Appendix L1

Transportation Impact Study

transportation consulting, inc.

MEMORANDUM

TO: Wes Pringle, Los Angeles Department of Transportation

FROM: Sarah M. Drobis, P.E.
Emily Wong, P.E.

DATE: April 1, 2022

RE: Update to Transportation Impact Study for the
4th & Hewitt Project
Los Angeles, California **Ref:** J1509

Gibson Transportation Consulting, Inc., previously prepared *Transportation Impact Study for the 4th & Hewitt Project, Los Angeles, California* (March 2018, Revised February 2020) (2020 TIS) in accordance with *Transportation Assessment Guidelines* (Los Angeles Department of Transportation [LADOT], July 2019). These guidelines, methodologies, and thresholds were in effect at the time of the 2020 TIS approval. LADOT concurred with the findings of the 2020 TIS in an inter-departmental correspondence, *Updated Transportation Impact Assessment for the 4th & Hewitt Commercial Development Located at 405 South Hewitt Street* (April 2020) (April 2020 LADOT Assessment Letter).

The update to the 2020 TIS provided in Attachment A has been revised for consistency with the Draft Environmental Impact Report. The revision does not affect the findings of the 2020 TIS nor the April 2020 LADOT Assessment Letter, and the conclusions remain valid.

Since the approval of the 2020 TIS, GTC also prepared *Transportation Assessment for the 4th & Hewitt Project* (December 2021), provided in Attachment B, detailing the analysis of the extended future buildout year. LADOT concurred in January 2022 that the extended buildout year would not affect the findings of the April 2020 LADOT Assessment Letter.

555 W. 5th Street, Suite 3375 Los Angeles, CA 90013 p. 213.683.0088 f. 213.683.0033

Attachment A

Revised Transportation Impact Study

TRANSPORTATION IMPACT STUDY FOR THE 4TH & HEWITT PROJECT

LOS ANGELES, CALIFORNIA

MARCH 2018

REVISED FEBRUARY 2020 & APRIL 2022

PREPARED FOR

LIG - 900, 910 AND 926 E. 4TH STREET, 405-411 S. HEWITT STREET, LLC

PREPARED BY

Gibson
transportation consulting, inc.

FORM GEN. 160A (Rev. 1/82)

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

405 S. Hewitt St
DOT Case No. CEN 20-49411

Date: April 14, 2020

To: Milena Zasadzien, Senior City Planner
Department of City Planning

From: Wes Pringle, Transportation Engineer
Department of Transportation

Subject: **UPDATED TRANSPORTATION IMPACT ANALYSIS FOR THE 4TH AND HEWITT COMMERCIAL DEVELOPMENT LOCATED AT 405 SOUTH HEWITT STREET**

On July 11, 2018, the Department of Transportation (DOT) issued a traffic assessment report to the Department of City Planning on the proposed commercial project located at 405 South Hewitt Street. However, subsequent to the release of this report, pursuant to Senate Bill (SB) 743 and the recent changes to Section 15064.3 of the State's California Environmental Quality Act (CEQA) Guidelines, the City of Los Angeles adopted vehicle miles traveled (VMT) as the criteria by which to determine transportation impacts under CEQA. Therefore, in response to this action the applicant submitted a VMT analysis for the proposed project in addition to the previous analysis submitted on March 2018. Therefore, please replace the previous July 11, 2018 DOT assessment, in its entirety, with this report which addresses the totality of the transportation analysis.

The Department of Transportation (DOT) has reviewed the supplemental traffic analysis, dated February 2020, prepared by Gibson Transportation Consulting, for the commercial project located at 405 South Hewitt Street. In compliance with Senate Bill 743 and the California Environmental Quality Act (CEQA), a vehicle miles traveled (VMT) analysis is required to identify the project's ability to promote the reduction of green-house gas emissions, access to diverse land-uses, and the development of multi-modal networks. The significance of a project's impact in this regard is measured against the VMT thresholds established in DOT's Transportation Assessment Guidelines (TAG), as described below.

DISCUSSION AND FINDINGS

A. Project Description

The project site is currently occupied by a museum, office use, and storage use located in the Arts District on the south side of 4th Street between Colyton Street and Hewitt Street. The museum will remain and the office and storage uses will be removed in order to construct 311,682 square feet of office space and 8,149 square feet of commercial space. The study did not include the number of parking spaces proposed for the project. Access to the parking garage would be provided via two driveways on 4th Street. Access to the loading dock would be provided via a driveway on Hewitt Street. The project is expected to be completed by 2023.

B. CEQA Screening Threshold

Prior to accounting for trip reductions resulting from the application of Transportation Demand Management (TDM) Strategies, a trip generation analysis was conducted to determine if the project would exceed the net 250 daily vehicle trips screening threshold. Using the City of Los Angeles VMT Calculator tool, which draws upon trip rate estimates published in the Institute of Transportation Engineers' (ITE's) Trip Generation, 9th Edition manual as well as applying trip generation adjustments when applicable, based on sociodemographic data and the built environment factors of the project's surroundings, it was determined that the project **does** exceed the net 250 daily vehicle trips threshold.

C. Transportation Impacts

On July 30, 2019, pursuant to Senate Bill (SB) 743 and the recent changes to Section 15064.3 of the State's California Environmental Quality Act (CEQA) Guidelines, the City of Los Angeles adopted vehicle miles traveled (VMT) as a criteria in determining transportation impacts under CEQA. The new DOT Transportation Assessment Guidelines (TAG) provide instructions on preparing transportation assessments for land use proposals and defines the significant impact thresholds.

The DOT VMT Calculator tool measures project impact in terms of Household VMT per Capita, and Work VMT per Employee. DOT identified distinct thresholds for significant VMT impacts for each of the seven Area Planning Commission (APC) areas in the City. For the Central APC area, in which the project is located, the following thresholds have been established:

- Household VMT per Capita: 6.0
- Work VMT per Employee: 7.6

As cited in the VMT Analysis report, the VMT projection for the proposed project is 7.2 for the Work VMT. There is no household VMT for this project. Therefore, it is concluded that implementation of the Project would not result in a significant Work VMT impact. A copy of the VMT Calculator summary reports is provided as **Attachment 1** to this report.

Additionally, the analysis included further discussion of the transportation impact thresholds:

T-1 Conflicting with plans, programs, ordinances, or policies
T-2.1 Causing substantial vehicle miles traveled
T-2.2 Substantially inducing additional automobile travel
T-3 Substantially increasing hazards due to a geometric design feature or incompatible use.

A Project's impacts per Thresholds T-2.1 and 2.2 are determined by using the VMT calculator and are discussed above. The assessment determined that the project would not have a significant transportation impact under any of the above thresholds.

D. Safety, Access and Circulation

During the preparation of the new CEQA guidelines, the State's Office of Planning and Research stressed that lead agencies can continue to apply traditional operational analysis requirements to inform land use decisions provided that such analyses were outside of the CEQA process. The authority for requiring non-CEQA transportation analysis and requiring improvements to address potential circulation deficiencies, lies in the City of Los Angeles' Site Plan Review authority as established in Section 16.05 of the Los Angeles Municipal Code (LAMC), Section 16.05. Therefore, DOT continues to require and review a project's site access, circulation, and operational plan to determine if any safety and access enhancements, transit amenities, intersection improvements, traffic signal upgrades, neighborhood traffic calming, or other improvements are needed. In accordance with this authority, the project has completed a circulation analysis using a "level of service" screening methodology that indicates that the trips generated by the proposed development will likely result in adverse circulation conditions at several locations. DOT has reviewed this analysis and determined that it adequately discloses operational concerns. A copy of the circulation analysis table that summarizes these potential deficiencies is provided as **Attachment 2** to this report.

PROJECT REQUIREMENTS

A. Corrective Measures (Non-CEQA Analysis)

In the Traffic Study report, the analysis included a review of current and potential future deficiencies that may result from the project. To address these deficiencies, the applicant should be required to implement the following corrective measures.

1. Transportation Demand Management (TDM) Program

A TDM program, which includes design elements and trip reduction strategies, would reduce the project's overall trip generation by discouraging single occupancy vehicle use and by promoting the use of alternative travel modes. Through strategic building design and orientation, this project can facilitate access to existing transit services, provide a pedestrian-friendly environment, promote non-automobile travel and support the goals of a trip-reduction program.

A preliminary TDM program shall be prepared and provided for DOT review prior to the issuance of the first building permit for this project and a final TDM program approved by DOT is required prior to the issuance of the first certificate of occupancy for the project. The preliminary plan will include, at a minimum, measures consistent with the City's Trip Reduction Ordinance. As recommended by the transportation study, the TDM program could include, but is not be limited to the following:

- Educational Programs/On-Site TDM Coordinator who reaches out to employers and employees promoting the benefits of TDM;
- Centrally located Transportation Information Center/Kiosk where employees and visitors can obtain information regarding commute programs and real-time commuter information;
- Bicycle and pedestrian-friendly environment with exclusive access points, secured bicycle facilities, and showers;
- A one-time fixed-fee contribution of $50,000 to be deposited into the City's Bicycle Plan Trust Fund prior to the issuance of any certificates of occupancy to be used to

implement bicycle improvements within the Project area;
- Ridesharing Services Program which would match employees together to establish carpools and vanpools;
- Guaranteed ride home (GRH) program;
- Parking incentives and administrative support for the formation of carpools and vanpools;
- Unbundled parking;
- Mobility Hub support of existing and/or future efforts by LADOT for Mobility Hubs by providing amenities such as bicycle parking, transit information, etc. at the project site (subject to design feasibility);
- Record a Covenant and Agreement to ensure that the TDM program will be maintained.

2. **Downtown/Arts District Transportation Management Organization (TMO)**
The project proposes to contribute to the formation and marketing of and participation in the Downtown/Arts District TMO. The project would provide its fair share of seed funding for the TMO in the first year to cover the cost of launching the TMO and continue to commit to nine additional years (10 years in total) as a charter member with annual dues. The TMO would offer similar services to those described above but would have a much wider reach than the project's local TDM plan and can result in much greater trip reduction benefits. The TMO could be instrumental in promoting the use of transit and the City's bike share and car share programs that will be installed in the coming years within the Downtown area. The TMO's activities would help augment or implement some of the strategies described above for the project specific TDM plan.

C. Highway Dedication and Street Widening Requirements
Per the new Mobility Element of the General Plan, **4th Street**, an Avenue III, would require a 23-foot half-width roadway within a 36-foot half-width right-of-way; **Colyton Street** and **Hewitt Street**, both Collector Streets, would require a 20-foot half-width roadway within a 33-foot half-width right-of-way. The applicant should check with BOE's Land Development Group to determine the specific highway dedication, street widening and/or sidewalk requirements for this project.

D. Construction Impacts
DOT recommends that a construction work site traffic control plan be submitted to DOT's Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval prior to the start of any construction work. Refer to http://ladot.lacity.org/what-we-do/plan-review to determine which section to coordinate review of the work site traffic control plan. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that all construction related traffic be restricted to off-peak hours to the extent feasible.

E. Parking Requirements
The study did not indicate the number of parking spaces to be provided. The developer should check with the Department of Building and Safety on the number of parking spaces needed.

F. Driveway Access and Circulation

Access to the parking garage would be provided via two right-in/right-out driveways on 4th Street, with one driveway accessing the subterranean parking levels and one driveway accessing the above-grade parking levels. Access to the at-grade loading dock would be provided via a full-access driveway on Hewitt Street. Conceptually, the proposed site plan is acceptable to DOT. The review of this study does not constitute approval of the driveway dimensions, access and circulation scheme, and loading/unloading area for the project. Any changes to the project's site access, circulation scheme, or loading/unloading area after issuance of this report would require separate review and approval and should be coordinated with DOT's Citywide Planning Coordination Section at 201 N. Figueroa Street, 5th Floor, Room 550, at (213) 482-7024. The applicant should contact DOT for driveway width and internal circulation requirements prior to the commencement of building or parking layout design efforts so that such traffic flow considerations are designed and incorporated early into the building and parking layout plans. All driveways should be Case 2 driveways and 30 feet for two-way operations or 18 feet for one-way operations. All delivery truck loading and unloading should take place on site with no vehicles having to back into the project via any of the project driveways. A copy of the project's site plan is provided as **Attachment 3** to this report.

G. Development Review Fees

Section 19.15 of the Los Angeles Municipal Code identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact me at (213) 972-8482.

Attachments

J:\Letters\2020\CEN20-49411_405 Hewitt St MU_vmt_ltr.docx

c: Shaylee Papadakis, Council District No. 14
Edward Yu, Central District, DOT
Taimour Tanavoli, Case Management Office, DOT
Matthew Masuda, BOE Development Services
Sarah Drobis & Emily Wong, Gibson Transportation Consulting

Attachment 1

CITY OF LOS ANGELES VMT CALCULATOR Version 1.2

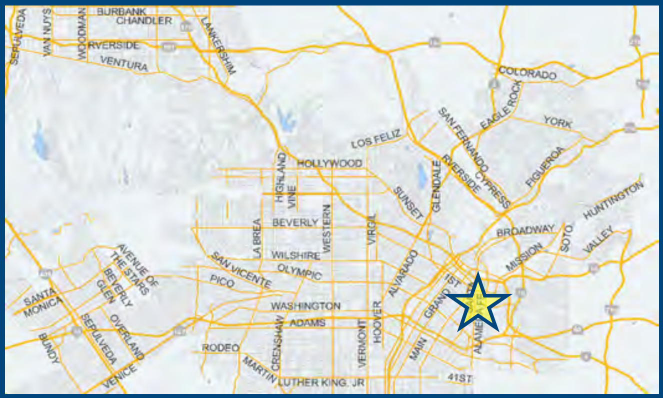
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: 4th & Hewitt

Scenario:

Address: 401 S HEWITT ST, 90013



If the project is replacing an existing number of residential units with a smaller number of residential units, is the proposed project located within one-half mile of a fixed-rail or fixed-guideway transit station?

○ Yes ◉ No

Existing Land Use

Land Use Type	Value	Unit
Office | General Office	3.515	ksf
Office | General Office	3.515	ksf

☐ Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type	Value	Unit
Retail | High-Turnover Sit-Down Restaurant	8.149	ksf
Retail | High-Turnover Sit-Down Restaurant	8.149	ksf
Office | General Office	311.682	ksf

☐ Click here to add a single custom land use type (will be included in the above list)

Project Screening Summary

Existing Land Use	Proposed Project
27 Daily Vehicle Trips	2,830 Daily Vehicle Trips
201 Daily VMT	20,381 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	2,803 Net Daily Trips
The net increase in daily VMT ≤ 0	20,180 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	8.149 ksf

The proposed project is required to perform VMT analysis.

Measuring the Miles

1/15/2020

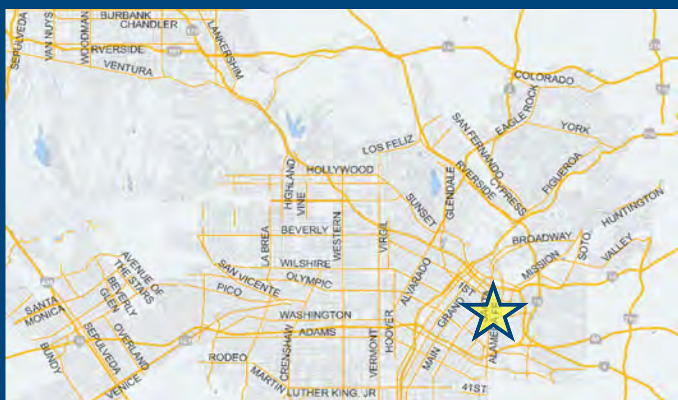
CITY OF LOS ANGELES VMT CALCULATOR Version 1.2

Project Information

Project: 4th & Hewitt

Scenario:

Address: 401 S HEWITT ST, 90013



Proposed Project Land Use Type	Value	Unit
Retail | High-Turnover Sit-Down Restaurant	8.14	
Office | General Office	311	

TDM Strategies

Select each section to show individual strategies
Use ☑ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	**No**	**No**
Max Work Based TDM Achieved?	**No**	**No**

A Parking

B Transit

C Education & Encouragement

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

Implement/Improve On-street Bicycle Facility
☐ Proposed Prj ☐ Mitigation
Select Proposed Prj or Mitigation to include this strategy

Include Bike Parking Per LAMC
☐ Proposed Prj ☐ Mitigation
Select Proposed Prj or Mitigation to include this strategy

Include Secure Bike Parking and Showers
☑ Proposed Prj ☐ Mitigation
Select Proposed Prj or Mitigation to include this strategy

G Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
2,756 Daily Vehicle Trips	**2,756** Daily Vehicle Trips
19,848 Daily VMT	**19,848** Daily VMT
0.0 Household VMT per Capita	**0.0** Household VMT per Capita
7.2 Work VMT per Employee	**7.2** Work VMT per Employee

Significant VMT Impact?

Proposed Project	With Mitigation
Household: No Threshold = 6.0 15% Below APC	**Household: No** Threshold = 6.0 15% Below APC
Work: No Threshold = 7.6 15% Below APC	**Work: No** Threshold = 7.6 15% Below APC

Measuring the Miles

1/15/2020

Project Information

Land Use Type		Value	Units
Housing	*Single Family*	*0*	*DU*
	Multi Family	*0*	*DU*
	Townhouse	*0*	*DU*
	Hotel	*0*	*Rooms*
	Motel	*0*	*Rooms*
Affordable Housing	*Family*	*0*	*DU*
	Senior	*0*	*DU*
	Special Needs	*0*	*DU*
	Permanent Supportive	*0*	*DU*
Retail	*General Retail*	*0.000*	*ksf*
	Furniture Store	*0.000*	*ksf*
	Pharmacy/Drugstore	*0.000*	*ksf*
	Supermarket	*0.000*	*ksf*
	Bank	*0.000*	*ksf*
	Health Club	*0.000*	*ksf*
	High-Turnover Sit-Down Restaurant	8.149	ksf
	Fast-Food Restaurant	*0.000*	*ksf*
	Quality Restaurant	*0.000*	*ksf*
	Auto Repair	*0.000*	*ksf*
	Home Improvement	*0.000*	*ksf*
	Free-Standing Discount	*0.000*	*ksf*
	Movie Theater	*0*	*Seats*
Office	General Office	311.682	ksf
	Medical Office	*0.000*	*ksf*
Industrial	*Light Industrial*	*0.000*	*ksf*
	Manufacturing	*0.000*	*ksf*
	Warehousing/Self-Storage	*0.000*	*ksf*
School	*University*	*0*	*Students*
	High School	*0*	*Students*
	Middle School	*0*	*Students*
	Elementary	*0*	*Students*
	Private School (K-12)	*0*	*Students*
Other		*0*	*Trips*

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: January 15, 2020
Project Name: 4th & Hewitt
Project Scenario:
Project Address: 401 S HEWITT ST, 90013

Version 1.2

Analysis Results

Total Employees: 1,279
Total Population: 0

Proposed Project		*With Mitigation*	
2,756	**Daily Vehicle Trips**	**2,756**	**Daily Vehicle Trips**
19,848	**Daily VMT**	**19,848**	**Daily VMT**
0	**Household VMT per Capita**	**0**	**Household VMT per Capita**
7.2	**Work VMT per Employee**	**7.2**	**Work VMT per Employee**

Significant VMT Impact?

APC: Central

Impact Threshold: 15% Below APC Average
Household = 6.0
Work = 7.6

Proposed Project		*With Mitigation*	
VMT Threshold	**Impact**	**VMT Threshold**	**Impact**
Household > 6.0	No	Household > 6.0	No
Work > 7.6	No	Work > 7.6	No

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	*Reduce parking supply*	*City code parking provision (spaces)*	*0*	*0*
		Actual parking provision (spaces)	*0*	*0*
	Unbundle parking	*Monthly cost for parking ($)*	*$0*	*$0*
	Parking cash-out	*Employees eligible (%)*	*0%*	*0%*
	Price workplace parking	*Daily parking charge ($)*	*$0.00*	*$0.00*
		Employees subject to priced parking (%)	*0%*	*0%*
	Residential area parking permits	*Cost of annual permit ($)*	*$0*	*$0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Transit	Reduce transit headways	Reduction in headways (increase in frequency) (%)	0%	0%
		Existing transit mode share (as a percent of total daily trips) (%)	0%	0%
		Lines within project site improved (<50%, >=50%)	0	0
	Implement neighborhood shuttle	Degree of implementation (low, medium, high)	0	0
		Employees and residents eligible (%)	0%	0%
	Transit subsidies	Employees and residents eligible (%)	0%	0%
		Amount of transit subsidy per passenger (daily equivalent) ($)	$0.00	$0.00
Education & Encouragement	Voluntary travel behavior change program	Employees and residents participating (%)	0%	0%
	Promotions and marketing	Employees and residents participating (%)	0%	0%

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	*Required commute trip reduction program*	*Employees participating (%)*	*0%*	*0%*
	Alternative Work Schedules and Telecommute	*Employees participating (%)*	*0%*	*0%*
		Type of program	*0*	*0*
	Employer sponsored vanpool or shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees eligible (%)	*0%*	*0%*
		Employer size (small, medium, large)	*0*	*0*
	Ride-share program	*Employees eligible (%)*	*0%*	*0%*
Shared Mobility	*Car share*	*Car share project setting (Urban, Suburban, All Other)*	*0*	*0*
	Bike share	*Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)*	*0*	*0*
	School carpool program	*Level of implementation (Low, Medium, High)*	*0*	*0*

(cont. on following page)

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: January 15, 2020
Project Name: 4th & Hewitt
Project Scenario:
Project Address: 401 S HEWITT ST, 90013

Version 1.2

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	*Implement/Improve on-street bicycle facility*	*Provide bicycle facility along site (Yes/No)*	*0*	*0*
	Include Bike parking per LAMC	*Meets City Bike Parking Code (Yes/No)*	*0*	*0*
	Include secure bike parking and showers	Includes indoor bike parking/lockers, showers, & repair station (Yes/No)	Yes	Yes
Neighborhood Enhancement	*Traffic calming improvements*	*Streets with traffic calming improvements (%)*	*0%*	*0%*
		Intersections with traffic calming improvements (%)	*0%*	*0%*
	Pedestrian network improvements	Included (within project and connecting off-site/within project only)	within project and connecting off-site	within project and connecting off-site

TDM Adjustments by Trip Purpose & Strategy

Place type: Suburban Center

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Residential area parking permits	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Transit	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education & Encouragement	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Ride-share program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Suburban Center

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
	Include secure bike parking and showers	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
Neighborhood Enhancement	Traffic calming improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Neighborhood Enhancement sections 1 - 2
	Pedestrian network improvements	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	

Final Combined & Maximum TDM Effect

	Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*
MAX. TDM EFFECT	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*

= Minimum (X%, 1-[(1-A)*(1-B)...])
where X%=

PLACE TYPE MAX:	*urban*	*75%*
	compact infill	*40%*
	suburban center	*20%*
	suburban	*15%*

Note: (1-[(1-A)*(1-B)...]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,...). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G)* for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: January 15, 2020
Project Name: 4th & Hewitt
Project Scenario:
Project Address: 401 S HEWITT ST, 90013

Version 1.2

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	6.2	0	0
Home Based Other Production	0	0.0%	0	4.6	0	0
Non-Home Based Other Production	599	-14.0%	515	7.4	4,433	3,811
Home-Based Work Attraction	1,685	-31.5%	1,154	8.2	13,817	9,463
Home-Based Other Attraction	1,267	-49.0%	646	5.9	7,475	3,811
Non-Home Based Other Attraction	599	-14.0%	515	6.4	3,834	3,296

MXD Methodology with TDM Measures

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-2.6%	0	0	-2.6%	0	0
Home Based Other Production	-2.6%	0	0	-2.6%	0	0
Non-Home Based Other Production	-2.6%	501	3,711	-2.6%	501	3,711
Home-Based Work Attraction	-2.6%	1,124	9,216	-2.6%	1,124	9,216
Home-Based Other Attraction	-2.6%	629	3,711	-2.6%	629	3,711
Non-Home Based Other Attraction	-2.6%	502	3,210	-2.6%	502	3,210

MXD VMT Methodology Per Capita & Per Employee

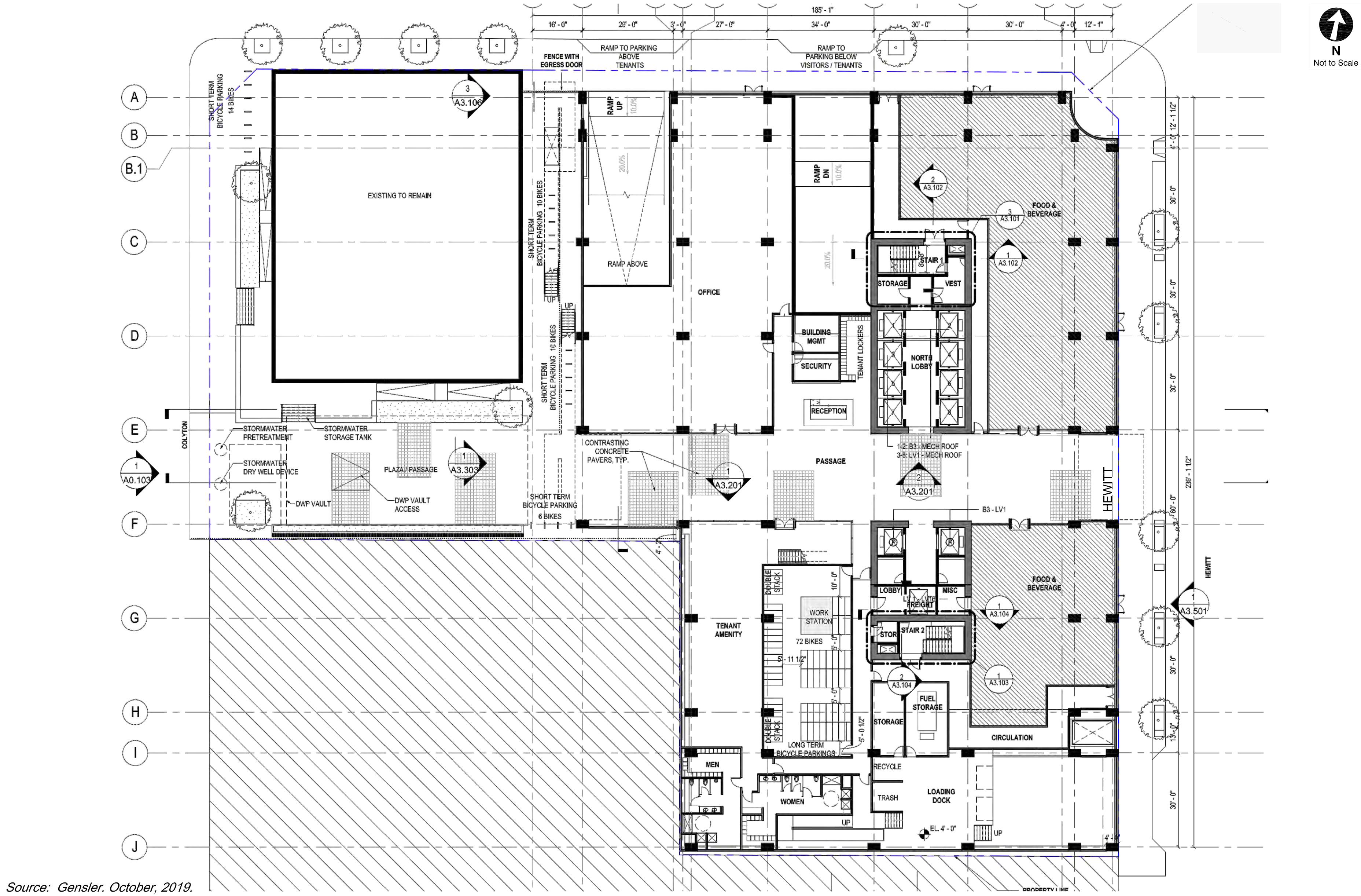
Total Population: 0
Total Employees: 1,279
APC: Central

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**0**	**0**
Total Home Based Work Attraction VMT	**9,216**	**9,216**
Total Home Based VMT Per Capita	**0.0**	**0.0**
Total Work Based VMT Per Employee	**7.2**	**7.2**

Attachment 2

TABLE 13
FUTURE WITH PROJECT CONDITIONS WITH TRANSPORTATION IMPROVEMENTS (YEAR 2023)
INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions		Future with Project Conditions with Transportation Improvements	
			V/C	LOS	V/C	LOS	V/C	LOS
1.	Central Avenue & 3rd Street	A.M. P.M.	0.760 0.594	C A	0.761 0.599	C A	0.751 0.588	C A
2.	Central Avenue & 4th Street	A.M. P.M.	0.377 0.733	A C	0.388 0.734	A C	0.376 0.724	A C
3.	Central Avenue & 6th Street	A.M. P.M.	0.636 0.949	B E	0.642 0.951	B E	0.631 0.941	B E
4.	Central Avenue & 7th Street	A.M. P.M.	0.893 0.937	D E	0.894 0.937	D E	0.884 0.927	D E
5.	Alameda Street & 2nd Street	A.M. P.M.	0.588 0.673	A B	0.611 0.690	B B	0.597 0.677	A B
6.	Alameda Street & 3rd Street/4th Place	A.M. P.M.	1.012 0.809	F D	1.059 0.852	F D	1.042 0.835	F D
7.	Alameda Street & 4th Street	A.M. P.M.	0.612 1.004	B F	0.761 1.045	C F	0.729 1.028	C F
8.	Alameda Street & 6th Street	A.M. P.M.	0.871 1.265	D F	0.924 1.285	E F	0.906 1.272	E F
9.	Alameda Street & 7th Street	A.M. P.M.	0.961 1.071	E F	0.973 1.079	E F	0.961 1.068	E F
10.	Alameda Street & Olympic Boulevard	A.M. P.M.	0.905 0.955	E E	0.931 0.961	E E	0.917 0.950	E E
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	0.757 0.804	C D	0.782 0.821	C D	0.769 0.809	C D
12.	Vignes Street & 1st Street	A.M. P.M.	0.471 0.682	A B	0.471 0.682	A B	0.461 0.672	A B
13.	Merrick Street/Molino Street & 4th Street	A.M. P.M.	0.892 0.754	D C	0.913 0.763	E C	0.900 0.751	D C
14.	Mateo Street & 6th Street	A.M. P.M.	0.563 0.517	A A	0.571 0.533	A A	0.559 0.521	A A
15.	Mateo Street & 7th Street	A.M. P.M.	1.007 1.185	F F	1.012 1.185	F F	1.001 1.175	F F
16.	Santa Fe Avenue & 7th Street	A.M. P.M.	0.981 1.203	E F	0.987 1.203	E F	0.977 1.193	E F
17.	Santa Fe Avenue & 8th Street	A.M. P.M.	0.671 0.689	B B	0.671 0.689	B B	0.661 0.679	B B
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	0.842 0.513	D A	0.869 0.521	D A	0.854 0.510	D A
19.	Boyle Avenue & 4th Street	A.M. P.M.	0.823 0.937	D E	0.834 0.941	D E	0.822 0.931	D E
20.	Boyle Avenue & Whittier Boulevard	A.M. P.M.	0.781 0.786	C C	0.787 0.788	C C	0.776 0.777	C C
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	0.908 0.956	E E	0.918 0.974	E E	0.906 0.961	E E
22.	Soto Street & 4th Street	A.M. P.M.	0.720 0.883	C D	0.726 0.890	C D	0.715 0.879	C D
23.	I-5 Southbound Ramps & 4th Street	A.M. P.M.	0.880 0.792	D C	0.908 0.812	E D	0.894 0.799	D C



Source: Gensler. October, 2019.

PROJECT SITE PLAN

FIGURE 1

AFORM GEN. 160A (Rev. 1/82)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

405 S Hewitt St
DOT Case No. CEN 17-45337

Date: July 11, 2018

To: Luciralia Ibarra, Senior City Planner
Department of City Planning

From: Wes Pringle, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION IMPACT ASSESSMENT FOR THE 4th & HEWITT COMMERCIAL DEVELOPMENT LOCATED AT 405 SOUTH HEWITT STREET (ENV-2017-470-EIR/VTT-74745/CPC-2017-469-GPA-VZC-HD-CU-MCUP-SPR-WDI)**

The Department of Transportation (DOT) has reviewed the transportation impact study, dated March 2018, prepared by Gibson Transportation Consulting, Inc. for the 4th & Hewitt commercial development located at 405 South Hewitt Street. In order to evaluate the effects of the project's traffic on the available transportation infrastructure, the significance of the project's traffic impacts is measured in terms of change to the volume-to-capacity (V/C) ratio between the "future no project" and the "future with project" scenarios. This change in the V/C ratio is compared to DOT's established threshold standards to assess the project-related traffic impacts. Based on DOT's current traffic impact criteria[1], the transportation study included the detailed analysis of 22 signalized intersections and determined that eight of these study intersections would be significantly impacted by project-related traffic prior to mitigation. This report summarizes the results of the transportation analysis (see **Attachment 1**), which accounted for other known development projects in evaluating potential cumulative impacts and adequately evaluated the project's traffic impacts on the surrounding community. The transportation analysis identifies the transportation mitigation measures designed to reduce the project's potential traffic impacts; however, the impacts at five intersections remain significant and unavoidable.

DISCUSSION AND FINDINGS

A. <u>Project Description</u>

The project site is currently occupied by a museum, office use, and storage use located in the Arts District on the south side of 4th Street between Colyton Street and Hewitt Street as illustrated in **Attachment 2**. The museum will remain and the office and storage uses will be removed in order to construct 255,387 square feet of office space and 14,995 square feet of commercial space. The project would provide up to 538 automobile and 164 bicycle parking spaces in an on-site parking garage. Access to the parking garage would be provided via two driveways on 4th Street. Access to the loading dock would be provided via a driveway on Hewitt Street. The project is expected to be completed by 2021.

[1] Per the DOT Traffic Study Policies and Procedures, a significant impact is identified as an increase in the Critical Movement Analysis (CMA) value, due to project-related traffic, of 0.01 or more when the final ("with project") Level of Service (LOS) is LOS E or F; an increase of 0.020 or more when the final LOS is LOS D; or an increase of 0.040 or more when the final LOS is LOS C.

B. Trip Generation

Prior to accounting for the trip reductions from the Transportation Demand Management program discussed below, the project is estimated to generate a net increase of approximately 3,493 daily trips, 441 trips during the a.m. peak hour and 424 trips during the p.m. peak hour. The trip generation estimates, summarized in **Attachment 3**, are based on rates and formulas published by the Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition, 2012. These trip generation rates are typically derived from surveys of similar stand-alone (single) land use projects in suburban areas with little to no transit service. Therefore, DOT's transportation impact study guidelines allow projects to reduce their total trip generation to account for potential transit usage to and from the site and for the internal-trip making opportunities that are afforded by mixed-use projects. Consistent with these guidelines, the estimated trip generation includes trip credits to account for the mixed-use nature of the project and for the expected transit mode share.

C. Freeway Analysis

The traffic study included a freeway impact analysis that was prepared in accordance with the State-mandated Congestion Management Program (CMP) administered by the Los Angeles County Metropolitan Transportation Authority (MTA). According to this analysis, the project would not result in significant traffic impacts on any of the evaluated freeway mainline segments. To comply with the Freeway Analysis Agreement executed between Caltrans and DOT in December 2015, the study also included a screening analysis to determine if additional evaluation of freeway mainline and ramp segments was necessary beyond the CMP requirements. Exceeding one of the four screening criteria would require the applicant to work directly with Caltrans to prepare more detailed freeway analyses. The project did meet at least one of the four thresholds defined in the agreement; therefore, additional freeway analysis was required. Detailed analyses of the Caltrans facilites indicated that the project traffic would not cause any off-ramp queue to extend onto the freeway mainline or add substantially to any existing queues.

D. Traffic Impacts

The study determined that the project would result in significant traffic impacts, before mitigation, at the following intersections:

1. Alameda Street and 3rd Street/4th Place (a.m. and p.m. peak hours)
2. Alameda Street and 4th Street (a.m. and p.m. peak hours)
3. Alameda Street and 6th Street (a.m. and p.m. peak hours)
4. Alameda Street and 7th Street (a.m. peak hour)
5. Alameda Street and Olympic Boulevard (a.m. peak hour)
6. Merrick Street/Molino Street and 4th Street (a.m. peak hour)
7. US 101 Northbound Off-Ramp and 4th Street (a.m. peak hour)
8. I-5 Northbound Ramps and 4th Street (a.m. and p.m. peak hours)

In consideration of the City's goals to reduce greenhouse gas emissions, the transportation study proposed a transportation mitigation program designed to reduce project-related trips and promote other travel modes. The transportation mitigation program (described below) would fully mitigate the project's significant traffic impacts during the peak commute hours at the following three intersections:

1. Alameda Street and 7th Street
2. US 101 Northbound Off-Ramp and 4th Street
3. I-5 Northbound Ramps and 4th Street

Physical improvements were considered at the following five intersections:
1. Alameda Street and 3rd Street/4th Place – Remove approximately five metered parking spaces and restripe 4th Place within the existing right-of-way to accommodate one left-turn lane, three through lanes, and one shared through/right-turn lane in the westbound approach;
2. Alameda Street and 4th Street – Acquire right-of-way, widen, and restripe Alameda Street to accommodate two through lanes and one right-turn lane in the northbound approach;
3. Alameda Street and 6th Street – Acquire right-of-way, widen, and restripe Alameda Street to accommodate two through lanes and one right-turn lane in the northbound approach;
4. Alameda Street and Olympic Boulevard – Restripe Olympic Boulevard within the existing right-of-way to accommodate one left-turn lane, two through lanes, and one right-turn lane in the westbound approach. This conceptual design would provide narrow curb lanes on the eastern leg of Olympic Boulevard which were deemed unacceptable;
5. Merrick Street/ Molino Street and 4th Street – Acquire right-of-way, widen, and restripe 4th Street to accommodate three through lanes and one right-turn lane in the northbound approach.

Due to right-of-way and geometric design constraints, loss of on-street parking and the desire to support the 6th Street Viaduct Replacement Project and the Arts District Active Transportation Program (ATP) project, the above proposed intersection improvements were deemed infeasible and unacceptable by DOT. Therefore, the impacts at the above five intersections would remain significant and unavoidable with the implementation of the mitigation program.

E. Construction Impacts

DOT recommends that a construction work site traffic control plan be submitted to DOT's Citywide Temporary Traffic Control Section or Permit Plan Review Section for review and approval prior to the start of any construction work. Refer to http://ladot.lacity.org/what-we-do/plan-review to determine which section to coordinate review of the work site traffic control plan. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that all construction related traffic be restricted to off-peak hours to the extent feasible.

PROJECT REQUIREMENTS

A. Transportation Improvement and Mitigation Program

Consistent with City policies on sustainability and smart growth and with DOT's trip reduction and multi-modal transportation goals, the project's mitigation focuses on developing a trip reduction program and on solutions that promote other modes of travel. The traffic mitigation program includes the following:

1. **Transportation Demand Management (TDM) Program**
   A TDM program, which includes design elements and trip reduction strategies, would reduce the project's overall trip generation by discouraging single occupancy vehicle use and by promoting the use of alternative travel modes. Through strategic building design and orientation, this project can facilitate access to existing transit services, provide a pedestrian-friendly environment, promote non-automobile travel and support the goals of a trip-reduction program.

   A preliminary TDM program shall be prepared and provided for DOT review <u>prior</u> to the issuance of the first building permit for this project and a final TDM program approved by DOT is required <u>prior</u> to the issuance of the first certificate of occupancy for the project. The preliminary plan will include, at a minimum, measures consistent with the City's Trip Reduction Ordinance. As recommended by the transportation study, the TDM program could include, but is not be limited to the following:
   - Educational Programs/On-Site TDM Coordinator who reaches out to employers and employees promoting the benefits of TDM;
   - Centrally located Transportation Information Center/Kiosk where employees and visitors can obtain information regarding commute programs and real-time commuter information;
   - Bicycle and pedestrian-friendly environment with exclusive access points, secured bicycle facilities, and showers;
   - A one-time fixed-fee contribution of **$50,000** to be deposited into the City's Bicycle Plan Trust Fund prior to the issuance of any certificates of occupancy to be used to implement bicycle improvements within the Project area*;*
   - Ridesharing Services Program which would match employees together to establish carpools and vanpools*;*
   - Guaranteed ride home (GRH) program;
   - Parking incentives and administrative support for the formation of carpools and vanpools;
   - Unbundled parking;
   - Mobility Hub support of existing and/or future efforts by LADOT for Mobility Hubs by providing amenities such as bicycle parking, transit information, etc. at the project site (subject-to design feasibility);
   - Record a Covenant and Agreement to ensure that the TDM program will be maintained.

2. **Downtown/Arts District Transportation Management Organization (TMO)**
   The project proposes to contribute to the formation and marketing of and participation in the Downtown/Arts District TMO. The project would provide its fair share of seed funding for the TMO in the first year to cover the cost of launching the TMO and continue to commit to nine additional years (10 years in total) as a charter member with annual dues. The TMO would offer similar services to those described above but would have a much wider reach than the project's local TDM plan and can result in much greater trip reduction benefits. The TMO could be instrumental in promoting the use of transit and the City's bike share and car share programs that will be installed in the coming years within the Downtown area. The TMO's activities would help augment or implement some of the strategies described above for the project specific TDM plan.

B. Highway Dedication and Street Widening Requirements

On September 7, 2016, the City Council adopted the Mobility Plan 2035 which is the new Mobility Element of the General Plan. A key feature of the updated plan is to revise street standards in an effort to provide a more enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. The applicant should check with BOE's Land Development Group to determine the specific highway dedication, street widening and/or sidewalk requirements for this project. Per the new Mobility Element, **4th Street**, an Avenue III, would require a 23-foot half-width roadway within a 36-foot half-width right-of-way; **Colyton Street** and **Hewitt Street**, both Collector Streets, would require a 20-foot half-width roadway within a 33-foot half-width right-of-way.

C. Parking Requirement

The project would provide up to 538 automobile and 164 bicycle parking spaces within an on-site parking garage. The developer should check with the Department of Building and Safety on the number of parking spaces needed.

D. Project Access and Circulation

Access to the parking garage would be provided via two right-in/right-out driveways on 4th Street, with one driveway accessing the subterranean parking levels and one driveway accessing the above-grade parking levels. Access to the at-grade loading dock would be provided via a full-access driveway on Hewitt Street. Conceptually, the proposed site plan is acceptable to DOT. The review of this study does not constitute approval of the driveway dimensions, access and circulation scheme, and loading/unloading area for the project. Any changes to the project's site access, circulation scheme, or loading/unloading area after issuance of this report would require separate review and approval and should be coordinated with DOT's Citywide Planning Coordination Section at 201 N. Figueroa Street, 5th Floor, Room 550, at (213) 482-7024. The applicant should contact DOT for driveway width and internal circulation requirements prior to the commencement of building or parking layout design efforts so that such traffic flow considerations are designed and incorporated early into the building and parking layout plans. All driveways should be Case 2 driveways and 30 feet for two-way operations or 18 feet for one-way operations. All delivery truck loading and unloading should take place on site with no vehicles having to back into the project via any of the project driveways.

E. Development Review Fees

An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to DOT for permit issuance activities was adopted by the Los Angeles City Council in 2009 and updated in 2014. This ordinance identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact Eileen Hunt of my staff at (213) 972-8481.

