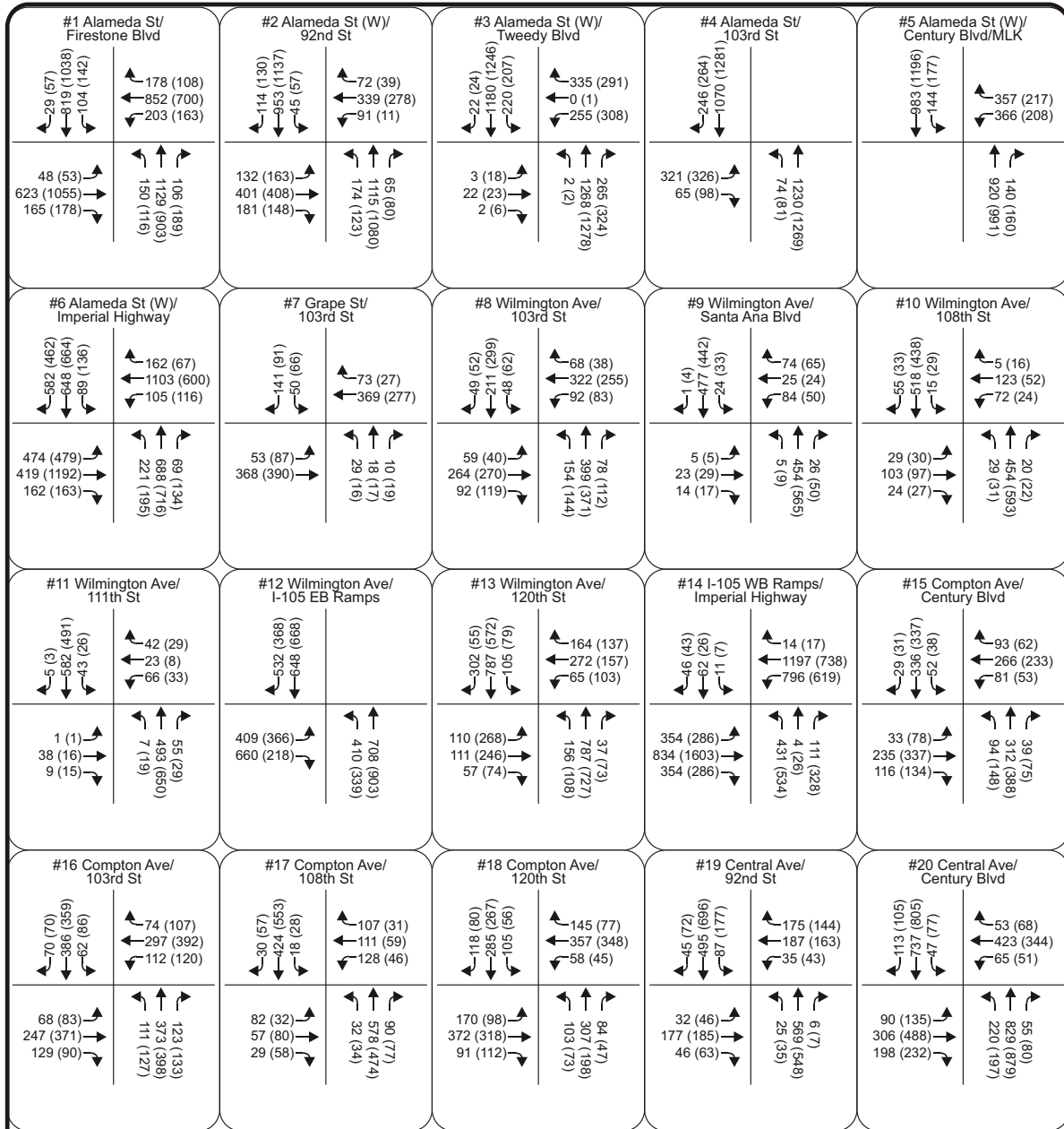
#	Intersection	Jurisdiction	AM Peak Hour		PM Peak Hour	
			LOS	V/C	LOS	V/C
1	Alameda St/Firestone Blvd	County of LA/South Gate	D	0.824	E	0.919
2	Alameda St (W)/92nd St	County of LA	C	0.761	C	0.741
3	Alameda St (W)/Tweedy Blvd **	(future) City of LA	E	0.929	E	0.957
4	Alameda St/103rd St <sup>+</sup>	City of LA/Lynwood	B	0.684	C	0.797
5	Alameda St (W)/Century Blvd/MLK	Lynwood	C	0.723	B	0.681
6	Alameda St (W)/Imperial Highway	County of LA/Lynwood	E	0.969	D	0.826
7	Grape St/103rd St <sup>+</sup>	City of LA	A	0.422	A	0.380
8	Wilmington Ave/103rd St <sup>+</sup>	City of LA	A	0.328	A	0.331
9	Wilmington Ave/Santa Ana Blvd <sup>+</sup>	City of LA	A	0.306	A	0.367
10	Wilmington Ave/108th St <sup>+</sup>	City of LA	A	0.454	A	0.449
11	Wilmington Ave/111th St <sup>+</sup>	City of LA	A	0.412	A	0.431
12	Wilmington Ave/I-105 EB Ramps <sup>+</sup>	City of LA/County of LA	D	0.878	B	0.629
13	Wilmington Ave/120th St	County of LA	A	0.585	A	0.572
14	I-105 WB Ramps/Imperial Highway <sup>+</sup>	City of LA/County of LA	D	0.858	D	0.815
15	Compton Ave/Century Blvd <sup>+</sup>	City of LA	A	0.275	A	0.331
16	Compton Ave/103rd St <sup>+</sup>	City of LA	A	0.346	A	0.422
17	Compton Ave/108th St <sup>+</sup>	City of LA	B	0.664	A	0.493
18	Compton Ave/120th St	County of LA	A	0.484	A	0.372
19	Central Ave/92nd St <sup>+</sup>	City of LA	A	0.466	A	0.500
20	Central Ave/Century Blvd <sup>+</sup>	City of LA	B	0.670	B	0.664
21	Central Ave/103rd St <sup>+</sup>	City of LA	A	0.556	A	0.594
22	Central Ave/108th St (N) <sup>+</sup>	City of LA	A	0.443	A	0.498
23	Central Ave/108th St (S) <sup>+</sup>	City of LA	A	0.453	A	0.504
24	Central Ave/120th St <sup>+</sup>	City of LA	A	0.468	A	0.506
25	McKinley Ave/Century Blvd <sup>+</sup>	City of LA	A	0.256	A	0.249
26	Avalon Blvd/Century Blvd <sup>+</sup>	City of LA	A	0.449	A	0.542
27	Avalon Blvd/92nd St <sup>+</sup>	City of LA	A	0.351	A	0.373
28	Avalon Blvd/120th St <sup>+</sup>	City of LA	A	0.406	A	0.459
29	San Pedro St/Century Blvd <sup>+</sup>	City of LA	A	0.487	A	0.531
30	Main St/Century Blvd <sup>+</sup>	City of LA	A	0.516	A	0.525
31	Figueroa St/Century Blvd <sup>+</sup>	City of LA	C	0.704	A	0.544
32	I-110 NB On-Ramp/Century Blvd <sup>+</sup>	City of LA	A	0.372	A	0.300
33	I-110 SB Off-Ramp/Century Blvd <sup>+</sup>	City of LA	A	0.312	A	0.395
34	Long Beach Blvd/Century Blvd	South Gate/Lynwood	C	0.769	C	0.756
35	Long Beach Blvd/Tweedy Blvd	South Gate/Lynwood	C	0.734	B	0.694
36	Alameda St/97th St* **	(future) City of LA/County of LA	-	-	-	-
37	Alameda St (E)/Tweedy Blvd* **	(future) City of LA/South Gate	-	-	-	-
38	Grape St/97th St (W)*	City of LA	-	-	-	-
39	Grape St 97th St (E)*	City of LA	-	-	-	-
40	Grape St/Century Blvd*	City of LA	-	-	-	-
41	Wilmington Ave/Century Blvd*	City of LA	-	-	-	-

Note:  
 \* Unsignalized intersections are analyzed separately under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario  
 \*\* Intersection will become partially or fully under the City of Los Angeles jurisdiction with annexation, no ATSAC credit is taken  
<sup>+</sup> City of Los Angeles signalized intersections reflect an ATSAC credit which reduces the final V/C ratio by 0.100

As shown, a total of three signalized study intersections are projected to operate at LOS E in the AM or PM peak hours, and no intersections are projected to operate at LOS F. Two study intersections are

projected to operate at LOS E during the AM peak hour, and two signalized study intersections are projected to operate at LOS E during PM peak hour. The following study intersections are projected to operate at LOS E during the AM and/or PM peak hours:

- #1 Alameda Street and Firestone Boulevard (PM Peak Hour)
- #3 Alameda Street (W) and Tweedy Boulevard (AM and PM Peak Hours)
- #6 Alameda Street (W) and Imperial Highway (AM Peak Hour)



**Legend**  
XX(XX) AM (PM) Peak Hour Volumes



**FIGURE 8-A**  
Existing + Ambient Growth + Cumulative Projects Peak Hour Volumes  
Jordan Downs Specific Plan

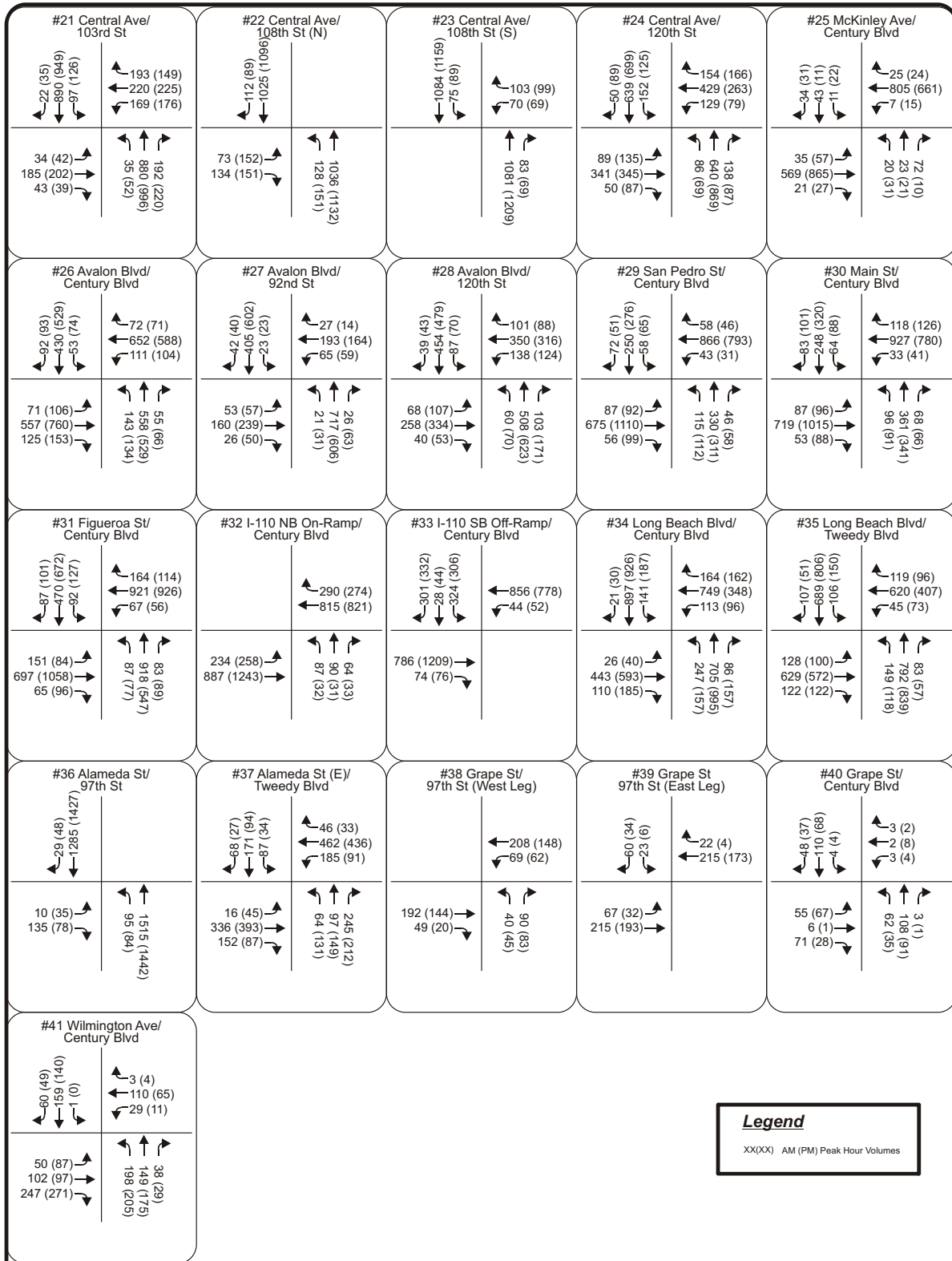


FIGURE 8-B

Existing + Ambient Growth + Cumulative Projects Peak Hour Volumes  
Jordan Downs Specific Plan



## PROPOSED PROJECT

### Trip Generation

The proposed project has a buildout year of 2020 and includes up to 1,800 dwelling units that would replace the 700 existing public housing units, and would consist of approximately 700 public housing units, 700 affordable rental units, and 400 ownership condominium units. The 1,800 dwelling units include 100 senior housing units. The project also proposes community facilities, open space, potential high school expansion and new elementary school, commercial and retail space, and the potential redevelopment of existing light-industrial parcels located along Alameda Street.

The ITE trip generation rates have several codes for housing units. ITE code 220 (Apartments) was used to calculate the trip generation for all non-senior rental dwelling units despite the diversity of proposed building types because it includes a large sample size used to develop the trip generation rate of low-, mid-, and high-rise apartments. ITE code 252 (Elderly Housing, Attached) was used to calculate the trip generation for all senior units, and the ownership units were calculated using ITE code 230 (Residential Condominium/Townhouse).

### Project Trip Generation Zones

The proposed project trip generation rates were allocated to eight separate trip generation zones within the Traffix model based on the land use type and location within the project site. These trip generation zones in the Traffix model were used to determine the loading points as well as the distribution of the project volumes onto the adjacent roadway network. An illustration of the location of the trip generation zones is shown in **Figure 9**.

### Trip Credits

#### Housing and Community Facilities

The project includes community facilities including a family resource center. The center will be a community hub of activity and learning for residents. The facility is intended primarily for the Jordan Downs community, and provides needed facilities on-site. Therefore, an internal capture rate of 50 percent was assumed for these community facilities.

The 1,300 rental housing units, along with the 100 senior rental housing units, are considered affordable housing, and are therefore eligible for the five percent affordable housing credit per LADOT guidelines. This credit is allowed in addition to any transit credit, which is discussed below.

#### Transit

The means of transportation to work for workers 16 years and older from the Census 2000 Summary File 4 for Census Tract 2421 (Jordan Downs) is summarized below in **Table 9**. As shown, approximately 66 percent of workers use a car, truck or van to travel to work, 25 percent use public transportation, seven percent walk, and two percent use a bicycle.

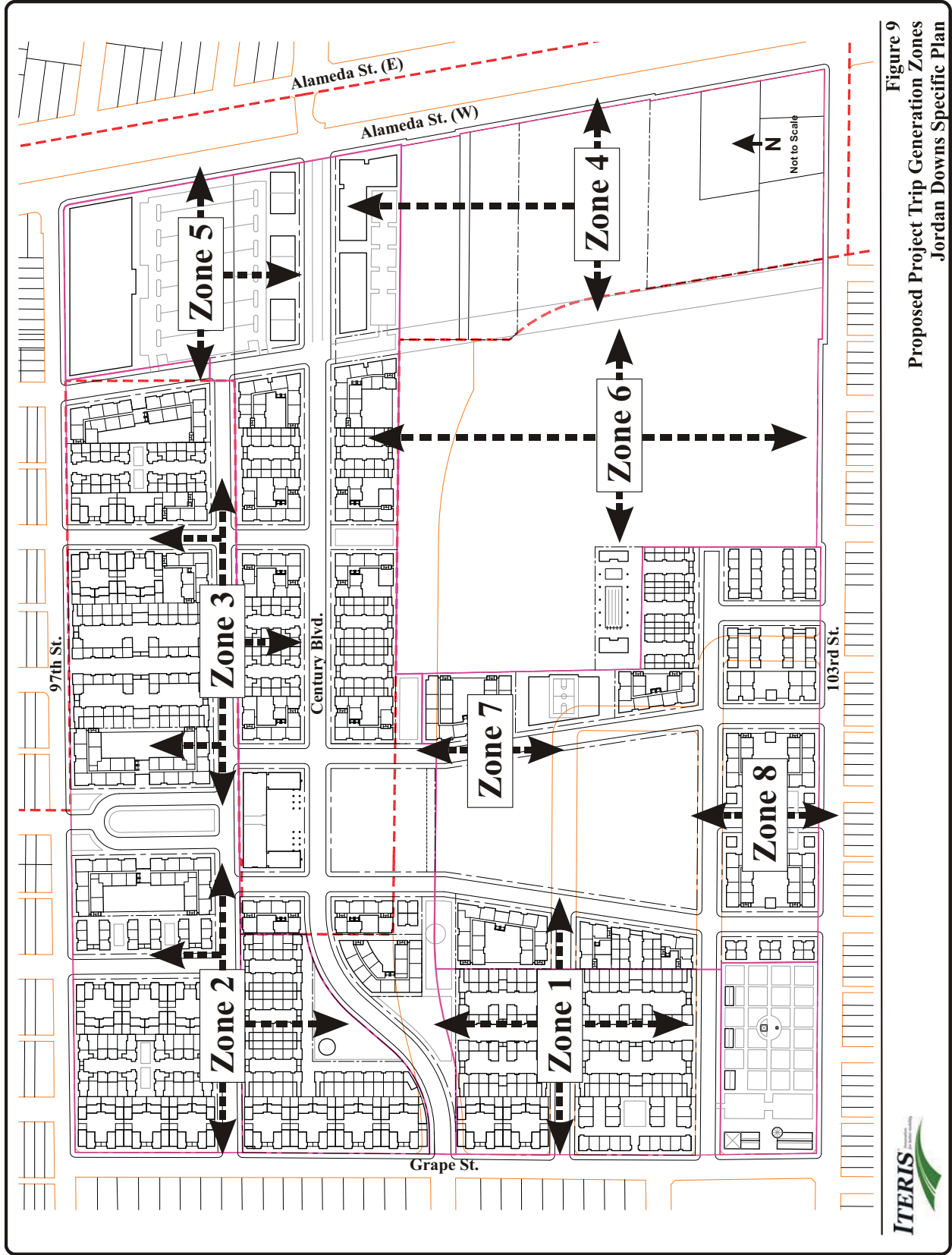


Figure 9  
Proposed Project Trip Generation Zones  
Jordan Downs Specific Plan

**Table 9 – Means to Work for Jordan Downs in 2000 (Census Tract 2421)**

Means to Work	Workers	Percent
Car, truck, or van:	193	66%
Public transportation:	73	25%
Walked	19	7%
Bicycle	7	2%
<b>Total</b>	<b>292</b>	

Source: US Census 2000

Current bus routes serving the project site are the LADOT Watts Dash Route and Metro Routes 117 and 254. As a result of the proposed project potentially extending Century Boulevard/Tweedy Boulevard to Alameda Street, Metro Route 117 could be rerouted through the project site where transit amenities would be constructed. Metro Route 117 is currently routed around the project site from Century Boulevard, south to 103<sup>rd</sup> Street, and north to Tweedy Boulevard, due to the lack of a Century Boulevard connection to Tweedy Boulevard at Alameda Street.

Due to the high transit usage, and census data, the Los Angeles Department of Transportation has permitted a transit credit of 15 percent for project trips.

**Existing Land Use**

Existing project site land uses include 700 dwelling units (ITE Code 220 – Apartments); 260,000 square feet of general light industrial (ITE Code 110 – Light Industrial) which is located in parcels along Alameda Street; and Jordan Downs High School (ITE Code 530 – High School).

**Pass-by Trips**

LADOT Traffic Study Guidelines allow credit for pass-by trips for commercial/retail uses. The proposed project contains several proposed commercial parcels:

- 150,000 square feet of commercial/retail
- 60,000 square feet of commercial
- Two sites of 10,000 square feet of ground floor commercial/retail

Pass-by trip reductions for these sites were calculated using the LADOT Traffic Study Guidelines Attachment G: LADOT Policy on Pass-By Trips.

- Parcels with less than 50,000 square feet would have a 50 percent pass-by trip discount rate applied.
- Parcels between 50,000 and 100,000 square feet would have a 40 percent pass-by trip discount rate applied.
- Parcels above 100,000 would have a 30 percent pass-by trip discount rate applied.

The proposed project trip generation is shown in **Table 10** below, and includes the affordable housing, transit, and pass-by credits discussed above. As shown, the project is projected to produce approximately 14,150 daily trips, 1,166 AM peak hour trips, and 1,265 PM peak hour trips.

**Table 10 – Estimated Jordan Downs Trip Generation**

Land Use	Building Area (ksf) / DU/ Ac/ Students	ITE No.	TRIPS									
			Daily			AM Peak			PM Peak			
			In	Out	Total	In	Out	Total	In	Out	Total	
Residential	Existing Residential	(700)	220	(2,328)	(2,328)	(4,655)	(71)	(286)	(357)	(282)	(152)	(434)
	Residential (rental)	1,300	220	4,323	4,323	8,645	133	530	663	524	282	806
	Residential (senior)	100	252	174	174	348	5	8	13	10	6	16
	<b>5% Affordable Housing Credit (Existing and Project)</b>			(108)	(108)	(217)	(3)	(13)	(16)	(13)	(7)	(19)
	Residential (condo)	400	230	1,162	1,162	2,324	30	146	176	139	69	208
<b>Residential Subtotal</b>			3,223	3,223	6,445	93	387	479	378	198	577	
Community Facilities*	Family Resource Center	50	495	570	570	1,140	49	32	81	27	46	73
	Joint Use Gym	17	495	194	194	388	17	11	28	9	16	25
	Community Facility	3	495	34	34	68	3	2	5	2	3	4
	<b>Internal Community Trips (50 %)</b>			(399)	(399)	(798)	(35)	(22)	(57)	(19)	(32)	(51)
	<b>Community Facilities Subtotal</b>			399	399	798	35	22	57	19	32	51
Open Space	Open Space	8.9	411	7	7	14	mm	mm	mm	mm	mm	mm
	Garden	2.5	411	2	2	4	mm	mm	mm	mm	mm	mm
	<b>Open Space Subtotal</b>			9	9	18	mm	mm	mm	mm	mm	mm
School	Future Additional High School Students**	750	530	641	641	1,283	158	135	293	46	52	98
	Future Elementary School Students**	650	520	419	419	839	143	137	280	48	50	98
	<b>School Subtotal</b>			1,061	1,061	2,121	301	272	572	94	101	195
Commercial	Existing Light Ind. Uses	(80)	110	(279)	(279)	(558)	(65)	(9)	(74)	(9)	(68)	(78)
	Parcel 1 Shopping Ctr	150	820	3,221	3,221	6,441	92	59	150	274	285	560
	<b>Pass-by Trips***</b>			(966)	(966)	(1,932)	(27)	(18)	(45)	(82)	(86)	(168)
	<b>Subtotal</b>			1,976	1,976	3,951	(1)	32	31	183	131	314
	Existing Light Ind. Uses	(58.0)	110	(202)	(202)	(404)	(47)	(6)	(53)	(7)	(50)	(56)
	Parcel 2 Shopping Ctr	60.0	820	1,288	1,288	2,576	37	23	60	110	114	224
	<b>Pass-by Trips***</b>			(515)	(515)	(1,031)	(15)	(9)	(24)	(44)	(46)	(90)
	<b>Subtotal</b>			571	571	1,142	(25)	8	(17)	59	19	78
	Parcel 30c			-	-	-	-	-	-	-	-	-
	Light Industrial	47.5	110	166	166	331	38	5	44	6	41	46
	Office	47.5	710	261	261	523	65	9	74	12	59	71
	<b>Subtotal</b>			427	427	854	103	14	117	18	99	117
	Parcel 31 Existing Light Ind. Uses	(63.0)	110	(220)	(220)	(439)	(51)	(7)	(58)	(7)	(54)	(61)
	Light Industrial	47.5	110	166	166	331	38	5	44	6	41	46
	Office	47.5	710	261	261	523	65	9	74	12	59	71
	<b>Subtotal</b>			207	207	415	52	7	59	10	46	56
	Parcel 32 Existing Light Ind. Uses	(61.0)	110	(213)	(213)	(425)	(49)	(7)	(56)	(7)	(52)	(59)
	Light Industrial	50.0	110	174	174	349	40	6	46	6	43	49
	Office	50.0	710	275	275	551	68	9	78	13	62	75
	<b>Subtotal</b>			237	237	474	59	8	67	11	52	64
	Parcel 16 Shopping Ctr	10.0	820	215	215	429	6	4	10	18	19	37
	<b>Pass-by Trips***</b>			(107)	(107)	(215)	(3)	(2)	(5)	(9)	(10)	(19)
	Parcel 17 Shopping Ctr	10.0	820	215	215	429	6	4	10	18	19	37
	<b>Pass-by Trips***</b>			(107)	(107)	(215)	(3)	(2)	(5)	(9)	(10)	(19)
	<b>Subtotal</b>			215	215	429	6	4	10	18	19	37
	<b>Commercial Subtotal</b>			3,632	3,632	7,265	195	73	268	299	367	666
	<b>Project Subtotal</b>			8,324	8,324	16,647	623	753	1,376	790	698	1,488
<b>15% Transit Credit</b>			(1,249)	(1,249)	(2,497)	(97)	(113)	(210)	(118)	(105)	(223)	
<b>Total Project Trips</b>			7,075	7,075	14,150	525	640	1,166	671	594	1,265	

Notes: mm = minimal  
 See Figure 1 for commercial parcel locations.  
 \* Community facilities will be primarily designed as on-site facilities for Jordan Downs residents resulting in a 50% internal capture assumption  
 \*\* AM Peak Hour School Trip Generation Rates from LAUSD trip generation rates for schools in the South Region, per the March 14, 2005 Memorandum of Cooperation between the LAUSD and LADOT  
 \*\*\* Pass-By Trips are trips made as intermediate stops on the way from an origin to a primary trip destination. To account for trips that come from the everyday traffic stream (i.e., existing traffic on Alameda Street or 103rd Street), peak hour pass-by reduction factors were utilized (Source: City of Los Angeles Traffic Study Guidelines, March 2002).