Attachments

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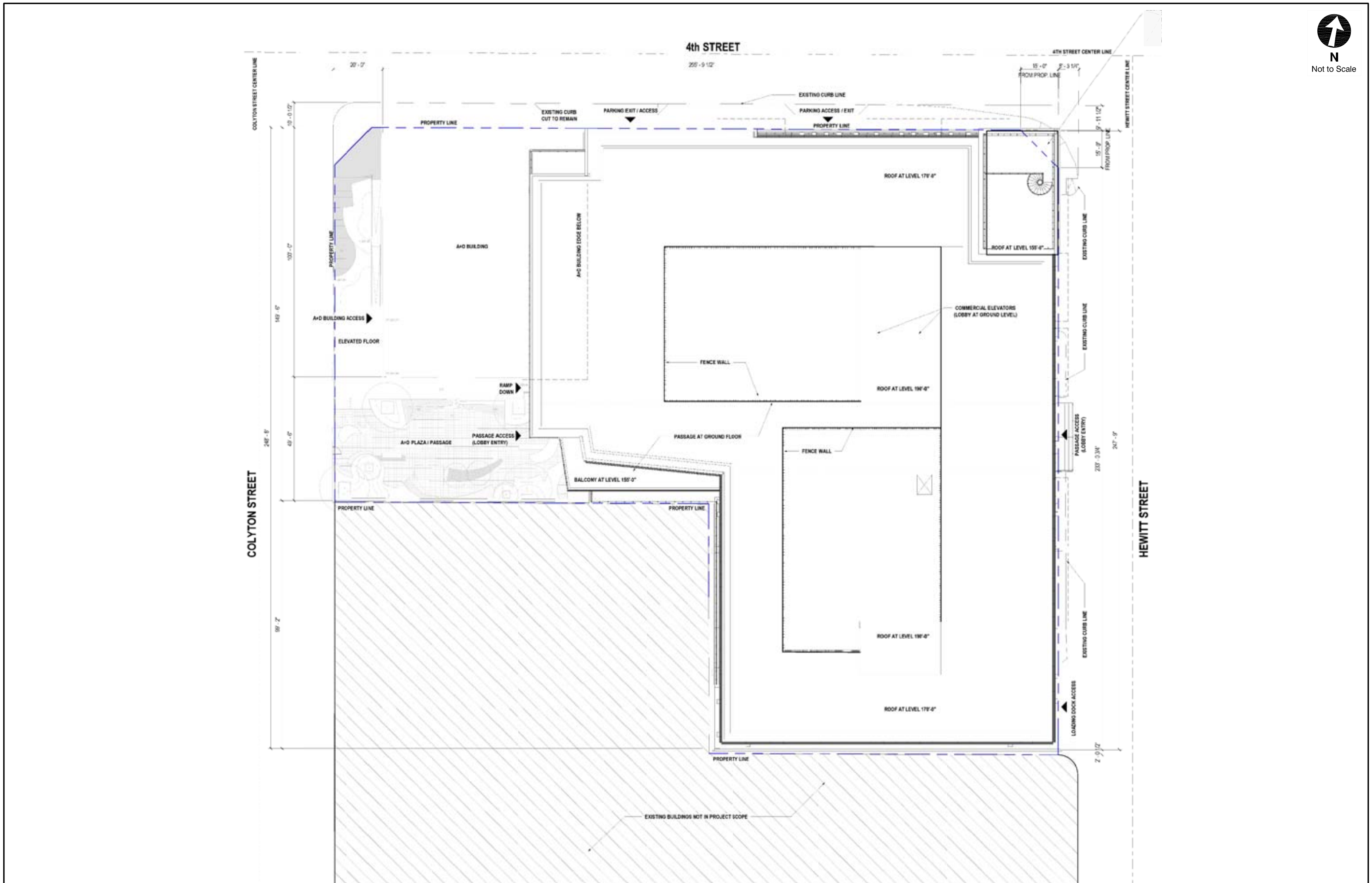
c: Shawn Kuk, Council District 14
Carl Mills, BOE Development Services
Mehrdad Moshksar, Central District Office, DOT
Taimour Tanavoli, Case Management Office, DOT
Sarah Drobis & Emily Wong, GTC

TABLE 10
FUTURE WITH PROJECT CONDITIONS (YEAR 2021)
SIGNIFICANT IMPACT ANALYSIS

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions			
			V/C	LOS	V/C	LOS	∆ V/C	Impact
1.	Central Avenue & 3rd Street	A.M. P.M.	0.745 0.582	C A	0.746 0.588	C A	0.001 0.006	NO NO
2.	Central Avenue & 4th Street	A.M. P.M.	0.370 0.718	A C	0.383 0.720	A C	0.013 0.002	NO NO
3.	Central Avenue & 6th Street	A.M. P.M.	0.625 0.933	B E	0.632 0.935	B E	0.007 0.002	NO NO
4.	Central Avenue & 7th Street	A.M. P.M.	0.879 0.919	D E	0.880 0.919	D E	0.001 0.000	NO NO
5.	Alameda Street & 2nd Street	A.M. P.M.	0.577 0.661	A B	0.602 0.680	B B	0.025 0.019	NO NO
6.	Alameda Street & 3rd Street/4th Place	A.M. P.M.	0.995 0.797	E C	1.047 0.843	F D	0.052 0.046	**YES** **YES**
7.	Alameda Street & 4th Street	A.M. P.M.	0.603 0.988	B E	0.774 1.037	C F	0.171 0.049	**YES** **YES**
8.	Alameda Street & 6th Street	A.M. P.M.	0.862 1.249	D F	0.920 1.271	E F	0.058 0.022	**YES** **YES**
9.	Alameda Street & 7th Street	A.M. P.M.	0.944 1.056	E F	0.958 1.065	E F	0.014 0.009	**YES** NO
10.	Alameda Street & Olympic Boulevard	A.M. P.M.	0.888 0.940	D E	0.919 0.947	E E	0.031 0.007	**YES** NO
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	0.740 0.788	C C	0.770 0.807	C D	0.030 0.019	NO NO
12.	Vignes Street & 1st Street	A.M. P.M.	0.461 0.668	A B	0.461 0.668	A B	0.000 0.000	NO NO
13.	Merrick Street/Molino Street & 4th Street	A.M. P.M.	0.929 0.793	E C	0.955 0.804	E D	0.026 0.011	**YES** NO
14.	Mateo Street & 6th Street	A.M. P.M.	0.552 0.509	A A	0.561 0.525	A A	0.009 0.016	NO NO
15.	Mateo Street & 7th Street	A.M. P.M.	0.997 1.173	E F	1.003 1.173	F F	0.006 0.000	NO NO
16.	Santa Fe Avenue & 7th Street	A.M. P.M.	0.968 1.185	E F	0.975 1.185	E F	0.007 0.000	NO NO
17.	Santa Fe Avenue & 8th Street	A.M. P.M.	0.658 0.671	B B	0.658 0.671	B B	0.000 0.000	NO NO
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	0.825 0.505	D A	0.856 0.515	D A	0.031 0.010	**YES** NO
19.	Boyle Avenue & 4th Street	A.M. P.M.	0.805 0.919	D E	0.819 0.925	D E	0.014 0.006	NO NO
20.	Boyle Avenue & Whittier Boulevard	A.M. P.M.	0.765 0.769	C C	0.771 0.771	C C	0.006 0.002	NO NO
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	0.890 0.939	D E	0.901 0.958	E E	0.011 0.019	**YES** **YES**
22.	Soto Street & 4th Street	A.M. P.M.	0.704 0.864	C D	0.710 0.871	C D	0.006 0.007	NO NO

Gibson transportation consulting, inc.



Source: Gensler, October, 2017

SITE PLAN

FIGURE 1

TABLE 8
TRIP GENERATION

Land Use	ITE Land Use Code	Size	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Generation Rates [a]									
Museum	580	per 1,000 sf	N/A	86%	14%	0.28	16%	84%	0.18
Office	710	per 1,000 sf	11.03	88%	12%	1.56	17%	83%	1.49
Shopping Center	820	per 1,000 sf	42.7	62%	38%	0.96	48%	52%	3.71
High-Turnover Restaurant	932	per 1,000 sf	127.15	55%	45%	10.81	60%	40%	9.85
Proposed Project									
Museum	580	7.8 ksf	N/A	2	0	2	0	1	1
Less 5% Transit/Walk-In [b]			*N/A*	*0*	*0*	*0*	*0*	*0*	*0*
Subtotal - Museum			**0**	**2**	**0**	**2**	**0**	**1**	**1**
Office	710	255.387 ksf	2,817	350	48	398	65	316	381
Less 5% Transit/Walk-In [b]			*(141)*	*(18)*	*(2)*	*(20)*	*(3)*	*(16)*	*(19)*
Subtotal - Office			**2,676**	**332**	**46**	**378**	**62**	**300**	**362**
Retail	820	4.995 ksf	213	3	2	5	9	10	19
Less 20% Internal Capture [c]			*(43)*	*(1)*	*0*	*(1)*	*(2)*	*(2)*	*(4)*
Less 5% Transit/Walk-In [b]			*(9)*	*0*	*0*	*0*	*0*	*0*	*0*
Less 50% Pass-by [d]			*(81)*	*(1)*	*(1)*	*(2)*	*(4)*	*(4)*	*(8)*
Subtotal - Retail			**80**	**1**	**1**	**2**	**3**	**4**	**7**
Restaurant	932	10.0 ksf	1,272	59	49	108	59	40	99
Less 20% Internal Capture [c]			*(254)*	*(12)*	*(10)*	*(22)*	*(12)*	*(8)*	*(20)*
Less 5% Transit/Walk-In [b]			*(51)*	*(2)*	*(2)*	*(4)*	*(2)*	*(2)*	*(4)*
Less 20% Pass-by [d]			*(193)*	*(9)*	*(7)*	*(16)*	*(9)*	*(6)*	*(15)*
Subtotal - Retail			**774**	**36**	**30**	**66**	**36**	**24**	**60**
Total - Proposed Project			**3,530**	**371**	**77**	**448**	**101**	**329**	**430**
Existing Uses									
Office	710	3.515 ksf	39	4	1	5	1	4	5
Less 5% Transit/Walk-In [b]			*(2)*	*0*	*0*	*0*	*0*	*0*	*0*
Subtotal - Office			**37**	**4**	**1**	**5**	**1**	**4**	**5**
Museum	580	7.8 ksf	N/A	2	0	2	0	1	1
Less 5% Transit/Walk-In [b]			*N/A*	*0*	*0*	*0*	*0*	*0*	*0*
Subtotal - Museum			**0**	**2**	**0**	**2**	**0**	**1**	**1**
Total - Existing Uses			**37**	**6**	**1**	**7**	**1**	**5**	**6**
Net New Project Trips			**3,493**	**365**	**76**	**441**	**100**	**324**	**424**

Notes
[a] Source: *Trip Generation, 9th Edition,* Institute of Transportation Engineers, 2012.
[b] The Project Site is located within walking distance of a LADOT DASH stop, therefore a 5% transit reduction is applied to account for transit usage and walking visitor arrivals from the surrounding neighborhoods and adjacent commercial developments.
[c] Internal capture adjustments account for person trips made between distinct land uses within a mixed-use development (e.g., employees visiting the retail/restaurant uses).
[d] Pass-by adjustments account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion, and are based on ITE's *Trip Generation Handbook, 3rd Edition* (2014) and LADOT's *Traffic Study Policies and Procedures.*

TRANSPORTATION IMPACT STUDY FOR THE 4TH & HEWITT PROJECT

LOS ANGELES, CALIFORNIA

March 2018
Revised February 2020 & April 2022

Prepared for:

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Chapter 1

Introduction

This study presents the transportation impact analysis for the proposed 4th & Hewitt project (Project) at 401 South Hewitt Street (Project Site) in the *Central City North Community Plan* (Los Angeles Department of City Planning [LADCP], 2009) area, also known as the Arts District, of Los Angeles, California (City). The methodology and base assumptions used in the analysis were established in conjunction with the Los Angeles Department of Transportation (LADOT).

PROJECT DESCRIPTION

The Project proposes the construction of a commercial development consisting of approximately 311,682 square feet (sf) of office space and approximately 8,149 sf of commercial space. The existing 7,800 sf A+D Museum will remain with the Project; however, the existing office and storage uses that currently occupy the Project Site would be removed with development of the Project.

Vehicular access to the on-site parking garage would be provided via two driveways on 4th Street. Access to the loading dock would be provided via Hewitt Street. Pedestrian access into the Project Site would be provided from Colyton Street into the A+D Museum, from 4th and Hewitt Streets to each of the ground floor uses, and from Colyton and Hewitt Streets to the passageway to the commercial office building main lobby.

The conceptual Project site plan is shown in Figure 1.

PROJECT LOCATION AND TRANSPORTATION ANALYSIS STUDY AREA

The Project Site is bounded by 4th Street to the north, Hewitt Street to the east, light industrial uses to the south, and Colyton Street to the west. The Project area includes commercial, retail, restaurant, office, live/work, and warehouse uses.

Regional Access

The Project Site is located less than 1.0 miles west of the Hollywood Freeway (US 101) and Santa Ana Freeway (I-5), and approximately 1.25 miles north of Santa Monica Freeway (I-10). In the vicinity of the Project Site, the area is served by major arterial streets such as Alameda Street and secondary arterial streets such as Central Avenue, 1st Street, 4th Street, and 6th Street.

As shown in Figure 2, the transportation analysis Study Area includes a geographic area bounded by 1st Street to the north, Soto Street to the east, I-10 to the south, and Central Avenue to the west. Detailed transportation analyses were conducted at key intersections within the Study Area.

Transit Access

The Project Site is located near the Los Angeles County Metropolitan Transportation Authority's (Metro) Gold Line Little Tokyo/Arts District Station, located approximately 0.50 miles north of the Project Site. The Metro Gold Line travels between Azusa and East Los Angeles. Additionally, the Project is served by multiple bus and shuttle lines along 1st Street, 4th Street, 7th Street, Central Avenue, and Alameda Street.

Bicycle Access

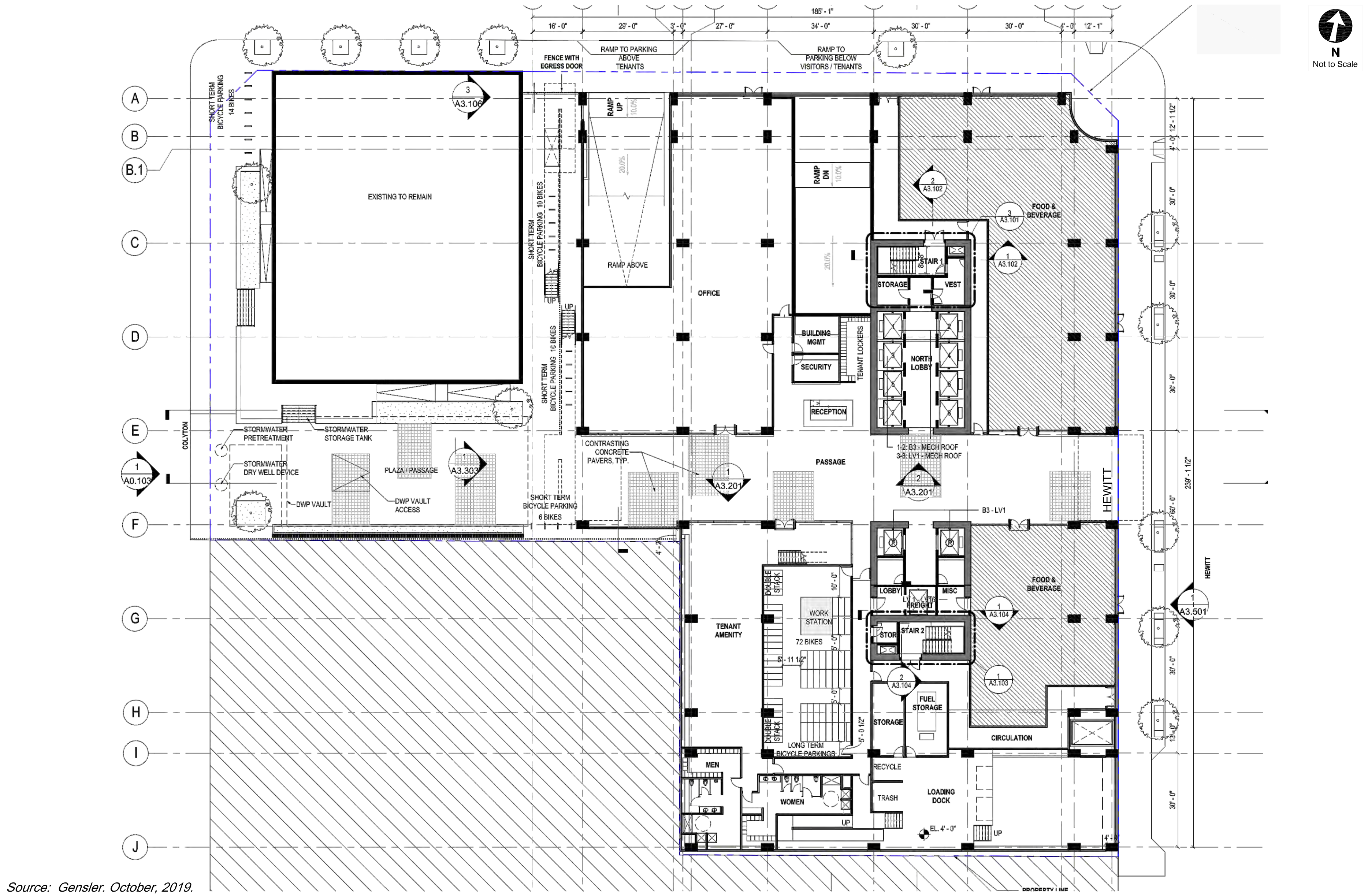
In the vicinity of the Project Site, there are existing bicycle lanes on 3rd Street west of Santa Fe Avenue and designated bicycle routes along 1st Street and 2nd Street west of Santa Fe Avenue.

STUDY SCOPE

The scope of analysis for this study was developed in consultation with LADOT, as well as in consideration of input received during the public scoping process in October 2017. Comments were received during the public scoping meeting concerning safety and traffic signal phasing that were not related to the Project and will be forwarded to LADOT and the Automated Traffic Surveillance and Control (ATSAC) Design Section. The base assumptions and technical methodologies (i.e., trip generation, study locations, analysis methodology, etc.) were identified as part of the study approach and were outlined in a revised Memorandum of Understanding (MOU) dated October 29, 2019, which was reviewed and approved by LADOT. A copy of the signed MOU is provided in Appendix A.

ORGANIZATION OF REPORT

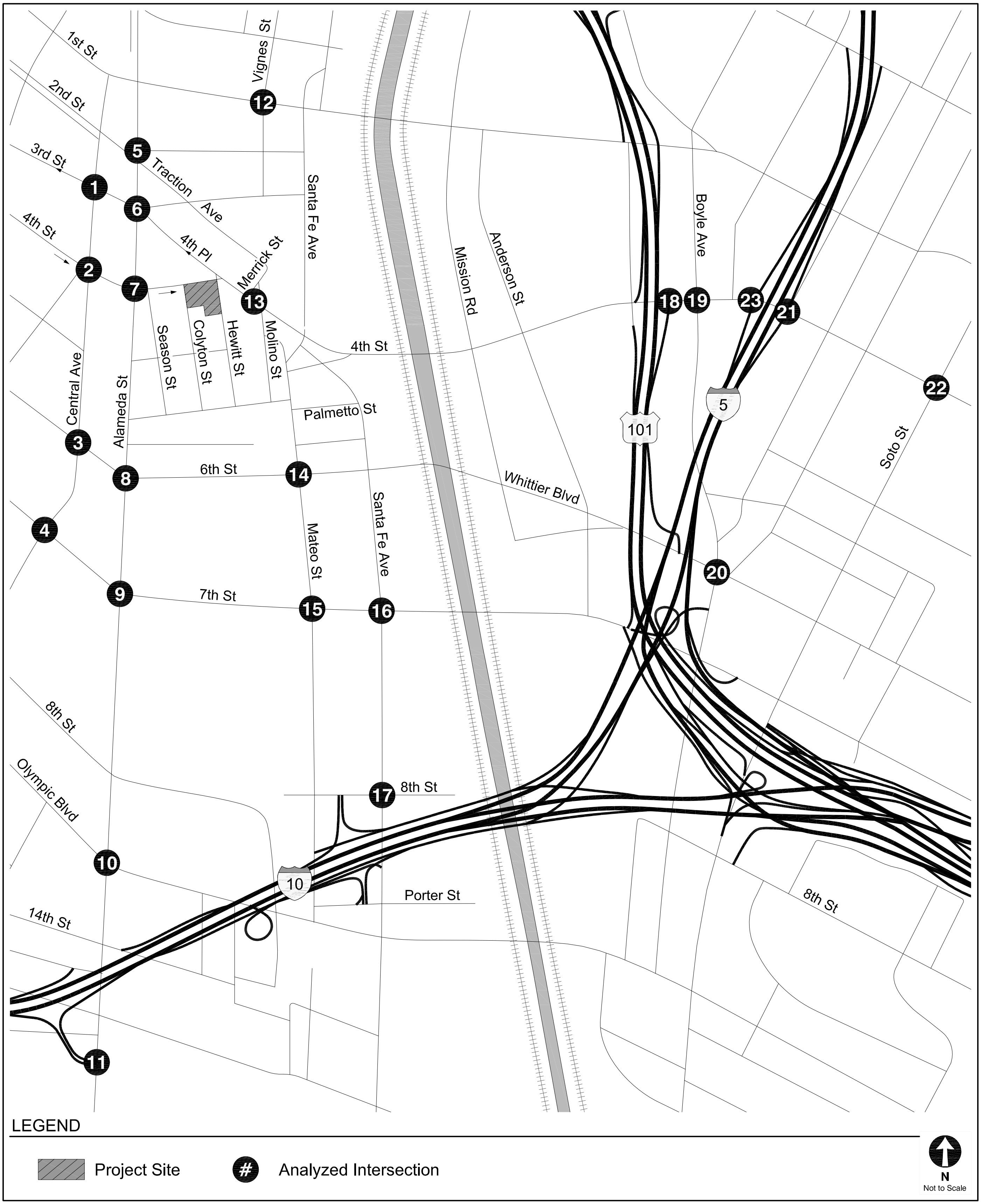
This report is divided into five chapters, including this introduction. Chapter 2 describes the Project context including the existing and future circulation system, traffic volumes, and traffic conditions in the Study Area. Chapter 3 presents the CEQA analysis of transportation impacts. Chapter 4 details the non-CEQA transportation analyses. Chapter 5 summarizes the analyses and study conclusions. The appendices contain supporting documentation, including the MOU that outlines the study scope and assumptions, and additional details supporting the technical analyses.



Source: Gensler. October, 2019.

PROJECT SITE PLAN

FIGURE 1



STUDY AREA

FIGURE 2

Chapter 2
Project Context

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions in the Project Study Area.

The Existing Conditions analysis includes an assessment of the existing freeway and street systems, an analysis of traffic volumes and current operating conditions, and an assessment of the existing public transit service, as well as pedestrian and bicycle circulation at the time the NOP was issued in September 2017. Fieldwork (lane configurations and signal phasing) for the analyzed intersections is provided in Appendix B and traffic count worksheets are provided in Appendix C.

In addition, this Chapter contains a discussion of the future conditions detailing the assumptions used to develop the Future without Project Conditions in Year 2023, which corresponds to projected occupancy of the Project.

STUDY AREA

The Project's transportation analysis Study Area, shown in Figure 2, is generally bounded by 1st Street to the north, Soto Street to the east, Olympic Boulevard to the south, and Central Avenue to the west.

A transportation analysis study area generally comprises those intersections with the greatest potential to experience significant transportation impacts due to the project, as defined by the City, including intersections that are:

1. Immediately adjacent or in close proximity to the project site
2. In the vicinity of the project site that are documented to have current or projected future adverse operational issues

3. In the vicinity of the project site that are forecast to experience a relatively greater percentage of project-related vehicular turning movements (e.g., at freeway ramp intersections)

The Project's Study Area was established in consultation with LADOT, based on the above criteria, as well as peak hour Project trip generation, the anticipated distribution of Project traffic, and the existing intersections/corridor operations. It contains those intersections with a reasonable potential to experience significant transportation impacts due to the Project.

The results of the transportation impact analysis detailed in this Transportation Study were reviewed to ensure that all potentially significantly impacted intersections, prior to mitigation, were analyzed, and that the boundary of the Study Area was extended, as necessary, to confirm that there were no significant impacts at or beyond the Study Area periphery. As detailed in later chapters, the study intersections on the Study Area periphery are not anticipated to be significantly impacted by the Project and, thus, the analyzed locations are considered to be adequate such that no additional significant impacts are anticipated to occur beyond the transportation analysis Study Area. The 23 intersections identified for detailed analysis of the above conditions are listed in Table 1. It should be noted that installation of a traffic signal at the intersection of I-5 Southbound Ramps & 4th Street (Intersection #23) was completed in Year 2018. Thus, the intersection was unsignalized in Year 2017 and, therefore, was not evaluated for impact purposes under Existing Conditions.

Figure 2 illustrates the location of the Project Site in relation to the surrounding street system and the study intersections. The existing lane configurations at the analyzed intersections are provided in Appendix B.

EXISTING TRANSPORTATION CONDITIONS

Existing Street System

The existing street system in the Study Area consists of a regional roadway system including freeways, primary and secondary arterials, and collector and local streets which provide regional, sub-regional, or local access and circulation within the Study Area. These transportation facilities generally provide two to six travel lanes and usually allow parking on either side of the street.

Typically, the speed limits range between 25 and 35 miles per hour (mph) on the streets and between 55 and 65 mph on freeways.

Street classifications are designated in *Mobility Plan 2035, An Element of the General Plan* (LADCP, January 2016) (the "Mobility Plan"). The Mobility Plan has revised street standards in an effort to provide a more enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. The available facilities in the Study Area are defined by the following in the Mobility Plan:

- Freeways are high-volume, high-speed roadways with limited access provided by interchanges that carry regional traffic through and do not provide local access to adjacent land uses.
- Arterial Streets are major streets that serve through traffic, as well as provide access to major commercial activity centers. Arterials are divided into two categories:
    - Boulevards represent the widest streets that typically provide regional access to major destinations and include two categories:
        - Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph
        - Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph
    - Avenues pass through both residential and commercial areas and include three categories:
        - Avenue I provides up to two travel lanes in each direction with a target operating speed of 35 mph
        - Avenue II provides up to two travel lanes in each direction with a target operating speed of 30 mph
        - Avenue III provides up to two travel lanes in each direction with a target operating speed of 25 mph
- Collector Streets are generally located in residential neighborhoods and provide access to and from arterial streets for local traffic and are not intended for cut-through traffic. They provide one travel lane in each direction with operating speed of 25 mph.
- Local Streets are intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. They provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Local streets include two categories:

- Continuous local streets connect to other streets at both ends
- Non-continuous local streets lead to a dead-end

Primary regional access to the Project Site is provided by US 101, I-5, and I-10. The major arterials providing regional and sub-regional access to the Project vicinity include Alameda Street and 4th Street. The following is a brief description of the major roadways in the Study Area, including their classifications under the Mobility Plan:

Freeways

- US 101 – US 101 generally runs in the north-south direction and is located less than 1.0 miles east of the Project Site. In the vicinity of the Project Site, US 101 provides three travel lanes in each direction. Access to and from US 101 is available via interchanges at 1st Street, 4th Street, and 7th Street.

- I-5 – I-5 generally runs in the north-south direction and is located less than 1.0 miles east of the Project Site. In the vicinity of the Project Site, I-5 provides five travel lanes in each direction. Access to and from I-5 is available via interchanges at 4th Street.

- I-10 – I-10 generally runs in the east-west direction and is located 1.50 miles south of the Project Site. In the vicinity of the Project Site, I-10 provides three to five travel lanes in each direction. Access to and from I-10 is available via interchanges at Porter Street.

Roadways

- 1st Street – 1st Street is a designated Avenue II. It travels in the east-west direction and is located north of the Project Site. It provides four travel lanes, two in each direction, with left-turn lanes at some intersections. Parking is generally prohibited east of Alameda Street, with metered spots available west of Alameda Street.

- 2nd Street – 2nd Street is a designated Modified Collector Street. It travels in the east-west direction and is located north of the Project Site. It provides two travel lanes, one in each direction. Parking is generally available within the Study Area.

- 3rd Street– 3rd Street is a designated Avenue II. It travels in the east-west direction and is located north of the Project Site. It provides four westbound travel lanes. Parking is generally available within the Study Area and is metered west of Alameda Street.

- 4th Place – 4th Place is a designated Avenue II between Alameda Street and 4th Street and a designated Collector Street between Molino Street and 4th Street. It travels in the east-west direction and is located adjacent to the northern boundary of the Project Site. 4th Place diverges from 4th Street at Hewitt Street and converges with 3rd Street at Alameda Street. It provides four westbound travel lanes between Alameda Street and 4th Street and two travel lanes, one in each direction, between Molino Street and 4th Street. Parking is generally available within the Study Area and is metered between Alameda Street and 4th Street.

- 4th Street – 4th Street is a designated Avenue III between Alameda Street and 4th Place, directly adjacent to the Project Site, and transitions to a designated Avenue II west of Alameda Street. It generally travels in the east-west direction and is located on the northern boundary of the Project Site. It provides five travel lanes, two in each direction and a bi-directional lane in the center, east of Hewitt Street and four eastbound lanes west of Hewitt Street. Parking is generally available on both sides of the street with peak hour restrictions east of I-5 and west of Hewitt Street within the Study Area. Parking is generally prohibited between Hewitt Street and I-5.

- 6th Street/Whittier Boulevard – 6th Street is a designated Avenue II. It travels in the east-west direction and is located south of the Project Site. It provides four travel lanes, two in each direction, with left-turn lanes at intersections. Parking is generally available within the Study Area, but it is prohibited on the 6th Street Viaduct.

- 7th Street – 7th Street is a designated Avenue II. It travels in the east-west direction and is located south of the Project Site. It provides four travel lanes, two in each direction, with left-turn lanes at intersections. Parking is generally available west of the 7th Street Bridge on the north side of the street.

- Olympic Boulevard – Olympic Boulevard is a designated Modified Avenue I. It travels in the east-west direction and is located south of the Project Site. It provides four travel lanes, two in each direction, with left-turn lanes at intersections. Parking is generally unavailable within the Study Area.

- Central Avenue – Central Avenue is a designated Avenue I. It travels in the north-south direction and is located west of the Project Site. It provides four travel lanes, two in each direction, with left-turn lanes provided at intersections. Parking is generally available on the west side within the Study Area.

- Alameda Street – Alameda Street is a designated Avenue I. It travels in the north-south direction and is located west of the Project Site. It provides four travel lanes, two in each direction, with left-turn lanes at intersections. Metered on-street parking is available between 3rd and 4th Streets; elsewhere, parking is generally prohibited within the Study Area.

- Molino Street – Molino Street is a designated Collector Street. It travels in the north-south direction and is located west of the Project Site. It provides two travel lanes, one in each direction. Parking is generally available within the Study Area.

- Merrick Street – Merrick Street is a designated Collector Street. It travels in the north-south direction and is located east of the Project Site. It provides two travel lanes, one in each direction. Parking is generally available within the Study Area.

- Vignes Street – Vignes Street is a designated Collector Street. It travels in the north-south direction and is located east of the Project Site. It provides two travel lanes, one in each direction. Parking is generally available within the Study Area.

- Mateo Street – Mateo Street is a designated Avenue III. It travels in the north-south direction and is located east of the Project Site. It provides two travel lanes, one in each direction. Parking is generally available within the Study Area.

- Santa Fe Avenue – Santa Fe Avenue is a designated Avenue II. It travels in the north-south direction and is located east of the Project Site. It provides four travel lanes, two in each direction, with left-turn lanes at major intersections. Parking is generally available within the Study Area.

- Boyle Avenue – Boyle Ave is a designated Avenue II. It travels in the north-south direction and is located east of the Project Site. It provides four travel lanes, two in each direction, with left-turn lanes at intersections. Parking is generally prohibited within the Study Area.

- Soto Street – Soto Street is a designated Avenue II. It travels in the north-south direction and is located east of the Project Site. It provides four travel lanes, two in each direction, with left-turn lanes at major intersections. Parking is generally available within the Study Area.

Existing Transit System

The Study Area is served by bus lines operated by Metro, LADOT Downtown Area Shuttle (LADOT DASH), and Montebello Bus Lines. Bus transit service in the Project vicinity is generally available along the following streets:

- 1st Street
- 3rd Street
- 4th Street
- 4th Place
- 6th Street
- 7th Street
- Traction Avenue
- Olympic Boulevard
- Central Avenue
- Alameda Street
- Boyle Avenue
- Soto Street

Figure 3 illustrates the existing transit service in the vicinity of the Project Site.

The following three bus lines operate on streets adjacent to the site:

- LADOT DASH A – DASH A is a local line that travels within downtown Los Angeles between City West and Little Tokyo, with average headways of approximately seven minutes during morning and afternoon peak hours. The line travels along 3rd Street, 4th Place, Traction Avenue, and Merrick Street in the vicinity of the Project Site.

- Montebello Bus Lines M40 – Route M40 is a local line that travels from downtown Los Angeles to Whittier through Montebello via Beverly Boulevard, with average headways of approximately 10 to 15 minutes during morning and afternoon peak hours. It provides service to East Los Angeles. The line travels along 4th Street in the vicinity of the Project Site.

- Montebello Bus Lines M90 – Route M90 is an express line that travels from downtown Los Angeles to Whittier through Montebello via Beverly Boulevard, with average headways of approximately 20 to 30 minutes during the morning and afternoon peak hours. The line travels along 4th Street in the vicinity of the Project Site.

The following bus lines provide service in the Project vicinity:

- Metro Local 18 – Route 18 is a local line that travels from Wilshire Center to Montebello through downtown Los Angeles via 6th Street and Whittier Boulevard, with average headways of approximately 10 to 15 minutes during the morning and afternoon peak hours. It provides service to East Los Angeles, Boyle Heights, and Westlake. This line travels along 6th Street in the vicinity of the Project Site.

- Metro Local 30 – Route 30 is a local line that travels from East Los Angeles to West Hollywood through downtown Los Angeles via San Vicente Boulevard, Pico Boulevard, and 1st Street, with average headways of approximately 30 to 35 minutes during the morning and afternoon peak hours. It provides service to Boyle Heights and Mid-City. This line travels along 1st Street in the vicinity of the Project Site.

- Metro Local 53 – Route 53 is a local line that travels from downtown Los Angeles to California State University, Dominguez Hills via Central Avenue, with average headways of approximately 10 to 15 minutes during the morning and afternoon peak hours. It provides service to South Los Angeles, Willowbrook, and Compton. This line travels along 6th Street and Central Avenue in the vicinity of the Project Site.

- Metro Local 60 – Route 60 is a local line that travels from downtown Los Angeles to the Artesia Station via Long Beach Boulevard, with average headways of approximately 10 minutes during the morning and afternoon peak hours. It provides service to Vernon, Lynwood, and Compton. The line travels along 7th Street and Santa Fe Avenue in the vicinity of the Project Site.

- Metro Local 62 – Route 62 is a local line that travels from downtown Los Angeles to Hawaiian Gardens via Telegraph Road, with average headways of approximately 25 to 30 minutes during the morning and afternoon peak hours. It provides service to East Los Angeles, Santa Fe Springs, and Norwalk. The line travels along 7th Street and Boyle Avenue in the vicinity of the Project Site.

- Metro Local 66 – Route 66 is a local line that travels from Wilshire Center to Montebello through downtown Los Angeles via 8th Street and Olympic Boulevard, with average headways of approximately 15 to 20 minutes during the morning and afternoon peak hours. It provides service to Boyle Heights, East Los Angeles, and City of Commerce. This line travels along Olympic Boulevard in the vicinity of the Project Site.

- Metro Local 106 – Route 106 is a local line that travels from the East Los Angeles College Transit Center to Los Angeles County + USC Medical Center (LAC+USC) via State Street, Whittier Boulevard, and 1st Street, with average headways of 60 minutes during the morning and afternoon peak hours. It provides service to Boyle Heights, East Los Angeles, and Monterey Park. The line travels along Boyle Avenue in the vicinity of the Project Site.

- Metro Local 251 – Route 251 is a local line that travels from Cypress Park to Lynwood via Soto Street, with average headways of approximately 15 to 20 minutes during the morning and afternoon peak hours. It provides service to Cypress Park, Vernon, and Huntington Park. The line travels along Soto Street in the vicinity of the Project Site.

- Metro Shuttle 605 – Route 605 is a shuttle that travels from LAC+USC to Olympic Boulevard, with average headways of approximately 15 to 20 minutes during the morning and afternoon peak hours. It provides service to Boyle Heights. The line travels along Soto Street in the vicinity of the Project Site.

- Metro Rapid Line 720 – Route 720 is a rapid line that travels from Santa Monica to the Commerce Center via Wilshire Boulevard and Whittier Boulevard, with average headways of approximately 10 to 15 minutes during morning and afternoon peak hours. It provides service to downtown Los Angeles, Beverly Hills, and Century City. The line travels along 6th Street and 7th Street in the vicinity of the Project Site.

- Metro Rapid Line 751 – Route 751 is a rapid line that travels from Huntington Park to Cypress Park via Soto Street, with average headways of approximately 15 to 20 minutes during the morning and afternoon peak hours. It provides service to Lincoln Heights, Boyle Heights, and Vernon. The line travels along Soto Street in the vicinity of the Project Site.

- Metro Rapid Line 760 – Route 760 is a rapid line that travels from Long Beach Boulevard Green Line Station to downtown Los Angeles via Long Beach Boulevard, with average headways of approximately 15 to 20 minutes during the morning and afternoon peak hours. It provides service to Vernon, Huntington Park, and South Gate. The line travels along 7th Street and Santa Fe Avenue in the vicinity of the Project Site.

In addition to the bus lines that provide service within the Project vicinity, the Metro Gold Line operates within the Study Area. The Metro Gold Line runs between Azusa and East Los Angeles. The Metro Gold Line has connecting service to the Metro Red Line, which runs between downtown Los Angeles and North Hollywood, and Purple Line, which runs between downtown Los Angeles and Koreatown, at Union Station, approximately 1.5 miles north of the Project Site.

Table 2 summarizes the transit lines operating in the Study Area for each of the service providers in the region, the type of service (peak vs. off-peak, express vs. local), and frequency of service, as described above. The average frequency of transit service during the peak hour was derived from the number of peak period stops made at the stop nearest the Project Site.

Table 3 summarizes the total residual capacity of the transit lines in the periphery of the Project Site during the morning and afternoon peak hours based on the frequency of service of each line and the maximum seated and standing capacity of each bus. As shown in Table 3, the transit lines within walking distance (0.25 miles) of the Project currently have residual capacity for 4,617 transit trips (3,369 bus and 1,248 rail) during the morning peak hour and 4,403 transit trips (3,427 bus and 976 transit) during the afternoon peak hour.

Existing Bicycle System

Based on *2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element* (LADCP, adopted March 1, 2011) ("2010 Bicycle Plan"), the existing bicycle system consists of a limited network of bicycle lanes (Class II) and bicycle routes (Class III). Bicycle lanes are a component of street design with dedicated striping, separating vehicular traffic from bicycle traffic. These facilities offer a safer environment for both cyclists and motorists. Bicycle routes and bicycle-friendly streets are those where motorists and cyclists share the roadway and there is no dedicated striping of a bicycle lane. Bicycle routes and bicycle-friendly streets are preferably located on collector and lower volume arterial streets. Bicycle routes with shared lane markings, or "sharrows", remind bicyclists to ride farther from parked cars to prevent collisions, makes motorists aware of bicycles potentially in the travel lane, and shows bicyclists the correct direction of travel. The following bicycle facilities are provided along corridors within the Study Area:

Bicycle Lanes (Class II)

- 3rd Street east of Santa Fe Avenue

Bicycle Routes (Class III)

- 1st Street
- 2nd Street east of Santa Fe Avenue

The components of the 2010 Bicycle Plan have been incorporated into the bicycle network of the Mobility Plan. The Mobility Plan consists of a Low-Stress Bikeway System and a Bicycle Lane

Network. The Low-Stress Bikeway System is comprised of the Bicycle Enhanced Network, the Neighborhood Enhanced Network, and Bike Paths. The Bicycle Enhanced Network includes protected bicycle lanes and neighborhood streets. Bicycle lanes provide infrastructure including cycle tracks, bicycle signals, and demarcated areas to facilitate turns at intersections. Neighborhood streets would typically provide mini-roundabouts, cross-street stop signs, crossing islands at major intersection crossings, improved street lighting, bicycle boxed, and bicycle-only left-turn pockets. The Neighborhood Enhanced Network and Bicycle Paths are relatively unchanged from the 2010 Bicycle Plan.

Existing Pedestrian Facilities

The walkability of existing facilities is based on the availability of pedestrian routes necessary to accomplish daily tasks without the use of an automobile; these attributes are quantified by WalkScore.com, an online tool that measures the walkability of communities, and assigned a score out of 100 points. With the various commercial businesses and entertainment facilities adjacent to residential uses, the walkability of the area is approximately 93 points[1].

It should be noted that the pedestrian network (i.e., marked pedestrian crossings, comfortable sidewalks, pedestrian connectivity) within the Arts District is limited due to the industrial nature of the area. An improved pedestrian network is proposed for future development, as later detailed.

Vision Zero

As described in *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (City of Los Angeles, August 2015), Vision Zero is a traffic safety policy that promotes strategies to eliminate collisions that result in severe injury or death. Vision Zero has identified the High Injury Network, a network of streets based on the collision data from the last five years, where strategic investments will have the biggest impact in reducing death and severe injury. The Project Site is

[1] Walk Score (www.walkscore.com) rates the Project Site (401 S. Hewitt Street) with a score of 94 of 100 possible points (scores accessed on June 20, 2019). Walk Score calculates the walkability of specific addresses by taking into account the ease of living in the neighborhood with a reduced reliance on automobile travel.

not located along the High Injury Network; however, the following streets located in proximity to the Project Site have been identified in the High Injury Network:

- 4th Street between San Pedro Street and Alameda Street and between Gless Street and Soto Street
- 6th Street between Mateo Street and Alameda Street
- 7th Street west of Mateo Street
- Alameda Street north of 6th Street
- Central Avenue

Existing Traffic Volumes

Due to the recent demolition of the 6th Street Viaduct and the resulting closure of 6th Street between Mateo Street and US 101, traffic traveling in the east/west direction has shifted to detour routes, specifically 4th Street and 7th Street. Based on discussions with LADOT staff, the collection of new traffic counts was not recommended, as new traffic counts would not reflect typical traffic patterns within the Study Area. Therefore, historical traffic count data from Years 2008 to 2014 were utilized. An ambient growth rate of one percent per year was applied to the traffic counts to reflect regional growth and development between the year of the traffic count and the existing year. Although the turning movement counts were conducted during different days and months of the year, a review of the data and existing conditions indicated that the traffic volume patterns were consistent. Thus, for the purposes of this analysis, the Existing Conditions traffic volumes represent conditions as of the issuance of the Project's NOP. Local schools were in session when the traffic counts were conducted. The existing intersection peak hour traffic volumes are illustrated in Figure 4. Traffic count worksheets are provided in Appendix C.

FUTURE CUMULATIVE TRANSPORTATION CONDITIONS

The forecast of Future without Project Conditions was prepared in accordance with procedures outlined in the California Environmental Quality Act (CEQA) guidelines. Specifically, two options are provided for developing the cumulative traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> "(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency."

As described in detail below, this analysis includes traffic growth both from future projects (option "A" above, the "Related Projects") and from regional growth projections (option "B" above, or ambient growth). The ambient growth factor discussed below likely includes some traffic growth resulting from the Related Projects. Therefore, the transportation analysis provides a highly conservative estimate of Future without Project traffic volumes.

<u>Ambient Traffic Growth</u>

Existing traffic is expected to increase as a result of regional growth and development outside the Study Area. Based on discussions with LADOT through the MOU process, an ambient growth factor of one percent per year, compounded annually, was used to adjust the existing traffic volumes to reflect the effects of the regional growth and development by Year 2023. The total adjustment applied over the six-year period was 6.15 percent. This growth factor accounts for increases in traffic due to potential projects not yet proposed or in the early stages of development, as well as projects outside of a 1.5-mile radius from the Project Site or the general downtown Los Angeles area.

<u>Related Projects</u>

In accordance with CEQA Guidelines, this study also considered the effects of the Project in relation to the Related Projects. With this information, the potential impact of the Project is, therefore, evaluated within the context of the cumulative impact of all ongoing development capable of producing related or cumulative impacts.

The list of Related Projects is based on information provided by LADCP and LADOT, as well as recent studies of projects in the area. Of the 137 Related Projects detailed in Table 4 and shown in Figure 5, approximately 30 are within the immediate vicinity of the Arts District. Related Projects within a 1.5-mile radius of the Project Site were considered in the Future Year analysis, as it is assumed that trips generated by these projects would generally affect the traffic patterns in the Study Area. Though the buildout years of many of these Related Projects are uncertain and may be well beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed, they were all Related Projects considered as part of this transportation study and conservatively assumed to be completed by the Project buildout year of 2023. The traffic growth due to the development of Related Projects considered in this analysis is highly conservative and, by itself, substantially overestimates the actual traffic volume growth in the Arts District and the general downtown Los Angeles area that would likely occur prior to Project buildout year. With the addition of the one percent per year ambient growth factor previously discussed, the Future without Project cumulative condition is even more conservative.

Using these conservative assumptions, the potential transportation impacts of the Project were evaluated. The development of estimated traffic volumes added to the study intersections as a result of Related Projects involves the use of a three-step process: trip generation, trip distribution, and trip assignment.

Trip Generation. Trip generation estimates for the Related Projects were provided by LADOT or were calculated using a combination of previous study findings and the trip generation rates contained in *Trip Generation, 10th Edition* (Institute of Transportation Engineers, 2017). The Related Projects trip generation estimates summarized in Table 4 are very conservative in that they do not in every case account for either the trips generated by the existing uses to be removed or the likely use of other travel modes (e.g., transit, bus, bicycling, walking, carpool, etc.) Further, they do not account for the internal capture trips within a multi-use development or for the interaction of trips between multiple Related Projects within the Arts District and the general downtown Los Angeles area, in which one Related Project serves as the origin for a trip destined for another Related Project.

Trip Distribution. The geographic distribution of the traffic generated by the Related Projects depends on several factors. These include the type and density of the proposed land uses, the geographic distribution of the population from which the employees/residents and potential patrons of the proposed developments are drawn, and the location of these projects in relation to the surrounding street system. These factors are considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.

Trip Assignment. The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution pattern described above. Figure 6 shows the peak hour traffic volumes associated with these Related Projects at the study intersections.

Future without Project Traffic Volumes

The Related Projects volumes were then added to the existing traffic volumes after adjustment for ambient growth through the projected buildout year of 2023. As discussed above, this is a conservative approach as many of the Related Projects may already be reflected in the ambient growth rate. These volumes represent the Future without Project Conditions (i.e., existing traffic volumes added to ambient traffic growth and Related Project traffic growth) for Year 2023 and are shown in Figure 7.

Future Improvements

The Arts District is a rapidly growing section of downtown Los Angeles and numerous transportation improvements are being discussed for the area. However, many of these proposals are in the formative stages and are not yet fully funded or scheduled for implementation. As such, it is inappropriate to consider all of these proposals as guaranteed improvements that are certain to be implemented. Therefore, the analysis of Future Conditions accounted for roadway improvements that were funded and reasonably expected to be implemented prior to the buildout of the Project in Year 2023. These roadway improvements result in changes to the physical configuration at the study intersections. Other proposed traffic/trip reduction strategies such as TDM programs for individual buildings and developments were conservatively omitted from the Future Conditions analyses.

<u>Intersection 23. I-5 Southbound Ramps & 4th Street</u>. As previously described, the installation of a traffic signal at the intersection of I-5 Southbound Ramps & 4th Street was completed in Year 2018. Thus, the potential Project impacts on the intersection are considered under Future Conditions.

<u>6th Street Viaduct Replacement Project</u>. Due to a rare chemical reaction in the cement supports and seismic vulnerability, the 6th Street Viaduct, which provided a connection between the Arts District and the Boyle Heights neighborhood, was demolished in early Year 2016 as part of the 6th Street Viaduct Replacement Project. As a result, 6th Street/Whittier Street between Mateo Street and US 101 is closed to through traffic. Construction of the new bridge is anticipated to be complete by Year 2020.

<u>Arts District Active Transportation Program</u>. Recent Active Transportation Program (ATP) funding was awarded to Council District 14 to create a more multi-modal environment in the Arts District. Construction of the ATP improvements is anticipated to begin in Year 2020. ATP improvements within the Study Area include the installation of bicycle facilities on Santa Fe Avenue, Mateo Street, and Traction Avenue. These bicycle improvements would not require the removal of any travel lanes. However, the Arts District ATP does include the realignment of Merrick Street/Molino Street & 4th Street (Intersection #13) to accommodate a new pedestrian plaza. This improvement would require the removal of one southbound approach lane and would also modify traffic signal phasing at the intersection, as shown in Appendix B and Appendix D. Completion of the ATP improvements is projected in Year 2022. Thus, the Future Conditions analysis assumes the completion of ATP improvements by the time of the Project buildout year of 2023.

<u>LADOT DASH Route Expansion</u>. LADOT is conducting a thorough line-by-line analysis of its existing transit services to determine whether expectations are being met and to identify expansion opportunities to existing transit service and routes. Within the Study Area, LADOT has proposed changes to the DASH A and DASH F lines.

As described in Chapter 2, DASH A currently travels between City West and Little Tokyo and DASH F currently travels between the Financial District and Exposition Park/USC. With the proposed changes, DASH A would run between the Los Angeles Sports and Entertainment District and Little Tokyo. Adjacent to the Project Site, minor route changes would shift DASH A from Merrick Street to Hewitt Street via Traction Avenue. The proposed changes to DASH F would extend the route to Union Station via 7th Street and Santa Fe Avenue. Detailed information about the proposed route changes is provided in Appendix E. The timeline of implementation for these improvements to DASH A and F is currently unknown and the improvements would not affect the configurations of the corridors in the Study Area.

Metro Regional Connector. The Metro Regional Connector project is a 1.9-mile underground light-rail system that will extend from the Little Tokyo/Arts District Station to the 7th Street/Metro Center Station, allowing passengers to make direct transfers between the Gold, Blue, Expo, Red, and Purple Lines. The Metro Regional Connector will improve access to both local and regional destinations by providing continuous service between these lines and providing connectors to other rail lines via the 7th Street/Metro Center Station. Three new transit stations will be developed with the operation of the Metro Regional Connector. The Metro Regional Connector is anticipated to be complete and in operation by Year 2020. The Metro Regional Connector will be underground and will not affect the configurations of the corridors in the Study Area.

Connect US Action Plan. Metro's *Connect US Action Plan* (Metro, 2015) is a strategy to encourage walking and bicycling to Union Station and the future Metro Regional Connector 1st/Central Station from surrounding neighborhoods. *Connect US Action Plan* consists of constructing Esplanades, Walk-Bike Streets, and Walk Streets within existing public right-of-way, without additional dedication or acquisition of additional right-of-way. None of the *Connect US Action Plan* improvements are within the Study Area and, therefore, would not affect any of the analyzed study intersections.

Future Bicycle System. As proposed in the 2010 Bicycle Plan and the Mobility Plan, the bicycle system in the Study Area will be expanded to create a more integrated network.

The three components of the bicycle network designated in the 2010 Bicycle Plan include the Backbone, the Neighborhood Network, and the Green Network. Class II bicycle lanes will be added to high volume corridors to and from the Backbone of the network, while in-road bikeways in lower volume and collector streets will form the Neighborhood Network through the implementation of Class II bicycle routes and bicycle friendly streets. The Green Network consists of dedicated bike paths that connect the City's open spaces. The 2010 Bicycle Plan proposes dedicated bicycle lanes on Central Avenue, Soto Street, 6th Street east of Central Avenue, 7th

Street, and Olympic Boulevard, bicycle routes/bicycle friendly streets on Boyle Avenue, Santa Fe Avenue, and Mateo Street, and a bicycle path along the Los Angeles River. These proposed bicycle facilities are not anticipated to be complete by the completion of the Project in Year 2023 and, therefore, were not included in the analysis.

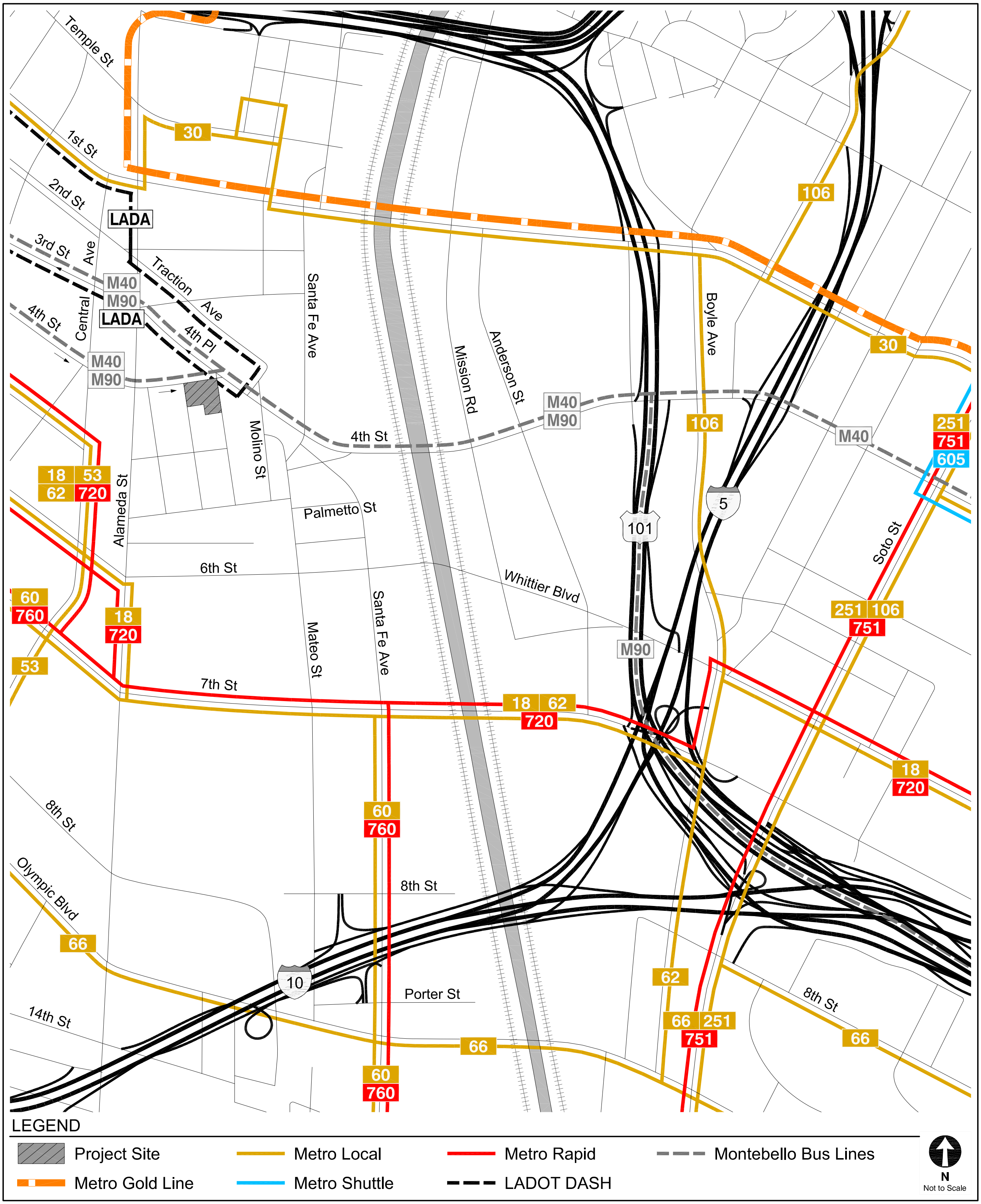
As detailed in the Mobility Plan, within the Study Area, the Bicycle Enhanced Network designates Central Avenue, Santa Fe Avenue north of 2nd Street, and Soto Street for Tier 1 protected bicycle lanes. The Bicycle Lane Network consists of Tier 2 and Tier 3 bicycle lanes. The Bicycle Lane Network would include Tier 2 bicycle lanes on 3rd Street between Alameda Street and Santa Fe Avenue, Santa Fe Avenue between 2nd Street and 7th Street, and 7th Street east of Central Avenue. Similar to the 2010 Bicycle Plan, these improvements have not been definitively scheduled for implementation and were, therefore, not assumed in the future analysis. As detailed above, protected bicycle lanes proposed along Figueroa Street were assumed in the future analysis.

Future Pedestrian Network. The Neighborhood Network established in the 2010 Bicycle Plan, which included a network of local streets that were adequate for bicycling, could also serve local pedestrian activity, as recognized in the Mobility Plan. The Neighborhood Enhanced Network of the Mobility Plan reflects the synthesis of the bicycle and pedestrian networks and serves as a system of local streets that are slow moving and safe enough to connect neighborhoods through active transportation. The Neighborhood Enhanced Network has designated the following streets within the Study Area as part of the Neighborhood Network:

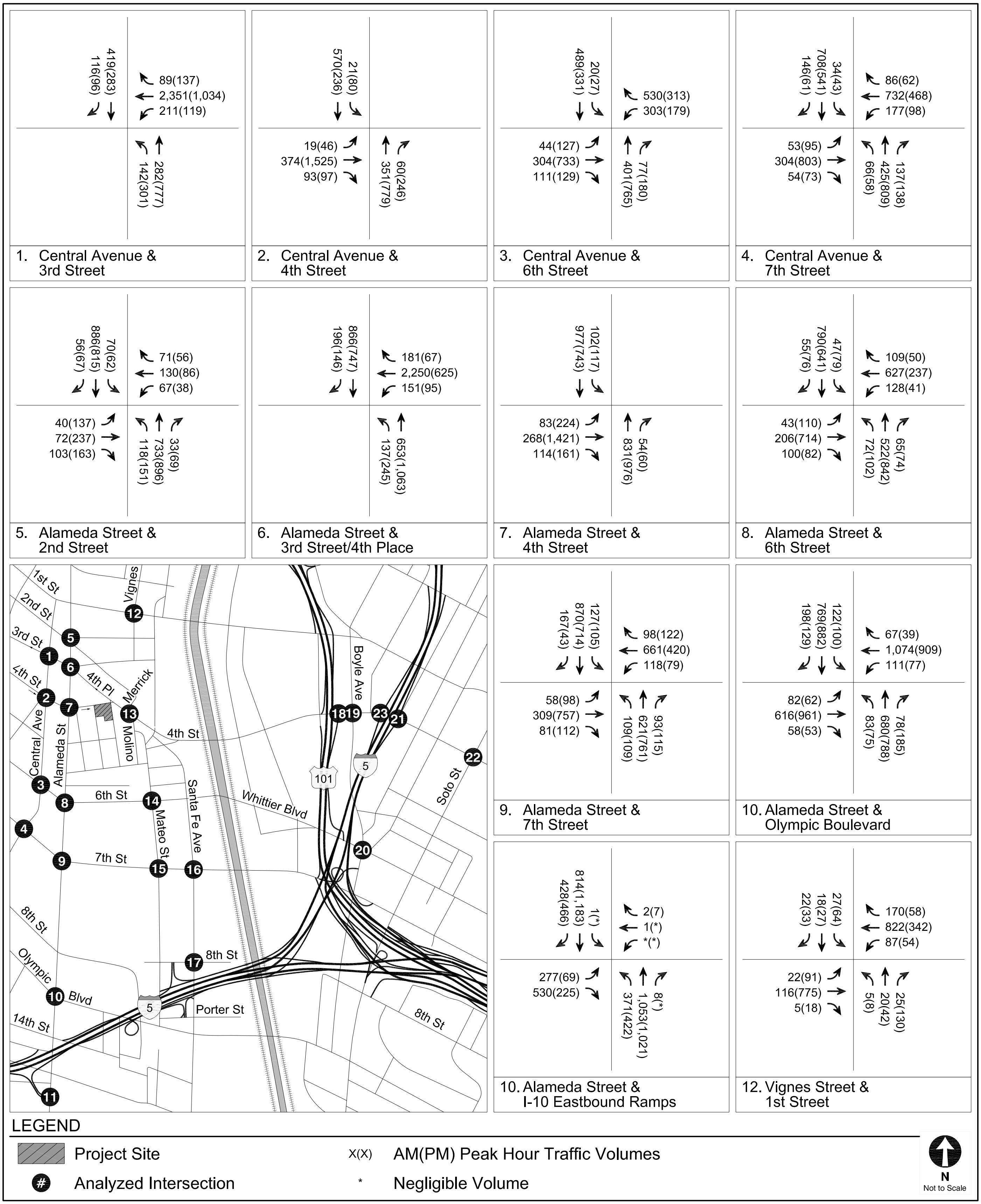
- Santa Fe Avenue south of 1st Street
- Mateo Street between 4th Street and Olympic Boulevard
- Boyle Avenue between 1st Street and 6th Street

The Mobility Plan aims to promote walking to reduce the reliance on auto-travel by providing more attractive and wider sidewalks, as well as adding pedestrian signalizations, street trees, and pedestrian-oriented design features. The Pedestrian Enhanced District of the Mobility Plan has designated the following arterial streets within the Study Area as Pedestrian Segments, where pedestrian improvements could be prioritized to provide better connectivity to and from major destinations within communities:

- Central Avenue between 1st Street and 4th Street and south of 6th Street
- Alameda Street north of 4th Street and south of 7th Street
- Boyle Avenue north of 4th Street
- Soto Street
- 1st Street west of Santa Fe Avenue and east of the Los Angeles River
- 4th Street east of Saint Louis Street
- 7th Street west of Mill Street

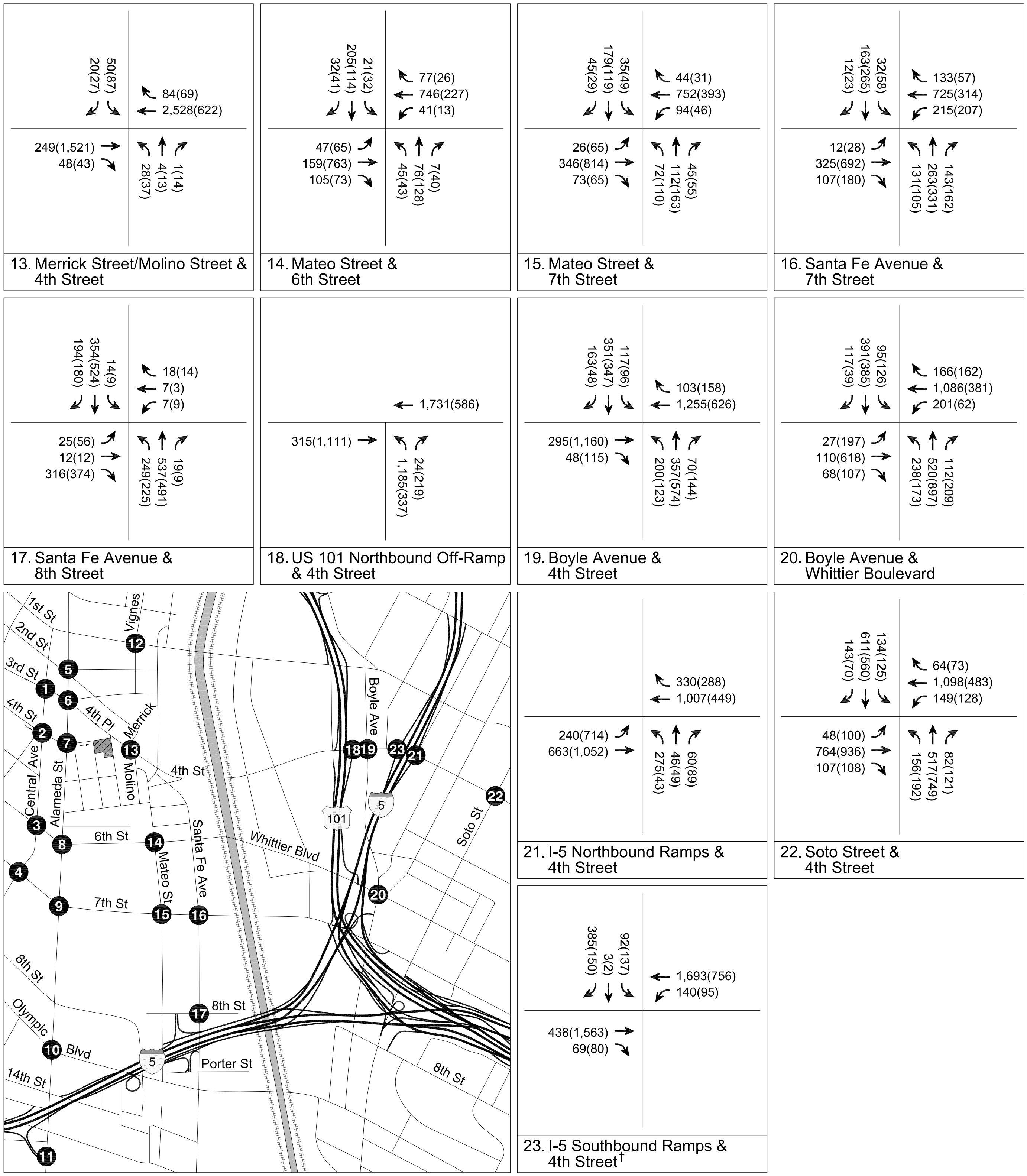


EXISTING TRANSIT SERVICE	FIGURE 3



EXISTING CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 4



LEGEND

Project Site

Analyzed Intersection

X(X) AM(PM) Peak Hour Traffic Volumes

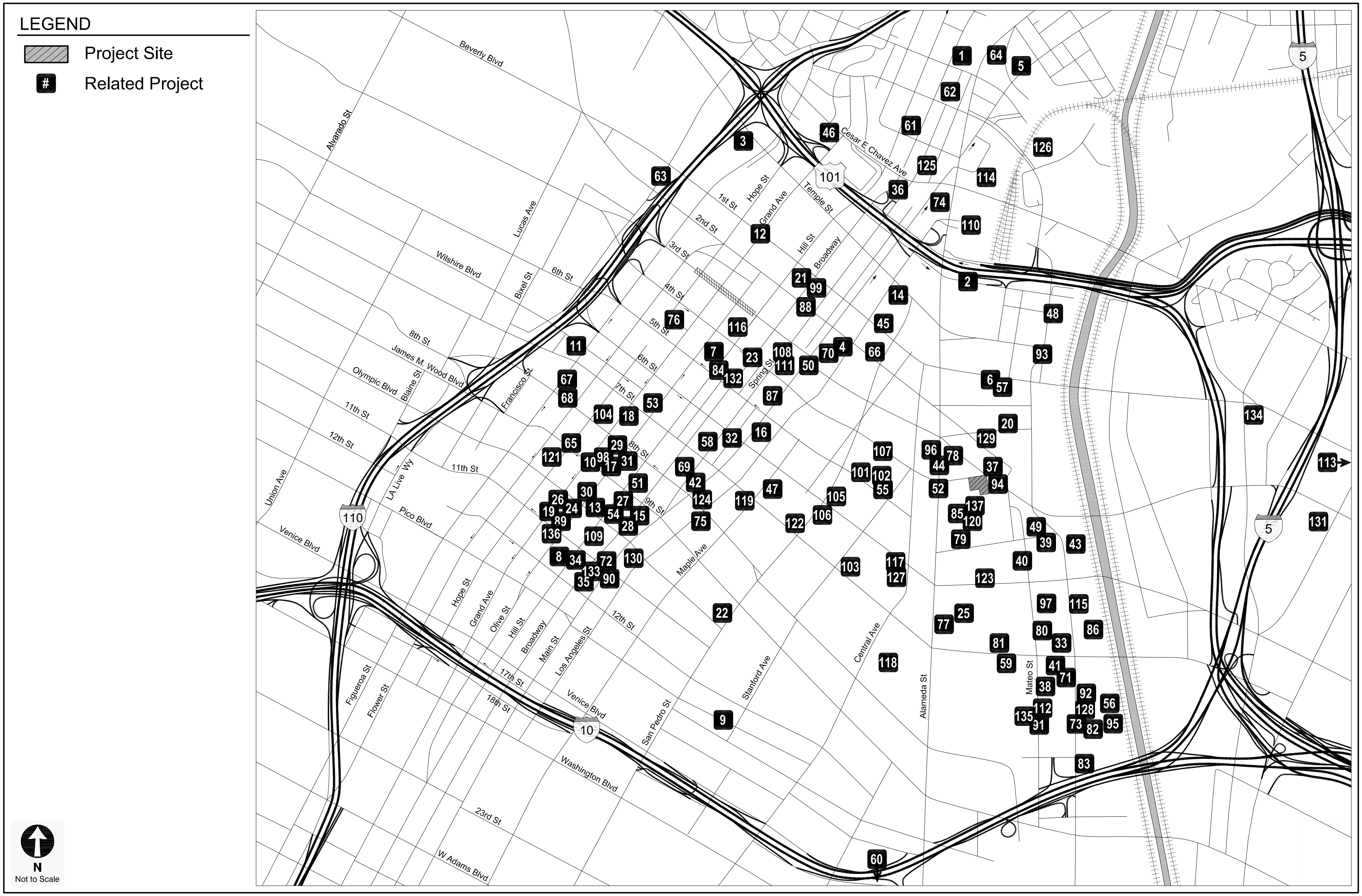
* Negligible Volume

†Note: Intersection is unsignalized under Existing Year 2017 Conditions

N
Not to Scale

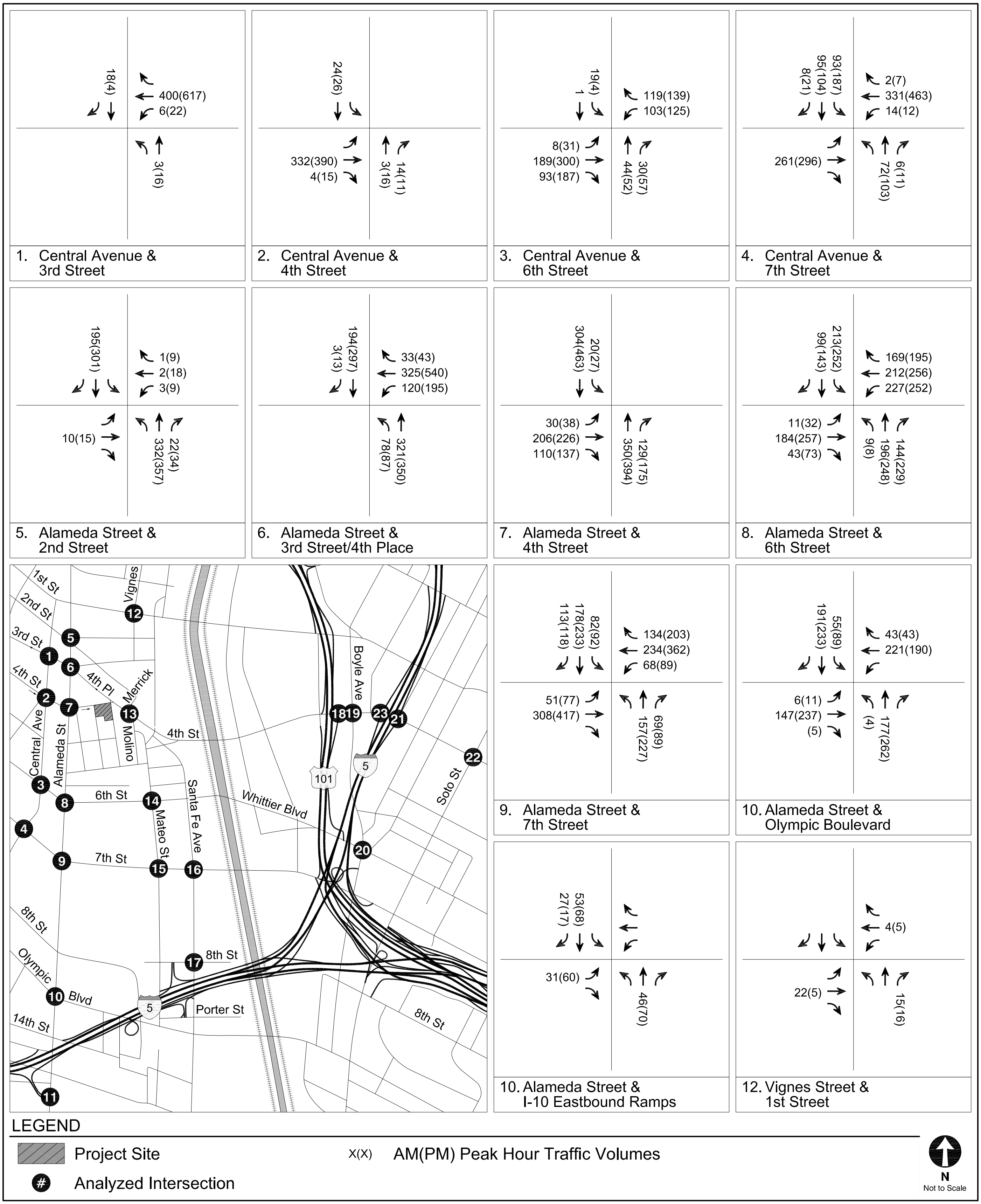
EXISTING CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 4 (CONT.)



LOCATIONS OF RELATED PROJECTS

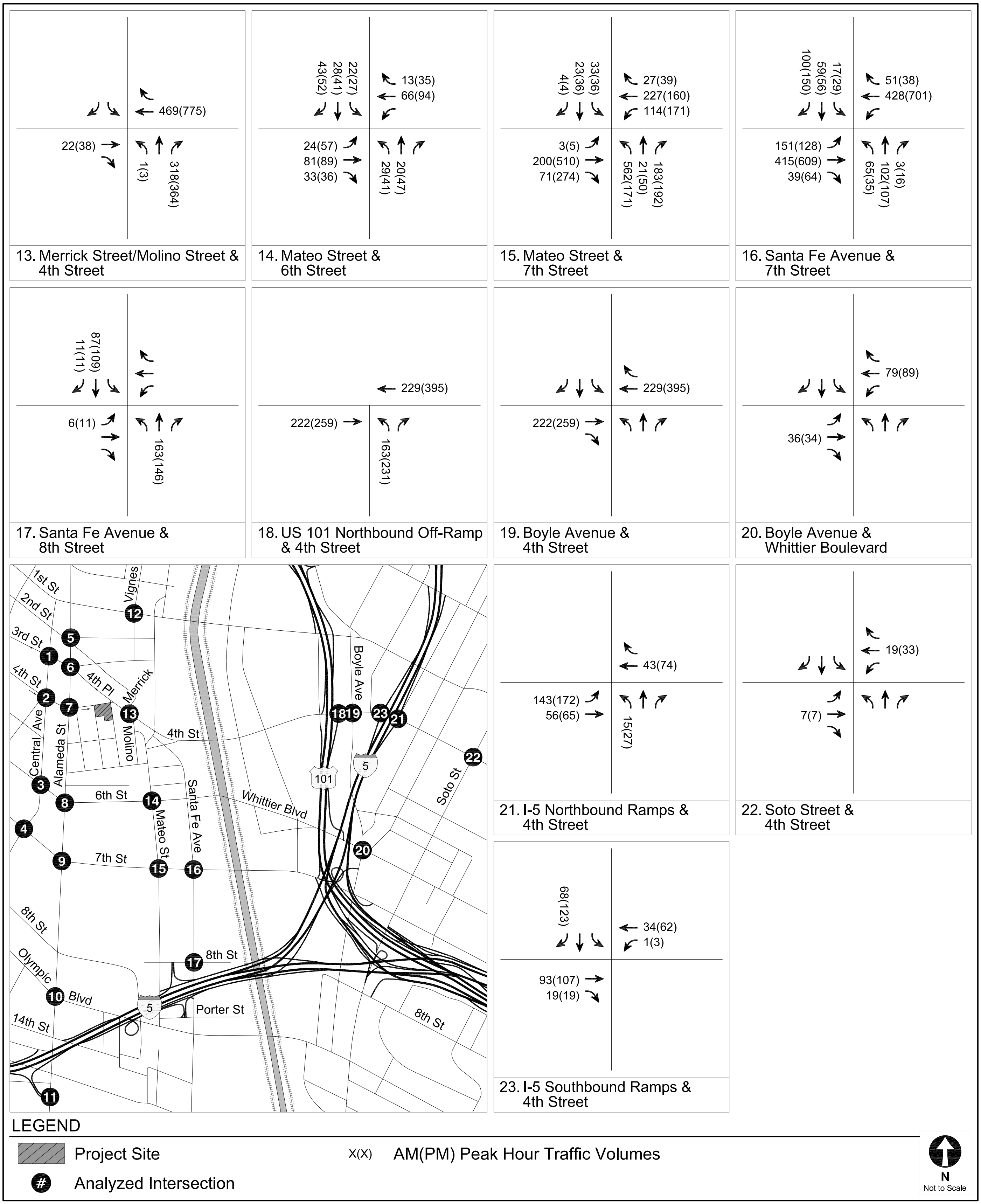
FIGURE 5



RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

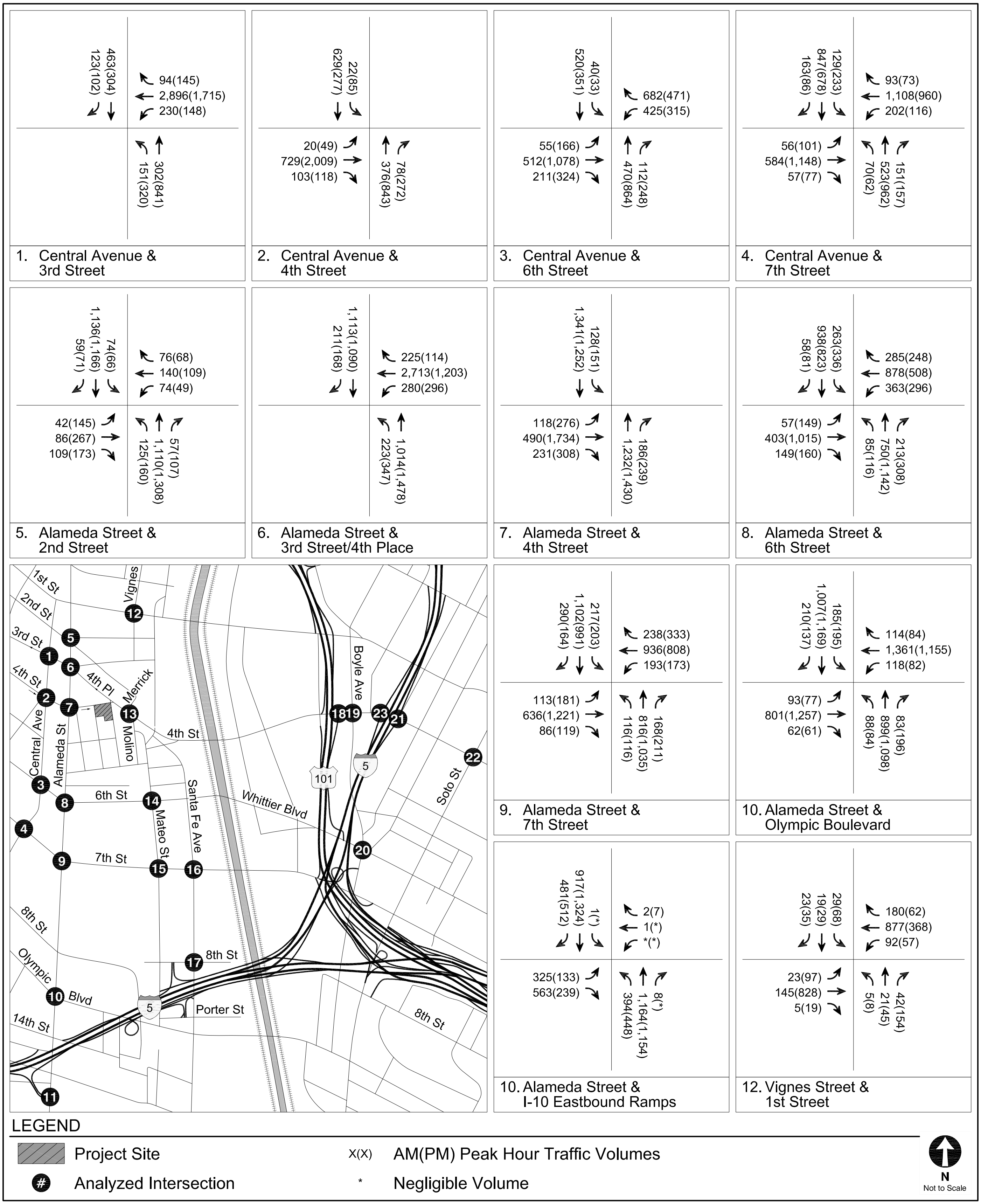
FIGURE
6

Gibson transportation consulting, inc.



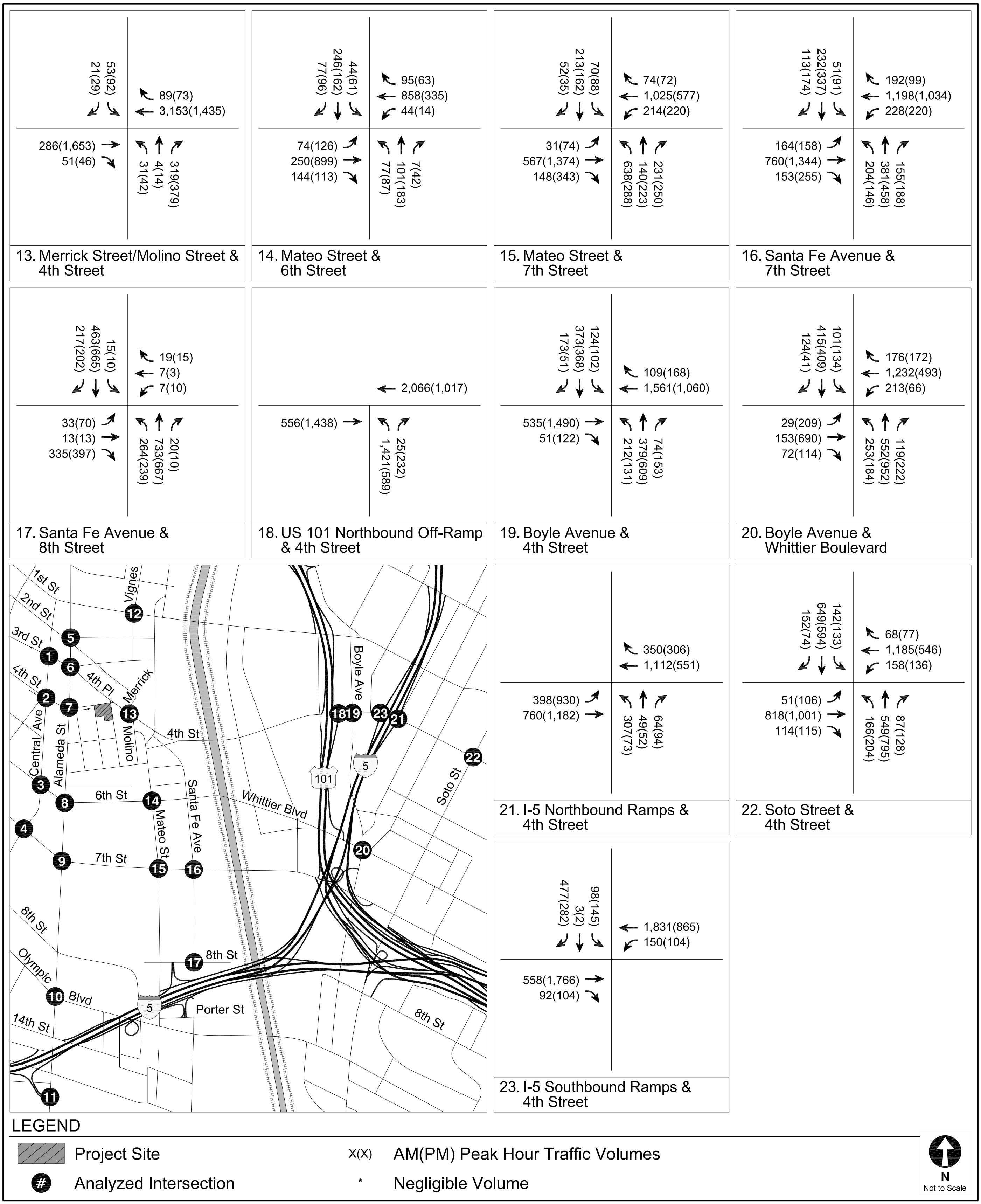
RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
6 (CONT.)



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 7



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 7 (CONT.)

TABLE 1
STUDY INTERSECTIONS

No	Intersection	Jurisdiction
1.	Central Avenue & 3rd Street	City of Los Angeles
2.	Central Avenue & 4th Street	City of Los Angeles
3.	Central Avenue & 6th Street	City of Los Angeles
4.	Central Avenue & 7th Street	City of Los Angeles
5.	Alameda Street & 2nd Street	City of Los Angeles
6.	Alameda Street & 3rd Street/4th Place	City of Los Angeles
7.	Alameda Street & 4th Street	City of Los Angeles
8.	Alameda Street & 6th Street	City of Los Angeles
9.	Alameda Street & 7th Street	City of Los Angeles
10.	Alameda Street & Olympic Boulevard	City of Los Angeles
11.	Alameda Street & I-10 Eastbound Ramps	City of Los Angeles / Caltrans
12.	Vignes Street & 1st Street	City of Los Angeles
13.	Merrick Street/Molino Street & 4th Street	City of Los Angeles
14.	Mateo Street & 6th Street	City of Los Angeles
15.	Mateo Street & 7th Street	City of Los Angeles
16.	Santa Fe Avenue & 7th Street	City of Los Angeles
17.	Santa Fe Avenue & 8th Street	City of Los Angeles
18.	US 101 Northbound Off-Ramp & 4th Street	City of Los Angeles / Caltrans
19.	Boyle Avenue & 4th Street	City of Los Angeles
20.	Boyle Avenue & Whittier Boulevard	City of Los Angeles
21.	I-5 Northbound Ramps & 4th Street	City of Los Angeles / Caltrans
22.	Soto Street & 4th Street	City of Los Angeles
23.	I-5 Southbound Ramps & 4th Street [a]	City of Los Angeles / Caltrans

Notes
[a] Traffic signal installation was completed in Year 2018. Therefore, the intersection is considered unsignalized under Existing Year 2017 Conditions.