## Proposed Century Boulevard Extension

One key project design feature is the roadway component which extends Century Boulevard from Grape Street to Tweedy Boulevard. Under existing conditions, Century Boulevard is a two-lane roadway from Wilmington Avenue to Grape Street. East of Grape Street, it becomes a small driveway serving internal land uses, and currently there is no roadway east of the driveway. As designed in the Master Plan, the Century Boulevard/Tweedy Boulevard Extension is a two-lane facility through the project site, with the exception of the segment from Laurel Street to Alameda Street, where a four-lane facility is proposed in order to provide adequate storage for the eastbound portion of the intersection of Alameda Street and Century/Tweedy Boulevard. In order to accommodate the westbound through movement of traffic from Tweedy Boulevard into the project site, another project design feature is restriping the westbound approach at Alameda Street and Century/Tweedy Boulevard as a shared left-through lane and a right-turn lane.

While the City of Los Angeles designates Century Boulevard from Grape Street to Alameda Street as a Major Highway Class II roadway with four peak-hour lanes in its General Plan Transportation Element, the Jordan Downs Master Plan envisions a more local, less-automobile-oriented roadway. In addition, a two-lane collector street is consistent with the existing Century Boulevard west of Grape Street, and would avoid the need to obtain the right-of-way necessary for a four-lane facility between Grape Street and Wilmington Avenue. The proposed extension segment is shown on the site plan in **Figure 1**.

In order to forecast changes in study area traffic patterns due to the extension of Century Boulevard between Grape Street and South Alameda Street, the SCAG Regional Travel Demand Model was utilized. The 2008 analysis model year was used and two model scenarios were conducted. One model scenario was conducted in the current roadway network configuration without the Century Boulevard Extension, and one model scenario was conducted with the Century Boulevard Extension for the daily, A.M., and P.M. peak hours. These two scenarios were compared to determine forecasted differences in roadway volumes due to the presence of the Century Boulevard Extension. In addition, a “select link” model analysis was conducted for the Century Boulevard Extension; this shows the origin and destination of all modeled trips using the roadway link.

The analysis showed that changes to local volumes would occur with the Century Boulevard Extension, and would increase east-west volumes along Century Boulevard, and decrease east-west traffic along parallel routes such as Firestone Boulevard, 92<sup>nd</sup> Street, and 103<sup>rd</sup> Street. In particular, traffic that formerly traveled between the existing Century Boulevard (west of Grape Street) and Tweedy Boulevard (east of Alameda Street) via 103<sup>rd</sup> Street and Alameda Street was redistributed to the Century Boulevard Extension.

The differences in model scenarios with and without the Century Boulevard Extension, the “select link” analysis, and existing intersection turning movements were used to determine the forecasted specific turning movement changes due to the potential extension of Century Boulevard through the proposed project site. The localized redistribution of traffic with the Century Boulevard Extension is shown in **Figure 10**.

In the Existing Plus Ambient Growth Plus Related Projects conditions (no-project conditions), the extension of Century Boulevard would not occur, therefore volumes are not redistributed.

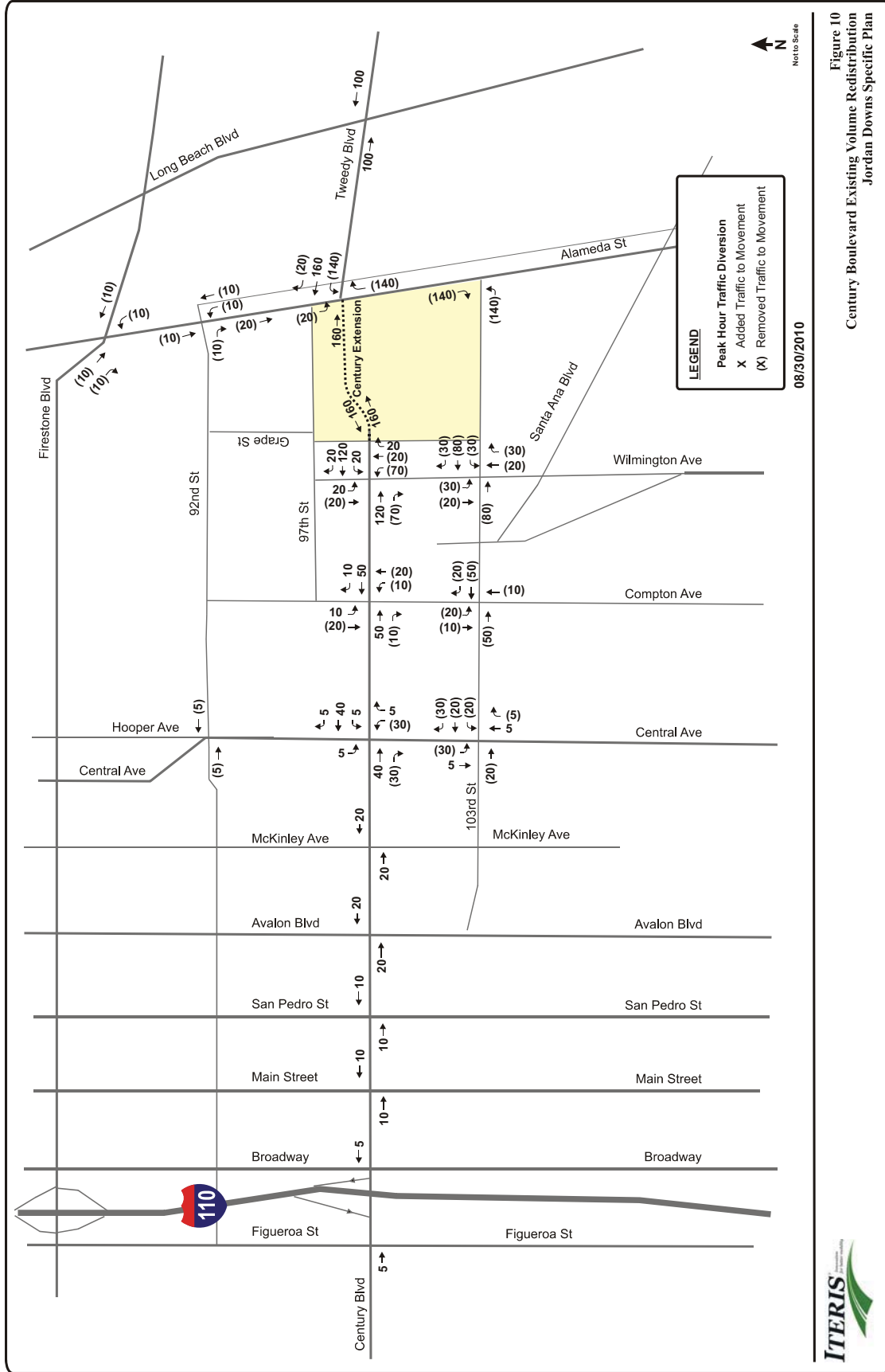


Figure 10  
Century Boulevard Existing Volume Redistribution  
Jordan Downs Specific Plan

## Trip Distribution and Assignment

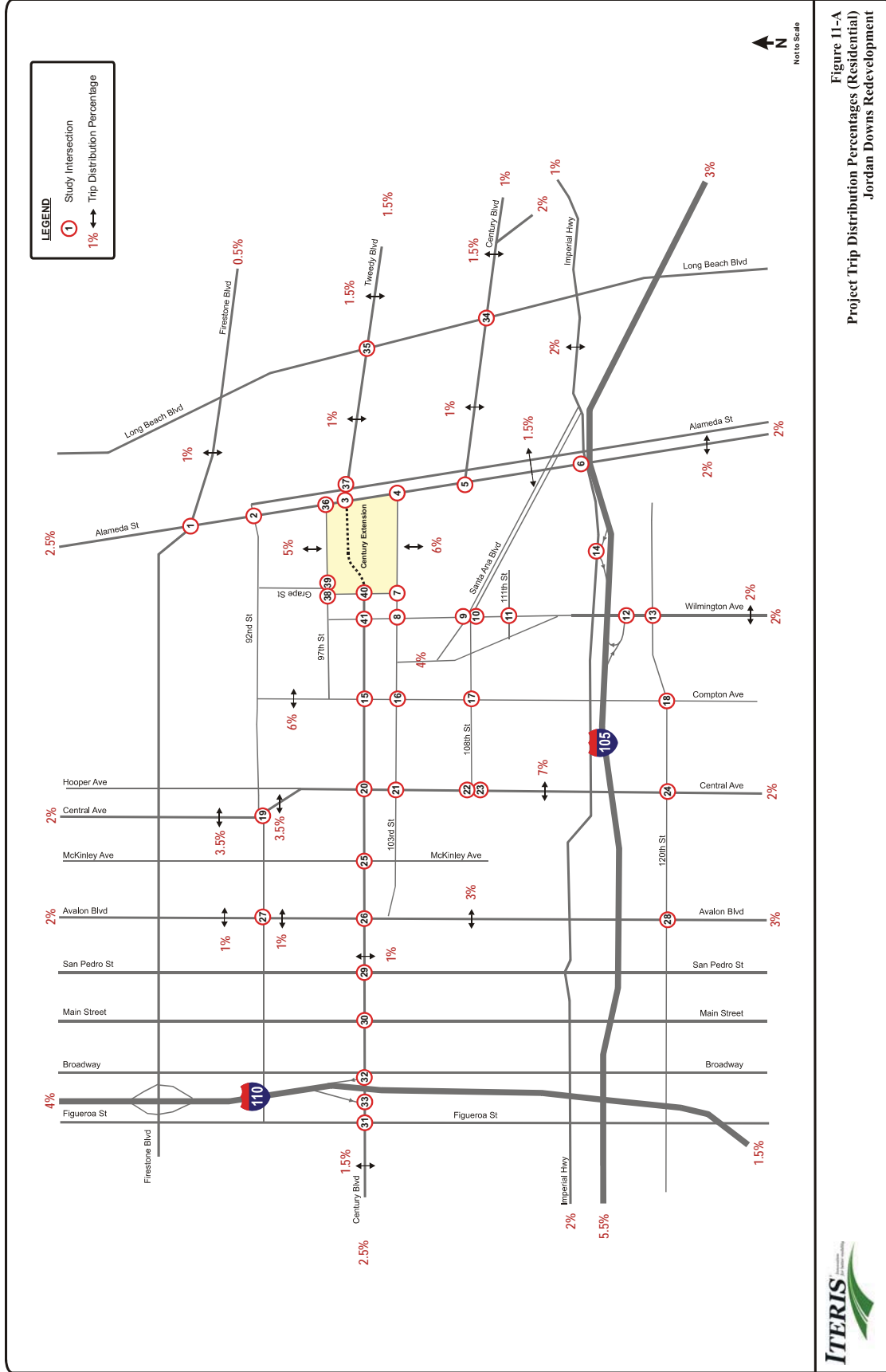
Trip distribution assumptions are used to determine the origin and destination of new vehicle trips associated with the project. In order to determine the project trip geographic distribution, Iteris utilized the Los Angeles County Congestion Management Program (CMP) and the SCAG regional travel demand model. The CMP was first used to identify the potential directional project trip distribution, then a “select zone” analysis was run in the SCAG model (for the traffic analysis zone representing Jordan Downs) to further refine the distribution to the local level.