TABLE 2
EXISTING TRANSIT SERVICE

Provider, Route, and Service Area		Service Type	Hours of Operation	Average Headway (minutes)			
				AM Peak Period		PM Peak Period	
Metro				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
18	Wilshire Center - Downtown Los Angeles - Montebello via 6th St and Whittier Blvd	Local	24-Hour	10	12	9	6
30	East Los Angeles - Downtown Los Angeles - West Hollywood via San Vicente Bl, Pico Bl & 1st St	Local	24-Hour	30	30	34	27
53	Downtown Los Angeles - CSU Domingues Hills via Central Ave	Local	4:45 AM - 12:15 AM	8	15	14	9
60	Downtown Los Angeles - Artesia Station via Long Beach Blvd	Local	24-Hour	9	8	7	7
62	Downtown Los Angeles - Hawaiian Gardens via Telegraph Rd	Local	5:00 AM - 12:15 AM	24	22	27	22
66	Wilshire Center - Downtown Los Angeles - Montebello via 8th St and Olympic Blvd	Local	4:15 A.M. - 1:30 A.M.	16	17	17	13
106	East LA College Transit Center - USC Medical Center via State St, Whittier Bl & 1st St	Local	5:30 AM - 8:30 PM	60	60	60	60
251	Cypress Park - Lynwood via Soto St	Local	24 Hours	18	16	20	22
605	LAC+USC Outpatient Clinic - Olympic Boulevard	Shuttle	5:30 AM - 7:30 PM	17	15	15	15
720	Santa Monica - Commerce Center via Wilshire Blvd and Whittier Blvd	Rapid	4:15 AM - 1:30 AM	12	4	6	10
751	Huntington Park - Cypress Park via Soto St	Rapid	5:00 AM - 8:30 PM	20	16	15	17
760	Long Beach Bl Green Line Station - Downtown Los Angeles via Long Beach Blvd	Rapid	5:15 AM - 8:30 PM	13	17	17	14
Metro Rail				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
Gold	Azusa - East Los Angeles	Rail	4:30 AM - 3:30 AM	7	7	7	7
LADOT DASH				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
A	Little Tokyo, City West	Local	6:00 AM - 6:30 PM	7	7	7	7
Montebello Bus Lines				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
M40	Downtown Los Angeles - Montebello - Whittier via Beverly Blvd	Local	4:45 AM - 11:00 PM	11	12	11	11
M90	Downtown Los Angeles - Montebello - Whittier via Beverly Blvd	Express	6:00 AM - 7:00 PM	30	20	30	30

Notes
Metro: Los Angeles County Metropolitan Transportation Authority
Montebello Bus Lines: City of Montebello
AM Peak from 6-10 AM
PM Peak from 3-7 PM

TABLE 3
EXISTING TRANSIT SERVICE PATRONAGE
LINES SERVING PROJECT PERIPHERY

A.M. Peak Period							
Provider	**Route**	**Number of Runs During Peak Hour** [a]	**Capacity** [c]	**Average Load** [d]	**Load Factor - Average Load/Capacity**	**Average Residual Capacity per Run**	**Average Residual Capacity in Peak Hour** [e]
Metro	18	13	50	19	0.38	31	403
	30	19	50	5	0.10	45	855
	53	17	50	27	0.54	23	391
	62	6	50	18	0.36	32	192
	720	22	75	23	0.31	52	1,144
LADOT DASH	A	16	30	6	0.20	24	384
Montebello Bus Lines	40	10	*No Information Provided*				
	90	2	*No Information Provided*				
Total Residual Capacity in Peak Hour - Bus Line							**3,369**
Metro	Gold	16	126	48	0.38	78	1,248
Total Residual Capacity in Peak Hour - Rail Line							**1,248**
P.M. Peak Period							
Provider	**Route**	**Number of Runs During Peak Hour** [a]	**Capacity** [c]	**Average Load** [d]	**Load Factor - Average Load/Capacity**	**Average Residual Capacity per Run**	**Average Residual Capacity in Peak Hour** [e]
Metro	18	19	50	20	0.40	30	570
	30	19	50	8	0.16	42	798
	53	12	50	23	0.46	27	324
	62	5	50	27	0.54	23	115
	720	22	75	21	0.28	54	1,188
LADOT DASH	A	16	30	3	0.10	27	432
Montebello Bus Lines	40	10	*No Information Provided*				
	90	3	*No Information Provided*				
Total Residual Capacity in Peak Hour - Bus Line							**3,427**
Metro	Gold	16	126	65	0.52	61	976
Total Residual Capacity in Peak Hour - Rail Line							**976**

Notes:

[a] Number of runs in both directions combined during peak hour.

[c] Capacity assumptions based on discussions with agencies:
Metro Regular Bus - 40 seated / 50 seated and standing.
Metro Articulated Bus - 66 seated / 75 seated and standing standing.
Metro Light Rail - 36 seated / 126 standing (175% of seated capacity) per car x 2 cars per train = 126 patrons.
LADOT DASH - 25 seated / 30 seated and standing.

[d] Maximum Load is the maximum number of people per bus in the peak direction.

[e] Maximum residual capacity in peak hours = (Maximum residual capacity per run) x (number of peak hour runs).

TABLE 4
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
1 [b]	Blossom Plaza	900 N Broadway	223 condominium units, 25 ksf retail, 15 ksf restaurant, 7 ksf cultural center	2,767	66	89	155	105	79	184
2	Bus Maintenance & Inspection Facility	454 E Commercial St	2 acre bus facility	0	22	8	30	9	1	10
3	Da Vinci Apartments	327 N Fremont Ave	600 apartment units and 30 ksf retail	5,457	113	248	361	286	217	503
4 [b]	Vibiana Lofts (Mixed-Use)	225 S Los Angeles St	300 condominium units and 3,400 sf retail	1,910	88	136	224	75	52	126
5	1101 N Main Condos	1101 N Main St	316 condominium units	1,102	-9	80	71	75	12	87
6 [b]	Mixed-Use Project (Megatoys)	905 E 2nd St	320 condominium units and 18,712 sf retail	1,207	-6	70	64	69	23	92
7	5th & Olive (formerly Park Fifth Project)	437 S Hill St	660 condominium units and 13,742 sf restaurant	4,707	71	273	344	279	158	437
8	11th & Hill Project	1115 S Hill St	172 condominium units and 6,850 sf restaurant	543	-45	40	-5	50	-7	43
9 [b]	Stanford Regency Plaza	810 E Pico Bl	181,620 sf retail	1,889	54	34	88	59	63	122
10	Embassy Tower	848 S Grand Ave	420 condominium units and 38,500 sf retail	3,882	66	144	210	212	165	377
11 [b][c]	Wilshire Grand Project	900 W Wilshire Bl	560 hotel rooms, 100 apartment units, 150,000 sf office and 275,000 sf retail/restaurant	3,624	725	75	800	94	764	858
12 [d]	Grand Avenue Project	100 S Grand Ave	968 condominium units, 242 apartment units, 225 room hotel, 152,150 sf retail, 650,000 sf office, 52,000 sf restaurant, 53,000 sf supermarket, 24,000 sf health club, and 250 seat event facility	21,631	919	632	1,551	1,120	1,344	2,464
13 [b]	Olympic & Hill Mixed-Use Project	301 W Olympic Bl	300 apartment units, 14,500 sf retail, and 8,500 sf restaurant	2,496	30	104	134	143	82	225
14	LA Civic Center Office	150 N Los Angeles St	712,500 sf office, 35,000 sf retail, and 2,500 sf child care	13,534	930	118	1,048	435	942	1,377
15	Broadway Palace	928 S Broadway	667 apartment units, 17 condominium units, and 58,800 sf retail	4,715	21	229	250	272	109	381
16	Mixed-Use	534 S Main St	160 apartment units, 18,000 sf retail, 3,500 sf restaurant, and 3,500 sf fast food	2,213	52	75	127	87	58	145
17	Mixed-Use	840 S Olive St	303 condominium units and 9,680 sf restaurant	3,071	81	166	247	174	96	270
18 [b]	Mixed-Use	710 S Grand Ave	700 apartment units, 27,000 sf retail, and 5,000 sf restaurant	5,245	88	185	273	275	202	477
19	Restaurant	1036 S Grand Ave	7,149 sf restaurant	492	2	3	5	27	14	41
20	Santa Fe Freight Yard Redevelopment	950 E 3rd St	532-student school, 635 apartment units, and 30,062 sf retail	6,372	162	177	339	245	213	458
21	Retail/Restaurant	201 S Broadway	27,765 sf retail/restaurant	1,638	-40	-41	-81	53	17	70
22	The City Market (Mixed-Use)	1057 S San Pedro St	877 apartment units, 68 condominium units, 210 hotel rooms, 549,141 sf of office, 224,862 sf retail, and 744 cinema seats	16,433	837	434	1,271	632	957	1,589
23	Mixed-Use	400 S Broadway	450 apartment units, 10,000 sf retail, and 5,000 sf bar	3,292	50	187	237	193	112	305
24 [b]	1001 S. Olive Street	1001 S Olive St	201 apartment units and 5,000 sf retail	1,581	22	79	101	94	51	145
25	Camden Arts Mixed-Use	1525 E Industrial St	328 apartment units, 27,300 sf of office, 6,400 sf retail, and 5,700 sf restaurant	2,288	58	73	131	86	69	155
26 [b]	Mixed-Use	1000 S Grand Ave	274 apartment units and 12,000 sf restaurant	2,216	27	94	121	130	69	199
27	Hill Street Mixed-Use	920 S Hill St	239 apartment units and 5,400 sf retail	1,476	23	84	107	87	50	137
28	Broadway Mixed-Use	955 S Broadway	201 apartment units and 6,000 sf retail	1,275	21	72	93	74	43	117
29 [b]	Mixed-Use	801 S Olive St	331 apartment units and 10,000 sf restaurant	2,557	33	129	162	140	83	225
30 [b]	Olympic & Olive Mixed-Use Project	960 S Olive St	263 apartment units and 14,500 sf restaurant	2,266	25	91	116	48	23	71

TABLE 4 (CONT.)
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
31	Mixed-Use	820 S Olive St	589 apartment units and 4,500 sf retail	3,309	63	202	264	195	106	302
32	Mixed-Use	601 S Main St	452 apartment units and 25,000 sf retail	2,686	36	144	179	152	87	238
33	Mixed-Use	2051 E 7th St	240 apartment units, 8,000 sf retail, and 3,500 sf restaurant	2,310	17	127	144	145	64	209
34	Mixed-Use (Herald Examiner)	1111 S Broadway	214 apartment units and 10,000 sf retail	5,198	144	176	319	258	274	532
35	Mixed-Use	1148 S Broadway	94 apartment units and 2,500 sf retail	553	8	30	38	32	18	50
36	La Plaza Cultura Village	527 N Spring St	345 apartment units, 23,000 sf retail, 21,000 sf specialty retail, and 11,000 sf restaurant	3,585	49	118	167	189	131	320
37 [b]	Mixed-Use (Coca Cola)	963 E 4th St	75,000 sf office, 25,000 sf retail, and 20,000 sf restaurant	2,512	106	22	128	113	138	251
38	Mixed-Use	826 S Mateo St	90 live/work units, 11,000 sf retail, and 5,600 sf restaurant	1,267	11	34	45	62	39	101
39	520 Mateo	520 S Mateo St	600 live-work apartment units, 90,000 sf live-work office, 10,000 sf museum, 20,000 sf office, and 30,000 sf commercial	4,995	157	220	373	274	223	491
40	Retail (Palmetto & Mateo)	555 S Mateo St	153,000 sf retail OR 130,000 sf retail, and 50,000 sf of office	4,300	5	30	35	220	205	425
41	Mixed-Use	2030 E 7th St	243,000 sf office and 40,000 sf retail	2,306	274	34	308	69	249	318
42	Mixed-Use	732 S Spring St	400 apartment units and 15,000 sf retail	3,359	59	152	211	164	104	268
43	Office	540 S Santa Fe Ave	65,812 sf office	726	90	12	102	17	81	98
44	Mixed-Use	360 S Alameda St	52 apartment units, 2,400 sf restaurant, and 6,900 sf of office	670	25	33	58	35	26	61
45	Apartments	118 S Astronaut es Onizuka St	77 apartment units	97	-1	20	19	19	6	25
46	Mixed-Use	700 W Cesar Chavez Ave	300 apartment units and 8,000 sf retail	1,511	7	89	96	99	54	153
47	Clinic at 7th & Wall	649 S Wall St	66 emp medical office and 55 assisted living beds	104	24	5	29	3	24	27
48	Metro Emergency Security Operations Center	410 N Center St	110,000 sf office	1,165	87	0	87	0	79	79
49	Restaurant	500 S Mateo St	12,682 sf restaurant	1,052	48	41	89	50	31	81
50	Medallion Phase 2	300 S Main St	471 apartment units, 27,780 sf restaurant, and 5,190 sf retail	4,691	143	243	386	257	153	410
51	Alexan South Broadway	850 S Hill St	305 apartment units, 3,500 sf retail, and 3,500 sf restaurant	1,998	29	108	137	117	67	184
52	400 S Alameda Street	400 S Alameda St	66 hotel rooms, 2,130 sf restaurant and 840 sf retail	512	20	18	38	23	14	37
53	Giannini Place (Nomad Hotel)	649 S Olive St	241 hotel rooms	1,674	60	44	109	63	60	123
54	940 S Hill Mixed-Use	940 S Hill St	232 apartment units and 14,000 sf retail	1,881	20	80	100	115	53	168
55	Mixed Use	719 E 5th St	160 apartment units and 7,500 sf retail	1,033	15	58	73	59	37	96
56	Mixed-Use	2130 E Violet St	94,000 sf of office, 3,500 sf retail and 4,000 sf restaurant	1,351	137	30	167	39	122	161
57	Mixed-Use (Private Club)	929 E 2nd St	37,979 sf retail and 71,078 sf private club space	2,153	68	12	80	105	96	201
58	Spring St Hotel	633 S Spring St	176 hotel rooms, 5,290 sf bar, and 8,430 sf restaurant	2,045	83	33	116	97	99	196
59	Mixed Use (Revised)	1800 E 7th St	122 apartment units and 7,900 sf of commercial	1,536	42	74	116	74	46	120
60	Restaurant	1722 E 16th St	8,515 sf restaurant	592	-4	2	-2	36	11	47

TABLE 4 (CONT.)
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
61	Hill Mixed Use Project	708 N Hill St	162 apartment units and 5,000 sf retail	980	16	57	73	57	33	90
62	Alpine Mixed-Use	211 W Alpine St	122 apartment units and 7,500 sf retail	566	9	42	51	37	18	55
63	Beaudry Ave & 2nd St Mixed-Use Project	130 S Beaudry Ave	220 apartment units and 9,000 sf other	1,159	8	76	84	76	29	105
64	College Station Mixed-Use	129 W College St, 924 N Spring St	770 apartment units and 51,390 sf commercial	6,583	169	290	461	307	201	509
65	CIM South Park Apartments	888 S Hope St	526 apartment units	3,498	54	214	268	212	114	326
66 [b]	Wakaba LA	232 E 2nd St	240 apartment units and 16,000 sf retail	2,279	33	104	137	125	83	208
67	Mitsui Fudosan (Eighth and Figueroa Tower)	744 S Figueroa St	436 apartment units, 3,750 sf restaurant, and 3,750 sf retail	2,644	37	146	183	158	86	244
68	945 W 8th Street	845 W 8th St	781 apartment units, and 6,700 sf commercial	2,869	63	146	209	144	91	235
69	Holland Partner Group/Eighth and Spring	737 S Spring St	320 apartment units and 25,000 sf pharmacy/drugstore	3,942	72	141	213	167	116	283
70	Budokan of Los Angeles	237 S Los Angeles St	43,453 sf sports complex	1,869	79	50	129	161	98	259
71	Ford Factory Building	2030 E 7th St	243,583 sf office and 40,000 sf retail	2,306	274	34	308	69	249	318
72 [b]	Harris Building Office Conversion	11th St & Main St	52,000 sf office	364	40	1	41	-1	38	37
73	Soho House	1000 S Santa Fe Ave	48-room private club and 8,447 sf restaurant and bar	966	36	38	74	49	20	69
74 [b]	Italian American Mixed-Useseum	125 Paseo de la Plaza	7,140 sf museum	0	2	0	2	0	1	1
75 [b]	Max Lofts	819 S Santee St	88 apartment units	585	9	36	45	36	19	55
76 [b]	Skyspace	633 W Fifth St	observation deck	0	13	12	25	13	12	25
77	668 S Alameda St Mixed-Use	668 S Alameda St	475 live-work apartment units, 25,200 sf live-work office, and 57,000 sf office/retail/restaurant/market	4,002	107	182	289	216	145	361
78	330 S Alameda St Mixed-Use	330 S Alameda St	186 live-work apartment units, 10,415 sf office, and 11,925 sf retail	1,662	36	76	112	91	65	156
79	Palmetto	527 S Colyton St	310 apartment units, 11,375 sf commercial, and 11,736 sf production space	2,095	36	116	152	121	74	195
80	676 Mateo Mixed-Use	676 Mateo St	185 live/work units, 3,900 sf live/work office, 15,005 sf restaurant, and 8,375 sf retail	1,990	50	95	145	106	51	157
81	Hillcrest Mixed-Use	1745 E 7th St	57 apartment units and 6,000 sf commercial	635	10	25	35	34	23	57
82	2110 Bay Street	2110 Bay St	110 live/work apartments, 113,350 sf creative office, and 43,657 shopping center (mix of retail, market, health club, restaurant)	2,394	180	63	243	89	192	281
83 [b]	1200 S Santa Fe Avenue	1200 S Santa Fe Ave	53 apartment units and 13,000 sf retail	907	12	27	39	44	37	81
84	Fifth and Hill	333 W 5th St	100 condominium units, 200 hotel rooms, 27,500 sf commercial or 142 condominium units, and 25,000 sf commercial	3,358	64	72	136	201	129	330
85	Arts District Center (Mixed-Use)	1129 E 5th St	129 condominium units, 113-room hotel, 26,979 sf retail, 31,719 sf restaurant, and 12,771 sf art space	4,674	130	140	270	157	69	226
86	670 Mesquit	670 Mesquit St	236 hotel rooms, 308 apartment units, 79,240 sf retail, 89,576 sf restaurant, 93,617 sf event space, 62,148 sf gym, 56,912 sf grocery, and 944,055 sf office	26,489	1,513	451	1,964	698	1,316	2,014
87	433 S Main Street	433 S Main St	196 condominium units, 5,300 sf retail, and 900 sf restaurant	1,450	32	72	104	61	37	98
88	Tribune (LA Times) South Tower Project	222 W 2nd St	107 condominium units, 534,044 sf office, and 7,200 sf retail	4,006	467	93	560	118	423	541
89	1045 S Olive Street	1045 S. Olive St	800 condominium units and 15,000 sf retail	5,289	69	297	366	306	166	472
90	Mixed-use	1100 S Main St	379 apartment units and 25,810 sf retail	385	9	103	112	78	14	92

TABLE 4 (CONT.)
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation Daily	AM Peak Hour Inbound	AM Peak Hour Outbound	AM Peak Hour Total	PM Peak Hour Inbound	PM Peak Hour Outbound	PM Peak Hour Total
91	1000 S Mateo Street	1000 S Mateo St	104 live/work units, 101,983 sf office, 22,109 sf retail/restaurant, 5,519 sf art production	2,238	153	83	236	90	131	221
92	2117 E Violet Street	2117 E Violet St	509 live/work units and 288,230 sf commercial	4,477	329	122	451	130	330	460
93	234 N Center Street	220 N Center St	430 apartment units and 8,742 sf retail	2,166	33	119	152	121	79	200
94	940 E 4th Street	940 E 4th St	93 live/work units and 20,248 sf commercial	788	14	37	51	44	31	75
95	2159 E Bay Street	2159 E Bay St	202,954 sf creative office and 21,720 sf commercial	4,417	193	27	220	115	245	360
96	333 S Alameda Street	333 S Alameda St	994 apartment units and 99,300 sf commercial	8,445	134	260	394	390	329	719
97	641 Imperial Street	641 Imperial St	140 live/work units and 14,700 sf of office	1,093	34	60	94	61	48	109
98	845 Olive & 842 Grand Mixed-Use	845 S Olive St	208 apartment units and 2,430 sf retail	1,305	25	76	101	77	42	119
99	Mixed-Use (Times Mirror Square)	100 S Broadway	1,127 apartment units, 285,088 sf of office, 50,000 sf supermarket, and 75,589 sf restaurant	8,535	94	341	435	294	38	332
100	Southern California Flower Market Project	755 S Wall St	322 apartment units, 53,200 sf office, and 8,820 sf commercial	2,499	108	82	191	164	141	305
101	Mixed-Use	609 E 5th St	151 apartment units	1,004	15	62	77	61	33	94
102	Residential	713 E 5th St	51 apartment units	208	15	10	25	9	8	17
103	656 S Stanford Ave	656 S Stanford Ave	82 apartment units	545	8	33	41	33	18	51
104	8th/Grand/Hope Project	754 S Hope St	409 condominium units and 7,329 sf retail	2,315	35	137	172	137	78	215
105	Weingart Tower - Affordable Housing	554 S San Pedro St	378 affordable / 4-market-rate apartment units, 1,758 sf retail, 4,410 sf office, and 5,932 sf flex	2,186	107	138	245	96	88	184
106	600 S San Pedro St	600 S San Pedro St	303 apartment units and 19,909 sf commercial	636	38	25	63	30	37	67
107	508 E 4th St	508 E 4th St	41 apartment units	167	8	12	20	8	6	14
108	4th & Spring Hotel	361 S Spring St	315 hotel rooms and 2,000 sf meeting space	2,273	91	59	150	84	85	169
109	Olympic & Hill Mixed Use	1030 S Hill St	700 apartment units, 7,000 sf retail, 7,000 sf restaurant	3,392	49	193	242	181	104	285
110	Alameda District Plan	Union Station Terminal Annex	22 residential units, 7,443,200 sf of office, 645,000 sf retail, 750 hotel rooms, 20,000 sf restaurant, and 70,000 sf museum	25,312	862	527	1,389	734	1,042	1,776
111	Hellman / Banco Building	354 S Spring St	212 apartment units	1,410	22	86	108	85	46	131
112	Industrial Park	1005 S Mateo St	94,849 sf industrial park	426	40	9	49	10	39	49
113	ELACC/Bridge Housing Project	SW corner of 1st St & Soto St	66 affordable housing units, 2,500 sf high-turnover restaurant and 2,500 sf retail	496	22	26	48	13	18	41
114	900 N Alameda Street	900 N Alameda St	179,900 sf data center	178	8	8	16	3	13	16
115	Mixed-Use	640 S Santa Fe Ave	91,185 sf office, 9,430 sf retail, and 6.550 sf restaurant	1,330	90	8	98	43	114	157
116	Equity Residential Mixed-Use	340 S Hill St	406 apartment units, 22 affordable units, 2,980 sf office, and 2,630 sf retail	2,253	36	129	165	133	75	208
117	Mixed-Use	601 S Central Ave	236 apartment units and 12,000 sf commercial	1,074	17	79	96	70	32	102
118	ROW DTLA Mixed-Use	777 S Alameda St	850,400 sf of office, 117,400 sf restaurant, 66,200 sf retail, and 125 hotel rooms	916	-134	-172	-306	-157	35	-122
119	7th & Maple Mixed-Use	701 S Maple Ave	452 apartment units, 6,800 sf retail, and 6,800 sf restaurant	3,199	67	179	246	185	105	290
120	1100 5th Mixed-Use	1100 E 5th St	220 live/work units, 4,350 sf live/work office, 15,671 sf of office, 19,609 sf restaurant, and 9,250 sf retail	2,583	79	119	198	133	74	207

TABLE 4 (CONT.)
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
121	949 S Hope Street Mixed-Use Development	949 S Hope St	236 apartment units and 5,954 sf retail	791	8	45	53	43	7	50
122	655 S San Pedro Street Residential	655 S San Pedro St	81 apartment units	539	8	33	41	33	17	50
123	6AM	1206-1338 E 6th St/1205-1321 Wholesale St	412 hotel rooms, 1,305 apartment units, 431 condominium units, 253,500 sf office, 127,600 sf community space, 29,300 sf school and 22,400 sf art space	23,975	1,199	1,369	2,568	1,246	1,133	2,379
124	Mixed-Use	755 S Los Angeles St	60,243 sf of office, 16,694 sf retail, and 26,959 sf restaurant	2,482	110	57	167	105	100	205
125	643-655 N Spring Street	643-655 N Spring St	281 apartment units, 142 hotel rooms, 17,003 sf commercial, and 2,532 sf restaurant	2,723	61	122	183	138	91	229
126	Men's Central Jail Replacement	441 E Bauchet St	LA CO. Consolidated Correctional Treatment Facility	242	0	9	9	0	29	29
127	Mixed-Use	930 E 6th St	236 apartment units, 12,000 sf retail	1,074	17	79	96	70	32	102
128	Mixed-Use	1000 S Sante Fe St	14,193 sf market, 6,793 sf health club, 10,065 sf restaurant	966	36	38	74	49	20	69
129	Mixed-Use	810 E 3rd St	4 live-work apartment units, 3,074 sf drinking place, 285 sf quality restaurant, 6,171 sf retail, and 209 sf high-turnover restaurant	1,487	37	32	69	87	48	135
130	Hotel	124 E Olympic Bl	149-room hotel, 6,716 sf restaurant	1,334	53	45	98	58	33	91
131	Charter School	443 S Soto St	625-student charter school	277	131	112	243	32	25	57
132	Mixed-Use	323 W 5th St	31 apartment units, 190-room hotel, 6,119 sf meeting room, 29,232 sf restaurant	2,809	73	49	122	126	100	226
133	Hotel	1138 S Broadway	138-room hotel	644	20	25	45	22	25	47
134	Mixed-Use	110 S Boyle Ave	44 affordable housing units, 3,000 sf bank, 5,000 sf retail	624	29	29	58	32	21	53
135	1024 Mateo St MU	1024 S Mateo St	104 apartment units, 101,983 sf of office, 16,729 sf restaurant, 5,830 sf retail, 5,519 sf light industrial	2,095	144	79	223	82	123	205
136	Mack Urban (Site 2 & 3)	1105 S Olive St	935 high-rise apartment units, 10,919 sf retail, and 10,919 sf restaurant	5,241	122	278	700	258	160	418
137	Office, Restaurant, Fast-Food	431 S Colyton St	97,577 sf office, 10,739 sf restaurant, and 1,977 sf feast-food restaurant without drive-through	1,524	80	18	98	60	95	155

Notes
[a] Related projects list based on information provided by LADOT, Los Angeles Department of City Planning, recent case filings, and recent traffic studies within 1.5 miles of the Project Site as of June 4, 2019.
[b] Although construction of the related project may be partially complete/entirely complete, the project was not fully occupied at the time of the NOP or when traffic counts were conducted. Therefore, the related project was considered and listed to provide a more conservative analysis.
[c] The project description and trip generation information is based on *Transportation Study for the Wilshire Grand Redevelopment Project* (Gibson Transportation Consulting, Inc., April 2010), which was reviewed and approved by LADOT in April 2010. The project that was ultimately constructed contains a reduced development program (889 hotel rooms, 369,299 sf of office, 34,765 sf retail/restaurant and 46,170 sf of ancillary uses). Thus, the assumptions are conservative.
[d] The related project information based on the *Final Environmental Impact Report for the Grand Avenue Project* (Christopher A. Joseph & Associates, November 2006), and does not account for the completed phase on Parcels L and M-2.

Chapter 3
CEQA Analysis of Transportation Impacts

This chapter presents the results of an analysis of CEQA-related transportation impacts. The analysis identifies any potential conflicts the Project may have with adopted City plans and policies and the improvements associated with the potential conflicts as well as the results of a Project vehicle miles traveled (VMT) analysis that satisfies State requirements under *State of California Senate Bill 743* (Steinberg, 2013) (SB 743).

METHODOLOGY

SB 743, made effective in January 2014, required the Governor's Office of Planning and Research to change the CEQA guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis shifts from driver delay (level of service [LOS]) to VMT, in order to reduce greenhouse gas emissions (GHG), create multimodal networks, and promote mixed-use developments.

To adapt to SB 743, the Los Angeles City Planning Commission, on February 28, 2019, recommended the approval of revised guidelines to include new transportation analysis screening procedures and thresholds; the revised guidelines were subsequently approved by the Los Angeles City Council on July 30, 2019. LADOT recently adopted *Transportation Assessment Guidelines* (July 2019) (the TAG), which defines the methodology of analyzing a project's transportation impacts in accordance with SB 743.

Per the TAG, the CEQA transportation analysis contains the following thresholds for identifying significant impacts:

- Threshold T-1: Conflicting with Plans, Programs, Ordinances, or Policies
- Threshold T-2.1: Causing Substantial Vehicle Miles Traveled (VMT)

- Threshold T-2.2: Substantially Inducing Additional Automobile Travel
- Threshold T-3: Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use

The thresholds were reviewed and analyzed, as detailed in the following Sections 3A-3D.

Section 3A: Threshold T-1

Conflicting with Plans, Programs, Ordinances, or Policies Analysis

Threshold T-1 states that a project would result in an impact if it conflicts with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.

PLANS, PROGRAMS, ORDINANCES, AND POLICIES

Table 2.1-1 of the TAG provides the City plans, policies, programs, ordinances and standards relevant in determining project consistency. Table 2.1-2 of the TAG provides a list of questions to help guide whether a project conflicts with the City's plans, programs, ordinances, or policies. As summarized below, the Project is consistent with the City documents listed in Table 2.1-1 of the TAG; therefore, the Project would not result in a significant impact under Threshold T-1. Detailed discussion of the plans, programs, ordinances, or policies below is provided in Table 5.

Mobility Plan

The Mobility Plan combines "complete street" principles with the following five goals that define the City's mobility priorities:

1. Safety First
2. World Class Infrastructure
3. Access for all Angelenos
4. Collaboration, Communication, and Informed Choices
5. Clean Environments and Healthy Communities

Plan for a Healthy Los Angeles

Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan (Los Angeles Department of City Planning, March 2015) introduces guidelines for the City to follow to enhance the City's position as a regional leader in health and equity, encourage healthy design and equitable access, and increase awareness of equity and environmental issues.

Land Use Element of the General Plan

The City General Plan's Land Use Element contains 35 Community Plans that establish specific goals and strategies for the various neighborhoods across Los Angeles. As detailed in *Central City North Community Plan*, the Project Site is located within the Artist-in-Residence District subarea, as well as the South Industrial subarea. The Project is not located within a specific plan area identified in *Central City North Community Plan.*

It should be noted that the City is currently in the process of developing the Downtown Community Plan, which will serve as an update to *Central City North Community Plan* and *Central City Community Plan* (LADCP, 2003). The Downtown Community Plan will provide a collective plan for downtown Los Angeles.

Los Angeles Municipal Code (LAMC) Section 12.21.A.16

LAMC Section 12.21.A.16, Case No. CPC-2016-4216-CA and Council File No. 12-1297-S1 detail the bicycle parking requirements for new developments.

LAMC Section 12.26J

LAMC Section 12.26J, the TDM Ordinance (1993), establishes trip reduction requirements for non-residential projects in excess of 25,000 sf.

LAMC Section 12.37

LAMC Section 12.37 includes the Waivers of Dedications and Improvement to the public right-of-way.

Vision Zero

Vision Zero implements projects that are designed to increase safety on the most vulnerable City streets. The City has identified a number of streets as part of the High Injury Network where City projects will be targeted.

Citywide Design Guidelines for Residential, Commercial, and Industrial Development

Citywide Design Guidelines (Los Angeles City Planning Urban Design Studio, October 2019) incorporates urban design principles pertaining to pedestrian-first design that serves to reduce VMT. *City of Los Angeles Urban Design Principles* (LADCP, 2011) aims to improve mobility in the City through transportation mode choices.

Walkability Checklist

City of Los Angeles Walkability Checklist – Guidance for Entitlement Review (City of Los Angeles Department of City Planning, November 2008) serves as a guide for creating improved conditions for pedestrians to travel and contribute to the overall walkability of the City and includes the following topics:

- Sidewalks
- Crosswalks/Street Crossings
- On-Street Parking
- Utilities
- Building Orientation
- Off-Street Parking and Driveways

- On-Site Landscaping
- Building Façade
- Building Signage and Lighting

LADOT Transportation Technology Strategy – Urban Mobility in a Digital Age

The LADOT transportation technology strategy, based on *Urban Mobility in a Digital Age: A Transportation Technology Strategy for Los Angeles* (Ashley Z. Hand, August 2016), is designed to ensure the City stays on top of emerging transportation technologies as both a regulator and a transportation service provider. This strategy document includes the following goals:

- Data as a Service: Providing and receiving real-time data to improve the City's ability to serve transportation needs
- Mobility as a Service: Improving the experience of mobility consumers by encouraging partnerships across different modes and fostering clear communication between transportation service providers
- Infrastructure as a Service: Re-thinking how the City pays for, maintains, and operates public, physical infrastructure to provide more transparency

Mobility Hub Reader's Guide

Mobility Hubs: A Reader's Guide (LADCP, 2016) provides guidance for enhancing transportation connections and multi-modal improvements in proximity to new or existing transit stations.

LADOT Manual of Policies and Procedures (Design Standards)

Manual of Policies and Procedures (LADOT, December 2008) provides plans and requirements for traffic infrastructure features in the City.

SUMMARY

As detailed in Table 5, the Project is consistent with each of the City documents listed in Table 2.1-1 of the TAG. Therefore, the Project would not result in a significant impact under Threshold T-1 and no mitigation measures are required.

CUMULATIVE ANALYSIS

Similar to the Project, the Related Projects would be individually responsible for complying with relevant plans, programs, ordinances, or policies addressing the circulation system. Thus, the Project, together with the Related Projects, would not result in cumulative impacts with respect to consistency with each of the plans, ordinances, or policies reviewed. The Project and the Related Projects do not interfere with any of the general policy recommendations and/or pilot proposals, and therefore there would be no significant Project impact or cumulative impact.

TABLE 5
PROJECT CONSISTENCY WITH PLANS, PROGRAMS, ORDINANCES OR POLICIES ANALYSIS SUMMARY

Plan, Policy, or Program	Transportation Goal/Objective	Consistency Analysis
Mobility Plan 2035	Safety First *Design and operate streets in a way that enables safe access for all users, regardless of age, ability, or transportation mode choice.*	**Consistent.** Adjacent to the Project Site, 4th Street accommodates one-way eastbound only traffic operations. Thus, the driveways would accommodate right-turn only ingress and egress maneuvers, thereby reducing potential vehicular conflicts along 4th Street. The driveways would be designed to provide an adequate pedestrian refuge area between the driveways. With development of the Project, Colyton Street and Hewitt Street along the Project frontage would be improved to provide sidewalks in order to meet the long-term mobility goals of the Mobility Plan. The Project also includes the development of a pedestrian passageway connecting Hewitt Street and Colyton Street.
	World Class Infrastructure *A well-maintained and connected network of streets, paths, bikeways, trails, and more provides Angelenos with the optimum variety of mode choices.*	**Consistent.** The Project includes the redesign of an existing driveway and the installation of a new driveway along 4th Street, a designated Avenue III in the Mobility Plan. Truck loading access would be provided via a new driveway along Hewitt Street, a designated Collector Street. Neither 4th Street nor Hewitt Street have been identified as part of the Mobility Plan's Transit Enhanced Network, Bicycle Enhanced Network or Pedestrian Enhanced Network.
	Access for All Angelenos *A fair and equitable system must be accessible to all, and must pay particularly close attention to the most vulnerable users.*	**Consistent.** The Project does not propose repurposing existing curb space and does not propose narrowing or shifting existing sidewalk placement or paving, narrowing, shifting, or removing an existing parkway. Further, the Project does not propose modifying, removing, or otherwise affecting existing bicycle infrastructure, and the Project driveways are not proposed along a street with a bicycle facility.
	Collarboration, Communication, and Informed Choices *The impact of new technologies on our day-to-day mobility demands will continue to become increasingly important to the future. The amount of information made available by new technologies must be managed responsibly in the future*.	**Consistent.** As part of the TDM program, the Project would provide educational programs/on-site TDM coordinator to make employers and employees aware of various programs offered and to promote the benefits of TDM. In addition, a Transportation Information Center would provide employees and visitors to obtain information regarding commute programs, and individuals can obtain real-time information for planning without using an automobile.
	Clean Environments and Healthy Communities *Active transportation modes such as bicycling and walking can significantly improve personal fitness and create new opportunities for social interaction, while lessening impacts on the environment.*	**Consistent.** As part of the TDM program, the Project would contribute funding toward the implementation of bicycle improvements within the Study Area. In addition, the Project includes secured bicycle parking facilities and showers, as well as a pedestrian passageway connecting Hewitt Street and Colyton Street. The Project would also participate as a member of the Downtown/Arts District TMO, which would promote alternatives transportation modes.
Plan for a Healthy Los Angeles	Enhance the City's position as a regional leader in health and equity, encourage healthy design and equitable access, and increase awareness of equity and environmental issues	**Consistent.** The Project prioritizes safety and access for all individuals utilizing the site. Pedestrian and bicycle access to the Project Site would be provided on the ground floor along Colyton Srreet and Hewitt Street, via the pedestrian passageway. Vehicluar access would be limited to 4th Street, with loading and deliveries limited to Hewitt Street, thus, reducing potential vehicular-pedestrian conflicts. Further, the Project Site supports healthy lifestyles by providing bicycle amenities and enhancing the pedestrian environment through the installation of adequate sidewalks along Hewitt Street and Colyton Street.

TABLE 5 (CONTINUED)
PROJECT CONSISTENCY WITH PLANS, PROGRAMS, ORDINANCES OR POLICIES ANALYSIS SUMMARY

Plan, Policy, or Program	Goal/Objective	Consistency Analysis
Land Use Element of the General Plan - Central City North Community Plan	Develop a public transit system that improves mobility with convenient alternatives to automobile travel.	**Consistent.** The Project includes pedestrian friendly commercial areas and job opportunities in proximity to transit stations, as the Project would maintain the existing museum uses, and provide neighborhood-serving restaurant uses and office uses within 0.5 miles of the Metro Gold Line Little Tokyo/Arts District Station. In addition, the Project would incorporate a transportation information center to provide employees and visitors information about transit schedules, as well as participate as a member of the Downtown/Arts District TMO, which will encourage and promote public transportation options.
	A well maintained, safe, efficient freeway and street network.	**Consistent.** The Project would improve Hewitt Street and Colyton Street to meet the standards of the Mobility Plan. In addition, a review of the Study Area by the LADOT ATSAC Division showed that TSM improvements have been fully deployed in the Study Area.
	Encourage alternative modes of transportation to the use of SOV in order to reduce vehicular trips.	**Consistent.** As part of the Project, a TDM program would be developed and aimed at encouraging use of alternative transportation modes. In addition, the Project would also contribute to and participate as a member in the Arts District TMO to increase transit and mode choices in the Study Area
	A system of safe, efficient, and attractive bicycle and pedestrian facilities.	**Consistent.** Separate pedestrian entrances would provide access from the adjacent streets, parking facilities, and transit stops. Adequate signage would be provided at the pedestrian entrances to inform visitors of the bicycle parking areas. Sidewalks along 4th Street would be improved, and sidewalks would be installed along Colyton Street and Hewitt Street adjacent to the Project Site. The pedestrian passageway would provide a cut-through between Colyton Street and Hewitt Street. In accordance with the LAMC, bicycle parking would be located within the ground floor, with convenient access provided via 4th Street and the pedestrian passageway via Colyton Street and Hewitt Street.
	A sufficient system of well designed and convenient on-street parking and off-street parking facilities throughout the Plan area.	**Consistent.** Vehicle and bicycle parking spaces for the Project would be provided in an on-site parking garage. It is anticipated that the Project's proposed driveway design on 4th Street would require the removal of up to seven existing on-street unmetered parking spaces along the Project frontage. In addition, the on-street parking spaces on Colyton Street and Hewitt Street adjacent to the Project Site would be removed with development of the Project to accommodate the installation of the sidewalks. It is likely that these spaces currently serve the existing uses of the Project Site. Therefore, the demand of these removed spaces would be accommodated within the Project's parking garage.
LAMC Section 12.21.A.16	Bicycle parking requirements for new developments.	**Consistent.** The proposed bicycle parking short-term and long-term supply would satisfy the LAMC requirement for the Project to provide 37 short-term bicycle parking spaces and 70 long-term bicycle parking spaces.
LAMC Section 12.26J	Trip reduction requirements for non-residential projects in excess of 25,000 sf.	**Consistent.** The Project would develop a TDM program aimed at encouraging use of alternative transportation modes in line with the requirements set forth in the TDM Ordinance.

TABLE 5 (CONTINUED)
PROJECT CONSISTENCY WITH PLANS, PROGRAMS, ORDINANCES OR POLICIES ANALYSIS SUMMARY

Plan, Policy, or Program	Transportation Goal/Objective	Consistency Analysis
LAMC Section 12.37	Waivers of Dedications and Improvement to the public right-of-way.	**Consistent.** The Project includes an approximately six-foot dedication along 4th Street, and three-foot dedications along Colyton Street and Hewitt Street to meet the Mobility Plan standards. The Project also requests a modification of street improvements to retain the existing unimproved sidewalk conditions and centerline drainage systems.
Vision Zero	Projects that are designed to increase safety on the most vulnerable City streets as part of the High Injury Network.	**Consistent.** The Project Site is not located along the High Injury Network. The Project improvements to the pedestrian environment would not preclude future Vision Zero Safety Improvements by the City.
Citywide Design Guidelines	Urban design principles pertaining to pedestrian-first design that serves to reduce VMT.	**Consistent.** The Project provides ground floor neighborhood-serving restaurant uses, and maintains the existing museum use currently on-site. The Project design also includes a pedestrian passageway connecting Colyton Street and Hewitt Street. In addition, Colyton Street and Hewitt Street would be improved to provide sidewalks, in accordance with the City's Living Streets design considerations. Thus, trees and sidewalk plantings would be incorporated to provide adequate shade and habitat to provide a more comfortable mobility environment for pedestrians.
City of Los Angeles Urban Design Principles	Improve mobility in the City through transportation mode choices.	**Consistent.** The Project Site is located approximately 0.5 miles from the Metro Gold Line Little Tokyo/Arts District Station and is well served by various bus lines. The Project design also includes bicycle amenities such as secure bicycle parking and showers. In addition, as part of the TDM program, the Project would support existing and/or future efforts by LADOT to provide first-mile and last-mile service for transit users through the mobility hub program.
Walkability Checklist	Creating improved conditions for pedestrians to travel and contribute to the overall walkability of the City.	**Consistent.** The Project incorporates many of the recommended strategies applicable to commercial developments, including but not limited to providing continuous and adequate sidewalks along the Project Site, providing trees and sidewalk plantings to provide adequate shade and habitat to for a more comfortable mobility environment for pedestrians, and designing direct primary entrances for pedestrians to be visible and ADA accessible.
LADOT Transportation Technology Strategy - Urban Mobilty in a Digital Age	Ensure the City stays on top of emerging transportation technologies as both a regulator and a transportation service provider, including: • Data as a Service • Mobility as a Service • Infrastructure as a Service	**N/A.** The Project does not interfere with any of the general policy recommendations and/or pilot proposals.
Mobility Hub Reader's Guide	Enhancing transportation connections and multi-modal improvements in proximity to new or existing transit stations	**Consistent.** The Project adopts several transportation connections and multi-modal improvements, including bicycle parking and amenities that facilitate and encourage bicycling in and around the Project. Additionally, the Project proposes active ground floor restaurant uses that support a vibrant and mixed-use environment.The Project would develop a TDM program aimed at encouraging alternative transportation modes and reducing single occupancy vehicle trips. The Project would also contribute to and participate as a member in the Arts District TMO to increase transit and mode choices in the Arts District.

TABLE 5 (CONTINUED)
PROJECT CONSISTENCY WITH PLANS, PROGRAMS, ORDINANCES OR POLICIES ANALYSIS SUMMARY

Plan, Policy, or Program	Transportation Goal/Objective	Consistency Analysis
LADOT Manual of Policies and Procedures - Section 321: Driveway Design	Minimize adverse effects on street traffic.	**Consistent.** The Project provides two 30 foot driveways along the Project frontage on 4th Street, a designated Avenue III. The two driveways would be spaced to provide adequate pedestrian refuge area to minimize interferences to pedestrian safety. In addition, the driveways and reservoir area would be designed to provide sufficient vehicle queuing space between the driveway and the first parking stall. Truck access to the on-site loading docks would be provided via Hewitt Street, a designated Collector Street. Loading docks would be designed and placed in accordance with the standards. No vehicles would back into the loading docks from Hewitt Street.