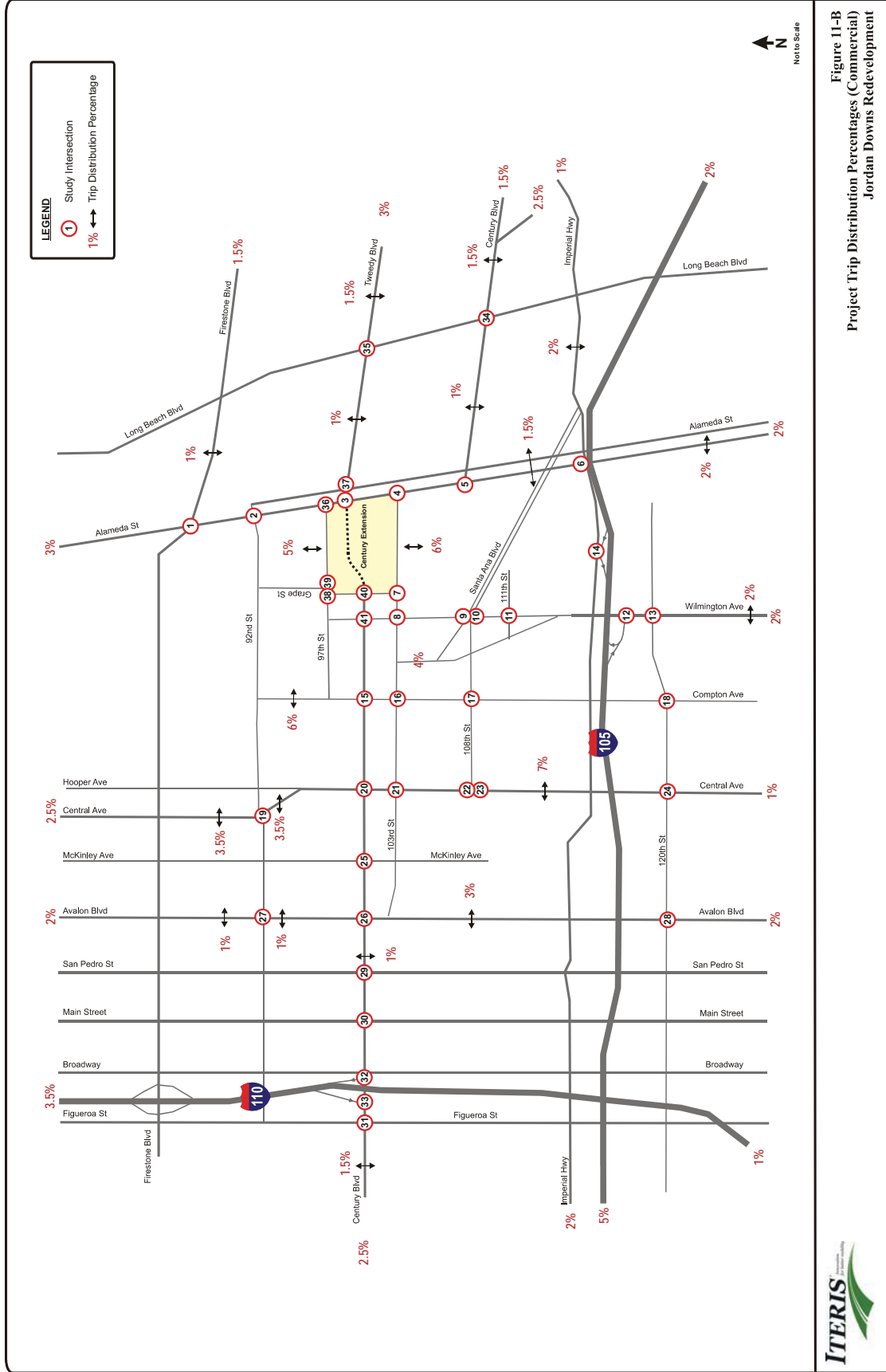
The SCAG model select zone analysis showed that approximately 50 percent of the trips from the zone had local area trip ends (between I-110 to the west, 120<sup>th</sup> Street to the south, Manchester Avenue to the north, and Long Beach Boulevard to the east). The project trip distribution is illustrated in **Figures 11A (Residential)** and **11B (Commercial)**, which also notes where the local trips are estimated to drop off the roadway system.

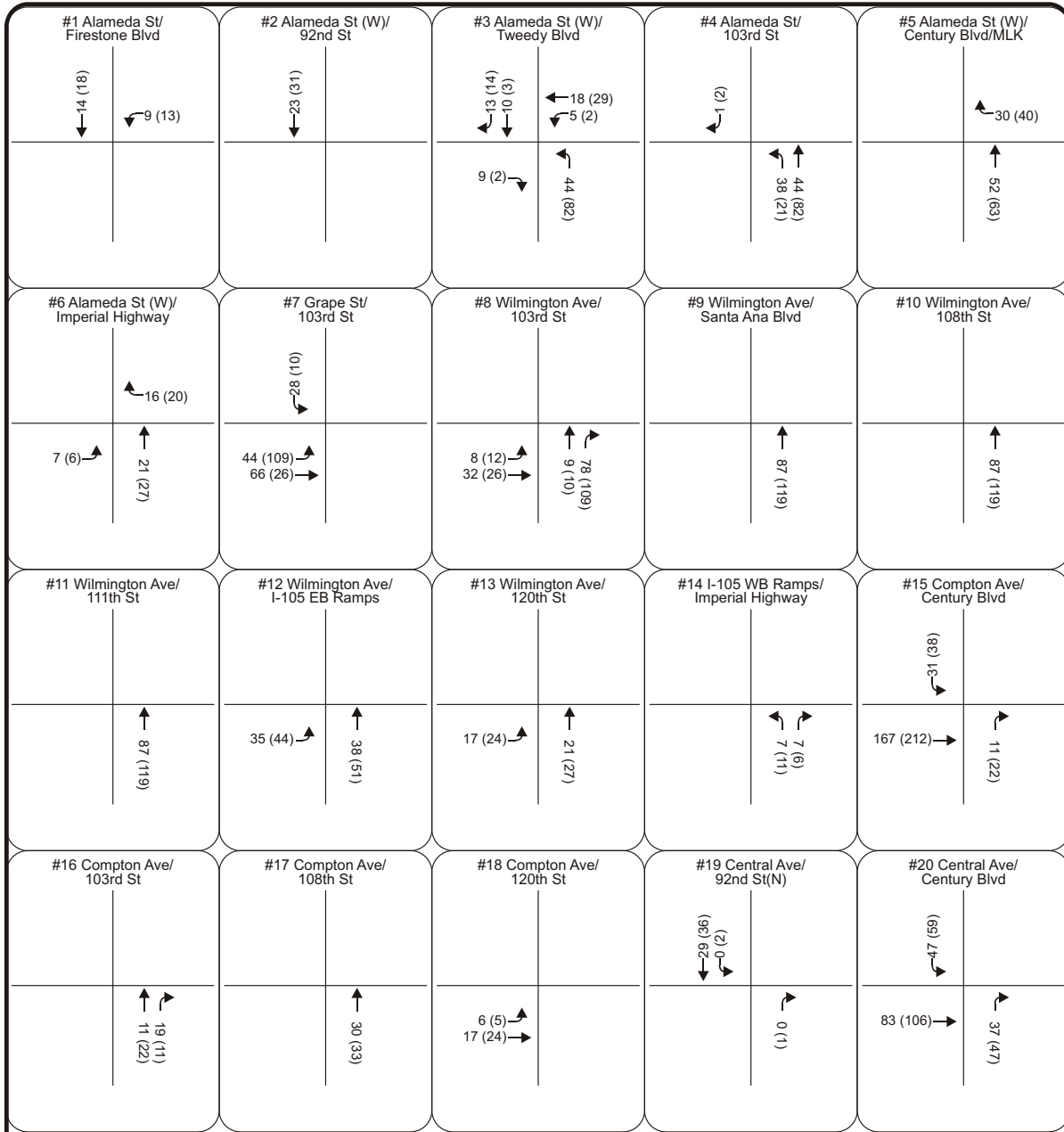
The net number of trips generated by the project was then assigned to the surrounding roadway system based on the project trip distribution to estimate the project related peak-hour traffic at each of the study intersections. **Figures 12A** (inbound) and **12B** (outbound) illustrate the project trip assignment onto the future roadway network during the AM and PM peak hours.

The project trip assignment was then added to the Existing Plus Ambient Growth Plus Related Projects traffic volumes. The Existing Plus Ambient Growth Plus Related Projects Plus Project lane configurations and traffic control at the 41 study intersections are provided in **Figure 13**.

The resulting Existing Plus Ambient Growth Plus Related Projects Plus Project traffic volumes for the AM and PM peak hours are illustrated in **Figure 14**.



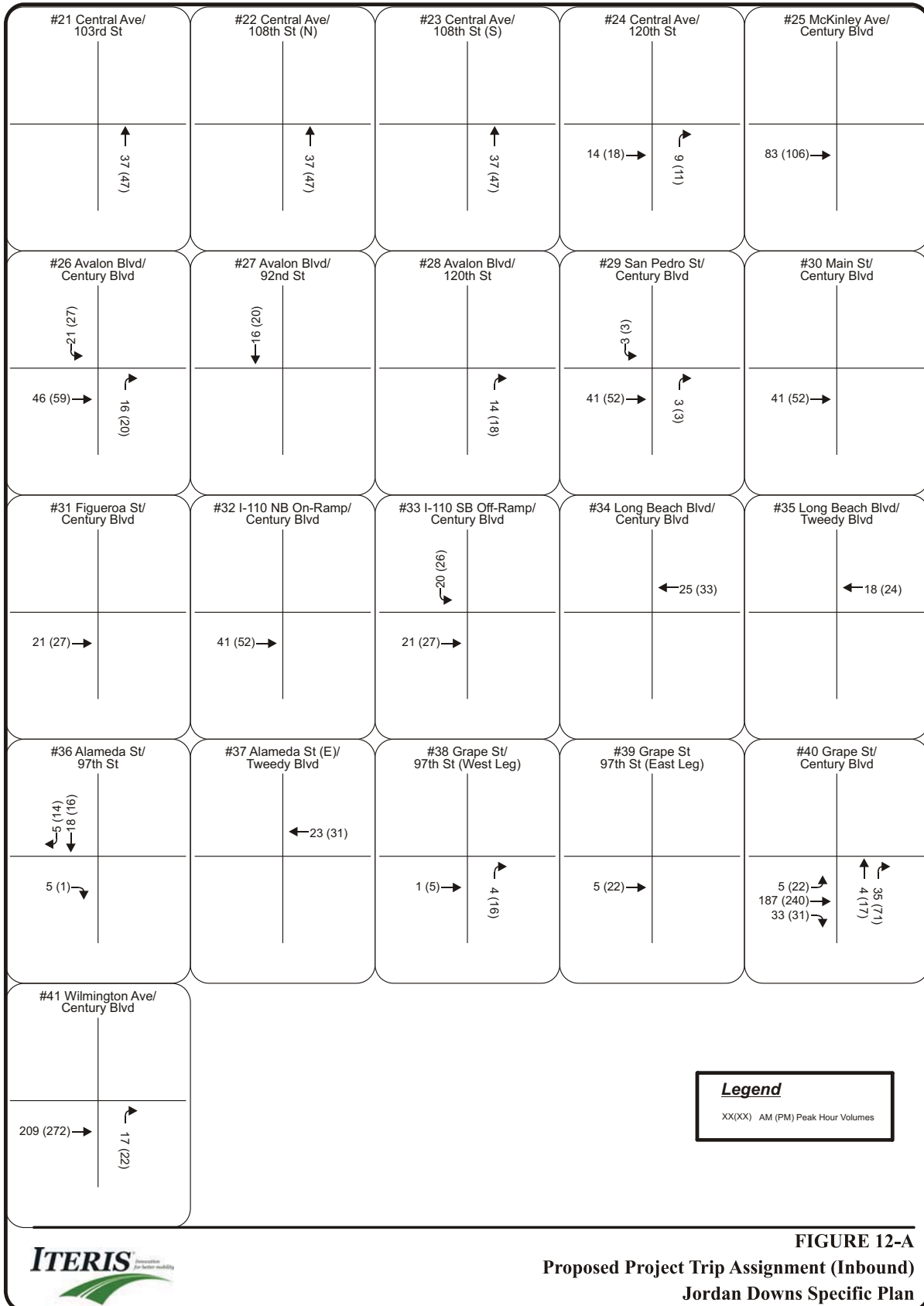




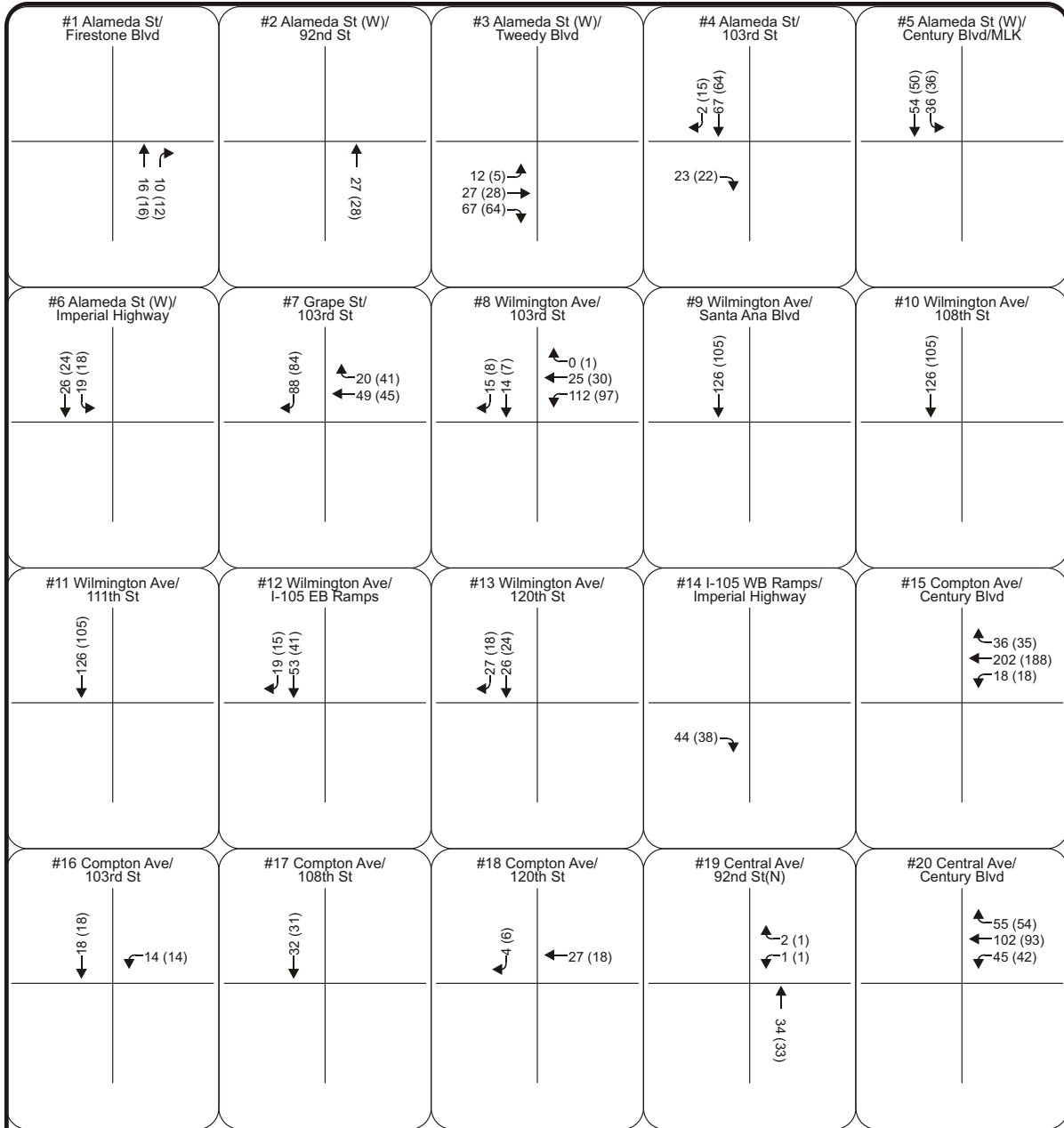
**Legend**  
XX(XX) AM (PM) Peak Hour Volumes