Section 3B: Threshold T-2.1
Causing Substantial VMT Analysis

Threshold T-2.1 states that a residential project would result in a significant VMT impact if it would generate household VMT per capita exceeding 15 percent below the existing average household VMT per capita for the Area Planning Commission (APC) area in which a project is located. Similarly, a commercial project would result in a significant VMT impact if it would generate work VMT per employee exceeding 15 percent below the existing average work VMT per employee for the APC area in which the project is located. The VMT analysis presented below was conducted for the Project in accordance with the TAG, which satisfies State requirements under SB 743.

VMT METHODOLOGY

The following details the methodology that vehicle trips and VMT are calculated in *City of Los Angeles VMT Calculator Version 1.2* (November 2019) (VMT Calculator), as detailed in *City of Los Angeles VMT Calculator Documentation* (LADOT and LADCP, February 2019). LADOT developed the VMT Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits, which are based on the following types of one-way trips:

- Home-Based Work Production: trips to a workplace destination originating from a residential use
- Home-Based Other Production: trips to a non-workplace destination (e.g., retail, restaurant, etc.) originating from a residential use
- Home-Based Work Attraction: trips to a workplace destination originating from a residential use

As detailed in *City of Los Angeles VMT Calculator Documentation* , the household VMT per capita threshold applies to Home-Based Work Production and Home-Based Other Production trips, and the work VMT per employee threshold applies to Home-Based Work Attraction trips, as the location and characteristics of residences and workplaces are often the main drivers of VMT, as detailed in Appendix 1 of *Technical Advisory on Evaluating Transportation Impacts in CEQA* (Governor's Office of Planning and Research, December 2018). As noted in the TAG, small-scale retail/restaurant components less than 50,000 sf of larger mixed-use development projects are not considered for the purposes of identifying significant work VMT per employee impacts, as those trips are assumed to be local serving and would have a negligible effect on VMT.

Table 2.2-1 of the LADOT TAG details the following daily household VMT per capita and daily work VMT per employee impact criteria the APC areas:

APC	Daily Household VMT per Capita	Daily Work VMT per Employee
Central	6.0	7.6
East LA	7.2	12.7
Harbor	9.2	12.3
North Valley	9.2	15.0
South LA	6.0	11.6
South Valley	9.4	11.6
West LA	7.4	11.1

Source: TAG, LADOT, July 2019.

Other types of one-way trips included in the VMT Calculator include Non-Home-Based Other Production (trips to a non-residential destination originating from a non-residential use), Home-Based Other Attraction (trips to a non-workplace destination originating from a residential use), and Non-Home-Based Other Attraction (trips to a non-residential destination originating from a non-residential use). These trip types are not factored into the household VMT per capita and work VMT per employee thresholds as those trips are typically localized and are assumed to have a negligible effect on the VMT impact assessment. However, those trips were factored into the calculation of total Project VMT for screening purposes when determining that VMT analysis for the Project would be required.

Travel Behavior Zone (TBZ)

The City developed TBZ categories to determine the magnitude of VMT and vehicle trip reductions that could be achieved through transportation demand management (TDM) strategies. As detailed in *City of Los Angeles VMT Calculator Documentation*, the development of the TBZs considered the population density, land use density, intersection density, and proximity to transit of each Census tract in the City and are categorized as follows:

1. *Suburban (Zone 1): Very low-density primarily centered around single-family homes and minimally connected street network.*
2. *Suburban Center (Zone 2): Low-density developments with a mix of residential and commercial uses with larger blocks and lower intersection density.*
3. *Compact Infill (Zone 3): Higher density neighborhoods that include multi-story buildings and well-connected streets.*
4. *Urban (Zone 4): High-density neighborhoods characterized by multi-story buildings with a dense road network.*

The VMT Calculator determines a project's TBZ based on the latitude and longitude of the project address.

Mixed-Use Development Methodology

As detailed in *City of Los Angeles VMT Calculator Documentation*, the VMT Calculator accounts for the interaction of land uses within a mixed-use development and considers the following sociodemographic, land use, and built environment factors for a project area:

- The project's jobs/housing balance
- Land use density of the project
- Transportation network connectivity
- Availability of and proximity to transit
- Proximity to retail and other destinations
- Vehicle ownership rates
- Household size

VMT

The VMT Calculator determines a project's VMT based on trip length information from the City's Travel Demand Forecasting (TDF) Model. The TDF Model considers the traffic analysis zone where the project is located to determine the trip length and trip type, which factor into the calculation of the project's VMT.

Population and Employment Assumptions

As previously stated, the VMT thresholds identified in the TAG are based on household VMT per capita and work VMT per employee. Thus, the VMT Calculator contains population assumptions developed based on Census data for the City and employment assumptions derived from multiple data sources, including *2012 Developer Fee Justification Study* (Los Angeles Unified School District, 2012), the San Diego Association of Governments' Activity Based Model, *Trip Generation, 9th Edition* (Institute of Transportation Engineers, 2012), the United States Department of Energy, and other modeling resources. A summary of population and employment assumptions for various land uses is provided in Table 1 of *City of Los Angeles VMT Calculator Documentation.*

TDM Measures

Additionally, the VMT Calculator measures the reduction in VMT resulting from a project's incorporation of TDM strategies as project design features or mitigation measures. The following seven categories of TDM strategies are included in the VMT Calculator:

1. Parking
2. Transit
3. Education and Encouragement
4. Commute Trip Reductions
5. Shared Mobility

6. Bicycle Infrastructure
7. Neighborhood Enhancement

TDM strategies within each of these categories have been empirically demonstrated to reduce trip-making or mode choice in such a way as to reduce VMT, as documented in *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association, 2010).

PROJECT VMT ANALYSIS

The VMT Calculator was used to evaluate Project VMT for comparison to the VMT impact criteria. The VMT Calculator was set up with the Project's land use program and the respective sizes as the primary input. Based on the Project's proposed land uses and location, the following assumptions were identified in the VMT Calculator:

- Total Employees: 1,276
- APC: Central
  - Household VMT Impact Threshold: N/A
  - Work VMT Impact Threshold: 7.6 VMT per employee
- TBZ: Suburban Center
- Maximum VMT Reduction: 20 percent

The VMT analysis results based on the VMT Calculator are summarized in Table 6. Detailed output from the VMT Calculator is provided in Appendix F. The Project does not include any residential uses. Therefore, per *City of Los Angeles VMT Calculator User Guide* (LADOT and LADCP, November 2019), the Project would not generate any household VMT per capita and would not result in a significant household VMT impact.

Project VMT

The Project includes several design features, which include measures to reduce the number of single occupancy vehicle trips to the Project Site. For the purposes of this analysis, the following Project design features were accounted for in the VMT evaluation:

- Bicycle parking supply per LAMC requirements
- Pedestrian network improvements within the Project Site and connecting to off-site pedestrian facilities

As shown in Table 6, the VMT Calculator estimates that the Project would generate 9,216 total work VMT. Thus, based on the employee assumptions above, the Project would generate an average work VMT per employee of 7.2, which falls below the significance thresholds for the Central APC (7.6 work VMT per employee). Therefore, the Project would not result in a significant VMT impact, and no mitigation measures would be required. However, it should be noted that as part of the Project, a TDM program would be developed and aimed at encouraging use of alternative transportation modes. In addition, the Project would also contribute to and participate as a member in the Arts District TMO to increase transit and mode choices in the Study Area. The TDM program and Arts District TMO are further discussed in Section 4D.

CUMULATIVE ANALYSIS

Cumulative effects of development projects are determined based on the consistency with the air quality and GHG reduction goals of *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy* (Southern California Association of Governments [SCAG], Adopted April 2016) (SCAG RTP/SCS) in terms of development location, density, and intensity. The SCAG RTP/SCS presents a long-term vision for the region's transportation system through Year 2040 and balances the region's future mobility and housing needs with economic, environmental, and public health goals. In addition, as stated in the TAG, projects that do not demonstrate a project impact by applying an efficiency-based impact threshold (i.e., household VMT per capita, work VMT per employee) in the impact analysis, a less than significant impact conclusion is sufficient in demonstrating there is no cumulative VMT impact, as those projects are already shown to align with the long-term VMT and greenhouse gas goals of the SCAG RTP/SCS.

The Project would not result in a significant work VMT per employee impact, as detailed above. Therefore, the Project would not result in a cumulative VMT impact under Threshold T-2.1, and no further evaluation or mitigation measures would be required.

Furthermore, the Project is located within a Transit Priority Area (TPA) and would develop a commercial building within 0.5 miles of the Metro Gold Line Little Tokyo/Arts District Station. The Project Site is also well-served by various bus and shuttle lines. In addition, the Project would be designed to further reduce single occupancy trips to the Project Site through various TDM strategies including bicycle amenities, neighborhood-serving ground floor restaurant uses, and a pedestrian passageway that would contribute to the walkability of the Arts District. As described above and further detailed in Section 4D, the Project would also participate as a member in the Arts District TMO to increase transit and mode choices in the Arts District.

Thus, the Project encourages a variety of transportation options and is consistent with the SCAG RTP/SCS goal of maximizing mobility and accessibility in the region. The Project would also contribute to the productivity and use of the regional transportation system by providing employment near transit and encourage active transportation by providing new bicycle parking and active street frontages, consistent with the SCAG RTP/SCS goals.

TABLE 6
VMT ANALYSIS

Project Information	
Project Land Uses	**Size**
Museum [a]	7,800 sf
Office	311,682 sf
Restaurant	8,149 sf
Project Analysis [b]	
Total Population [c]	0
Total Employees [d]	1,279
Project Area Planning Commission	Central
Travel Behavior Zone [e]	Suburban Center
Maximum VMT Reduction [f]	*20%*
VMT Analysis [g]	
Daily Project VMT	19,848
Total Household VMT	N/A
Household VMT per Capita [h]	N/A
Impact Threshold	6.0
Significant Impact	N/A
VMT Reduction	--
Total Work VMT	9,216
Work VMT per Employee [i]	7.2
Impact Threshold	7.6
Significant Impact	NO
VMT Reduction	--

Notes

[a] The museum is an existing use that would be maintained with development of the Project. Thus, the museum was not considered for the VMT evaluation as it would not generate new VMT.

[b] Project Analysis is from VMT Calculator output reports provided in the Appendix B.

[c] Total population estimate is based on a population factor of 2.25 persons/unit for multi-family households. The population factor is based on Census data for the City of Los Angeles.

[d] Total employment estimate is based on the following employment factors:

Office:	4.0 / 1,000 sf
High-Turnover Restaurant:	4.0 / 1,000 sf

The employement factors are based on employee data from the Los Angeles Unified School District, 2012 SANDAG Activity Based Model, ITE trip generation rates, US Department of Energy, and other modeling resources.

[e] A "Suburban Center" TBZ is characterized in *City of Los Angeles VMT Calculator Documentation* (LADOT and DCP, November as low-density developments with a mix of residential and commercial uses with larger blocks and lower intersection density.

[f] The maximum allowable VMT reduction is based on the Project's designated TBZ.

[g] The Project design features include:

1. Bicycle parking per LAMC requirements
2. Pedestrian connections within the Project Site and connecting to off-site pedestrian facilities.

[g] Household VMT per Capita is based on the "home-based work production" and "home-based other production" trip types.

[h] Work VMT per Employee is based on the "home-based work attraction" trip types.

Section 3C: Threshold T-2.2
Substantially Inducing Additional Automobile Travel Analysis

The intent of Threshold T-2.2 is to assess whether a transportation project would induce substantial VMT, such as the addition of through traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges.

The Project does not propose a transportation project that would induce automobile travel. Therefore, the Project would not result in a significant impact under Threshold T-2.2 and further evaluation is not required.

Section 3D: Threshold T-3

Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use Analysis

Further evaluation is required for projects that propose new access points or modifications along the public right-of-way (i.e., street dedications) under Threshold T-3. A review of Project access points, internal circulation, and parking access would determine if the Project would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts.

As described in Chapter 1, vehicular access to the on-site parking garage would be provided via two driveways on 4th Street. Access to the loading dock would be provided via Hewitt Street. The driveways will be designed according to LADOT standards and will be reviewed by the City Bureau of Engineering during site plan review.

The two Project driveways along 4th Street would consist of one existing driveway and the installation of one new curb cut. Access to the loading dock would also require the installation of a new curb cut along Hewitt Street. The driveways would be designed, placed and configured to limit vehicle queues and bicycle/pedestrian-vehicle conflicts. The driveways on 4th Street would be located approximately 30 feet apart, providing an adequate pedestrian refuge between the two driveways. On-street parking adjacent to the Project Site would be removed along 4th Street and Hewitt Street to accommodate the new curb cut and to improve the roadways to meet City standards. Thus, sight distance from the Project driveways would be further enhanced.

No unusual or new obstacles are presented in the design that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians. Neither 4th Street nor Hewitt Street are designated as part of the High Injury Network or the Pedestrian Enhanced Network of the Mobility Plan. Pedestrian activity on both streets is minimal, and the new curb cuts would not present significant safety issues regarding traffic/pedestrian conflicts.

Based on the site plan review and design assumptions, the Project does not present any geometric design hazards as it relates to traffic movement, mobility, or pedestrian accessibility, and is considered less than significant.

CUMULATIVE ANALYSIS

None of the 137 Related Project provide access along the same block as the Project. Thus, the Project and Related Projects would not result in a cumulative impact under Threshold T-3.

Chapter 4
Non-CEQA Transportation Analysis

This chapter summarizes the non-CEQA transportation analysis of the Project. It includes Project traffic, the expected access, safety, and circulation operations of the Project, and the nearby pedestrian, bicycle, and transit facilities. This chapter also summarizes the evaluation of the Project's operational conditions, parking supply and requirements, and effects due to Project construction.

NON-CEQA TRANSPORTATION ANALYSIS METHODOLOGY

Because the Notice of Preparation (NOP) for the Project was issued in September 2017, prior to the adoption of the TAG, the LOS analysis provided in this study is consistent with the adopted methodology and LADOT guidelines in effect at the time of the NOP, *Transportation Impact Study Guidelines* (LADOT, December 2016). This study analyzed the potential Project-generated transportation effects on the street system in the vicinity of the Project Site as compared to existing conditions and projected future conditions at the time the Project is expected to be occupied (Year 2023). The Project's operational effects were evaluated for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. The following traffic conditions were developed and analyzed as part of this study:

- <u>Existing with Project Conditions (Year 2017)</u>: This analysis condition projects the potential intersection operating conditions that could be expected if the Project were built under existing conditions. This analysis evaluates the potential Project-related transportation effects as compared to Existing Conditions.

- <u>Existing with Project with Conditions with Transportation Improvements (Year 2017)</u> – This analysis condition projects the potential intersection operating conditions that could be expected if the Project were built under existing conditions, including the effect of any transportation improvements. In this analysis condition, the Project-generated traffic with transportation improvements incorporated is added to the Existing Conditions.

- <u>Future with Project Conditions (Year 2023)</u>: This analysis condition projects the potential intersection operating conditions that could be expected if the Project were occupied in the projected buildout year. In this analysis, the Project-generated traffic is added to Future without Project Conditions (Year 2023).

- Future with Project Conditions with Transportation Improvements (Year 2023) – This analysis projects the potential intersection operating conditions that could be expected if the Project were built in the projected buildout year, including the effect of any transportation improvements In this analysis condition, the Project-generated traffic with transportation improvements incorporated is added to the Future without Project Conditions.

Operational Evaluation

Intersection capacity has been analyzed using the "Critical Movement Analysis (CMA) – Planning" (*Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, Transportation Research Board, 1980) methodology in accordance with the *Transportation Impact Study Guidelines*. The CMA methodology was implemented using LADOT's CalcaDB Lite spreadsheet application to analyze intersection operating conditions. The methodology calculates the volume-to-capacity (V/C) ratio, which is used to determine the intersection LOS according to the LOS definitions provided in Table 7. LOS worksheets for each scenario are provided in Appendix G.

The ATSAC system represents an advanced system in computer control of traffic signals. It was first put into operation in June 1984 in the Coliseum area of the City to anticipate the expected increase in traffic due to the Summer Olympic Games and has since been expanded to other parts of the City. The advantages of ATSAC-controlled traffic signals are substantial, including real-time adjustment of signal timing plans to reflect changing traffic conditions, identification of unusual traffic conditions caused by incidents, the ability to implement special purpose short-term signal timing changes in response to incidents, and the ability to identify signal equipment malfunctions quickly. LADOT estimates that implementation of this system improves intersection capacity by an average of seven percent.

In addition to ATSAC, the Adaptive Traffic Control System (ATCS) has been implemented in the City. ATCS is a computer-based traffic signal control program that provides fully responsive traffic signal control based on real-time traffic conditions. It automatically adjusts and optimizes traffic signal timing in response to current traffic demands on the entire signal network such that the number of stops and the amount of delay is minimized along with improved traffic signal coordination throughout the network. LADOT estimates that implementation of this system improves intersection capacity by an additional three percent over those operating under the ATSAC system alone.

Each of the signalized study intersections is equipped with both ATSAC and ATCS. In accordance with standard LADOT procedures, a capacity increase of 10 percent (0.10 V/C adjustment) was applied to each intersection to reflect the benefits of ATSAC and ATCS control. The capacity increases are applied within the CalcaDB Lite software and, therefore, are inherent in the analysis results.

Congestion Management Program

2010 Los Angeles County Congestion Management Program (Metro, 2010) (CMP) is a State-mandated program that serves as the monitoring and analytical basis for transportation funding decisions in the County made through the Regional Transportation Improvement Program and State Transportation Improvement Program processes. On August 28, 2019, Metro issued a letter regarding the dissolution of the CMP in the County. As set forth in the letter, the County and a majority of cities in the County, including the City, have elected to be exempt from the CMP. Thus, the provisions of the CMP no longer apply to any of the 89 local jurisdictions in the County, including the City. Therefore, under the TAG, CMP considerations are no longer required for CEQA purposes.

As previously noted, the NOP for the Project was issued in September 2017, prior to Metro's decision to dissolve the CMP in Los Angeles County. Therefore, the transportation analysis presented in Appendix H is provided for informational purposes and is based on the adopted CMP guidelines, methodologies, and thresholds that were in effect at the time of the NOP.

Caltrans

To better align with the State's multimodal transportation and environmental action goals, the California Department of Transportation (Caltrans) is pursuing VMT as a metric of Project impacts, which is outlined in *Local Development – Intergovernmental Review Program Interim Guide* (Caltrans, Approved September 2016) (Caltrans Interim Guide).

The Caltrans Interim Guide suggests the approach with which Caltrans can recommend improvements to enhance pedestrian safety and increase pedestrian accessibility to help meet the goals and targets of *Caltrans Strategic Management Plan 2015-2020* (Caltrans, March 2015) and *California Transportation Plan 2040* (Caltrans, June 2016). The Caltrans Interim Guide directs lead agencies to consider “multi-modal solutions from existing regional transportation plans, regional plans, transit plans, bicycle plans, and pedestrian plans.”

As shown in Figure 1, the Study Area includes intersections along I-10, I-5, and US 101, all Caltrans facilities. Thus, a supplemental analysis of these intersections based on *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) methodology is provided in Appendix I.

TABLE 7
LEVEL OF SERVICE DEFINITIONS FOR INTERSECTIONS

Level of Service	**Signalized V/C Ratio** [a]	**Definition**
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Notes
[a] *Transportation Research Circular No. 212, Interim Materials on Highway Capacity,* Transportation Research Board, 1980.

Trip generation estimates, trip distribution patterns and trip assignments were prepared for the proposed Project. These components form the basis of the Project's traffic analysis.

PROJECT TRIP GENERATION

The number of trips expected to be generated by the Project was estimated using rates published in *Trip Generation, 10th Edition*. These rates are based on surveys of similar land uses at sites around the country and are provided as both daily rates and morning and afternoon peak hour rates. The number of vehicle trips traveling to and from the Project Site is related to the size of development of use.

Appropriate trip generation reductions to account for public transit usage and walk-ins were made in consultation with LADOT and were based on engineering judgment and published data from *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, August 2014) supported by surveys conducted at similar land use developments. A transit/walk-in adjustment was applied to the Project in accordance with *Transportation Impact Guidelines* to account for transit usage and walking arrivals. Internal capture adjustments were applied to the restaurant estimates to account for person trips made between distinct land uses within a mixed-use development (e.g., employees visiting the commercial uses). A pass-by reduction was also applied to the restaurant uses to account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

The number of trips currently generated by the existing uses of the Project Site was also estimated using rates published in *Trip Generation, 10th Edition* for office and museum uses. Adjustments were also applied to account for some level of transit usage and walking arrivals.

As shown in Table 8, after accounting for the adjustments and the removal of the existing uses detailed above, the Project is estimated to generate 3,416 new trips on a typical weekday, including 388 new morning peak hour trips (319 inbound, 69 outbound) and 384 new afternoon peak hour trips (83 inbound, 301 outbound).

PROJECT TRIP DISTRIBUTION

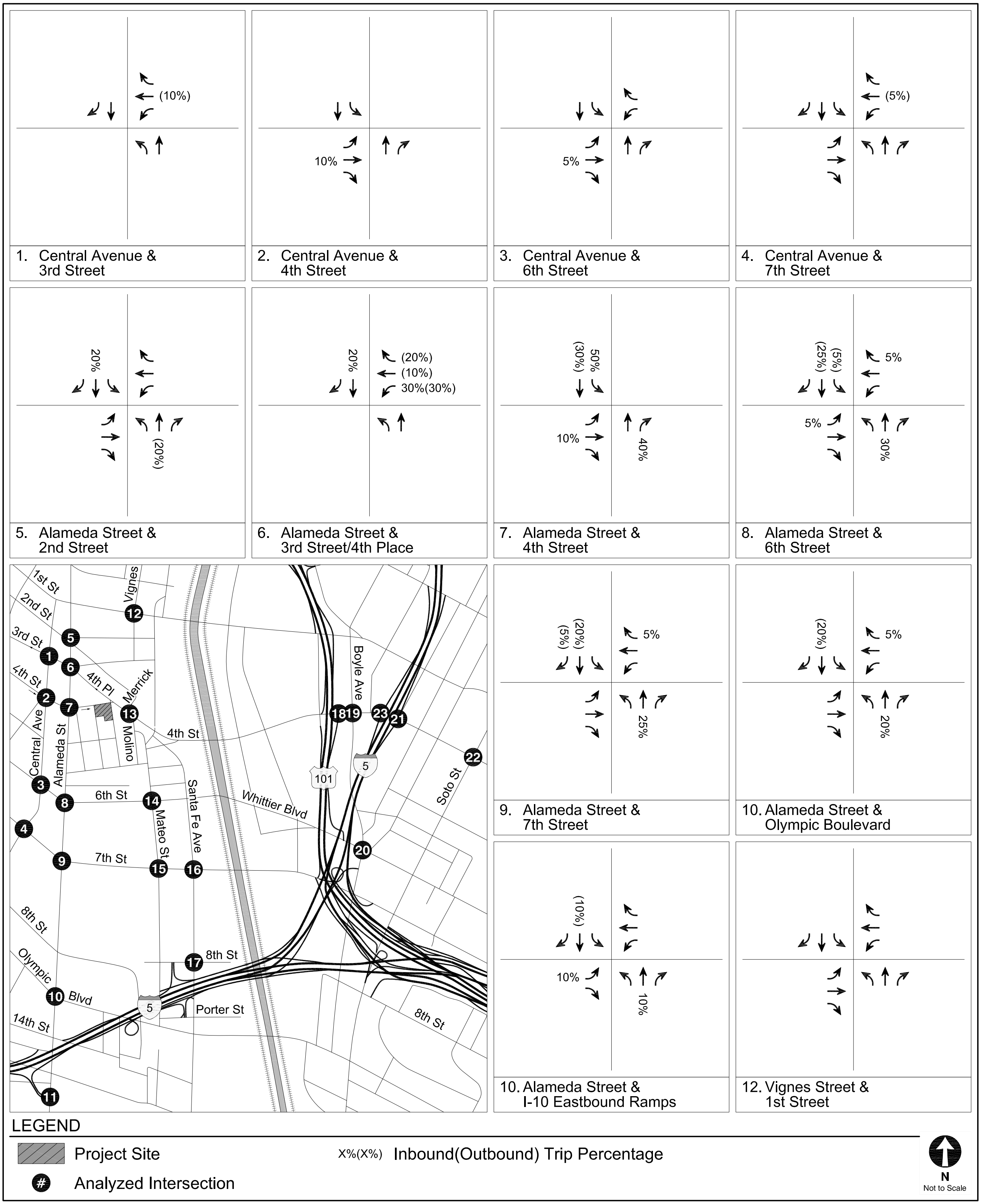
Similar to the trip distribution of traffic for the Related Projects described in Chapter 4, the geographic distribution of trips generated by the Project is dependent on the location of residences from which employees and visitors of the Project would be drawn, characteristics of the street system serving the Project Site, and the level of accessibility of the routes to and from the Project Site, existing intersection traffic volumes, the Project ingress/egress availability based on the proposed site access and circulation scheme, the location of the proposed driveway, as well as input from LADOT staff.

Based on these considerations, traffic entering and exiting the Project was assigned to the surrounding street system. The general intersection-level trip distribution pattern for the Project is shown in Figure 8. Generally, the regional pattern for the Project is as follows:

- 30 percent to/from the north (US 101, I-5, Alameda Street)
- 20 percent to/from the south (Alameda Street)
- 20 percent to/from the east (I-5, I-10, State Route [SR] 60, 3rd Street, Whittier Boulevard)
- 30 percent to/from the west (I-10, 3rd Street/4th Street, 7th Street)

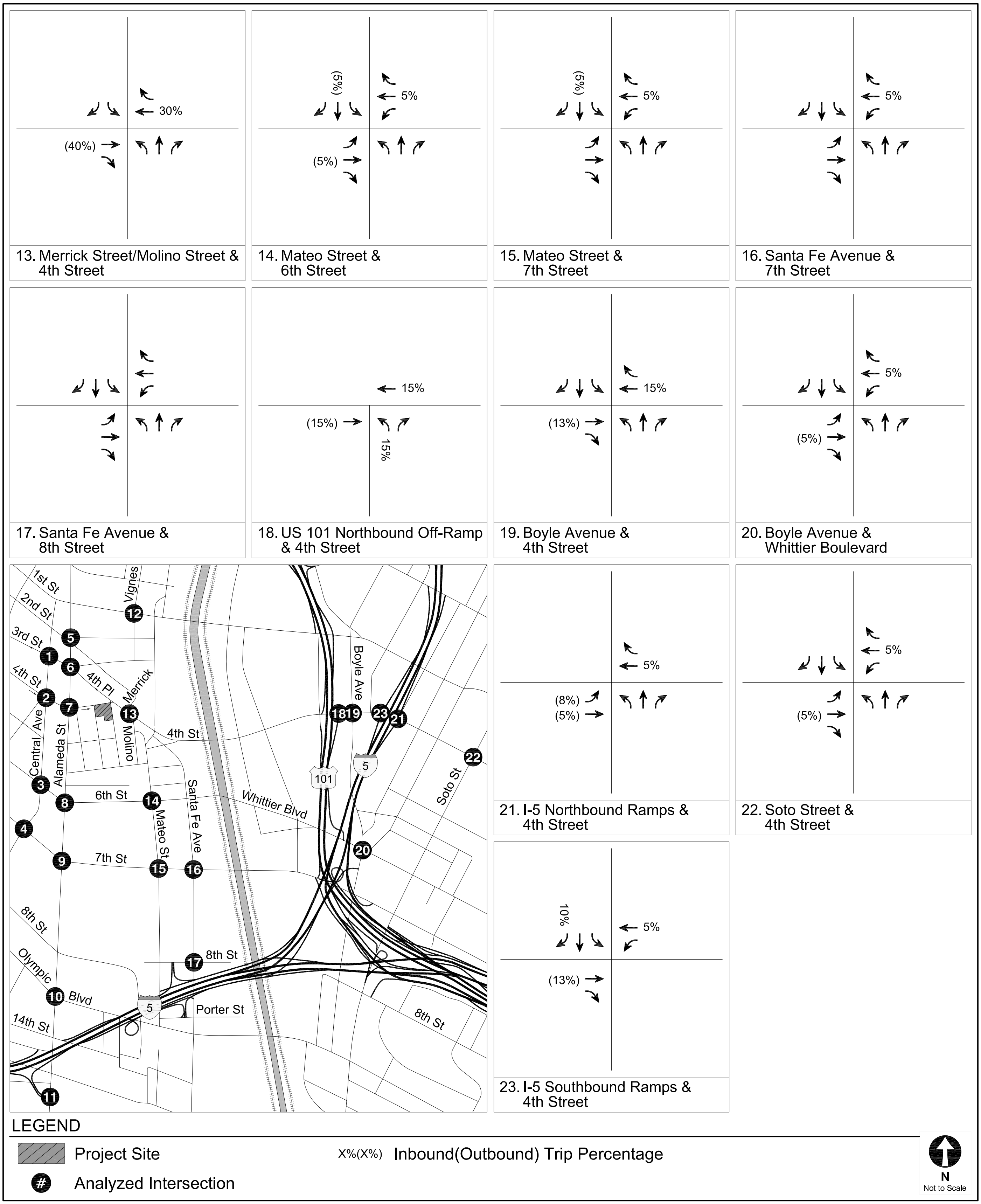
PROJECT TRIP ASSIGNMENT

The Project trip generation estimates summarized in Table 8 and the trip distribution patterns shown in Figure 8 were used to assign the Project-generated traffic through the study intersections. Figure 9 illustrates the Project-only traffic volumes at the study intersections during typical weekday morning and afternoon peak hours.



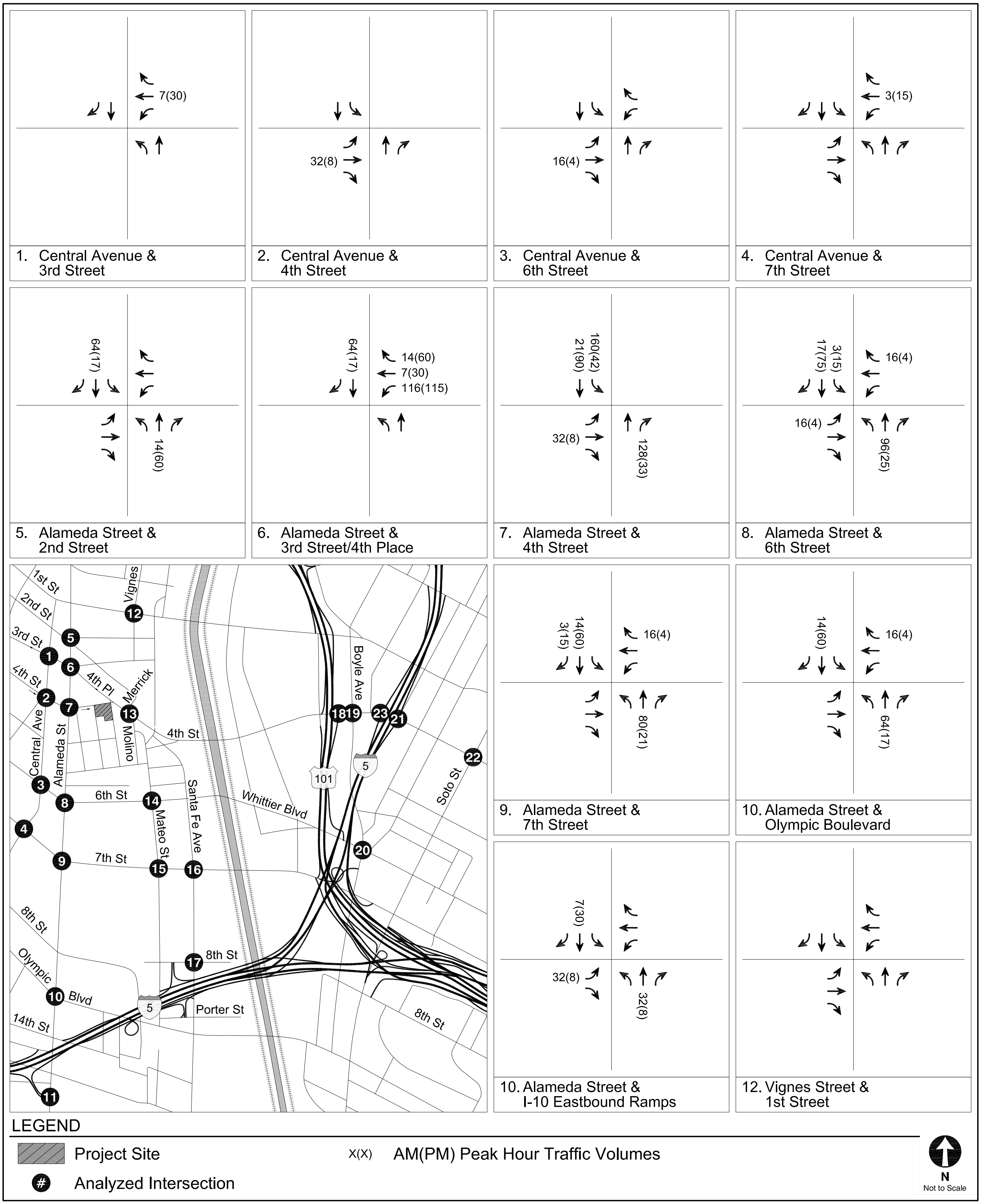
TRIP DISTRIBUTION

FIGURE 8



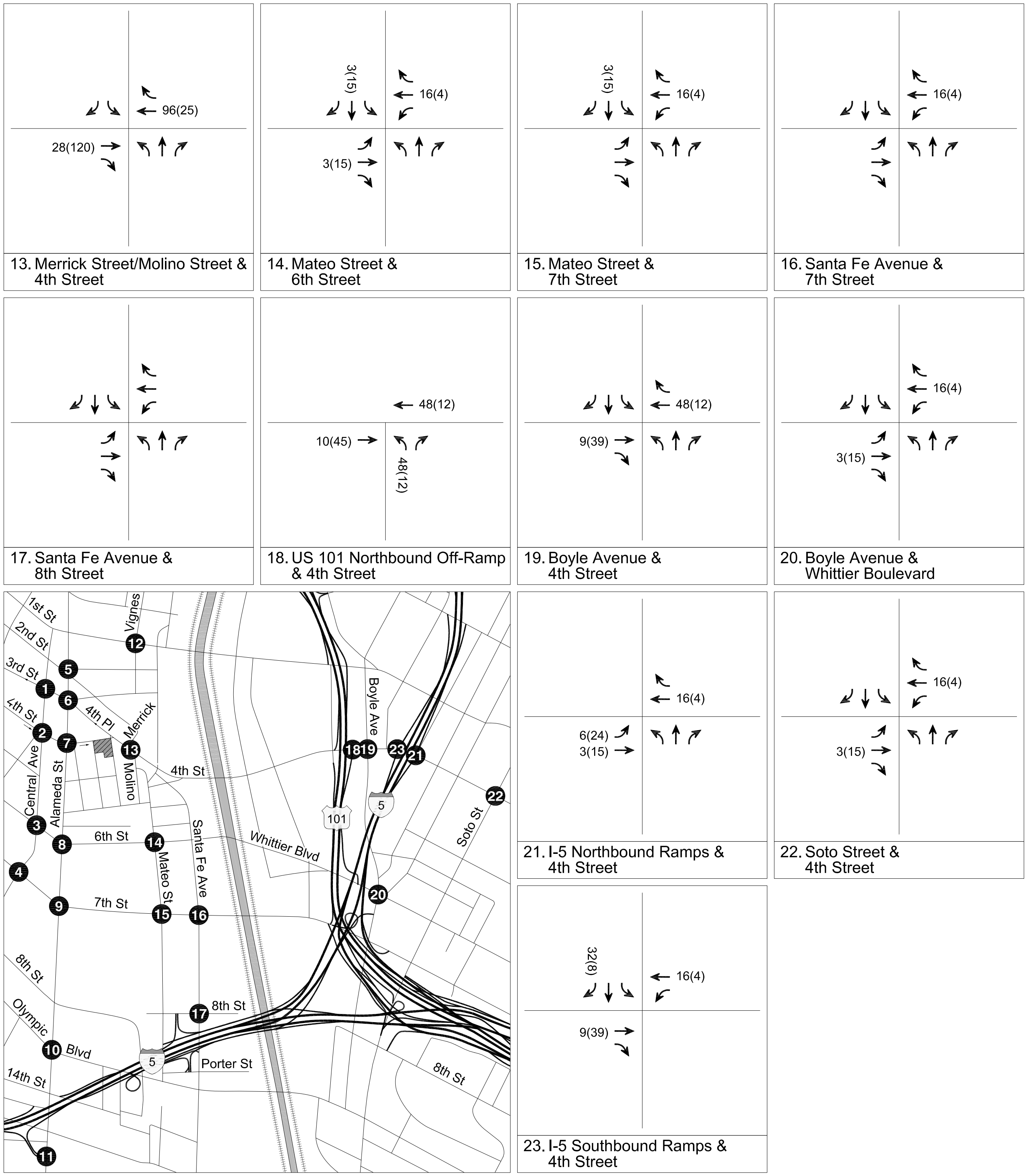
TRIP DISTRIBUTION

FIGURE 8 (CONT.)



PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
9



LEGEND

Project Site

X(X) AM(PM) Peak Hour Traffic Volumes

Analyzed Intersection

N
Not to Scale

PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
9 (CONT.)

TABLE 8
TRIP GENERATION

Land Use	ITE Land Use Code	Size	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Generation Rates [a]									
Museum	580	per 1,000 sf	N/A	86%	14%	0.28	16%	84%	0.18
Office	710	per 1,000 sf	9.74	86%	14%	1.16	16%	84%	1.15
High-Turnover Restaurant	932	per 1,000 sf	112.18	55%	45%	9.94	62%	38%	9.77
Proposed Project									
Museum	580	7.8 ksf	10	2	0	2	0	1	1
Less 5% Transit/Walk-In [b]			*(1)*	*0*	*0*	*0*	*0*	*0*	*0*
Subtotal - Museum			**9**	**2**	**0**	**2**	**0**	**1**	**1**
Office	710	311.682 ksf	3,036	311	51	362	57	301	358
Less 5% Transit/Walk-In [b]			*(152)*	*(16)*	*(3)*	*(19)*	*(3)*	*(15)*	*(18)*
Subtotal - Office			**2,884**	**295**	**48**	**343**	**54**	**286**	**340**
Restaurant	932	8.149 ksf	914	45	36	81	50	30	80
Less 20% Internal Capture [c]			*(183)*	*(9)*	*(7)*	*(16)*	*(10)*	*(6)*	*(16)*
Less 5% Transit/Walk-In [b]			*(37)*	*(2)*	*(1)*	*(3)*	*(2)*	*(1)*	*(3)*
Less 20% Pass-by [d]			*(139)*	*(7)*	*(6)*	*(13)*	*(8)*	*(5)*	*(13)*
Subtotal - Retail			**555**	**27**	**22**	**49**	**30**	**18**	**48**
Total - Proposed Project			**3,448**	**324**	**70**	**394**	**84**	**305**	**389**
Existing Uses									
Office	710	3.515 ksf	34	3	1	4	1	3	4
Less 5% Transit/Walk-In [b]			*(2)*	*0*	*0*	*0*	*0*	*0*	*0*
Subtotal - Office			**32**	**3**	**1**	**4**	**1**	**3**	**4**
Museum	580	7.8 ksf	N/A	2	0	2	0	1	1
Less 5% Transit/Walk-In [b]			*N/A*	*0*	*0*	*0*	*0*	*0*	*0*
Subtotal - Museum			**0**	**2**	**0**	**2**	**0**	**1**	**1**
Total - Existing Uses			**32**	**5**	**1**	**6**	**1**	**4**	**5**
Net New Project Trips			**3,416**	**319**	**69**	**388**	**83**	**301**	**384**

Notes

[a] Source: Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.
[b] No daily trip generation rate is provided for ITE Land Use 580 (Museum), therefore, it was assumed that the afternoon peak hour trips account for 10% of the daily trips.
[c] The Project Site is located within walking distance of a LADOT DASH stop, therefore a 5% transit reduction is applied to account for transit usage and walking visitor arrivals from the surrounding neighborhoods and adjacent commercial developments.
[d] Internal capture adjustments account for person trips made between distinct land uses within a mixed-use development (e.g., employees visiting the retail/restaurant uses).
[e] Pass-by adjustments account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion, and are based on ITE's Trip Generation Handbook, 3rd Edition (September 2017) and LADOT's Transportation Impact Study Guidelines.

Section 4B

Project Access, Safety, and Circulation Assessment

This section summarizes the site access, safety, and circulation of the Project Site. It includes an evaluation of the expected access and circulation operations of the Project.

VEHICLES

Vehicular access to the on-site parking garage would be provided via two driveways on 4th Street, with one driveway accessing the subterranean parking levels and one driveway accessing the above-grade parking levels. Both driveways would accommodate right-turn-only ingress and egress movements due to the one-way operation of 4th Street. Access to the at-grade loading dock would be provided via Hewitt Street.

The driveways would be designed, placed and configured to limit vehicle queues and bicycle/pedestrian-vehicle conflicts along 4th Street. The driveways would be located approximately 30 feet apart, providing an adequate pedestrian refuge between the two driveways. Wayfinding signage at the driveways would be installed to identify visitor and tenant parking areas. In addition, as part of the development of the Project, the adjacent roadways would be improved in accordance with the Mobility Plan standards as well as the City’s Living Street design considerations.

PEDESTRIANS AND BICYCLES

Pedestrian access into the Project Site would be provided from Colyton Street into the A+D Museum, from 4th and Hewitt Streets to each of the ground floor uses, and from Colyton and Hewitt Streets to the passageway to the commercial office building main lobby. The pedestrian passageway would provide a cut-through between Colyton Street and Hewitt Street that would entail an outdoor plaza south of the A+D Museum that would continue east into a covered passageway through the Project.

The Project access locations would be designed to City standards and would provide adequate sight distance, sidewalks, crosswalks, and pedestrian movement controls that meet the City's requirements to protect pedestrian safety. All roadways and driveways intersect at right angles and street trees and other potential impediments to adequate driver and pedestrian visibility would be minimal. Separate pedestrian entrances would provide access from the adjacent streets, parking facilities, and transit stops.

As part of the Project, sidewalks along 4th Street would be improved, and sidewalks would be installed along Colyton Street and Hewitt Street adjacent to the Project Site, in accordance with the Mobility Plan standards as well as the City's Living Streets design considerations. Thus, trees and sidewalk plantings would be incorporated to provide adequate shade and habitat to provide a more comfortable mobility environment for pedestrians.

Visitors, patrons and employees arriving by bicycle would have the same access opportunities as pedestrian visitors. In order to facilitate bicycle use, bicycle parking spaces would be provided on-site, consistent with the Bicycle Parking Ordinance, LAMC Section 12.21 A16(a)(2). In accordance with the LAMC, bicycle parking would be located within the ground floor, with convenient access provided via 4th Street and the pedestrian passageway via Colyton Street and Hewitt Street. Adequate signage would be provided at the pedestrian entrances to inform visitors of the bicycle parking areas.

POTENTIAL SECONDARY EFFECTS

The Project includes the redesign and relocation of existing driveways that may affect the current on-street parking supply adjacent to the Project Site. It is anticipated that the Project's proposed driveway design on 4th Street would require the removal of up to seven existing on-street unmetered parking spaces along the Project frontage. Parking at these spaces is unrestricted, except during the afternoon peak hours. In addition, Colyton Street and Hewitt Street would be improved to meeting City standards. Thus, the on-street parking spaces adjacent to the Project Site would be removed with development of the Project to accommodate the installation of the sidewalks. It is likely that these spaces currently serve the existing uses of the Project Site. Therefore, the demand of these removed spaces would be accommodated within the Project's parking garage.

Section 4C
Pedestrian, Bicycle, and Transit Assessment

This section assesses the Project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the Project Site.

Factors to consider when assessing a project's potential effect on pedestrian, bicycle, and transit facilities, include the following:

- Would the project directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian, bicycle, or transit facilities?
- Would a project intensify use of existing pedestrian, bicycle, or transit facilities?

PEDESTRIANS AND BICYCLES

The Project would not directly or indirectly result in a permanent removal or modification that would lead to the degradation of pedestrian or bicycle facilities. Although the Project may intensify use of existing pedestrian and bicycle facilities, the Project would provide adequate measures to ensure the safety of those accessing the site and utilizing the street system surrounding it, including the development of a pedestrian passageway connecting Hewitt Street and Colyton Street, as well as improving Hewitt Street and Colyton Street along the Project frontage to provide adequate sidewalks.

TRANSIT

As detailed in Chapter 2, the Study Area is served by numerous established transit routes. The Project Site is served by multiple bus lines along 4th Street and 4th Place, operated by LADOT DASH and Montebello Bus. Additionally, the Metro Gold Line Little Tokyo/Arts District Station is 0.5 miles from the Project Site.

Although the Project (and Related Projects) will cumulatively add transit ridership, the Project Site and the Study Area are served by a vast amount of transit service, as detailed in Table 2 and Table 3. As shown, the total residual capacity of the bus and rail lines within the Study Area during the morning and afternoon peak hours is approximately 4,617 and 4,403 transit trips, respectively. As detailed in Table 8, transit usage accounts for the reduction of approximately 22 morning peak hour vehicle trips and 21 afternoon peak hour vehicle trips. Assuming each vehicle has an average vehicle occupancy (AVO) of 1.5, in accordance with the AVO for all trip purposes identified for Los Angeles County in *SGAG Regional Travel Demand Model and 2012 Model Validation* (SCAG, March 2016), the total Project morning and afternoon peak hour transit trips are projected at 31 and 29 person trips, respectively, or less than one percent of the total residual capacity of the transit lines within the Study Area during morning and afternoon peak. Overall, the total transit capacity along the routes of those lines can accommodate the Project's transit trips.

Section 4D
Operational Evaluation

This section provides a quantitative evaluation of the Project's access and circulation operations, including the anticipated LOS at the study intersections.

LOS ANALYSIS

The intersection analysis was conducted based on the CMA methodologies to identify V/C ratios and LOS at each of the study intersections with development of the Project. Detailed LOS calculation worksheets are provided in Appendix G.

Existing with Project Conditions

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes described in Chapter 4 and shown in Figure 9 were added to the existing morning and afternoon peak hour traffic volumes shown in Figure 4. The resulting volumes are illustrated in Figure 10 and represent Existing with Project Conditions, assuming Project operation under Existing Conditions.

Intersection LOS. Table 9 summarizes the results of the Existing and Existing with Project Conditions during the weekday morning and afternoon peak hours for the 22 signalized study intersections. As shown in Table 9, all 22 signalized study intersections are expected to operate at LOS D or better during both the morning and afternoon peak hours under Existing and Existing with Project Conditions.

Future with Project Conditions

All future cumulative traffic growth (i.e., ambient and Cumulative Project traffic growth) and transportation infrastructure improvements described in Chapter 3 are incorporated into this analysis.

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes described in Chapter 4 and shown in Figure 9 were added to the Future without Project morning and afternoon peak hour traffic volumes shown in Figure 7. The resulting volumes are illustrated in Figure 11 and represent Future with Project Conditions after development of the Project in Year 2023.

Intersection LOS. Table 10 summarizes the results of the Future without Project and Future with Project Conditions during the weekday morning and afternoon peak hours for the 23 signalized study intersections. As shown in Table 10, 10 of the 23 signalized study intersections are projected to operate at LOS D or better during both the morning and afternoon peak hours under Future with Project Conditions. The remaining 13 intersections continue to operate at LOS E or F during at least one of the peak hours.

TRANSPORTATION IMPROVEMENT MEASURES

The improvement measures investigated for the Project include the following major components:

1. Implementation of a TDM program for the Project Site to promote peak period trip reduction
2. Transportation Systems Management (TSM) improvements, including signal controller updates and installation of closed circuit television (CCTV) at key intersections within the Study Area
3. Areawide TMO to increase transit and mode choices in the Study Area
4. Specific intersection improvements, including physical mitigations and signal phasing enhancements.

These improvement measures are consistent with City policies and procedures that support improvements that reduce greenhouse gas emissions by reducing the use of single-occupant vehicle trips, encourage developers to construct transit and pedestrian-friendly projects with safe and walkable sidewalks, and promote other modes of travel.

TDM Program

The TDM program outlined below details a set of strategies proposed for the Project designed to reduce peak hour vehicular traffic to and from the Project Site. It is a comprehensive program of design features, transportation services, education programs, and incentive programs intended to reduce the impact of traffic from employees and visitors to the Project Site during the most congested time periods of the day. The Project shall develop and implement a TDM program to promote non-auto travel, reduce the use of single-occupant vehicle trips, etc. The TDM program would be subject to review and approval by the City (LADCP and LADOT). The strategies in the TDM program would include, but are not necessarily limited to, the following:

- Educational Programs/On-Site TDM Coordinator
- Transportation Information Center/kiosks
- Bicycle amenities
- Contribution to the City Bicycle Plan Trust Fund for implementation of bicycle improvements in the Project area under the 2010 Bicycle Plan and Mobility Plan
- Promotion and support of carpools and rideshare
- Guaranteed ride home (GRH) program
- Incentives for using alternative travel modes
- Parking incentives and administrative support for formation of carpools/vanpools
- Mobility hub support

The following provides further information and description of the TDM program strategies.

Educational Programs/On-Site Coordinator. A key component of a successful TDM program is to make employers and employees at the Project Site aware of the various programs offered. To this end, a TDM coordinator on the building management staff would reach out to employers and employees directly to promote the benefits of TDM.

Transportation Information Center/Kiosk. A Transportation Information Center is a centrally-located commuter information center where project employees and visitors can obtain information regarding commute programs, and individuals can obtain real-time information for planning travel without using an automobile. A Transportation Information Center will support orientation for new employees as well as providing information about transit schedules, commute planning, rideshare, telecommuting, and bicycle and pedestrian plans.

Project Design Features to Promote Bicycling and Walking. A significant and growing number of people in the City prefer to ride bicycles or walk to their employment given sufficient facilities to make the commute feel safe and convenient. The Project would incorporate features for bicyclists and pedestrians, such as exclusive access points, secured bicycle parking facilities and showers. Additionally, the Project Site would be designed to be a friendly and convenient environment for pedestrians.

Bikeway Improvements. The Project would contribute funding toward the implementation of bicycle improvements within the Study Area under the 2010 Bicycle Plan and Mobility Plan.

Ridesharing Services Programs. The TDM program would provide services to match employees together to establish carpools and vanpools. Carpools/vanpools provide the potential for employees to come to work relaxed and/or work during the commute and reduce the number of vehicle trips to and from the Project Site.

Incentives for Using Alternative Travel Modes. The TDM program could incorporate various incentives for use of its programs. For example, carpool and vanpool users could be offered preferential load/unload areas or convenient designated parking spaces. Unbundled parking is a program wherein parking spaces are rented separately from the building space, which allows for a separate charge for parking and the flexibility to vary the number of spaces rented. Unbundling parking is an essential first step toward getting people to understand the economic cost of parking. Without unbundled parking, tenants often assume that parking is free.

Mobility Hub Support. The Project would support existing and/or future efforts by LADOT to provide first-mile and last-mile service for transit users through the mobility hub program. Mobility hubs, typically located at or near public transit centers, would provide amenities such as, but not limited to, bicycle parking, and transit information. In cooperation with the proposed Arts District

TMO detailed below, the Project could provide space for similar amenities at the Project Site to complement future mobility hubs in the Study Area.

Project Trip Reduction from the TDM Program. *Trip Generation Handbook, 3rd Edition* provides a summary of research of TDM programs at many different employers. Case studies of TDM program implementations are detailed in Appendix J. The combined effect of the various strategies implemented as part of the TDM program would result in a reduction in peak hour trip generation by offering services, actions, specific facilities, etc., aimed at encouraging use of alternative transportation modes (e.g., transit, bus, walking, bicycling, carpool, etc.). At places that had the most comprehensive TDM programs, including both economic incentives (e.g., transit passes, etc.) and support services, the programs resulted in an average 24% reduction in commuter vehicles. Thus, as an achievable but conservative estimate, an overall TDM trip reduction credit of 15 percent was assumed.

Table 11 summarizes the estimated trip reduction during the peak hours. As shown, the TDM program is expected to result in a reduction of 517 daily trips, including 58 morning peak hour trips and 58 afternoon peak hour trips. The Project, when fully built and occupied and with implementation of the TDM program, would generate a total of 2,899 daily trips, including 330 morning peak hour trips (271 inbound, 59 outbound) and 326 afternoon peak hour trips (70 inbound, 255 outbound).

The trip generation estimates with peak hour trip reductions from the TDM program were assigned through the study intersections using the trip distribution patterns illustrated in Figure 8. The Project-only morning and afternoon peak hour traffic volumes after implementation of the TDM program as part of the Project's mitigation are shown in Figure 12.

TSM Improvements

Potential TSM strategies typically studied as part of transportation impact analyses include: Signal Controller Upgrades, CCTV Cameras and System Loops. LADOT has determined that TSM improvements could improve traffic operations and increase intersection capacity by approximately one percent along a corridor.

A review of the Study Area by the LADOT ATSAC Division showed that TSM improvements have already been fully deployed in the Study Area and, therefore, this element is not available for Project implementation.

Downtown/Arts District TMO

A TMO is an organization that oversees the development, implementation, and operation of TDM strategies within a particular study area. The TMO would offer similar services to those detailed above as part of the TDM program, however, the TMO would have a much wider reach than the Project's local TDM plan and can result in much greater trip reduction benefits. The TMO would help augment or implement some of the strategies described above for the Project-specific TDM program. Developers, building owners, and businesses are members of the TMO, paying annual dues to support the activities of the TMO.

The City has formed a Downtown Los Angeles TMO and the Arts District would be covered by this TMO.

The Arts District community is a strong candidate for alternative modes of transportation, including walking and bicycling, carpooling and vanpooling, use of public transit, short-term automobile rentals, etc. At present, there is no organization to administer and promote these options to the public. The Downtown/Arts District TMO would be an organization that helps to promote these services to the community by providing information about available public transportation options and matching people into ridesharing services. The Arts District TMO could be instrumental in promoting the use of transit and the City's bike share and car share programs that will be installed in the coming years within the area.

The Applicant shall participate in the initial funding and marketing of the Arts District TMO / Arts District portion of a Downtown TMO to address these needs and help alleviate current and future traffic congestion throughout the area. The TMO services would be available to anyone within the general Arts District community, not just employees and visitors of the Project.

Travel analyses in urban Los Angeles show that more than half of the trips within a specific urban zone have a trip length of less than 5.0 miles. Therefore, approximately 50 percent of trips in the Downtown/Arts District TMO area have the potential to be directly reduced by the TMO programs.

The Downtown/Arts District TMO is expected to approach the levels of effectiveness of the Warner Center, Century City, and Burbank TMOs in that it will reduce the number of trips originating or ending within the Arts District TMO area. To this end, over the next two decades, it could reduce single-passenger automobile trips by as much as 15 percent while increasing transit ridership, use of ridesharing, and non-automotive modes of transportation such as walking and bicycling. Overall, this could lead to as much as a 10 percent reduction in vehicular traffic for trips originating or ending within the Downtown/Arts District TMO area. Recognizing that some of the trips on the streets in the Arts District are trips merely passing through, the 10 percent trip reduction was conservatively reduced to a seven percent overall reduction in vehicular traffic.

Developer Credit. The Applicant shall provide its fair share of seed funding for the Arts District TMO / Arts District portion of a Downtown TMO following approval of its Project by providing funding for TMO operations and marketing efforts. While the City is in the early stages of establishing the Downtown/Arts District TMO, similar TMO organizations in Los Angeles have established initial budgets to set up and run the first year of operations and they have identified additional costs to maintain and operate each year thereafter. These costs include development of the TMO, the salary of a full- or part-time TMO manager, and the implementation of a marketing plan. The Applicant would commit its fair share required in the first year to cover the cost of launching the Arts District TMO / Arts District portion of a Downtown TMO and continue to commit to nine additional years (10 years in total) as a charter member with annual dues. It is anticipated that with almost 30 projects proposed for the Arts District, a number of major projects would benefit from joining the TMO and, thus, the organization would have a meaningful base from which to work.

Given the Project's commitment to participate in the funding of the start-up of the TMO for the Arts District, the Project would receive credit from LADOT for a one percent increase in the intersection capacity of the Study Area intersections as a result of the trip reduction programs operated by the TMO. That credit conservatively assumes a lower rate of overall trip reduction than the seven percent reduction discussed above. Other major projects in the Study Area could make similar initial contributions to the TMO and similar commitments to annual dues and receive similar credits for trip reductions/intersection capacity increases.

Specific Intersection Improvement Measures

The physical intersection improvements (e.g., restriping to provide additional travel lanes or capacity) discussed below were considered at the following study intersections that are critical to the Project's site access and circulation operations. However, the physical improvements were not recommended by LADOT, and therefore, would not be implemented as part of the Project.

6. Alameda Street & 3rd Street/4th Place. The intersection could increase vehicular capacity by restriping along 4th Place to provide additional westbound capacity at the intersection. The resulting westbound approach would consist of one left-turn lane, three through lanes and one shared through/right-turn lane. This improvement could be accommodated within the existing right-of-way; however, it would require narrowing of the curb lanes and the removal of up to five on-street metered parking spaces on the south side of 4th Place. Thus, based on discussions with LADOT, this physical improvement was deemed infeasible and unacceptable due to the potential loss of on-street parking and geometric constraints. In addition, increasing vehicular capacity would conflict with the goals of the Mobility Plan.

7. Alameda Street & 4th Street. The intersection could increase vehicular capacity by widening and restriping along Alameda Street to provide additional northbound capacity at the intersection. The resulting northbound approach would consist of two through lanes and one right-turn lane. This improvement could not be accommodated within the existing right-of-way and would require acquisition of private property. Due to the lack of available roadway width and given the physical constraints of the existing intersection geometry, neither widening nor restriping would be feasible, practical or desirable. In addition, increasing vehicular capacity would conflict with the goals of the Mobility Plan.

8. Alameda Street & 6th Street. The intersection could increase vehicular capacity by widening and restriping along Alameda Street to provide additional northbound capacity at the intersection. The resulting northbound approach would consist of two through lanes and one right-turn lane. This improvement could not be accommodated within the existing right-of-way and would require acquisition of private property. Due to the lack of available roadway width and given the physical constraints of the existing intersection geometry, neither widening nor striping would be feasible, practical or desirable. In addition, increasing vehicular capacity would conflict with the goals of the Mobility Plan.

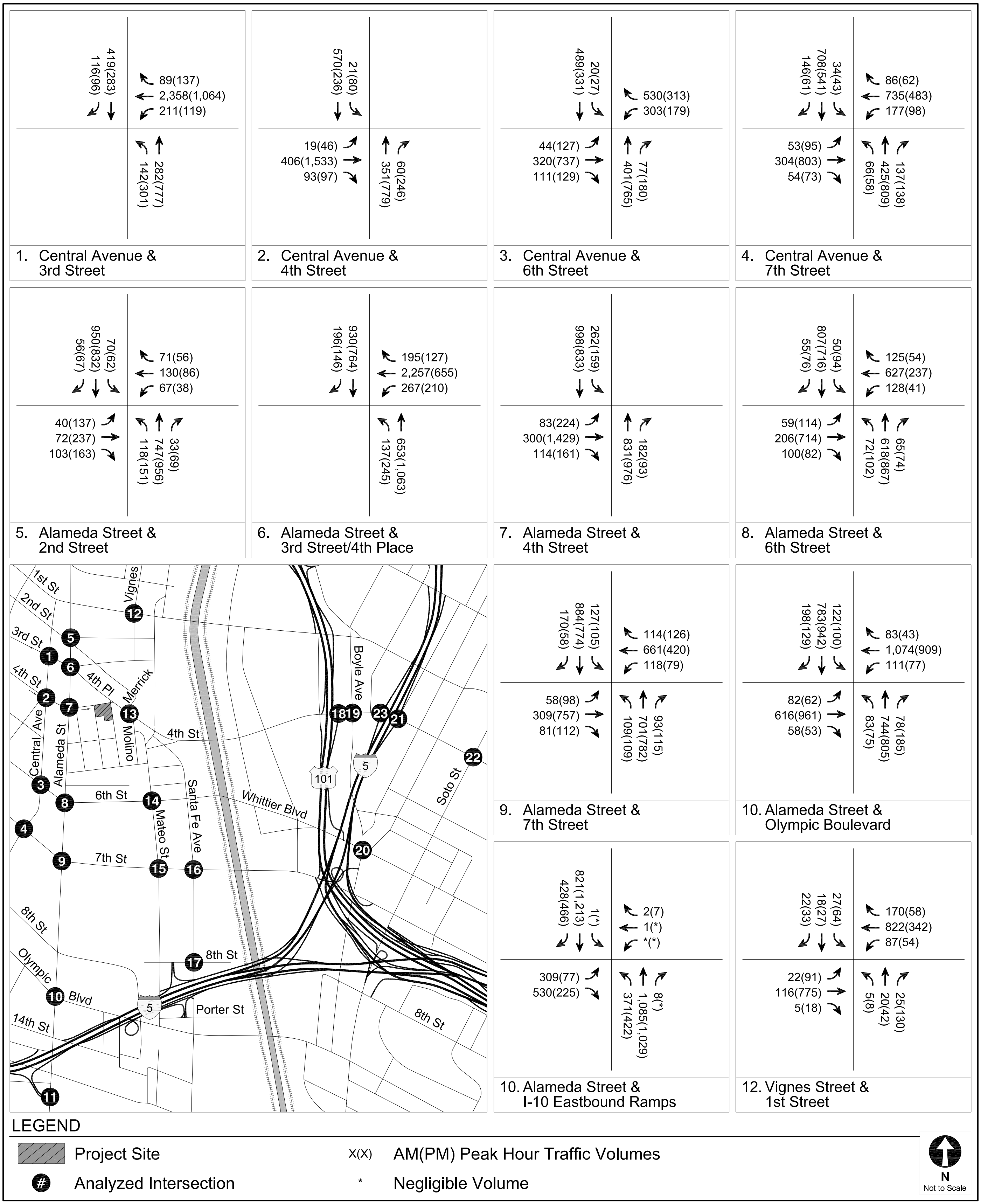
10. Alameda Street & Olympic Boulevard. The intersection could increase vehicular capacity by restriping along Olympic Boulevard to provide additional westbound capacity at the intersection. The resulting westbound approach would consist of one left-turn lane, two through lanes and one right-turn lane. This improvement could be accommodated within the existing right-of-way; however, it would require the narrowing of both the eastbound and westbound curb lanes on Olympic Boulevard. Thus, based on discussions with LADOT, this physical improvement was deemed infeasible and unacceptable due to the geometric constraints on Olympic Boulevard. In addition, increasing vehicular capacity would conflict with the goals of the Mobility Plan.

Transportation Improvement Effectiveness

The components of the Project's transportation improvement program described above would result in peak hour trip reductions from the implementation of the TDM program, as well as operation improvements as a result of the TMO activities. The effectiveness of the proposed transportation mitigation program was analyzed by applying the appropriate trip generation reductions and capacity enhancements from the implementation of the improvement measures. This results in the Existing with Project Conditions with Transportation Improvements and Future with Project Conditions with Transportation Improvements for the Project. The intersections were analyzed using the methodology described in Chapter 1.

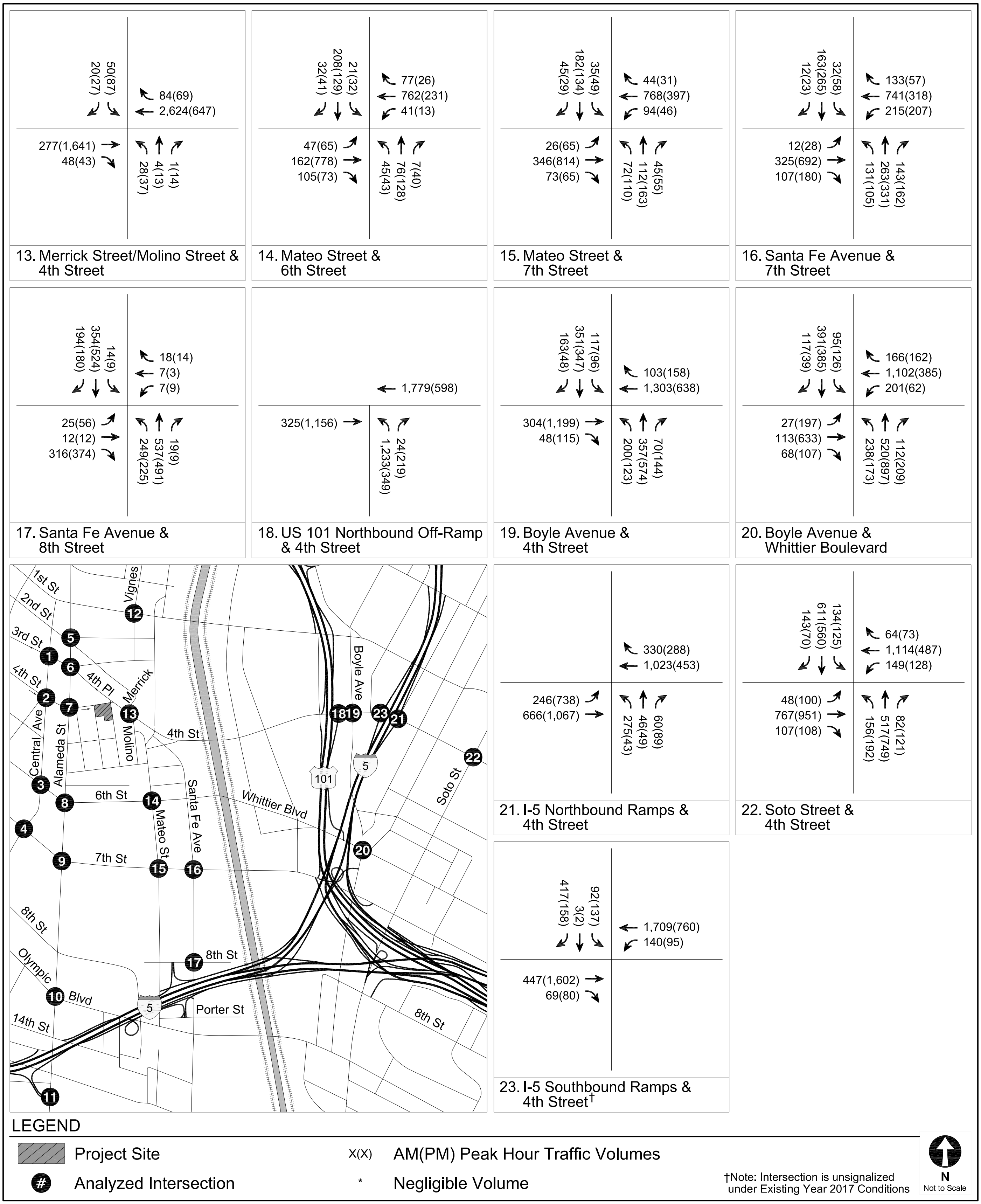
The Project-only with Transportation Improvements traffic volumes illustrated in Figure 12 were added to the existing morning and afternoon peak hour traffic volumes shown in Figure 4, resulting in the Existing with Project with Transportation Improvements Conditions traffic volumes, illustrated in Figure 13. The Project-only with Transportation Improvements traffic volumes illustrated in Figure 12 were also added to the Future without Project morning and afternoon peak hour traffic volumes shown in Figure 7, resulting in the Future with Project Conditions with Transportation Improvements traffic volumes, illustrated in Figure 14.

Tables 12 and 13 summarize the results of the Existing with Project Conditions with Transportation Improvements and the Future with Project Conditions with Transportation Improvements, respectively, during the weekday morning and afternoon peak hours for the study intersections.



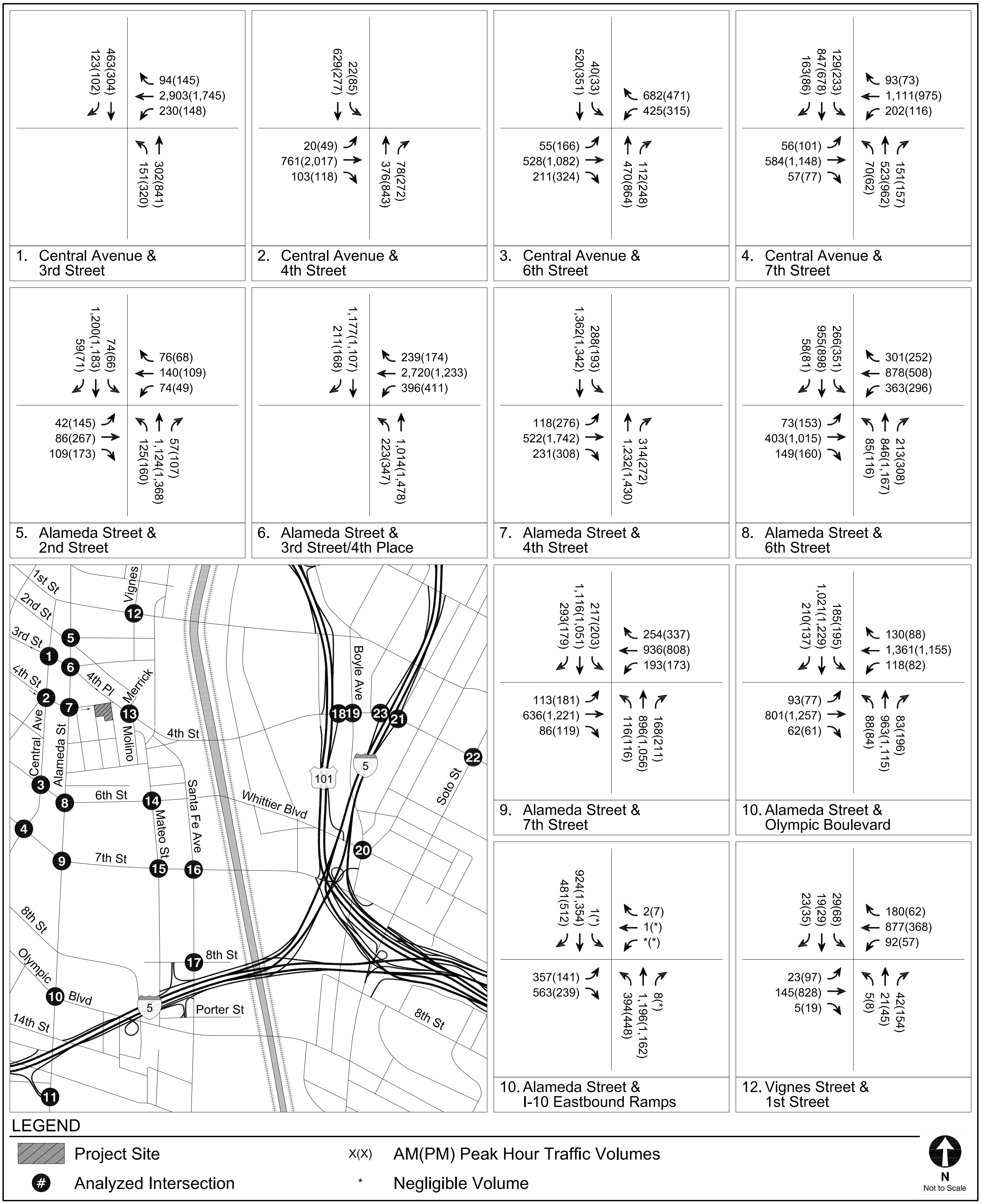
EXISTING WITH PROJECT CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 10



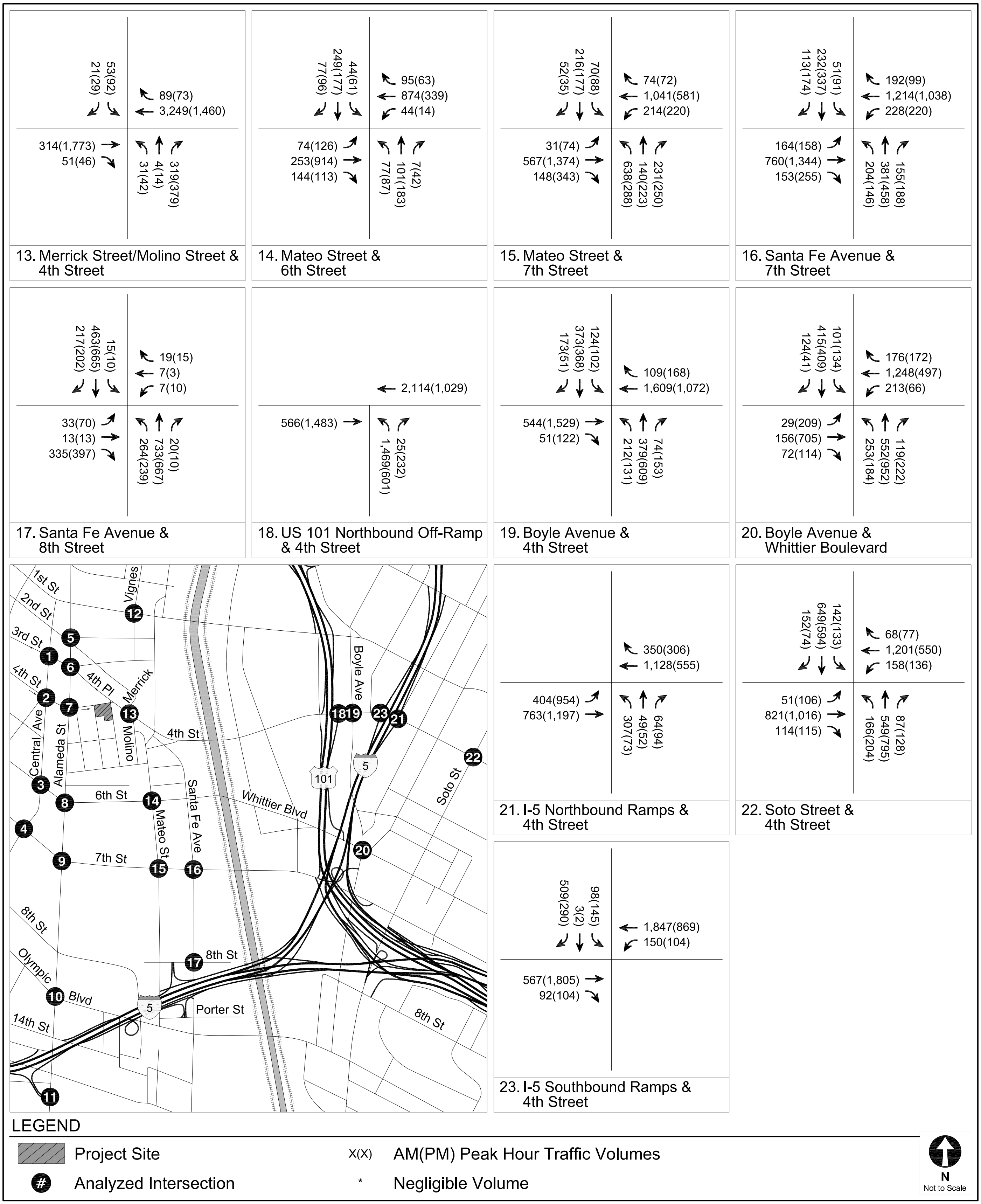
EXISTING WITH PROJECT CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 10 (CONT.)



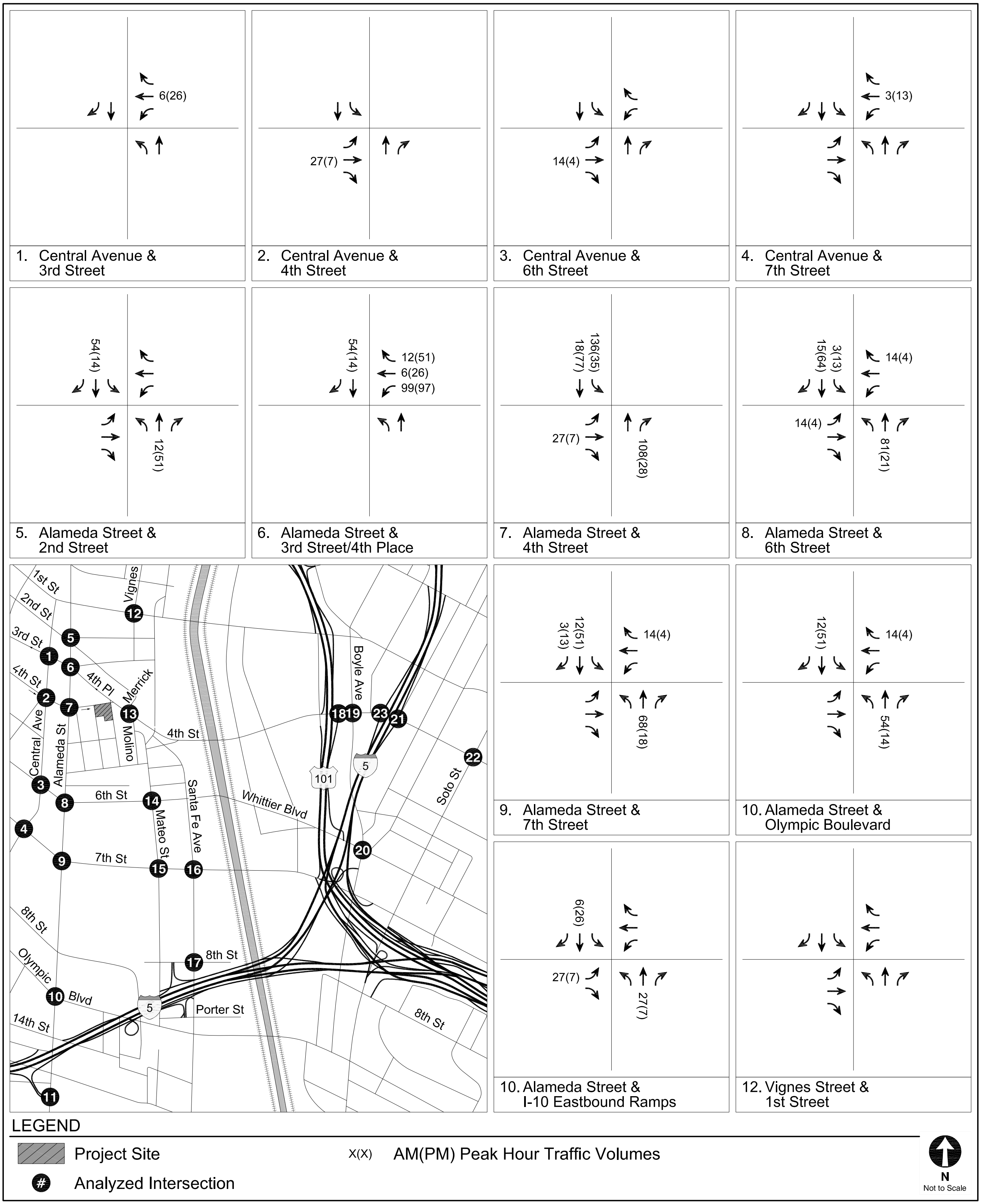
FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 11



FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

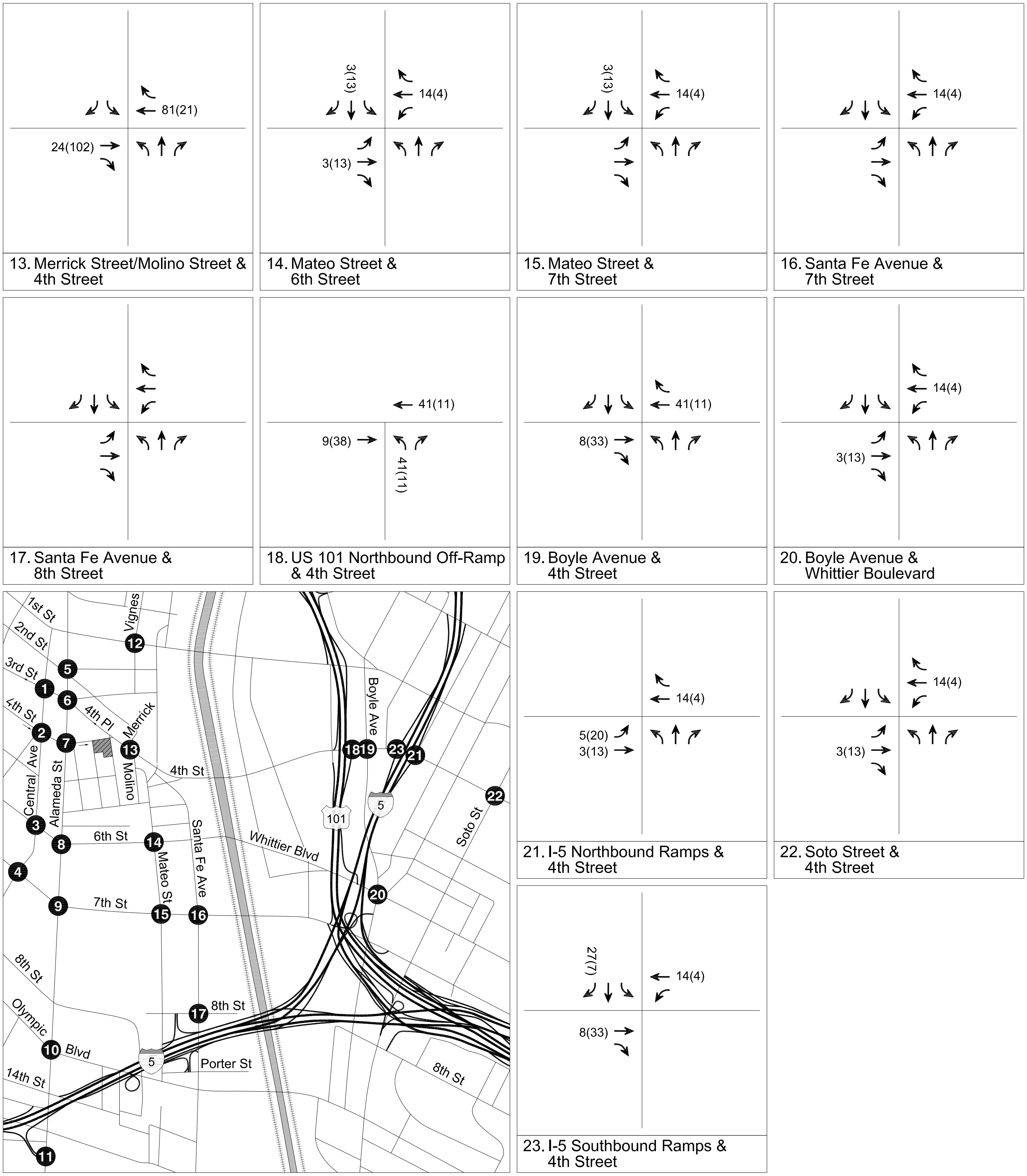
FIGURE 11 (CONT.)



PROJECT-ONLY WITH TRANSPORTATION IMPROVEMENTS
PEAK HOUR TRAFFIC VOLUMES

FIGURE 12

Gibson
transportation consulting, inc.



LEGEND

Project Site

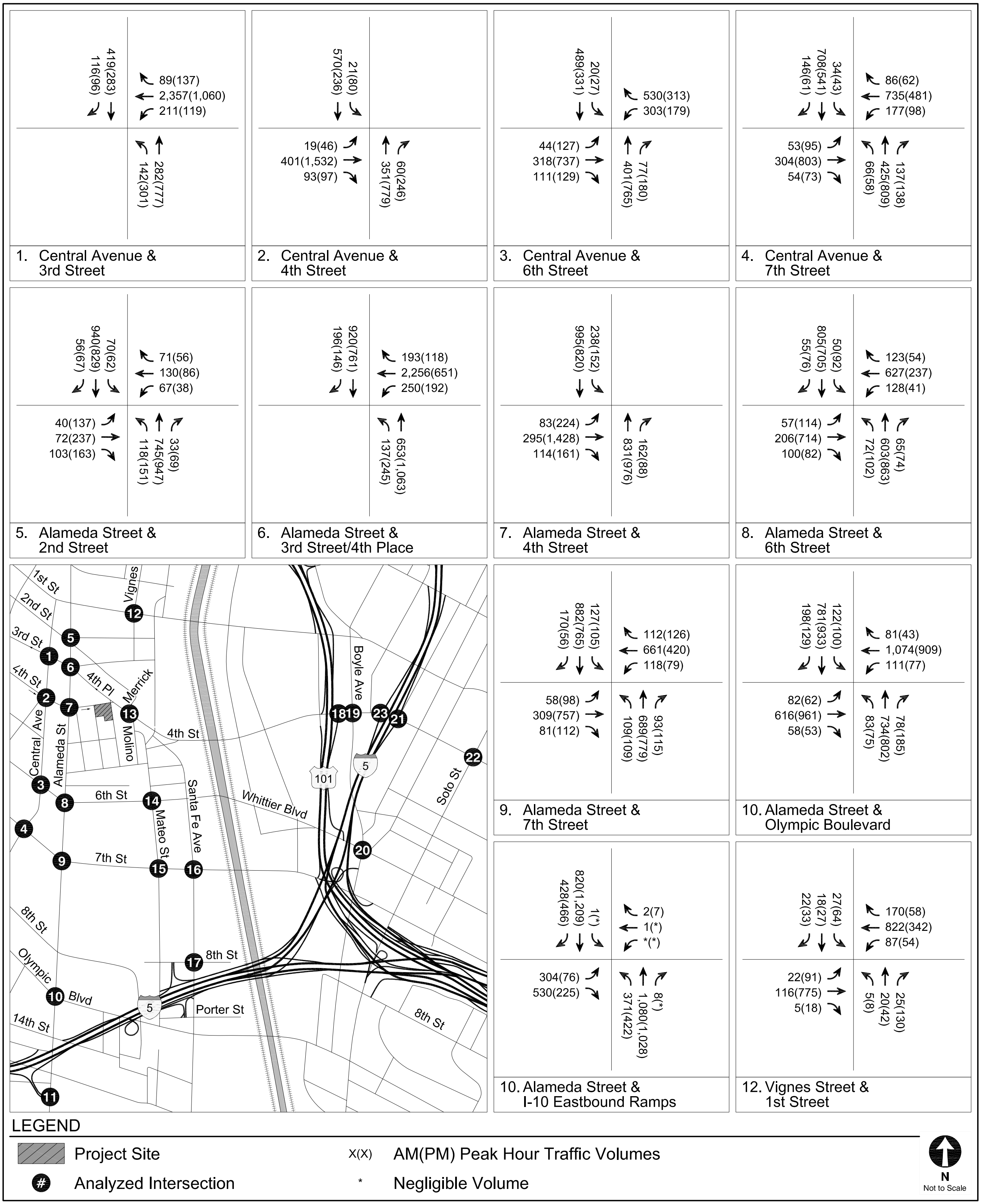
X(X) AM(PM) Peak Hour Traffic Volumes

\# Analyzed Intersection

N
Not to Scale

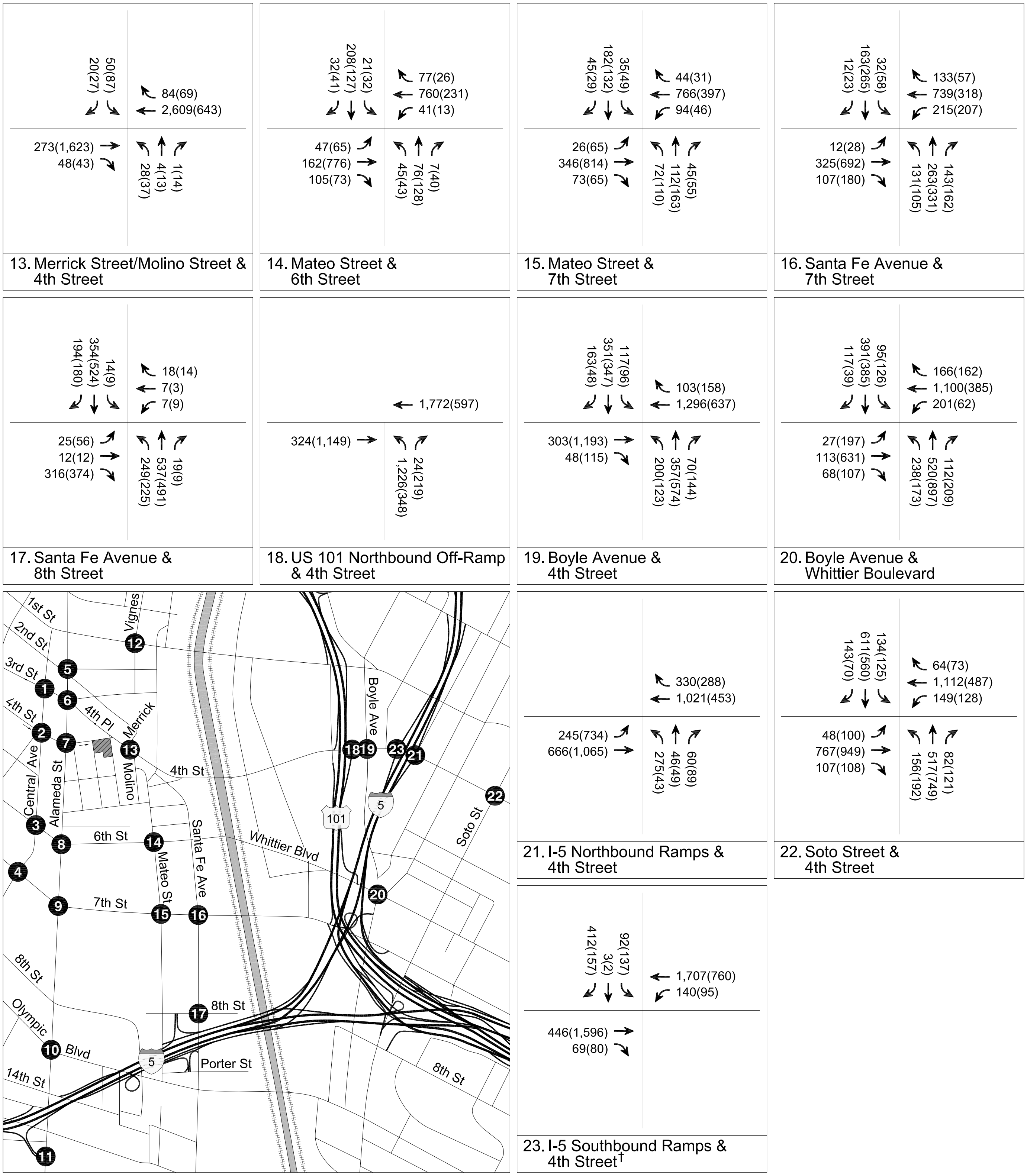
PROJECT-ONLY WITH TRANSPORTATION IMPROVEMENTS
PEAK HOUR TRAFFIC VOLUMES

FIGURE
12 (CONT.)