**FIGURE 12-A**  
**Proposed Project Trip Assignment (Inbound)**  
**Jordan Downs Specific Plan**



**FIGURE 12-A**  
**Proposed Project Trip Assignment (Inbound)**  
**Jordan Downs Specific Plan**

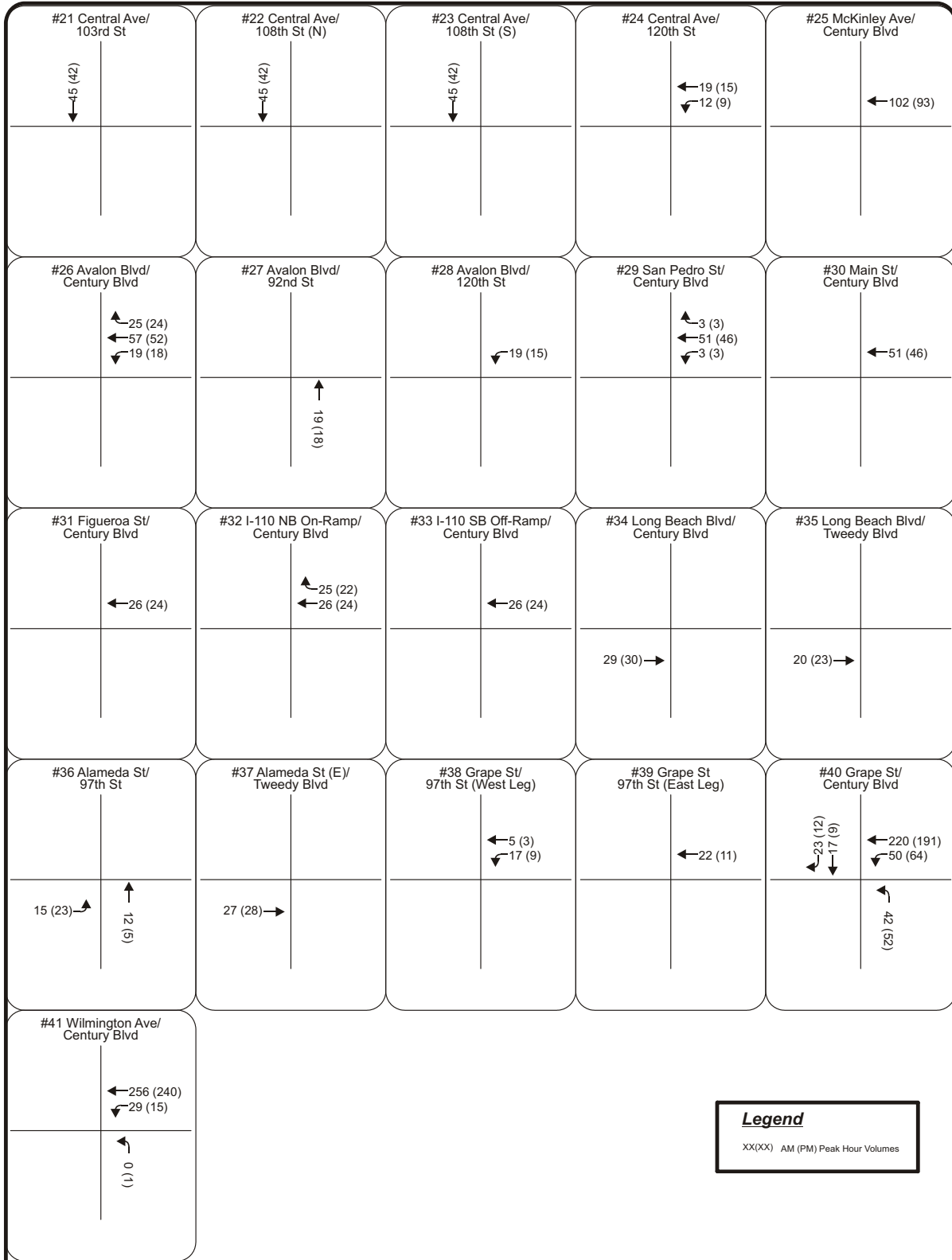


**Legend**  
 XX(XX) AM (PM) Peak Hour Volumes



**FIGURE 12-B**  
 Proposed Project Trip Assignment (Outbound)  
 Jordan Downs Specific Plan



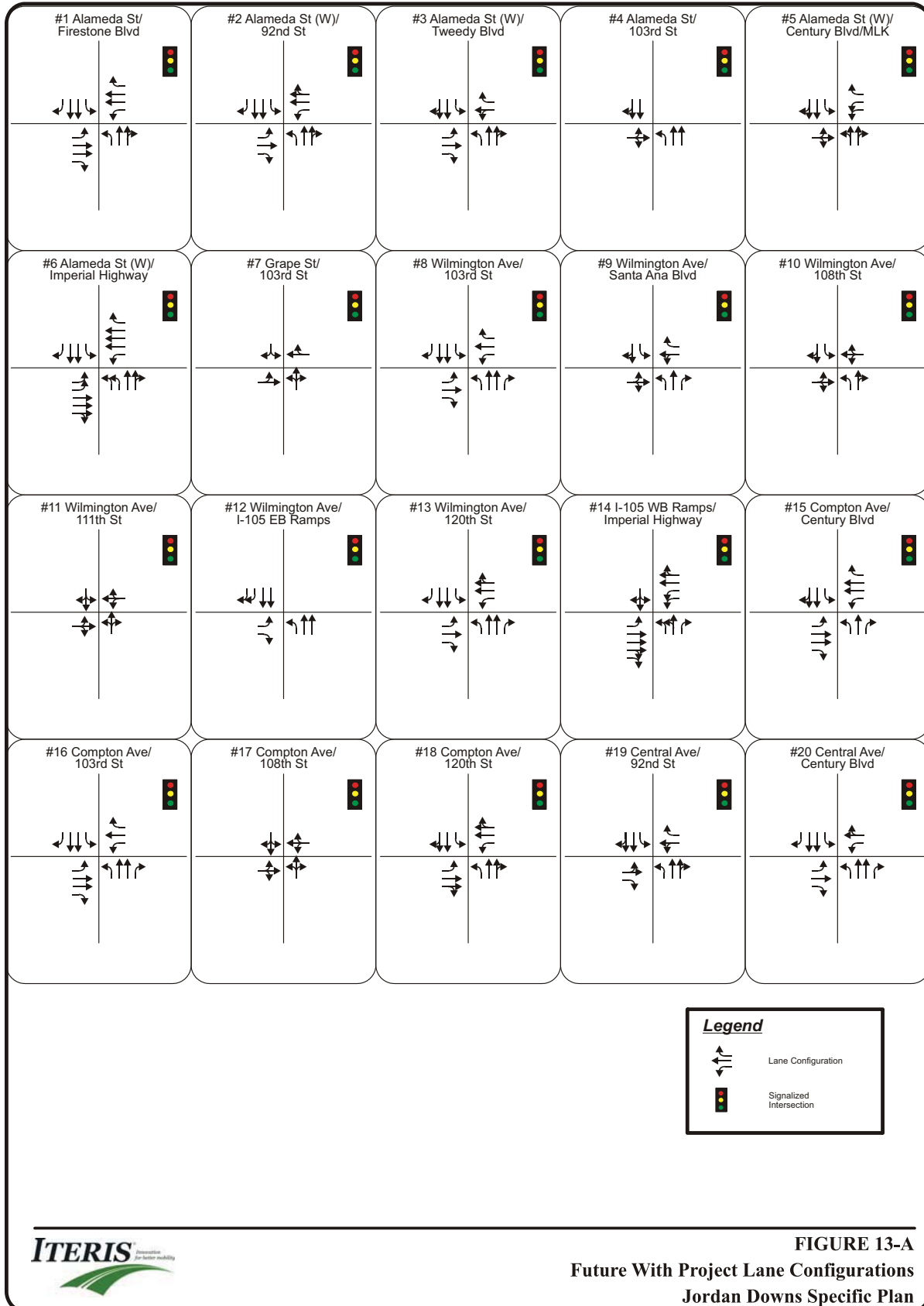


**Legend**  
 XX(X) AM (PM) Peak Hour Volumes



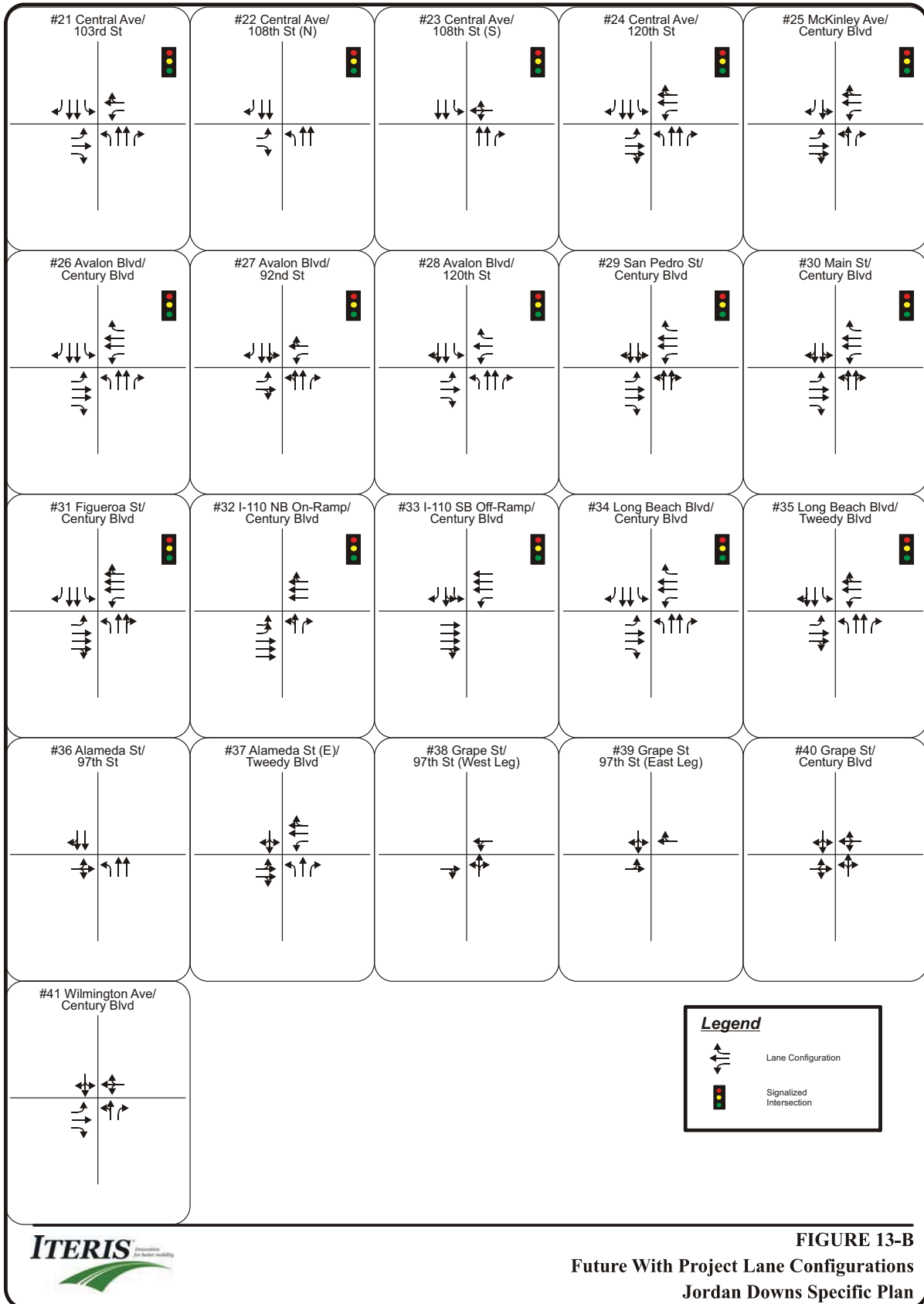
**FIGURE 12-B**  
 Proposed Project Trip Assignment (Outbound)  
 Jordan Downs Specific Plan