EXISTING WITH PROJECT WITH TRANSPORTATION IMPROVEMENTS CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 13



LEGEND

Project Site

X(X) AM(PM) Peak Hour Traffic Volumes

Analyzed Intersection

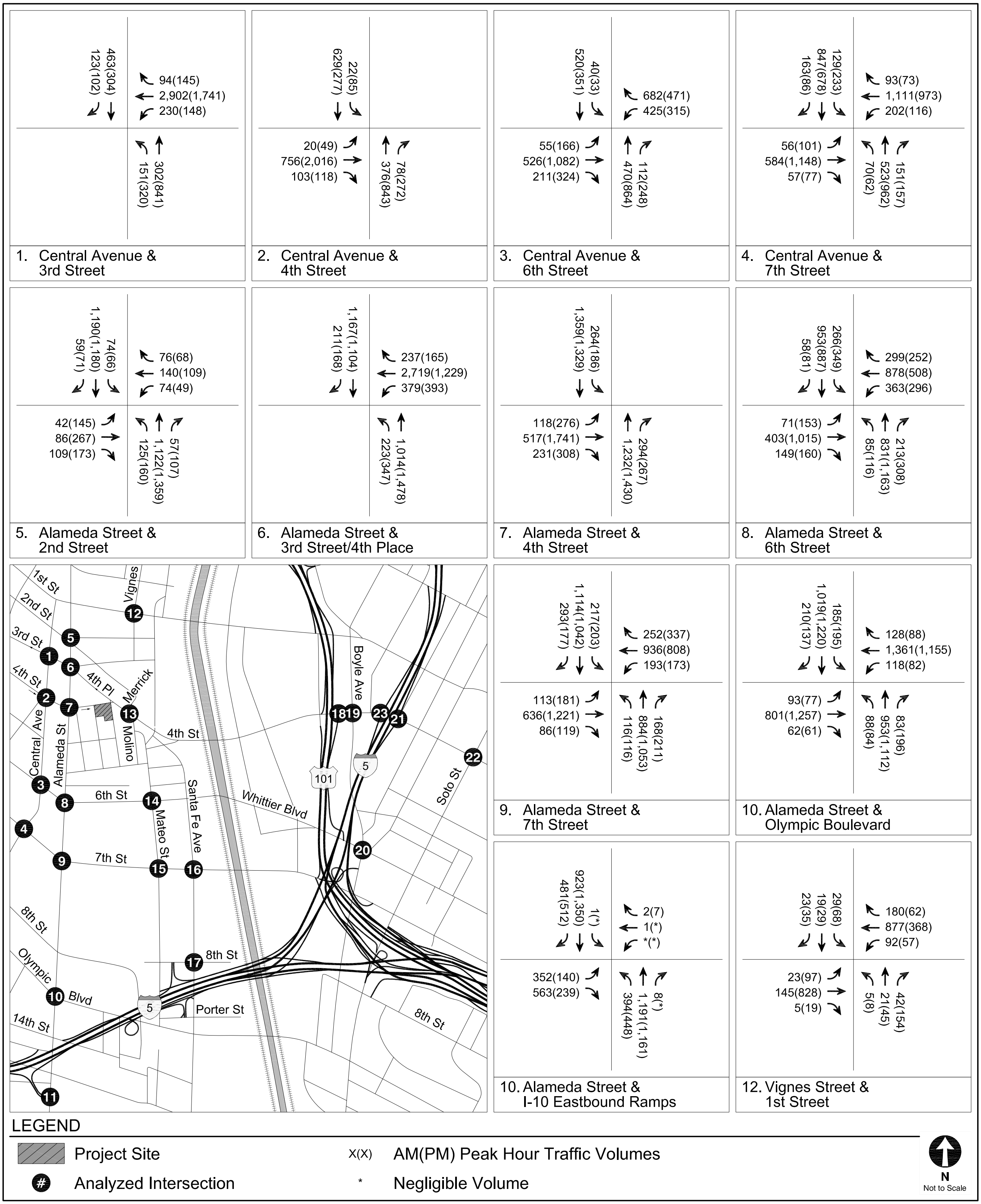
* Negligible Volume

†Note: Intersection is unsignalized under Existing Year 2017 Conditions

N Not to Scale

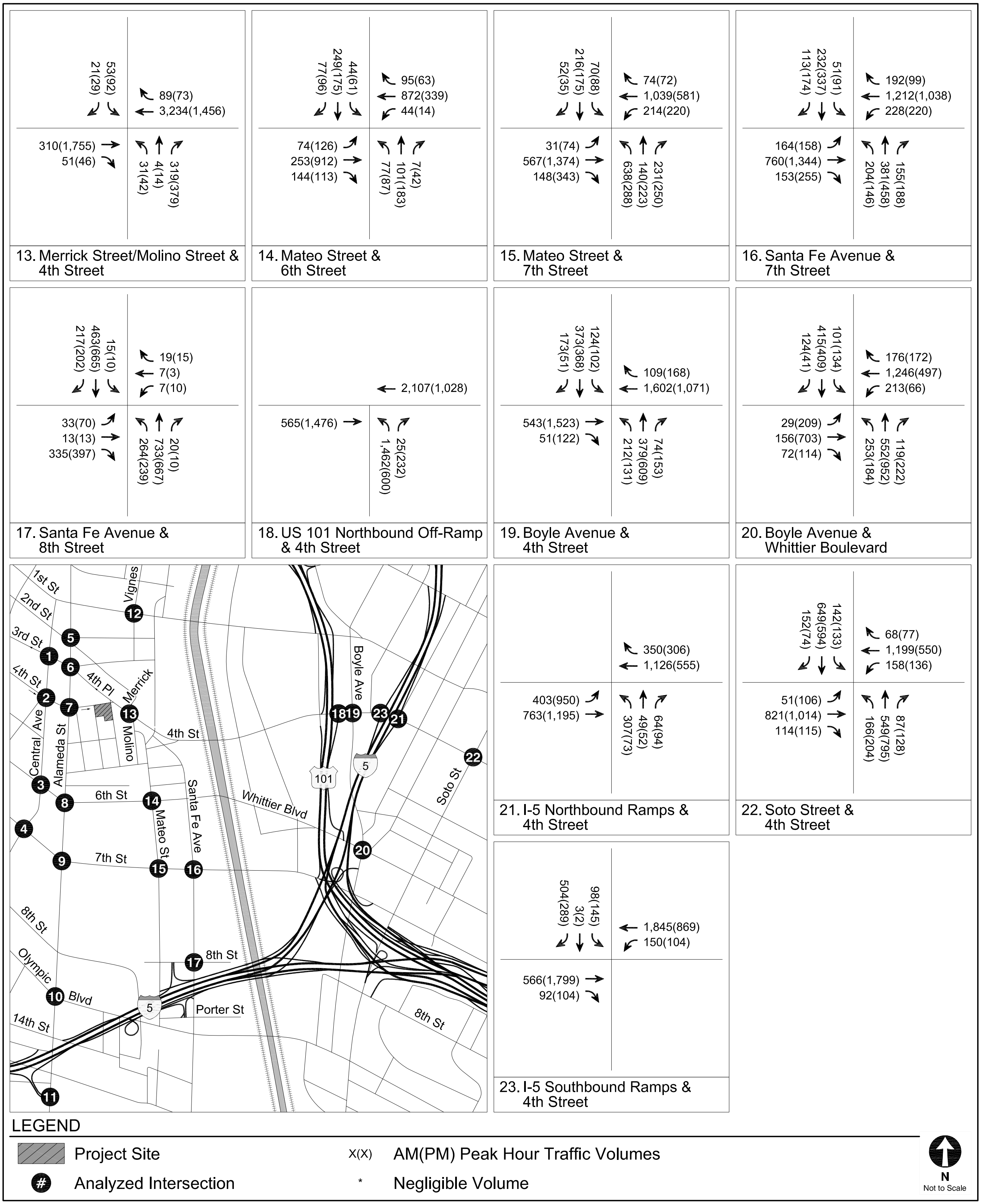
EXISTING WITH PROJECT WITH TRANSPORTATION IMPROVEMENTS CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 13 (CONT.)



FUTURE WITH PROJECT WITH TRANSPORTATION IMPROVEMENTS CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 14



FUTURE WITH PROJECT WITH TRANSPORTATION IMPROVEMENTS CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 14 (CONT.)

TABLE 9
EXISTING WITH PROJECT CONDITIONS (YEAR 2017)
INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions	
			V/C	LOS	V/C	LOS
1.	Central Avenue & 3rd Street	A.M. P.M.	0.638 0.447	B A	0.638 0.452	B A
2.	Central Avenue & 4th Street	A.M. P.M.	0.231 0.609	A B	0.242 0.610	A B
3.	Central Avenue & 6th Street	A.M. P.M.	0.419 0.661	A B	0.425 0.662	A B
4.	Central Avenue & 7th Street	A.M. P.M.	0.559 0.602	A B	0.561 0.602	A B
5.	Alameda Street & 2nd Street	A.M. P.M.	0.482 0.511	A A	0.505 0.518	A A
6.	Alameda Street & 3rd Street/4th Place	A.M. P.M.	0.753 0.473	C A	0.800 0.514	C A
7.	Alameda Street & 4th Street	A.M. P.M.	0.341 0.689	A B	0.498 0.730	A C
8.	Alameda Street & 6th Street	A.M. P.M.	0.536 0.585	A A	0.558 0.605	A B
9.	Alameda Street & 7th Street	A.M. P.M.	0.648 0.642	B B	0.659 0.649	B B
10.	Alameda Street & Olympic Boulevard	A.M. P.M.	0.669 0.681	B B	0.696 0.686	B B
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	0.667 0.688	B B	0.693 0.704	B C
12.	Vignes Street & 1st Street	A.M. P.M.	0.405 0.624	A B	0.405 0.624	A B
13.	Merrick Street/Molino Street & 4th Street	A.M. P.M.	0.569 0.372	A A	0.592 0.400	A A
14.	Mateo Street & 6th Street	A.M. P.M.	0.408 0.349	A A	0.415 0.356	A A
15.	Mateo Street & 7th Street	A.M. P.M.	0.403 0.475	A A	0.411 0.475	A A
16.	Santa Fe Avenue & 7th Street	A.M. P.M.	0.499 0.728	A C	0.493 0.712	A C
17.	Santa Fe Avenue & 8th Street	A.M. P.M.	0.501 0.591	A A	0.501 0.591	A A
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	0.688 0.332	B A	0.715 0.346	C A
19.	Boyle Avenue & 4th Street	A.M. P.M.	0.719 0.769	C C	0.730 0.779	C C
20.	Boyle Avenue & Whittier Boulevard	A.M. P.M.	0.704 0.706	C C	0.709 0.707	C C
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	0.731 0.757	C C	0.741 0.775	C C
22.	Soto Street & 4th Street	A.M. P.M.	0.666 0.812	B D	0.671 0.819	B D
23. [a]	I-5 Southbound Ramps & 4th Street	A.M. P.M.	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Notes
[a] Traffic signal installation was completed in Year 2018. Thus, the intersection was unsignalized in Year 2017, and was therefore not evaluated under Existing Conditions.

TABLE 10
FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions	
			V/C	LOS	V/C	LOS
1.	Central Avenue & 3rd Street	A.M. P.M.	0.760 0.594	C A	0.761 0.599	C A
2.	Central Avenue & 4th Street	A.M. P.M.	0.377 0.733	A C	0.388 0.734	A C
3.	Central Avenue & 6th Street	A.M. P.M.	0.636 0.949	B E	0.642 0.951	B E
4.	Central Avenue & 7th Street	A.M. P.M.	0.893 0.937	D E	0.894 0.937	D E
5.	Alameda Street & 2nd Street	A.M. P.M.	0.588 0.673	A B	0.611 0.690	B B
6.	Alameda Street & 3rd Street/4th Place	A.M. P.M.	1.012 0.809	F D	1.059 0.852	F D
7.	Alameda Street & 4th Street	A.M. P.M.	0.612 1.004	B F	0.761 1.045	C F
8.	Alameda Street & 6th Street	A.M. P.M.	0.871 1.265	D F	0.924 1.285	E F
9.	Alameda Street & 7th Street	A.M. P.M.	0.961 1.071	E F	0.973 1.079	E F
10.	Alameda Street & Olympic Boulevard	A.M. P.M.	0.905 0.955	E E	0.931 0.961	E E
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	0.757 0.804	C D	0.782 0.821	C D
12.	Vignes Street & 1st Street	A.M. P.M.	0.471 0.682	A B	0.471 0.682	A B
13.	Merrick Street/Molino Street & 4th Street	A.M. P.M.	0.892 0.754	D C	0.913 0.763	E C
14.	Mateo Street & 6th Street	A.M. P.M.	0.563 0.517	A A	0.571 0.533	A A
15.	Mateo Street & 7th Street	A.M. P.M.	1.007 1.185	F F	1.012 1.185	F F
16.	Santa Fe Avenue & 7th Street	A.M. P.M.	0.981 1.203	E F	0.987 1.203	E F
17.	Santa Fe Avenue & 8th Street	A.M. P.M.	0.671 0.689	B B	0.671 0.689	B B
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	0.842 0.513	D A	0.869 0.521	D A
19.	Boyle Avenue & 4th Street	A.M. P.M.	0.823 0.937	D E	0.834 0.941	D E
20.	Boyle Avenue & Whittier Boulevard	A.M. P.M.	0.781 0.786	C C	0.787 0.788	C C
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	0.908 0.956	E E	0.918 0.974	E E
22.	Soto Street & 4th Street	A.M. P.M.	0.720 0.883	C D	0.726 0.890	C D
23.	I-5 Southbound Ramps & 4th Street	A.M. P.M.	0.880 0.792	D C	0.908 0.812	E D

TABLE 11
TRIP GENERATION WITH TDM PROGRAM

Land Use	ITE Land Use Code	Size	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Existing Uses [a]									
Office	710	3.515 ksf	32	3	1	4	1	3	4
Museum	580	7.8 ksf	0	2	0	2	0	1	1
Total - Existing Uses			**32**	**5**	**1**	**6**	**1**	**4**	**5**
Proposed Project [a]									
Museum	580	7.8 ksf	9	2	0	2	0	1	1
Office	710	311.682 ksf	2,884	295	48	343	54	286	340
Restaurant	932	8.149 ksf	555	27	22	49	30	18	48
Total - Proposed Project			**3,448**	**324**	**70**	**394**	**84**	**305**	**389**
Net New Project Trips prior to TDM Program			**3,416**	**319**	**69**	**388**	**83**	**301**	**384**
TDM Program Reduction									
Museum	580	15%	(1)	0	0	0	0	0	0
Office	710	15%	(433)	(44)	(7)	(51)	(8)	(43)	(51)
Restaurant	932	15%	(83)	(4)	(3)	(7)	(5)	(3)	(7)
Total - TDM Program Reduction			**(517)**	**(48)**	**(10)**	**(58)**	**(13)**	**(46)**	**(58)**
Net New Project Trips with TDM Program			**2,899**	**271**	**59**	**330**	**70**	**255**	**326**

Notes
[a] See Table 8.

TABLE 12
EXISTING WITH PROJECT CONDITIONS WITH TRANSPORTATION IMPROVEMENTS (YEAR 2017)
INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions		Existing with Project Conditions with Transportation Improvements	
			V/C	LOS	V/C	LOS	V/C	LOS
1.	Central Avenue & 3rd Street	A.M. P.M.	0.638 0.447	B A	0.638 0.452	B A	0.628 0.442	B A
2.	Central Avenue & 4th Street	A.M. P.M.	0.231 0.609	A B	0.242 0.610	A B	0.231 0.600	A A
3.	Central Avenue & 6th Street	A.M. P.M.	0.419 0.661	A B	0.425 0.662	A B	0.414 0.651	A B
4.	Central Avenue & 7th Street	A.M. P.M.	0.559 0.602	A B	0.561 0.602	A B	0.550 0.592	A A
5.	Alameda Street & 2nd Street	A.M. P.M.	0.482 0.511	A A	0.505 0.518	A A	0.491 0.506	A A
6.	Alameda Street & 3rd Street/4th Place	A.M. P.M.	0.753 0.473	C A	0.800 0.514	C A	0.749 0.477	C A
7.	Alameda Street & 4th Street	A.M. P.M.	0.341 0.689	A B	0.498 0.730	A C	0.464 0.713	A C
8.	Alameda Street & 6th Street	A.M. P.M.	0.536 0.585	A A	0.558 0.605	A B	0.545 0.592	A A
9.	Alameda Street & 7th Street	A.M. P.M.	0.648 0.642	B B	0.659 0.649	B B	0.648 0.638	B B
10.	Alameda Street & Olympic Boulevard	A.M. P.M.	0.669 0.681	B B	0.696 0.686	B B	0.655 0.675	B B
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	0.667 0.688	B B	0.693 0.704	B C	0.651 0.663	B B
12.	Vignes Street & 1st Street	A.M. P.M.	0.405 0.624	A B	0.405 0.624	A B	0.395 0.614	A B
13.	Merrick Street/Molino Street & 4th Street	A.M. P.M.	0.569 0.372	A A	0.592 0.400	A A	0.578 0.385	A A
14.	Mateo Street & 6th Street	A.M. P.M.	0.408 0.349	A A	0.415 0.356	A A	0.404 0.344	A A
15.	Mateo Street & 7th Street	A.M. P.M.	0.403 0.475	A A	0.411 0.475	A A	0.399 0.465	A A
16.	Santa Fe Avenue & 7th Street	A.M. P.M.	0.499 0.728	A C	0.493 0.712	A C	0.482 0.702	A C
17.	Santa Fe Avenue & 8th Street	A.M. P.M.	0.501 0.591	A A	0.501 0.591	A A	0.491 0.581	A A
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	0.688 0.332	B A	0.715 0.346	C A	0.701 0.334	C A
19.	Boyle Avenue & 4th Street	A.M. P.M.	0.719 0.769	C C	0.730 0.779	C C	0.718 0.767	C C
20.	Boyle Avenue & Whittier Boulevard	A.M. P.M.	0.704 0.706	C C	0.709 0.707	C C	0.698 0.696	B B
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	0.731 0.757	C C	0.741 0.775	C C	0.729 0.762	C C
22.	Soto Street & 4th Street	A.M. P.M.	0.666 0.812	B D	0.671 0.819	B D	0.661 0.809	B D
23. [a]	I-5 Southbound Ramps & 4th Street	A.M. P.M.	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Notes

[a] Traffic signal installation was completed in Year 2018. Thus, the intersection was unsignalized in Year 2017, and was therefore not evaluated under Existing Conditions.

TABLE 13
FUTURE WITH PROJECT CONDITIONS WITH TRANSPORTATION IMPROVEMENTS (YEAR 2023)
INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions		Future with Project Conditions with Transportation Improvements	
			V/C	LOS	V/C	LOS	V/C	LOS
1.	Central Avenue & 3rd Street	A.M. P.M.	0.760 0.594	C A	0.761 0.599	C A	0.751 0.588	C A
2.	Central Avenue & 4th Street	A.M. P.M.	0.377 0.733	A C	0.388 0.734	A C	0.376 0.724	A C
3.	Central Avenue & 6th Street	A.M. P.M.	0.636 0.949	B E	0.642 0.951	B E	0.631 0.941	B E
4.	Central Avenue & 7th Street	A.M. P.M.	0.893 0.937	D E	0.894 0.937	D E	0.884 0.927	D E
5.	Alameda Street & 2nd Street	A.M. P.M.	0.588 0.673	A B	0.611 0.690	B B	0.597 0.677	A B
6.	Alameda Street & 3rd Street/4th Place	A.M. P.M.	1.012 0.809	F D	1.059 0.852	F D	1.042 0.835	F D
7.	Alameda Street & 4th Street	A.M. P.M.	0.612 1.004	B F	0.761 1.045	C F	0.729 1.028	C F
8.	Alameda Street & 6th Street	A.M. P.M.	0.871 1.265	D F	0.924 1.285	E F	0.906 1.272	E F
9.	Alameda Street & 7th Street	A.M. P.M.	0.961 1.071	E F	0.973 1.079	E F	0.961 1.068	E F
10.	Alameda Street & Olympic Boulevard	A.M. P.M.	0.905 0.955	E E	0.931 0.961	E E	0.917 0.950	E E
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	0.757 0.804	C D	0.782 0.821	C D	0.769 0.809	C D
12.	Vignes Street & 1st Street	A.M. P.M.	0.471 0.682	A B	0.471 0.682	A B	0.461 0.672	A B
13.	Merrick Street/Molino Street & 4th Street	A.M. P.M.	0.892 0.754	D C	0.913 0.763	E C	0.900 0.751	D C
14.	Mateo Street & 6th Street	A.M. P.M.	0.563 0.517	A A	0.571 0.533	A A	0.559 0.521	A A
15.	Mateo Street & 7th Street	A.M. P.M.	1.007 1.185	F F	1.012 1.185	F F	1.001 1.175	F F
16.	Santa Fe Avenue & 7th Street	A.M. P.M.	0.981 1.203	E F	0.987 1.203	E F	0.977 1.193	E F
17.	Santa Fe Avenue & 8th Street	A.M. P.M.	0.671 0.689	B B	0.671 0.689	B B	0.661 0.679	B B
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	0.842 0.513	D A	0.869 0.521	D A	0.854 0.510	D A
19.	Boyle Avenue & 4th Street	A.M. P.M.	0.823 0.937	D E	0.834 0.941	D E	0.822 0.931	D E
20.	Boyle Avenue & Whittier Boulevard	A.M. P.M.	0.781 0.786	C C	0.787 0.788	C C	0.776 0.777	C C
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	0.908 0.956	E E	0.918 0.974	E E	0.906 0.961	E E
22.	Soto Street & 4th Street	A.M. P.M.	0.720 0.883	C D	0.726 0.890	C D	0.715 0.879	C D
23.	I-5 Southbound Ramps & 4th Street	A.M. P.M.	0.880 0.792	D C	0.908 0.812	E D	0.894 0.799	D C

Section 4E

Residential Street Cut-Through Analysis

A residential street cut-through analysis would determine potential increases in average daily traffic volumes on designated Local Streets, as classified in the Mobility Plan, that can be identified as cut-through trips generated by a project and that could adversely affect the character and function of those streets, as detailed in Section 3.5.2 of the TAG.

As detailed in Chapter 2, none of the streets included in the Study Area are designated Local Streets in the Mobility Plan. As such, residential Local Streets would not be affected by Project traffic and a residential street cut-through analysis would not be required. Thus, no residential Local Streets would be excessively burdened by Project traffic.

Section 4F
Construction Impact Analysis

This chapter summarizes the construction schedule and construction impact analysis for the Project. The construction impact analysis relates to the temporary impacts that may result from the construction activities of the Project, which may include safety, operational, or capacity impacts.

TYPES OF CONSTRUCTION IMPACTS

The four types of construction impacts refer to a particular population that could be inconvenienced by construction activities. The four types of impacts and related populations are:

1. Temporary transportation impacts – potential impacts on vehicular travelers on roadways
2. Temporary loss of access – potential impacts on vehicular and pedestrian access
3. Temporary loss of bus stops or rerouting of bus lines – potential impacts on bus travelers
4. Temporary loss of on-street parking – potential impacts on parkers

The factors used to determine the significance of a project's impacts involve the likelihood and extent to which an impact might occur, the potential inconvenience caused to a population, and consideration for public safety. Transportation impacts from construction activities could occur as a result of the following types of activities:

- Increases in truck traffic associated with export or import of fill materials and delivery of construction materials
- Increases in automobile traffic associated with construction workers traveling to and from the Project Site
- Reductions in existing street capacity or on-street parking from temporary lane closures necessary for the construction of roadway improvements, utility relocation, and drainage facilities
- Blocking existing vehicle or pedestrian access to other parcels fronting streets

The impact of construction traffic (including haul trucks) would be a lessening of the capacities of access streets and haul routes due to slower movements and larger turning radii of trucks.

PROPOSED CONSTRUCTION SCHEDULE

The Project is anticipated to be constructed in phases over a period of approximately 30 months, with completion anticipated in the Year 2023. The construction period would include subphases of site demolition, excavation and grading, foundations, and building construction. Peak haul truck activity occurs during excavation and grading, and peak worker activity occurs during building construction. These two subphases of construction were studied in greater detail.

EXCAVATION AND GRADING PHASE

The peak period of truck activity during construction would occur during excavation and grading of the Project Site. Based on projections compiled for the Project, approximately 85,000 cubic yards (CY) of material would be excavated and/or generated and removed from the Project Site during the construction period, requiring a maximum of 60 haul trucks per work day based on an anticipated haul truck capacity of 14 CY each. Thus, up to 120 daily truck trips (60 inbound, 60 outbound) are forecast to occur during the excavation and grading period, with approximately 20 trips per hour (10 inbound, 10 outbound) uniformly over a typical six-hour workday.

Transportation Research Circular No. 212 defines PCE for a vehicle as the number of through moving passenger cars to which it is equivalent based on the vehicle's headway and delay-creating effects. Table 8 of *Transportation Research Circular No. 212* and Exhibit 16.7 of the HCM suggest a passenger car equivalency (PCE) of 2.0 for trucks. Assuming a PCE factor of 2.0, the 120 truck trips would be equivalent to 240 daily PCE trips. The 20 hourly truck trips would be equivalent to 40 PCE trips (20 inbound, 20 outbound) per hour. In addition, during this period a maximum of 80 construction workers would work at the Project Site. Assuming minimal carpooling amongst those workers, an AVO of 1.135 persons per vehicle was applied, as provided in *CEQA Air Quality Handbook* (South Coast Air Quality Management District, 1993). Therefore, 80 workers would result in a total of 70 vehicle trips to and from the Project Site on a daily basis.

With the implementation of the Construction Management Plan, which is described in more detail later in this chapter, it is anticipated that almost all haul truck activity to and from the Project Site would occur outside of the morning and afternoon peak hours. In addition, as discussed in more detail in the following section, worker trips to and from the Project Site would also occur outside of the peak hours. Therefore, no peak hour construction transportation impacts are expected during the excavation and grading phase of construction.

Outbound haul trucks would travel to US 101 Northbound via 4th Place to Alameda Street. Inbound haul trucks would use the reverse route to the Project Site via 4th Street.

BUILDING CONSTRUCTION PHASE

The transportation impacts associated with construction workers depends on the number of construction workers employed during various phases of construction, as well as the travel mode and travel time of the workers. In general, the hours of construction typically require workers to be onsite before the weekday commuter morning peak period and allow them to leave before or after the commuter afternoon peak period (i.e., arrive at the site prior to 7:00 AM and depart before 3:00 PM). Therefore, most, if not all, construction worker trips would occur outside of the typical weekday commuter peak periods.

The estimated number of construction workers each day depends on the phase of construction. According to construction projections prepared for the Project, the building subphase of construction would employ the most construction workers, with a maximum of approximately 150 workers per day for all components of the building (i.e., framing, plumbing, elevators, inspections, finishing). However, since the different building components would not be constructed or installed simultaneously this cumulative estimate overstates the number of workers that would be expected on the peak construction day. Furthermore, on most of the estimated 30 months to complete the Project, there would be far fewer workers than on the peak day. Therefore, the estimate of 150 workers per day used for the purposes of this analysis represents a higher-than-expected estimate.

Assuming an AVO of 1.135 persons per vehicle, 150 workers would result in a total of 132 vehicles that would arrive and depart from the Project Site each day. The estimated number of daily trips associated with the construction workers is approximately 264 (132 inbound and 132 outbound trips), but nearly all of those trips would occur outside of the peak hours, as described above. As such, the building phase of Project construction is not expected to cause a significant transportation impact at any of the study intersections.

During construction, adequate parking for construction workers would be secured in the vicinity of the Project Site. Restrictions against workers parking in the public right-of-way in the vicinity of (or adjacent to) the Project Site will be identified as part of the Construction Management Plan. Construction parking may require the temporary use of offsite parking areas for materials storage and truck staging.

POTENTIAL IMPACTS ON ACCESS, TRANSIT, AND PARKING

Construction activities are expected to be primarily contained within the Project Site boundaries. However, it is expected that construction fences may encroach into the public right-of-way (e.g., sidewalk and roadways) adjacent to the Project Site. Adjacent to the Project Site, the curb lane on 4th Street would be used intermittently throughout the construction period for equipment staging, concrete pumping, deliveries, etc. Temporary traffic controls would be provided to direct traffic around any closures as required in the Construction Management Plan.

The use of the public right-of-way along 4th Street, Colyton Street, and Hewitt Street would require temporary rerouting of pedestrian traffic as the sidewalks fronting the Project Site would be closed. The Construction Management Plan would include measures to ensure pedestrian safety along the affected sidewalks and temporary walkways (e.g., use of directional signage, maintaining continuous and unobstructed pedestrian paths, and/or providing overhead covering). There are no bus stops adjacent to the Project Site and, therefore, no temporary impacts to transit routes are expected.

Parking is allowed adjacent to the Project Site on Colyton Street and Hewitt Street, so the construction fences could result in the temporary loss of up to eight unmetered parking spaces on Colyton Street and 13 unmetered parking spaces on Hewitt Street.

Project construction is not expected to create hazards for roadway travelers, bus riders, or parkers, so long as commonly practiced safety procedures for construction are followed. Such procedures and other measures (e.g., to address temporary traffic control, lane closures, sidewalk closures, etc.) have been incorporated into the Construction Management Plan.

CONSTRUCTION MANAGEMENT PLAN

A detailed Construction Management Plan, including street closure information, a detour plan, haul routes, and a staging plan, would be prepared and submitted to the City for review and approval. The Construction Management Plan would formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include, but not be limited to, the following elements, as appropriate:

- Advance notification of adjacent property owners and occupants, as well as nearby schools, of upcoming construction activities, including durations and daily hours of construction.
- Prohibition of construction worker parking on adjacent residential streets.
- Temporary pedestrian and vehicular traffic controls during all construction activities adjacent to 4th Street, Colyton Street, and Hewitt Street to ensure traffic safety on public rights-of-way. These controls shall include, but are not limited to, flag people trained in pedestrian and student safety.
- Temporary traffic control during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways (e.g., flag men).
- Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets.
- Prohibition of construction-related vehicle parking on surrounding public streets.
- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers as appropriate, including along all identified Los Angeles Unified School District (LAUSD) pedestrian routes to nearby schools.
- Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible, and so as to not impede school drop-off and pick-up activities and students using LAUSD's identified pedestrian routes to nearby schools.

- Coordination with public transit agencies to provide advanced notifications of stop relocations and durations.

- Advanced notification of temporary parking removals and duration of removals.

- Provision of detour plans to address temporary road closures during construction.

Section 4G
Parking Analysis

This chapter provides an analysis of the proposed parking and the potential parking impacts of the Project.

PARKING SUPPLY

As proposed, automobile parking spaces and bicycle parking spaces for the Project would be provided within an on-site parking garage.

CODE REQUIREMENTS

Automobile Parking Requirement

The LAMC has identified the off-street automobile parking requirements of various land uses. The following automobile parking rates are indicated in Section 12.21.A4(a) of the LAMC and Section 12.21.A4(x)(3) for uses within any Enterprise Zone, as defined by the California Department of Commerce:

- Commercial Uses (Museum, Office, Restaurant)
    - One space per 500 sf

Per LAMC Section 12.21A.4, non-residential buildings may replace up to 20 percent of required automobile parking spaces with bicycle parking spaces at a rate of one automobile space per four bicycle parking spaces provided. These parking rates and reductions were applied to the proposed floor area of the Project to determine the required amount of off-street automobile parking stalls.

Code-Required Project Automobile Parking

The Project consists of the following components:

- Museum – 7,800 sf
- Office – 311,682 sf
- Restaurant – 8,149 sf
- Office Outdoor Common Area[2] – 16,294 sf

The aforementioned off-street automobile parking ratios were applied to these components in order to determine the off-street automobile parking requirement for the Project. As detailed in Table 14, the Project is required to provide 688 automobile parking spaces. The LAMC parking requirement would be accommodated on-site.

Bicycle Parking Requirement

Bicycle parking requirements are subdivided into short-term and long-term parking based on LAMC Section 12.21.A.16. Short-term bicycle parking is characterized by bicycle racks that support the bicycle frame at two points; conversely, long-term bicycle parking is characterized by an enclosure protecting all sides from inclement weather and secured from the general public.

LAMC Section 12.21A16 identifies bicycle parking rates, which were used to determine the required bicycle parking spaces for the Project. The following short-term and long-term bicycle parking rates are indicated in the LAMC:

- Office
    - Short-term: One space per 10,000 sf
    - Long-term: One space per 5,000 sf

[2] Common area (i.e., balconies, patios, etc.) is considered in the floor area ratio calculation and, therefore, must be accounted for in the LAMC parking requirement.

- Commercial
  - Short-term: One space per 2,000 sf
  - Long-term: One space per 2,000 sf

Code-Required Project Bicycle Parking

As detailed in Table 15, the Project would require 37 short-term bicycle parking spaces and 70 long-term bicycle parking spaces, for a total of 107 spaces. The LAMC short-term and long-term bicycle parking requirement for the Project would be accommodated on-site.

TABLE 14
CODE AUTOMOBILE PARKING REQUIREMENTS

Land Use	Parking Rate	Size	Total Spaces
Commercial [a]			
Museum	1.00 sp / 500 sf	7,800 sf	16
Office	1.00 sp / 500 sf	311,682 sf	623
Outdoor Office Common Area [b]	1.00 sp / 500 sf	16,294 sf	33
Restaurant	1.00 sp / 500 sf	8,149 sf	16
Total Code Parking Requirement			**688**

Notes
[a] Per Section 12.21.A4(i), for commercial uses within an Enterprise Zone, as defined by the California Department of Commerce.
[b] Common area (i.e., balconies, patios, etc.) is considered in the floor area ratio calculation and, therefore, must be accounted for in the LAMC parking requirement.

TABLE 15
CODE BICYCLE PARKING REQUIREMENTS

Land Use	Size	Short-Term		Long-Term	
		Parking Rate [a]	Total Spaces	Parking Rate [a]	Total Spaces
Office	311,682 sf	1.00 sp / 10,000 sf	33	1.00 sp / 5,000 sf	66
Outdoor Office Common Area [b]	16,294 sf				
Restaurant	8,149 sf	1.00 sp / 2,000 sf	4	1.00 sp / 2,000 sf	4
Total			**37**		**70**
Total Bicycle Parking Spaces Required					**107**

Notes
[a] Bicycle parking rates per Section 12.21.A16.
[b] Common area (i.e., balconies, patios, etc.) is considered in the floor area ratio calculation and, therefore, must be accounted for in the LAMC parking requirement.

Chapter 5
Summary and Conclusions

This study was undertaken to analyze the potential transportation impacts of the Project. The following summarizes the results of this analysis:

CEQA ANALYSIS

- The Project is consistent with the City's plans, programs, ordinances, and policies.
- The Project would not result in a significant VMT impact. In addition, the Project aligns with the goals of the SCAG RTP/SCS and would not result in a significant cumulative VMT impact. Implementation of the Project's transportation improvement program would further reduce the Project's calculated work VMT per employee.
- The Project does not include geometric design features that would increase hazards and conflicts between pedestrians, bicycles, or vehicles.

NON-CEQA ANALYSIS

- After application of appropriate trip reduction credits (to account for public transit usage, walk-ins, and pass-by reductions), the Project is estimated to generate a total 3,416 daily weekday trips, including 388 morning peak hour trips and 384 afternoon peak hour trips.
- The study conducted detailed transportation analyses at a total of 23 study intersections. All 22 signalized study intersections operate at LOS D or better during both the morning and afternoon peak hours under Existing and Existing with Project Conditions.
- Of the 23 signalized study intersections, 12 intersections under the Future without Project Conditions and 10 intersections under Future with Project Conditions are projected to operate at LOS D or better during both the morning and afternoon peak hours. The remaining intersections are projected to operate at LOS E or F during at least one of the analyzed peak hours.
- The transportation improvement program includes the implementation of a project-level TDM program and financial participation in the initiation and marketing of a Downtown/Arts District TMO.

- The Project provides adequate internal circulation to accommodate vehicular traffic without impeding through traffic movements on City streets.

- The Project will incorporate pedestrian and bicycle-friendly designs, such as a bicycle facilities and publicly accessible paseo and open space.

- All construction activities will occur outside of the commuter morning and afternoon peak hours and will not result in significant transportation impacts. A Construction Management Plan would ensure that construction impacts would be less than significant.

- Vehicular and bicycle parking for the Project would be provided in accordance with the LAMC.

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Appendix A

Memorandum of Understanding

LADOT

Transportation Impact Study Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Impact Study for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Impact Study Guidelines:

I. PROJECT INFORMATION

Project Name: 4th & Hewitt

Project Address: 401 S Hewitt Street, Los Angeles CA 90013

Project Description: The Project consists of approximately 311,682 square feet (sf) of office space and approximately 8,149 sf of commercial space, as well as the approximately 7,800 sf existing A+D Museum. The existing office and storage uses would be removed with the development of the Project.