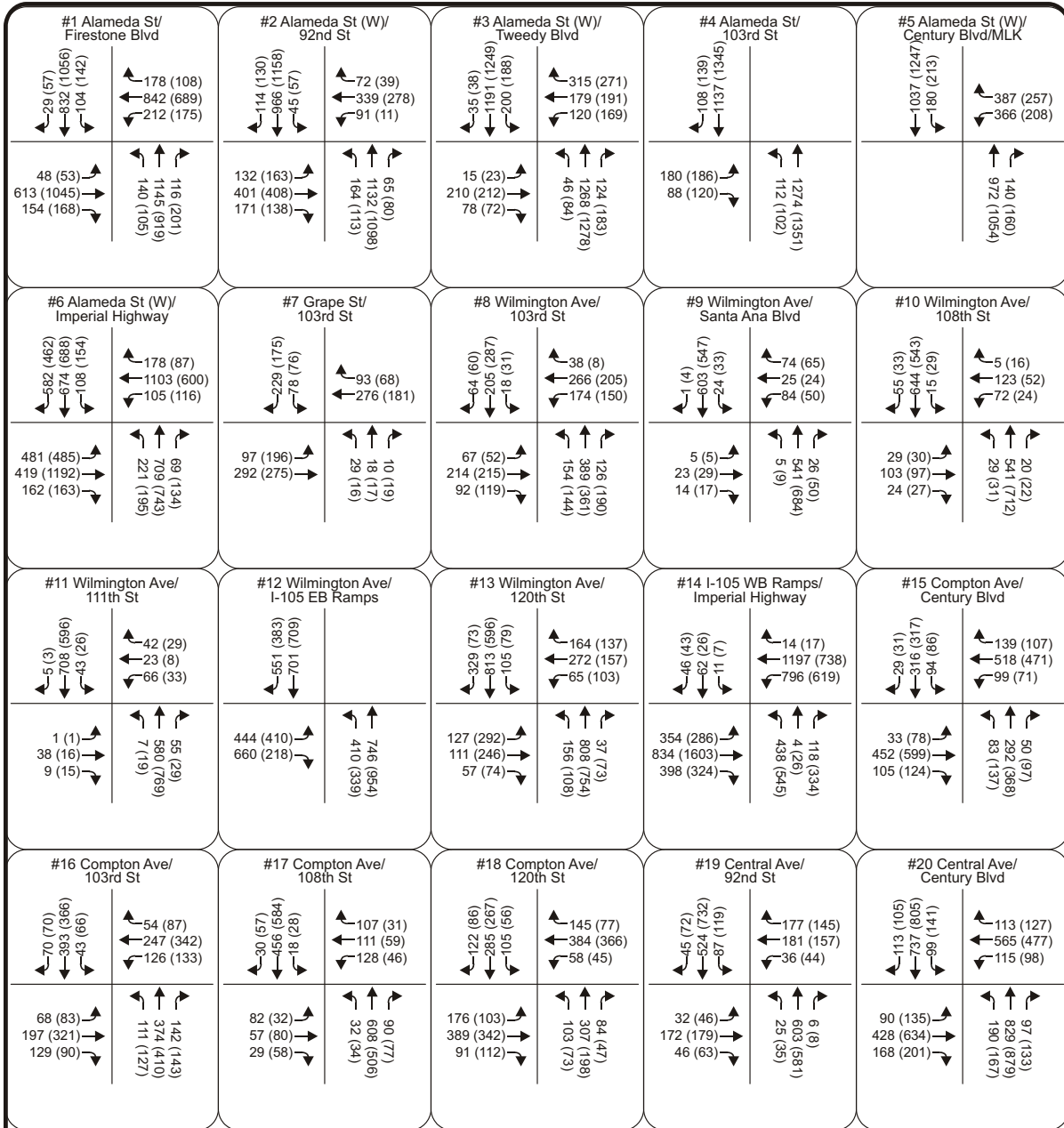
**Figure 13 – Existing Plus Ambient Growth Plus Related Projects Plus Project Geometry  
 And Traffic Control**



**FIGURE 13-A**  
 Future With Project Lane Configurations  
 Jordan Downs Specific Plan



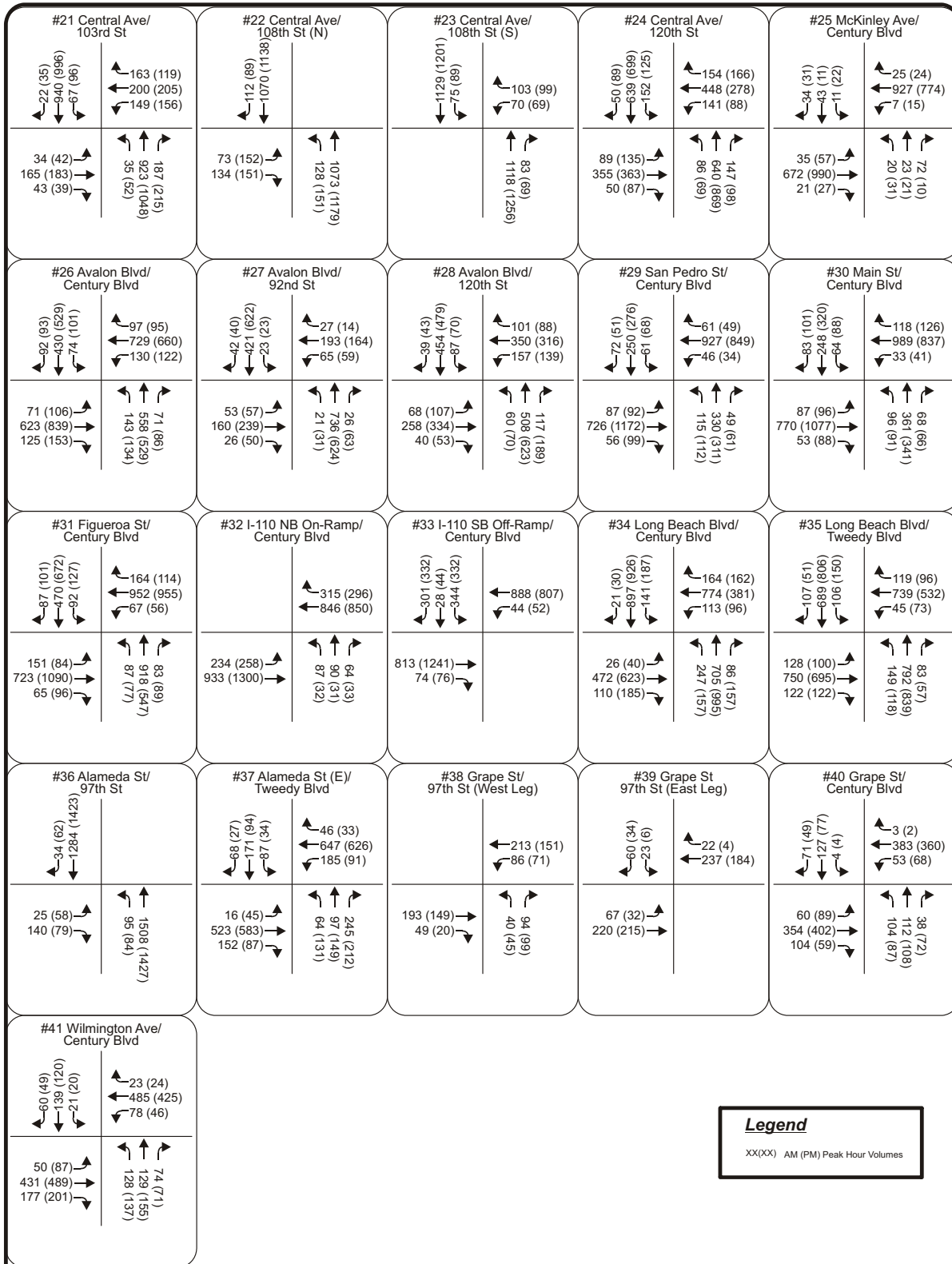




**Legend**  
XX(XXX) AM (PM) Peak Hour Volumes



**FIGURE 14-A**  
Existing + Ambient Growth + Cumulative Projects + Project Peak Hour Volumes  
Jordan Downs Specific Plan



**FIGURE 14-B**  
Existing + Ambient Growth + Cumulative Projects + Project Peak Hour Volumes  
Jordan Downs Specific Plan

## **EXISTING PLUS AMBIENT GROWTH PLUS RELATED PROJECTS PLUS PROJECT CONDITIONS**

Existing Plus Ambient Growth Plus Related Projects Plus Project conditions represent future traffic growth and operating conditions due to ambient growth, specific, planned or approved development projects in the study area, and traffic generated by the proposed project. Results from this scenario represent future with project conditions for all study intersections.

### **Existing Plus Ambient Growth Plus Related Projects Plus Project Level of Service**

All study intersections were evaluated using the City of Los Angeles traffic impact analysis guidelines. Intersections that fall within multiple jurisdictions were also evaluated according to the specific guidelines from each individual jurisdiction.

All signalized study intersections were evaluated under this scenario using the CMA - Circular Planning 212 methodology per City of Los Angeles Traffic Study Policies and Procedures. Level of service analyses under the Existing Plus Ambient Growth Plus Project Plus Related Projects condition were performed for both AM and PM peak hours and are summarized below in **Table 11**.

As shown, the results indicate that per CMA - Circular Planning 212 methodology, four signalized study intersections are projected to experience a significant project-related impact. Of those, three study intersections are projected to experience a significant project-related traffic impact during the AM peak hour, and four study intersections are projected to experience a significant project-related traffic impact during the PM peak hour under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario, as follows:

- #1 Alameda Street and Firestone Boulevard (PM Peak Hour)
- #5 Alameda Street (W) and Century Boulevard/Martin Luther King Jr. Boulevard (AM and PM Peak Hours)
- #20 Central Avenue and Century Boulevard (AM and PM Peak Hour)
- #35 Long Beach Boulevard and Tweedy Boulevard (AM and PM Peak Hours)

Table 11 – Existing Plus Ambient Growth Plus Related Projects Plus Project Peak Hour LOS – (City of Los Angeles Guidelines - CMA)

#	Intersection	Jurisdiction	AM Peak Hour						PM Peak Hour							
			Existing + AG + RP		LOS	Existing + AG + RP + Project		A in V/C	Sig Impact Yes/No	Existing + AG + RP		LOS	Existing + AG + RP + Project		A in V/C	Sig Impact Yes/No
			V/C	V/C		V/C	V/C			V/C	V/C		V/C	V/C		
1	Alameda St/Firestone Blvd	County of LA	D	0.824	D	0.835	0.011	No	E	0.919	E	0.932	0.013	Yes		
2	Alameda St (W)/92nd St	County of LA	C	0.761	C	0.756	-0.005	No	C	0.741	C	0.741	0.000	No		
3	Alameda St (W)/Tweedy Blvd **	(future) City of LA	E	0.929	C	0.761	-0.168	No	E	0.957	D	0.811	-0.146	No		
4	Alameda St/103rd St +	City of LA/Lynwood	B	0.684	B	0.604	-0.080	No	C	0.797	C	0.707	-0.090	No		
5	Alameda St (W)/Century Blvd/MLK	Lynwood	C	0.723	C	0.788	0.065	Yes	B	0.681	C	0.756	0.075	Yes		
6	Alameda St (W)/Imperial Highway	County of LA/Lynwood	E	0.969	E	0.972	0.003	No	D	0.826	D	0.843	0.017	No		
7	Grape St/103rd St +	City of LA	A	0.422	A	0.483	0.061	No	A	0.380	A	0.442	0.062	No		
8	Wilmington Ave/103rd St +	City of LA	A	0.328	A	0.330	0.002	No	A	0.331	A	0.335	0.004	No		
9	Wilmington Ave/Santa Ana Blvd +	City of LA	A	0.306	A	0.390	0.084	No	A	0.367	A	0.446	0.079	No		
10	Wilmington Ave/108th St +	City of LA	A	0.454	A	0.538	0.084	No	A	0.449	A	0.528	0.079	No		
11	Wilmington Ave/111th St +	City of LA	A	0.412	A	0.496	0.084	No	A	0.431	A	0.510	0.079	No		
12	Wilmington Ave/I-105 EB Ramps +	City of LA/County of LA	D	0.878	D	0.897	0.019	No	B	0.629	B	0.674	0.045	No		
13	Wilmington Ave/120th St	County of LA	A	0.585	B	0.605	0.020	No	A	0.572	A	0.597	0.025	No		
14	I-105 WB Ramps/Imperial Highway +	City of LA/County of LA	D	0.858	D	0.861	0.003	No	D	0.815	D	0.819	0.004	No		
15	Compton Ave/Century Blvd +	City of LA	A	0.275	A	0.374	0.099	No	A	0.331	A	0.450	0.119	No		
16	Compton Ave/103rd St +	City of LA	A	0.346	A	0.315	-0.031	No	A	0.422	A	0.391	-0.031	No		
17	Compton Ave/108th St +	City of LA	B	0.664	B	0.684	0.020	No	A	0.493	A	0.513	0.020	No		
18	Compton Ave/120th St	County of LA	A	0.484	A	0.498	0.014	No	A	0.372	A	0.383	0.011	No		
19	Central Ave/92nd St +	City of LA	A	0.466	A	0.471	0.005	No	A	0.500	A	0.506	0.006	No		
20	Central Ave/Century Blvd +	City of LA	B	0.670	C	0.784	0.114	Yes	B	0.664	C	0.779	0.115	Yes		
21	Central Ave/103rd St +	City of LA	A	0.556	A	0.517	-0.039	No	A	0.594	A	0.557	-0.037	No		
22	Central Ave/108th St (N) +	City of LA	A	0.443	A	0.459	0.016	No	A	0.498	A	0.512	0.014	No		
23	Central Ave/108th St (S) +	City of LA	A	0.453	A	0.466	0.013	No	A	0.504	A	0.521	0.017	No		
24	Central Ave/120th St +	City of LA	A	0.468	A	0.475	0.007	No	A	0.506	A	0.511	0.005	No		

#	Intersection	Jurisdiction	AM Peak Hour						PM Peak Hour					
			Existing + AG + RP		Existing + AG + RP + Project		Δ in V/C	Sig Impact Yes/No	Existing + AG + RP		Existing + AG + RP + Project		Δ in V/C	Sig Impact Yes/No
			LOS	V/C	LOS	V/C			LOS	V/C	LOS	V/C		
25	McKinley Ave/Century Blvd <sup>+</sup>	City of LA	A	0.256	A	0.297	0.041	No	A	0.249	A	0.291	0.042	No
26	Avalon Blvd/Century Blvd <sup>+</sup>	City of LA	A	0.449	A	0.481	0.032	No	A	0.542	A	0.583	0.041	No
27	Avalon Blvd/92nd St <sup>+</sup>	City of LA	A	0.351	A	0.357	0.006	No	A	0.373	A	0.379	0.006	No
28	Avalon Blvd/120th St <sup>+</sup>	City of LA	A	0.406	A	0.406	0.000	No	A	0.459	A	0.469	0.010	No
29	San Pedro St/Century Blvd <sup>+</sup>	City of LA	A	0.487	A	0.510	0.023	No	A	0.531	A	0.557	0.026	No
30	Main St/Century Blvd <sup>+</sup>	City of LA	A	0.516	A	0.537	0.021	No	A	0.525	A	0.546	0.021	No
31	Figueroa St/Century Blvd <sup>+</sup>	City of LA	C	0.704	C	0.711	0.007	No	A	0.544	A	0.552	0.008	No
32	I-110 NB On-Ramp/Century Blvd <sup>+</sup>	City of LA	A	0.372	A	0.385	0.013	No	A	0.300	A	0.312	0.012	No
33	I-110 SB Off-Ramp/Century Blvd <sup>+</sup>	City of LA	A	0.312	A	0.319	0.007	No	A	0.395	A	0.400	0.005	No
34	Long Beach Blvd/Century Blvd	South Gate/Lynwood	C	0.769	C	0.778	0.009	No	C	0.756	C	0.766	0.010	No
35	Long Beach Blvd/Tweedy Blvd	South Gate/Lynwood	C	0.734	C	0.775	0.041	Yes	B	0.694	C	0.738	0.044	Yes
36	Alameda St/97th St* **	(future) City of LA/County of LA	-	-	-	-	-	-	-	-	-	-	-	-
37	Alameda St (E)/Tweedy Blvd* **	(future) City of LA/South Gate	-	-	-	-	-	-	-	-	-	-	-	-
38	Grape St/97th St (W)*	City of LA	-	-	-	-	-	-	-	-	-	-	-	-
39	Grape St/97th St (E)*	City of LA	-	-	-	-	-	-	-	-	-	-	-	-
40	Grape St/Century Blvd*	City of LA	-	-	-	-	-	-	-	-	-	-	-	-
41	Wilmington Ave/Century Blvd*	City of LA	-	-	-	-	-	-	-	-	-	-	-	-

Note:

\* Unsignalized intersections are analyzed separately

\*\* Intersection will become partially or fully under the City of Los Angeles jurisdiction with annexation, no ATSAC credit is taken under Existing + AG + RP conditions

+ City of Los Angeles signalized intersections reflect an ATSAC credit which reduces the final V/C ratio by 0.100



**ADDITIONAL ANALYSES**

**Unsignalized Intersection Analysis**

For this study, the unsignalized intersections operating conditions were evaluated using the Highway Capacity Methodology (HCM 2000) for unsignalized intersections. For the study intersections, the overall intersection delay is measured pursuant to procedures accepted by LADOT during the scoping process. If, based on the estimated delay, the resultant LOS “E” or “F” in the “Future With Project” scenario, then the intersection should be evaluated for the potential installation of a new traffic signal. Unsignalized intersections were evaluated to determine the need for the installation of a traffic signal or other specific control device, but are not included in the impact analysis.

As shown in **Table 12**, the results indicate that three of the six unsignalized study intersections are projected to operate at unacceptable LOS F during both the AM and PM peak hours under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario. The results from the signal warrant analyses show that same three intersections are warranted for signal installation under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario.

**Table 12 – Existing Plus Ambient Growth Plus Related Projects Plus Project Peak Hour LOS/Signal Warrant - (City of Los Angeles Guidelines)**

#	Intersection	Jurisdiction	Existing + AG + RP + Project				Signal Warrants Met	
			AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour
			LOS	Del/Veh	LOS	Del/Veh	Yes/No	Yes/No
36	Alameda St/97th St	City of LA/County of LA	F	181.8	F	780.5	Yes	Yes
37	Alameda St (E)/Tweedy Blvd	City of LA/South Gate	F	OVRFL	F	OVRFL	Yes	Yes
38	Grape St/97th St (W)	City of LA	B	11.9	B	11.0	-	-
39	Grape St 97th St (E)	City of LA	B	11.3	A	9.8	-	-
40	Grape St/Century Blvd	City of LA	D	32.1	D	30.6	-	-
41	Wilmington Ave/Century Blvd	City of LA	F	81.4	F	63.6	Yes	Yes

Note that for intersection 37, Alameda Street (E) at Tweedy Boulevard, the City of South Gate has included in its Fiscal Year 2010 Capital Improvement Program the signalization of this intersection. The City of South Gate will construct a traffic signal for the Los Angeles Unified School District as part of the off-site improvements for the new high school and middle school located on Tweedy Boulevard east of Alameda Street. The cost of construction will be reimbursed by the LAUSD.

**Intersection Capacity Utilization (ICU) Methodology (County of Los Angeles, City of Lynwood, City of South Gate Guidelines)**

In order to facilitate review by other agencies, intersections located in the County of Los Angeles, City of Lynwood, and the City of South Gate were also evaluated under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario using the ICU methodology per guidelines from the individual jurisdictions, as well as their respective impact criteria. Level of service analyses under this scenario were performed for both AM and PM peak hours and are summarized below in **Table 13**.

As shown, the results indicate that using the local jurisdiction’s (other than the city of Los Angeles) ICU methodology, two study intersections are projected to experience a significant impact as a result of the

addition of project-related traffic during the AM and PM peak hours under the Existing Plus Ambient Growth Plus Related Projects Plus Project conditions, as follows:

- #1 Alameda Street and Firestone Boulevard (PM Peak Hour)
- #12 Wilmington Avenue and I-105 EB Ramps (AM and PM Peak Hours)

**Table 13 – Existing Plus Ambient Growth Plus Related Projects Plus Project LOS - (Other Jurisdiction Guidelines - ICU)**

#	Intersection	Jurisdiction	AM Peak Hour				PM Peak Hour				Sig Impact Yes/No			
			Existing + AG + RP		Existing + AG + RP + Project		Existing + AG + RP		Existing + AG + RP + Project					
			LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C				
1	Alameda St/Firestone Blvd	County of LA	D	0.872	D	0.883	0.011	No	E	0.961	E	0.974	0.013	Yes
2	Alameda St (W)/92nd St	County of LA	D	0.814	D	0.811	-0.003	No	C	0.794	C	0.794	0.000	No
4	Alameda St/103rd St	City of LA*	-	-	-	-	-	-	-	-	-	-	-	-
		Lynwood	C	0.799	C	0.727	-0.072	No	D	0.899	D	0.819	-0.080	No
5	Alameda St (W)/Century Blvd/MLK	Lynwood	C	0.744	D	0.802	0.058	No	C	0.706	C	0.773	0.067	No
6	Alameda St (W)/Imperial Highway	County of LA Lynwood	E	0.935	E	0.938	0.003	No	D	0.811	D	0.825	0.014	No
12	Wilmington Ave/I-105 EB Ramps	City of LA*	-	-	-	-	-	-	-	-	-	-	-	-
		County of LA	E	0.971	E	0.988	0.017	Yes	C	0.749	C	0.790	0.041	Yes
13	Wilmington Ave/120th St	County of LA	B	0.649	B	0.667	0.018	No	B	0.636	B	0.660	0.024	No
14	I-105 WB Ramps/Imperial Highway	County of LA	E	0.910	E	0.912	0.002	No	E	0.901	E	0.905	0.004	No
18	Compton Ave/120th St	County of LA	A	0.551	A	0.563	0.012	No	A	0.448	A	0.459	0.011	No
34	Long Beach Blvd/Century Blvd	South Gate Lynwood	C	0.785	C	0.793	0.008	No	C	0.773	C	0.782	0.009	No
35	Long Beach Blvd/Tweedy Blvd	South Gate Lynwood	C	0.753	C	0.790	0.037	No	C	0.719	C	0.757	0.038	No

Note: \* City of LA intersections previously analyzed with City of LA Guidelines using CMA methodology

### **Residential Street Analysis**

The LADOT guidelines state that commercial projects may be required to conduct a residential street impact analysis. A local residential street can be potentially impacted based on an increase in the average daily traffic volumes. The objective of the residential street analysis is to determine the potential for cut-through traffic impacts on a residential street that can result from a Project. Cut-through trips are measured as vehicles that bypass a congested arterial or intersection by instead opting to travel along a residential street.

Since Alameda Street, where most of the commercial uses occur, is not considered a congested arterial, and there would be little to no cut-through trips on the residential streets, a residential street analysis was not performed.

## MITIGATION MEASURES

The traffic impact analysis identified impacts at four (4) signalized intersection locations, and also identified three (3) locations that are currently stop sign controlled and may require signalization in the future. Potential mitigation measures are discussed below.

### Intersection Mitigation Measures

To reduce the overall impacts under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario, as defined under the City of Los Angeles Traffic Study Policies, the proposed mitigation measures are suggested for the intersections with significant project-related impacts.

- #1 Alameda Street and Firestone Boulevard – This intersection is located outside the City of Los Angeles under the County of Los Angeles jurisdiction. This intersection is also projected to experience a significant impact using the County of Los Angeles criteria. This intersection is scheduled to be improved via the County’s Traffic Signal Synchronization Program (TSSP), which will facilitate the movement of vehicles through the intersection. No feasible physical mitigation measures were identified for this intersection that would reduce the project-related impact to a less than significant level. Therefore, a significant project impact would remain.
- #5 Alameda Street at Century Boulevard/MLK Boulevard – This intersection is located outside the City of Los Angeles in the City of Lynwood. While it does show a significant impact under City of Los Angeles criteria, it does not show an impact using the City of Lynwood criteria. No feasible mitigation measures have been identified that would mitigate the identified impact.
- #20 Central Avenue at Century Boulevard – At the intersection of Central Avenue and E. Century Boulevard, because of existing physical constraints, no feasible physical mitigations measures have been identified for this location. Therefore, a significant project impact would remain.
- #35 Long Beach Boulevard at Tweedy Boulevard - This intersection is located outside the City of Los Angeles in the Cities of South Gate and Lynwood. While it does show a significant impact under City of Los Angeles criteria, it does not show an impact using the City of South Gate or Lynwood criteria. No feasible mitigation measures have been identified that would mitigate the identified impact.

Level of service analyses under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario with mitigations were performed for both AM and PM peak hours and are summarized below in **Tables 14 and 15**.

**Table 14 – Existing Plus Ambient Growth Plus Related Projects With Mitigation AM Peak Hour LOS - (City of Los Angeles Guidelines - CMA)**

#	Intersection	Jurisdiction	AM Peak Hour								Residual Impact Yes/No	
			Existing + AG + RP		Existing + AG + RP + Project		Δ in V/C	Sig Impact Yes/No	Existing + AG + RP + Project With Mitigation			Δ in V/C
			LOS	V/C	LOS	V/C			LOS	V/C		
1	Alameda St/Firestone Blvd	County of LA	D	0.824	D	0.835	0.011	No	D	0.835	0.000	No
5	Alameda St (W)/Century Blvd/MLK	Lynwood	C	0.723	C	0.788	0.065	Yes	C	0.788	0.000	Yes
20	Central Ave/Century Blvd	City of LA	B	0.670	C	0.784	0.114	Yes	C	0.784	0.000	Yes
35	Long Beach Blvd/Tweedy Blvd	South Gate/Lynwood	C	0.734	C	0.775	0.041	Yes	C	0.775	0.000	Yes

**Table 15 – Existing Plus Ambient Growth Plus Related Projects With Mitigation PM Peak Hour LOS - (City of Los Angeles Guidelines - CMA)**

#	Intersection	Jurisdiction	PM Peak Hour								Residual Impact Yes/No	
			Existing + AG + RP		Existing + AG + RP + Project		Δ in V/C	Sig Impact Yes/No	Existing + AG + RP + Project With Mitigation			Δ in V/C
			LOS	V/C	LOS	V/C			LOS	V/C		
1	Alameda St/Firestone Blvd	County of LA	E	0.919	E	0.932	0.013	Yes	E	0.932	0.000	Yes
5	Alameda St (W)/Century Blvd/MLK	Lynwood	B	0.681	C	0.756	0.075	Yes	C	0.756	0.000	Yes
20	Central Ave/Century Blvd	City of LA	B	0.664	C	0.779	0.115	Yes	C	0.779	0.000	Yes
35	Long Beach Blvd/Tweedy Blvd	South Gate/Lynwood	B	0.694	C	0.738	0.044	Yes	C	0.738	0.000	Yes

## CONGESTION MANAGEMENT PROGRAM ANALYSIS

The Congestion Management Program (CMP) was created statewide as a result of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (Metro). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. A specific system of arterial roadways plus all freeways comprise the CMP system. A total of 164 intersections are identified for monitoring on the system in Los Angeles County. This section describes the analysis of project-related impacts on the CMP system. The analysis has been conducted according to the guidelines set forth in the 2004 Congestion Management Program for Los Angeles County.

According to the CMP Traffic Impact Analysis (TIA) Guidelines developed by the MTA, a traffic impact analysis must include the following, at a minimum:

- All CMP arterial monitoring intersections, including freeway on- or off-ramp intersections, where the proposed project would add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic).
- If CMP arterial segments are being analyzed rather than intersections, the study area must include all segments where the proposed project will add 50 or more peak hour trips (total of both directions). Within the study area, the TIA must analyze at least one segment between monitored CMP intersections.
- Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.
- Caltrans must also be consulted through a Notice of Preparation (NOP) process to identify other specific locations to be analyzed on the state highway system.

To promote consistency in the TIAs prepared in different jurisdictions, CMP TIAs must conduct intersection LOS calculations using either of the following methods:

- The Intersection Capacity Utilization (ICU) method as specified for CMP highway monitoring;  
or
- The Critical Movement Analysis (CMA) / Circular 212 method.

For the purposes of the CMP, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by two percent of capacity ( $V/C \geq 0.02$ ), causing LOS F ( $V/C > 1.00$ ). If the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by two percent of capacity ( $V/C \geq 0.02$ ).

### **CMP Intersection Analysis**

The closest CMP arterial monitoring stations to the proposed Jordan Downs site are at the intersections of:

- Alameda Street and Firestone Boulevard
- Alameda Street and Imperial Highway

After calculating the number of project-related trips assigned to the street network using the TRAFFIX model, it has been determined that the proposed project will add 50 or more trips to both of the intersections, therefore, CMP intersection analysis is required. The CMP arterial monitoring station located at Alameda Street and Firestone Boulevard will experience an increase of 40 AM project-related trips and 59 PM project-related trips during the weekday. The CMP arterial monitoring station located at Alameda Street and Imperial Highway will experience an increase of 89 AM project-related trips and 95 PM project-related trips during the weekday. As seen in **Table 16**, the results show that both of the CMP study intersections are projected to operate at satisfactory LOS level under the Existing Plus Ambient Growth Plus Related Plus Project scenario.

**Table 16 – CMP Monitoring Intersection Analysis (ICU Methodology)**

#	Intersection	AM Peak Hour						PM Peak Hour					
		Existing + AG + RP		Existing + AG + Project + RP		Δ in V/C	Sig Project-Related Impact Yes/No	Existing + AG + RP		Existing + AG + Project + RP		Δ in V/C	Sig Project-Related Impact Yes/No
		LOS	V/C	LOS	V/C			LOS	V/C	LOS	V/C		
1	Alameda St / Firestone Blvd	D	0.872	D	0.883	0.011	No	E	0.961	E	0.974	0.013	No
6	Alameda St (W) / Imperial Hwy	E	0.935	E	0.938	0.003	No	D	0.811	D	0.825	0.014	No

**CMP Mainline Freeway Segment Analysis**

CMP guidelines require analysis of mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours. In accordance with CMP guidelines, an increase of 0.02 or more in the Demand/Capacity ratio (D/C) with a resulting LOS F is considered a significant impact. The closest CMP mainline freeway monitoring stations are as follows:

- I-105 Freeway – East of Crenshaw Boulevard, west of Vermont Avenue – CMP Station 1042, Post Mile R5.50
- I-105 Freeway – West of I-710, east of Harris Avenue – CMP Station 1043, Post Mile R12.60
- I-110 Freeway – Manchester Avenue – CMP Station 1046, Post Mile 15.86

**Table 17** summarizes the project-related trips that would be added to the two CMP Mainline freeway segments by time period, direction and location.

**Table 17 – CMP Freeway Analysis**

	I-105 (e/o Crenshaw, w/o Vermont)				I-105 (w/o I-710, e/o Harris)				I-110 at Manchester			
	AM		PM		AM		PM		AM		PM	
	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
<b>Added Volume from Project</b>	19	14	15	18	28	35	36	31	25	20	22	26

As noted, according to the guidelines for CMP Transportation Impact Analysis, if the proposed project fails to add 150 or more trips, in either direction, during the AM or PM weekday peak period, no further traffic analysis is required. Based on the table above, the project is not expected to add 150 or more trips



at the three closest CMP mainline freeway monitoring stations during both the AM and PM peak hours, thus are not subjected to CMP level analysis.

## CONCLUSIONS

Iteris, Inc. has evaluated 41 intersections located within the jurisdictions of the City of Los Angeles, County of Los Angeles, City of Lynwood, and City of South Gate, for potential significant impacts resulting from the construction of the proposed Jordan Downs Specific Plan. Analysis of projected operating conditions was completed for the Existing, Existing Plus Ambient Growth Plus Related Projects, and Existing Plus Ambient Growth Plus Related Projects Plus Project scenarios. The following observations and conclusions can be made regarding traffic related impacts:

- Per City of Los Angeles CMA methodology, under existing traffic conditions, one signalized study intersection operates at LOS E during the AM peak hour, and one signalized study intersection operates at LOS E during the PM peak hour. No intersections operate at LOS F. The following signalized study intersections are currently operating at LOS E during the AM and/or PM peak hours:
  - #3 Alameda Street (W) and Tweedy Boulevard (PM Peak Hour)
  - #6 Alameda Street (W) and Imperial Highway (AM Peak Hour)
- Per City of Los Angeles CMA methodology, under the Existing Plus Ambient Growth Plus Related Projects scenario, a total of three signalized study intersections are projected to operate at LOS E, and no intersections are projected to operate at LOS F. Two study intersections are projected to operate at LOS E during the AM peak hour, and two study intersections are projected to operate at LOS E during PM peak hour. The following study intersections are projected to operate at LOS E during the AM and/or PM peak hours:
  - #1 Alameda Street and Firestone Boulevard (PM Peak Hour)
  - #3 Alameda Street (W) and Tweedy Boulevard (AM and PM Peak Hours)
  - #6 Alameda Street (W) and Imperial Highway (AM Peak Hour)
- Per City of Los Angeles CMA methodology, under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario, four signalized study intersections are projected to experience a significant project-related impact. Of those, three study intersections are projected to experience a significant project-related traffic impact during the AM peak hour, and four study intersections are projected to experience a significant project-related traffic impact during the PM peak hour under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario, as follows:
  - #1 Alameda Street and Firestone Boulevard (PM Peak Hour)
  - #5 Alameda Street (W) and Century Boulevard/Martin Luther King Jr. Boulevard (AM and PM Peak Hours)
  - #20 Central Avenue and Century Boulevard (AM and PM Peak Hour)
  - #35 Long Beach Boulevard and Tweedy Boulevard (AM and PM Peak Hours)
- To reduce the overall impacts under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario, the proposed mitigation measures were investigated for the intersections with significant project-related impacts and analyzed using the CMA methodology:
  - #20 Central Avenue at Century Boulevard – No feasible physical mitigation measures were identified for this intersection that would reduce the project-related impact to a less than significant level. Therefore, a significant project impact would remain.

- The following three intersections experience impacts under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario. All three intersections are located outside the City of Los Angeles. No mitigation measures have been identified that would reduce impacts to a less than significant level, therefore significant project related impacts would remain.
  - #1 Alameda Street and Firestone Boulevard – This intersection is located outside the City of Los Angeles under the County of Los Angeles jurisdiction. This intersection is also shown to experience a significant impact using the County of Los Angeles criteria. However, the intersection is scheduled to be improved via the County’s Traffic Signal Synchronization Program (TSSP), which will facilitate the movement of vehicles through the intersection. No feasible physical mitigation measures were identified for this intersection that would reduce the project-related impact to a less than significant level. Therefore, a significant project impact would remain.
  - #5 Alameda Street at Century Boulevard/MLK Avenue – This intersection is located outside the City of Los Angeles in the City of Lynwood. While it does show a significant impact under City of Los Angeles criteria, it does not show an impact using the City of Lynwood criteria.
  - #35 Long Beach Boulevard at Tweedy Boulevard - This intersection is located outside the City of Los Angeles in the Cities of South Gate and Lynwood. While it does show a significant impact under City of Los Angeles criteria, it does not show an impact using the City of South Gate or Lynwood criteria.
- Per City of Los Angeles guidelines, unsignalized study intersections were evaluated using the Highway Capacity Methodology (HCM 2000). Intersections that are projected to operate at LOS E or F during the “Future With Project” condition are evaluated for potential installation of a new traffic signal. Three of the six unsignalized study intersections are projected to operate at LOS F during the AM and PM peak hours. The results from the signal warrant analyses show that all three intersections that are projected to operate at LOS E or F are warranted for signal installation under the Existing Plus Ambient Growth Plus Related Projects Plus Project scenario. The following unsignalized study intersections are warranted for signal installation:
  - #36 Alameda Street and 97<sup>th</sup> Street
  - #37 Alameda Street (E) and Tweedy Boulevard – This intersection has funding identified in the City of South Gate Capital Improvement Program for installation of a traffic signal at this location.
  - #41 Wilmington Avenue and Century Boulevard
- The proposed project is not projected to have any Congestion Management Program impacts at both the arterial and freeway monitoring stations near the project area.

## APPENDICIES

### **Appendix A – Existing Intersection Peak Hour Counts.** A-1

Appendix A – Existing Intersection Peak Hour Counts – Includes the City of Los Angeles Department of Transportation Manual Traffic Count Summary sheets for each study intersection. Manual Traffic Count Summary sheets include the day, date, weather, and time of the traffic count, along with a sum of the AM and PM peak 15 minutes, a sum of the AM and PM peak hour, and the total intersection count during the AM and PM peak hours.

### **Appendix B – Traffix Worksheets** A-43

Appendix B – Traffix Worksheets – Includes the Level of Service worksheets for all study intersections. Intersections in the City of Los Angeles were analyzed using the Transportation Research Board Critical Movement Analysis (CMA), Circular 212 Planning Method, per the City of Los Angeles Traffic Study Policies and Procedures. The CMA method determines the V/C ratio on a critical lane basis and the LOS at signalized intersections. The V/C for the intersection corresponds to a LOS value, which describes the intersection operations. Level of Service analysis for intersections located within or bordering the County of Los Angeles, City of Lynwood, or City of South Gate were conducted using the Intersection Capacity Utilization (ICU) methodology, as defined in the County of Los Angeles Traffic Impact Analysis Report Guidelines. A maximum of 1,600 vehicles per hour per lane was used (2,880 vehicles per hour for dual left-turn lanes) and a ten percent yellow clearance cycle was included.

Existing Intersection Peak Hour CMA Analysis A-43

Existing + Ambient Growth + Related Projects Intersection Peak Hour CMA Analysis A-94

Existing + Ambient Growth + Related Projects + Project Intersection Peak Hour CMA Analysis .A-149

Existing + Ambient Growth + Related Projects Intersection Peak Hour ICU Analysis. .A-206

Existing + Ambient Growth + Related Projects + Project Intersection Peak Hour ICU Analysis. .A-231

### **Appendix C –Signal Warrant Analysis Worksheets** A-257

Appendix C – Future With Project Signal Warrant Analysis Worksheets – Includes the traffic signal warrant analysis worksheets for the Future With Project scenario pursuant to Section 353 of LADOT’s Manual of Policies and Procedures. Unsignalized intersections were evaluated to determine the need for the installation of a traffic signal or other traffic control device.