LADOT Project Case Number: 19-48446 (New)   Project Site Plan attached? *(Required)* ☒ Yes ☐ No

II. TRIP GENERATION

Geographic Distribution: N 30.00 %   S 20.00 %   E 20.00 %   W 30.00 %

Illustration of Project trip distribution percentages at Study intersections attached? *(Required)* ☒ Yes ☐ No

Trip Generation Adjustments *(Exact amount of credit subject to approval by LADOT)*

	Yes	No
Transit Usage	☒	☐
Transportation Demand Management	☐	☒
Existing Active Land Use	☒	☐
Previous Land Use	☐	☒
Internal Trip	☒	☐
Pass-By Trip	☒	☐

Source of Trip Generation Rate(s)? ☐ ITE 9th Edition ☒ Other: ITE 10th Edition

Trip generation table including a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? *(Required)* ☒ Yes ☐ No

	IN	OUT	TOTAL
AM Trips	319	69	388
PM Trips	83	301	384

III. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2023   Ambient or CMP Growth Rate: 1 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? *(Required)* ☒ Yes ☐ No

Map of Study Intersections attached? *(May be subject to LADOT revision after initial impact analysis)* ☒ Yes ☐ No

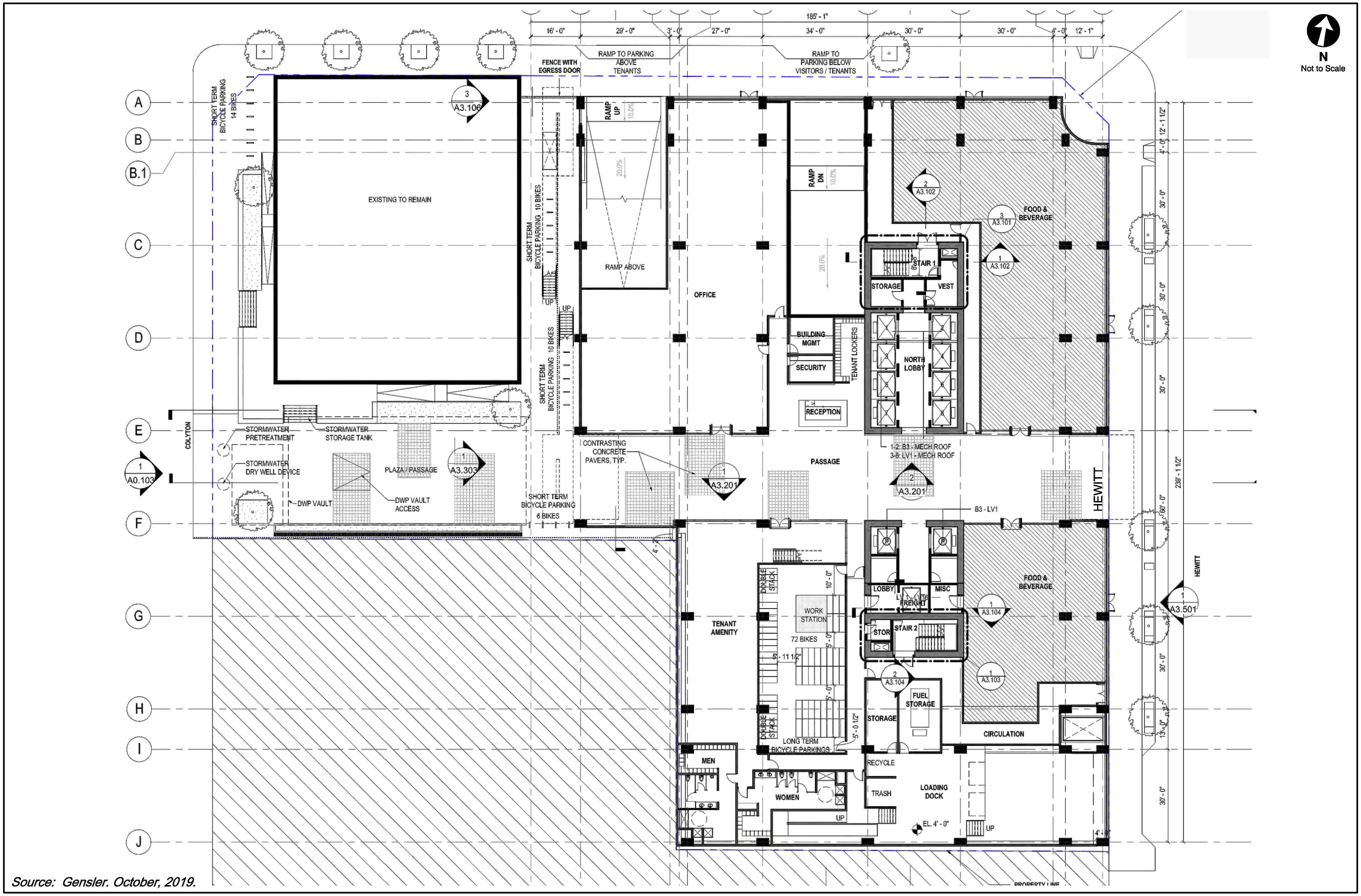
Is this Project located on a street within the High Injury Network? ☐ Yes ☒ No

IV. CONTACT INFORMATION

	CONSULTANT	DEVELOPER
Name:	Gibson Transportation Consulting, Inc.	LIG - 900, 910 and 925 E 4th St, 405-411 S Hewitt St, LLC
Address:	555 W. 5th Street, Suite 3375, Los Angeles, CA 90013	635 Bandini Boulevard, Commerce, CA 90040
Phone Number:	(213) 683-0088	(213) 820-9696
E-Mail:	ewong@gibsontrans.com	dilip@sunscopeusa.com

Approved by:	x	10-23-19	x	10/29/2019
	Consultant's Representative	Date	LADOT Representative	Date

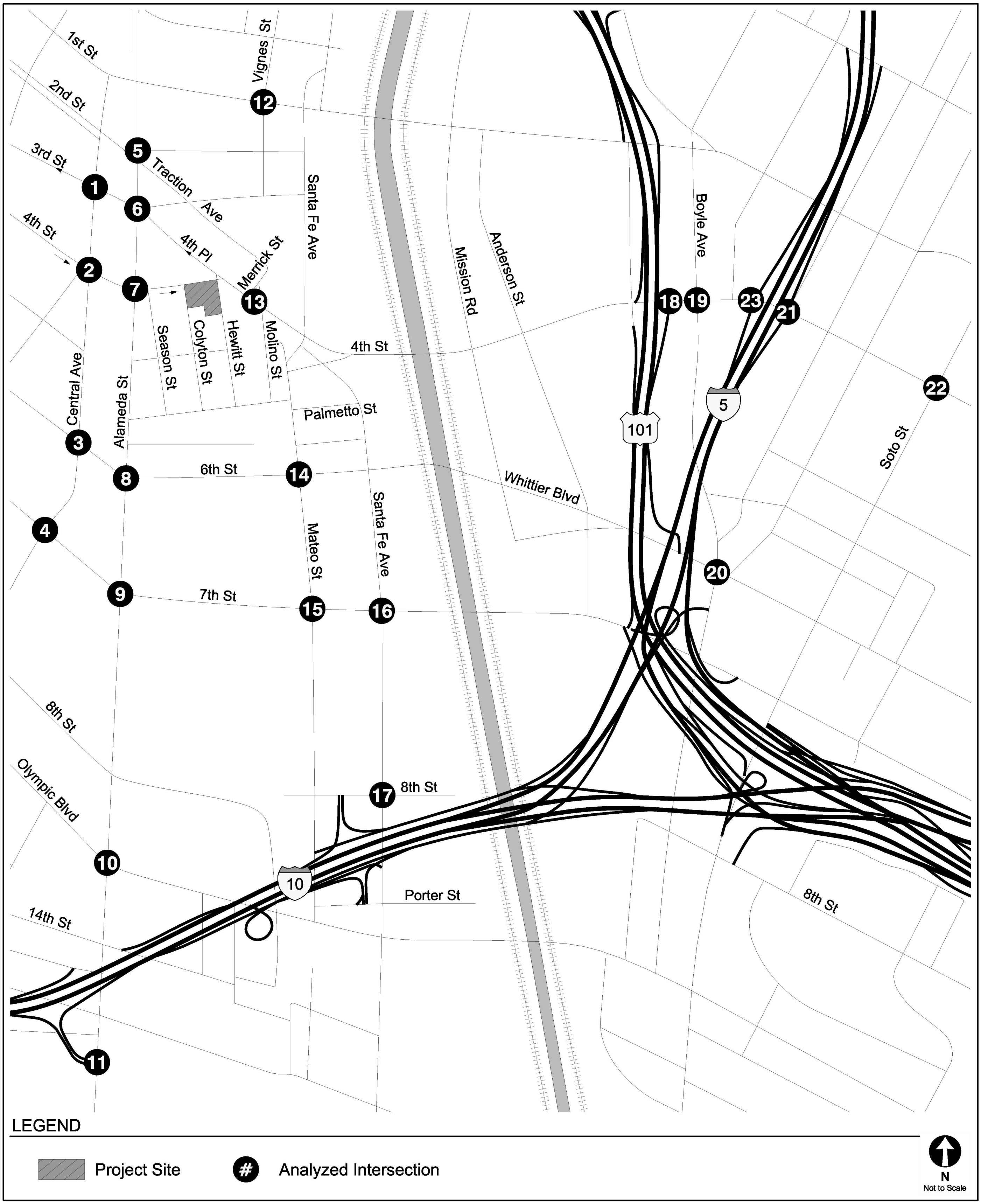
Gibson transportation consulting, inc.



Source: Gensler. October, 2019.

PROJECT SITE PLAN

FIGURE 1



STUDY AREA

FIGURE 2

TABLE 1
STUDY INTERSECTIONS

No	Intersection	Jurisdiction
1.	Central Avenue & 3rd Street	City of Los Angeles
2.	Central Avenue & 4th Street	City of Los Angeles
3.	Central Avenue & 6th Street	City of Los Angeles
4.	Central Avenue & 7th Street	City of Los Angeles
5.	Alameda Street & 2nd Street	City of Los Angeles
6.	Alameda Street & 3rd Street/4th Place	City of Los Angeles
7.	Alameda Street & 4th Street	City of Los Angeles
8.	Alameda Street & 6th Street	City of Los Angeles
9.	Alameda Street & 7th Street	City of Los Angeles
10.	Alameda Street & Olympic Boulevard	City of Los Angeles
11.	Alameda Street & I-10 Eastbound Ramps	City of Los Angeles / Caltrans
12.	Vignes Street & 1st Street	City of Los Angeles
13.	Merrick Street/Molino Street & 4th Street	City of Los Angeles
14.	Mateo Street & 6th Street	City of Los Angeles
15.	Mateo Street & 7th Street	City of Los Angeles
16.	Santa Fe Avenue & 7th Street	City of Los Angeles
17.	Santa Fe Avenue & 8th Street	City of Los Angeles
18.	US 101 Northbound Off-Ramp & 4th Street	City of Los Angeles / Caltrans
19.	Boyle Avenue & 4th Street	City of Los Angeles
20.	Boyle Avenue & Whittier Boulevard	City of Los Angeles
21.	I-5 Northbound Ramps & 4th Street	City of Los Angeles / Caltrans
22.	Soto Street & 4th Street	City of Los Angeles
23.	I-5 Southbound Ramps & 4th Street [a]	City of Los Angeles / Caltrans

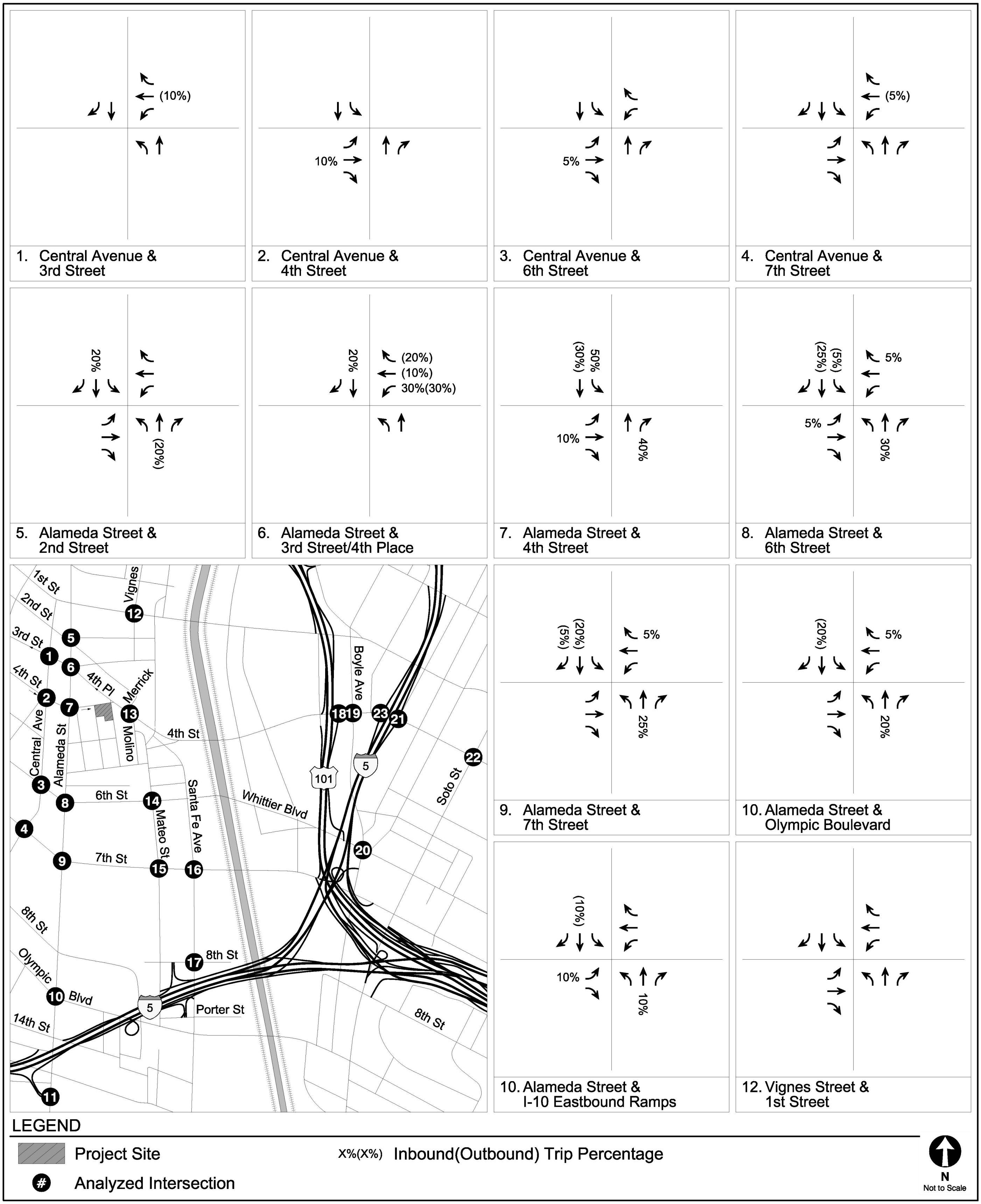
Notes

[a] Traffic signal installation was completed in Year 2018. Therefore, the intersection is considered unsignalized under Existing Year 2017 Conditions.

TABLE 2
TRIP GENERATION

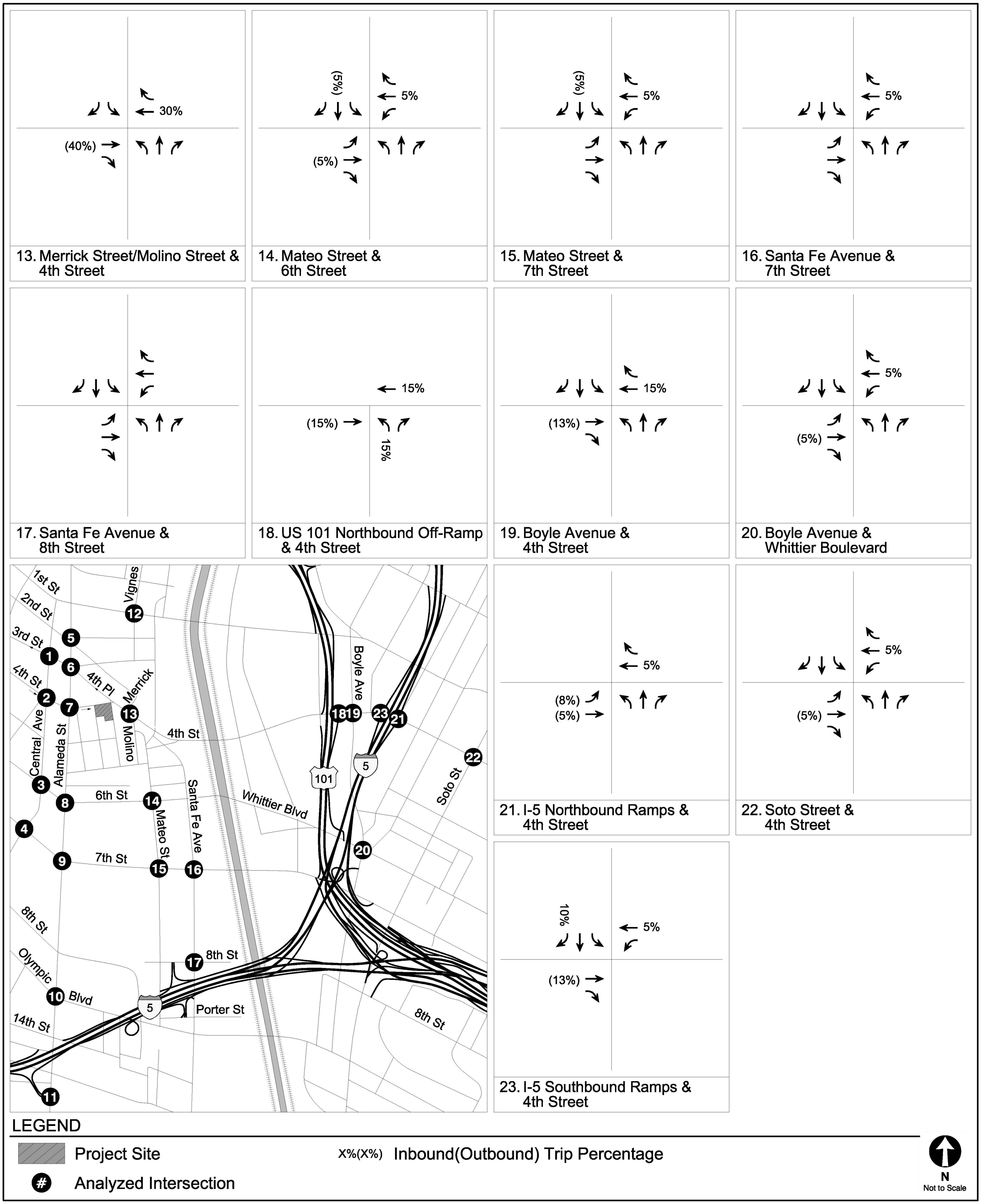
Land Use	ITE Land Use Code	Size	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Trip Generation Rates [a]									
Museum	580	per 1,000 sf	N/A	86%	14%	0.28	16%	84%	0.18
Office	710	per 1,000 sf	9.74	86%	14%	1.16	16%	84%	1.15
High-Turnover Restaurant	932	per 1,000 sf	112.18	55%	45%	9.94	62%	38%	9.77
Proposed Project									
Museum	580	7.8 ksf	10	2	0	2	0	1	1
Less 5% Transit/Walk-In [b]			*(1)*	*0*	*0*	*0*	*0*	*0*	*0*
Subtotal - Museum			**9**	**2**	**0**	**2**	**0**	**1**	**1**
Office	710	311.682 ksf	3,036	311	51	362	57	301	358
Less 5% Transit/Walk-In [b]			*(152)*	*(16)*	*(3)*	*(19)*	*(3)*	*(15)*	*(18)*
Subtotal - Office			**2,884**	**295**	**48**	**343**	**54**	**286**	**340**
Restaurant	932	8.149 ksf	914	45	36	81	50	30	80
Less 20% Internal Capture [c]			*(183)*	*(9)*	*(7)*	*(16)*	*(10)*	*(6)*	*(16)*
Less 5% Transit/Walk-In [b]			*(37)*	*(2)*	*(1)*	*(3)*	*(2)*	*(1)*	*(3)*
Less 20% Pass-by [d]			*(139)*	*(7)*	*(6)*	*(13)*	*(8)*	*(5)*	*(13)*
Subtotal - Retail			**555**	**27**	**22**	**49**	**30**	**18**	**48**
Total - Proposed Project			**3,448**	**324**	**70**	**394**	**84**	**305**	**389**
Existing Uses									
Office	710	3.515 ksf	34	3	1	4	1	3	4
Less 5% Transit/Walk-In [b]			*(2)*	*0*	*0*	*0*	*0*	*0*	*0*
Subtotal - Office			**32**	**3**	**1**	**4**	**1**	**3**	**4**
Museum	580	7.8 ksf	N/A	2	0	2	0	1	1
Less 5% Transit/Walk-In [b]			*N/A*	*0*	*0*	*0*	*0*	*0*	*0*
Subtotal - Museum			**0**	**2**	**0**	**2**	**0**	**1**	**1**
Total - Existing Uses			**32**	**5**	**1**	**6**	**1**	**4**	**5**
Net New Project Trips			**3,416**	**319**	**69**	**388**	**83**	**301**	**384**

Notes
[a] Source: Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017.
[b] No daily trip generation rate is provided for ITE Land Use 580 (Museum), therefore, it was assumed that the afternoon peak hour trips account for 10% of the daily trips.
[c] The Project Site is located within walking distance of a LADOT DASH stop, therefore a 5% transit reduction is applied to account for transit usage and walking visitor arrivals from the surrounding neighborhoods and adjacent commercial developments.
[d] Internal capture adjustments account for person trips made between distinct land uses within a mixed-use development (e.g., employees visiting the restaurant uses).
[e] Pass-by adjustments account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion, and are based on ITE's Trip Generation Handbook, 3rd Edition (September 2017) and LADOT's Transportation Impact Study Guidelines.



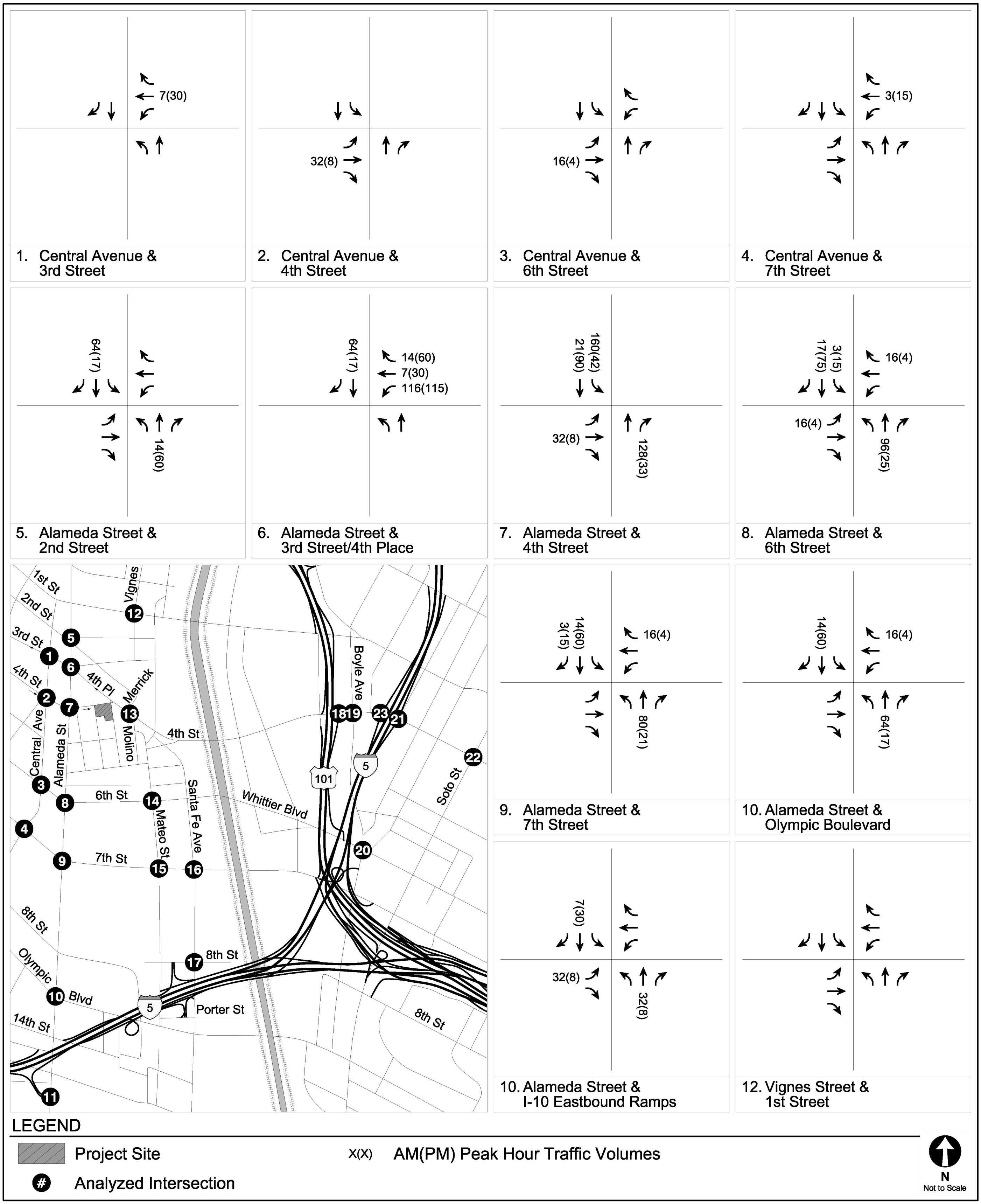
TRIP DISTRIBUTION

FIGURE 3



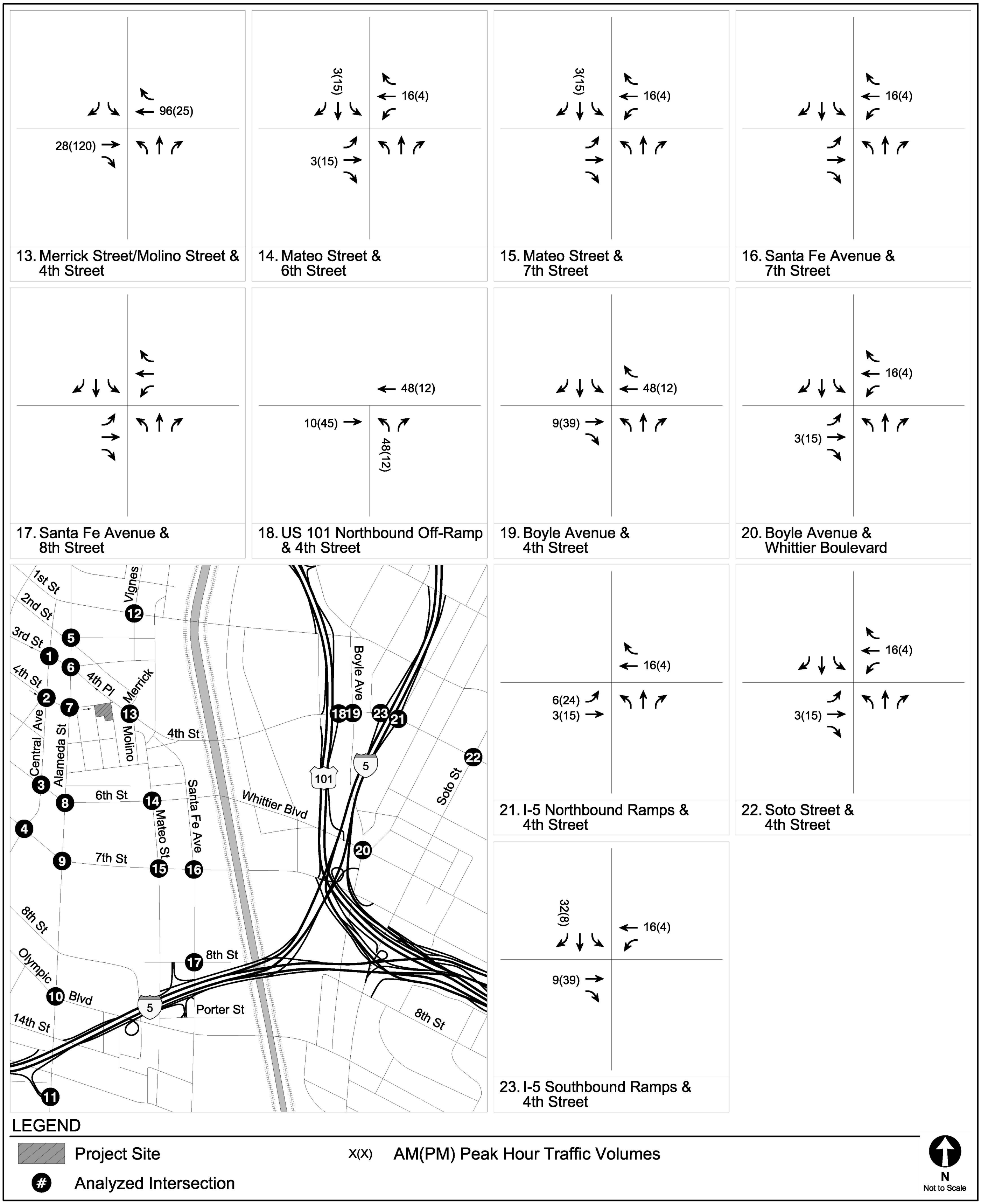
TRIP DISTRIBUTION

FIGURE 3 (CONT.)



PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE 4



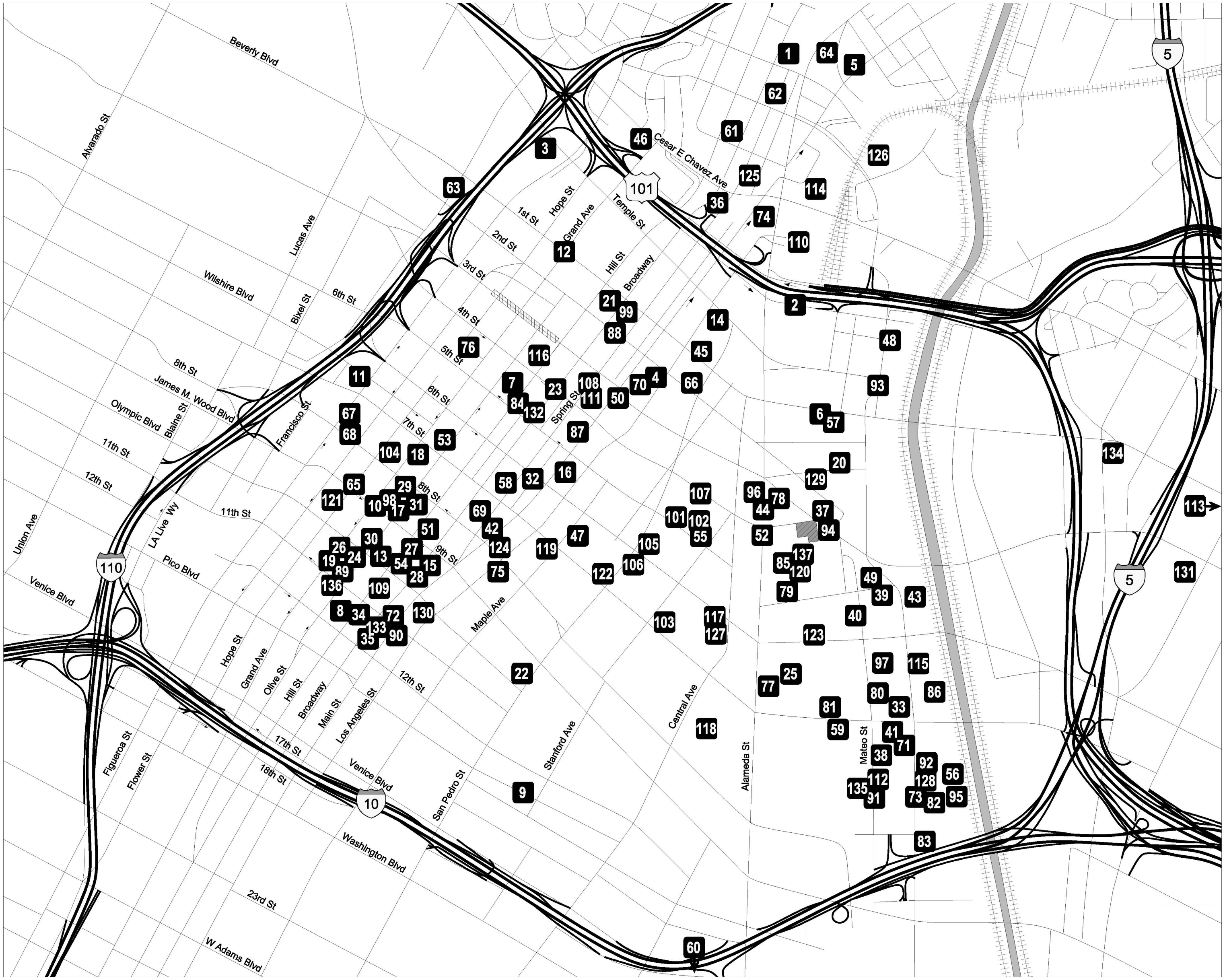
PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
4 (CONT.)

Gibson
transportation consulting, inc.

LEGEND

- Project Site
- # Related Project



N
Not to Scale

LOCATIONS OF RELATED PROJECTS

FIGURE 5

TABLE 3
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
1 [b]	Blossom Plaza	900 N Broadway	223 condominium units, 25 ksf retail, 15 ksf restaurant, 7 ksf cultural center	2,767	66	89	155	105	79	184
2	Bus Maintenance & Inspection Facility	454 E Commercial St	2 acre bus facility	0	22	8	30	9	1	10
3	Da Vinci Apartments	327 N Fremont Ave	600 apartment units and 30 ksf retail	5,457	113	248	361	286	217	503
4 [b]	Vibiana Lofts (Mixed-Use)	225 S Los Angeles St	300 condominium units and 3,400 sf retail	1,910	88	136	224	75	52	126
5	1101 N Main Condos	1101 N Main St	316 condominium units	1,102	-9	80	71	75	12	87
6 [b]	Mixed-Use Project (Megatoys)	905 E 2nd St	320 condominium units and 18,712 sf retail	1,207	-6	70	64	69	23	92
7	5th & Olive (formerly Park Fifth Project)	437 S Hill St	660 condominium units and 13,742 sf restaurant	4,707	71	273	344	279	158	437
8	11th & Hill Project	1115 S Hill St	172 condominium units and 6,850 sf restaurant	543	-45	40	-5	50	-7	43
9 [b]	Stanford Regency Plaza	810 E Pico Bl	181,620 sf retail	1,889	54	34	88	59	63	122
10	Embassy Tower	848 S Grand Ave	420 condominium units and 38,500 sf retail	3,882	66	144	210	212	165	377
11 [b][c]	Wilshire Grand Project	900 W Wilshire Bl	560 hotel rooms, 100 apartment units, 150,000 sf office and 275,000 sf retail/restaurant	3,624	725	75	800	94	764	858
12 [d]	Grand Avenue Project	100 S Grand Ave	968 condominium units, 242 apartment units, 225 room hotel, 152,150 sf retail, 650,000 sf office, 52,000 sf restaurant, 53,000 sf supermarket, 24,000 sf health club, and 250 seat event facility	21,631	919	632	1,551	1,120	1,344	2,464
13 [b]	Olympic & Hill Mixed-Use Project	301 W Olympic Bl	300 apartment units, 14,500 sf retail, and 8,500 sf restaurant	2,496	30	104	134	143	82	225
14	LA Civic Center Office	150 N Los Angeles St	712,500 sf office, 35,000 sf retail, and 2,500 sf child care	13,534	930	118	1,048	435	942	1,377
15	Broadway Palace	928 S Broadway	667 apartment units, 17 condominium units, and 58,800 sf retail	4,715	21	229	250	272	109	381
16	Mixed-Use	534 S Main St	160 apartment units, 18,000 sf retail, 3,500 sf restaurant, and 3,500 sf fast food	2,213	52	75	127	87	58	145
17	Mixed-Use	840 S Olive St	303 condominium units and 9,680 sf restaurant	3,071	81	166	247	174	96	270
18 [b]	Mixed-Use	710 S Grand Ave	700 apartment units, 27,000 sf retail, and 5,000 sf restaurant	5,245	88	185	273	275	202	477
19	Restaurant	1036 S Grand Ave	7,149 sf restaurant	492	2	3	5	27	14	41
20	Santa Fe Freight Yard Redevelopment	950 E 3rd St	532-student school, 635 apartment units, and 30,062 sf retail	6,372	162	177	339	245	213	458
21	Retail/Restaurant	201 S Broadway	27,765 sf retail/restaurant	1,638	-40	-41	-81	53	17	70
22	The City Market (Mixed-Use)	1057 S San Pedro St	877 apartment units, 68 condominium units, 210 hotel rooms, 549,141 sf office, 224,862 sf retail, and 744 cinema seats	16,433	837	434	1,271	632	957	1,589
23	Mixed-Use	400 S Broadway	450 apartment units, 10,000 sf retail, and 5,000 sf bar	3,292	50	187	237	193	112	305
24 [b]	1001 S. Olive Street	1001 S Olive St	201 apartment units and 5,000 sf retail	1,581	22	79	101	94	51	145
25	Camden Arts Mixed-Use	1525 E Industrial St	328 apartment units, 27,300 sf office, 6,400 sf retail, and 5,700 sf restaurant	2,288	58	73	131	86	69	155
26 [b]	Mixed-Use	1000 S Grand Ave	274 apartment units and 12,000 sf restaurant	2,216	27	94	121	130	69	199
27	Hill Street Mixed-Use	920 S Hill St	239 apartment units and 5,400 sf retail	1,476	23	84	107	87	50	137
28	Broadway Mixed-Use	955 S Broadway	201 apartment units and 6,000 sf retail	1,275	21	72	93	74	43	117
29 [b]	Mixed-Use	801 S Olive St	331 apartment units and 10,000 sf restaurant	2,557	33	129	162	140	83	225
30 [b]	Olympic & Olive Mixed-Use Project	960 S Olive St	263 apartment units and 14,500 sf restaurant	2,266	25	91	116	48	23	71

TABLE 3
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
31	Mixed-Use	820 S Olive St	589 apartment units and 4,500 sf retail	3,309	63	202	264	195	106	302
32	Mixed-Use	601 S Main St	452 apartment units and 25,000 sf retail	2,686	36	144	179	152	87	238
33	Mixed-Use	2051 E 7th St	240 apartment units, 8,000 sf retail, and 3,500 sf restaurant	2,310	17	127	144	145	64	209
34	Mixed-Use (Herald Examiner)	1111 S Broadway	214 apartment units and 10,000 sf retail	5,198	144	176	319	258	274	532
35	Mixed-Use	1148 S Broadway	94 apartment units and 2,500 sf retail	553	8	30	38	32	18	50
36	La Plaza Cultura Village	527 N Spring St	345 apartment units, 23,000 sf retail, 21,000 sf specialty retail, and 11,000 sf restaurant	3,585	49	118	167	189	131	320
37 [b]	Mixed-Use (Coca Cola)	963 E 4th St	75,000 sf office, 25,000 sf retail, and 20,000 sf restaurant	2,512	106	22	128	113	138	251
38	Mixed-Use	826 S Mateo St	90 live/work units, 11,000 sf retail, and 5,600 sf restaurant	1,267	11	34	45	62	39	101
39	520 Mateo	520 S Mateo St	600 live-work apartment units, 90,000 sf live-work office, 10,000 sf museum, 20,000 sf office, and 30,000 sf commercial	4,995	157	220	373	274	223	491
40	Retail (Palmetto & Mateo)	555 S Mateo St	153,000 sf retail OR 130,000 sf retail, and 50,000 sf office	4,300	5	30	35	220	205	425
41	Mixed-Use	2030 E 7th St	243,000 sf office and 40,000 sf retail	2,306	274	34	308	69	249	318
42	Mixed-Use	732 S Spring St	400 apartment units and 15,000 sf retail	3,359	59	152	211	164	104	268
43	Office	540 S Santa Fe Ave	65,812 sf office	726	90	12	102	17	81	98
44	Mixed-Use	360 S Alameda St	52 apartment units, 2,400 sf restaurant, and 6,900 sf office	670	25	33	58	35	26	61
45	Apartments	118 S Astronaut es Onizuka St	77 apartment units	97	-1	20	19	19	6	25
46	Mixed-Use	700 W Cesar Chavez Ave	300 apartment units and 8,000 sf retail	1,511	7	89	96	99	54	153
47	Clinic at 7th & Wall	649 S Wall St	66 emp medical office and 55 assisted living beds	104	24	5	29	3	24	27
48	Metro Emergency Security Operations Center	410 N Center St	110,000 sf office	1,165	87	0	87	0	79	79
49	Restaurant	500 S Mateo St	12,682 sf restaurant	1,052	48	41	89	50	31	81
50	Medallion Phase 2	300 S Main St	471 apartment units, 27,780 sf restaurant, and 5,190 sf retail	4,691	143	243	386	257	153	410
51	Alexan South Broadway	850 S Hill St	305 apartment units, 3,500 sf retail, and 3,500 sf restaurant	1,998	29	108	137	117	67	184
52	400 S Alameda Street	400 S Alameda St	66 hotel rooms, 2,130 sf restaurant and 840 sf retail	512	20	18	38	23	14	37
53	Giannini Place (Nomad Hotel)	649 S Olive St	241 hotel rooms	1,674	60	44	109	63	60	123
54	940 S Hill Mixed-Use	940 S Hill St	232 apartment units and 14,000 sf retail	1,881	20	80	100	115	53	168
55	Mixed Use	719 E 5th St	160 apartment units and 7,500 sf retail	1,033	15	58	73	59	37	96
56	Mixed-Use	2130 E Violet St	94,000 sf of office, 3,500 sf retail and 4,000 sf restaurant	1,351	137	30	167	39	122	161
57	Mixed-Use (Private Club)	929 E 2nd St	37,979 sf retail and 71,078 sf private club space	2,153	68	12	80	105	96	201
58	Spring St Hotel	633 S Spring St	176 hotel rooms, 5,290 sf bar, and 8,430 sf restaurant	2,045	83	33	116	97	99	196
59	Mixed Use (Revised)	1800 E 7th St	122 apartment units and 7,900 sf of commercial	1,536	42	74	116	74	46	120
60	Restaurant	1722 E 16th St	8,515 sf restaurant	592	-4	2	-2	36	11	47

TABLE 3 (cont.)
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
61	Hill Mixed Use Project	708 N Hill St	162 apartment units and 5,000 sf retail	980	16	57	73	57	33	90
62	Alpine Mixed-Use	211 W Alpine St	122 apartment units and 7,500 sf retail	566	9	42	51	37	18	55
63	Beaudry Ave & 2nd St Mixed-Use Project	130 S Beaudry Ave	220 apartment units and 9,000 sf other	1,159	8	76	84	76	29	105
64	College Station Mixed-Use	129 W College St, 924 N Spring St	770 apartment units and 51,390 sf commercial	6,583	169	290	461	307	201	509
65	CIM South Park Apartments	888 S Hope St	526 apartment units	3,498	54	214	268	212	114	326
66 [b]	Wakaba LA	232 E 2nd St	240 apartment units and 16,000 sf retail	2,279	33	104	137	125	83	208
67	Mitsui Fudosan (Eighth and Figueroa Tower)	744 S Figueroa St	436 apartment units, 3,750 sf restaurant, and 3,750 sf retail	2,644	37	146	183	158	86	244
68	945 W 8th Street	845 W 8th St	781 apartment units, and 6,700 sf commercial	2,869	63	146	209	144	91	235
69	Holland Partner Group/Eighth and Spring	737 S Spring St	320 apartment units and 25,000 sf pharmacy/drugstore	3,942	72	141	213	167	116	283
70	Budokan of Los Angeles	237 S Los Angeles St	43,453 sf sports complex	1,869	79	50	129	161	98	259
71	Ford Factory Building	2030 E 7th St	243,583 sf office and 40,000 sf retail	2,306	274	34	308	69	249	318
72 [b]	Harris Building Office Conversion	11th St & Main St	52,000 sf office	364	40	1	41	-1	38	37
73	Soho House	1000 S Santa Fe Ave	48-room private club and 8,447 sf restaurant and bar	966	36	38	74	49	20	69
74 [b]	Italian American Mixed-Useseum	125 Paseo de la Plaza	7,140 sf museum	0	2	0	2	0	1	1
75 [b]	Max Lofts	819 S Santee St	88 apartment units	585	9	36	45	36	19	55
76 [b]	Skyspace	633 W Fifth St	observation deck	0	13	12	25	13	12	25
77	668 S Alameda St Mixed-Use	668 S Alameda St	475 live-work apartment units, 25,200 sf live-work office, and 57,000 sf office/retail/restaurant/market	4,002	107	182	289	216	145	361
78	330 S Alameda St Mixed-Use	330 S Alameda St	186 live-work apartment units, 10,415 sf office, and 11,925 sf retail	1,662	36	76	112	91	65	156
79	Palmetto	527 S Colyton St	310 apartment units, 11,375 sf commercial, and 11,736 sf production space	2,095	36	116	152	121	74	195
80	676 Mateo Mixed-Use	676 Mateo St	185 live/work units, 3,900 sf live/work office, 15,005 sf restaurant, and 8,375 sf retail	1,990	50	95	145	106	51	157
81	Hillcrest Mixed-Use	1745 E 7th St	57 apartment units and 6,000 sf commercial	635	10	25	35	34	23	57
82	2110 Bay Street	2110 Bay St	110 live/work apartments, 113,350 sf creative office, and 43,657 shopping center (mix of retail, market, health club, restaurant)	2,394	180	63	243	89	192	281
83 [b]	1200 S Santa Fe Avenue	1200 S Santa Fe Ave	53 apartment units and 13,000 sf retail	907	12	27	39	44	37	81
84	Fifth and Hill	333 W 5th St	100 condominium units, 200 hotel rooms, 27,500 sf commercial or 142 condominium units, and 25,000 sf commercial	3,358	64	72	136	201	129	330
85	Arts District Center (Mixed-Use)	1129 E 5th St	129 condominium units, 113-room hotel, 26,979 sf retail, 31,719 sf restaurant, and 12,771 sf art space	4,674	130	140	270	157	69	226
86	670 Mesquit	670 Mesquit St	236 hotel rooms, 308 apartment units, 79,240 sf retail, 89,576 sf restaurant, 93,617 sf event space, 62,148 sf gym, 56,912 sf grocery, and 944,055 sf office	26,489	1,513	451	1,964	698	1,316	2,014
87	433 S Main Street	433 S Main St	196 condominium units, 5,300 sf retail, and 900 sf restaurant	1,450	32	72	104	61	37	98
88	Tribune (LA Times) South Tower Project	222 W 2nd St	107 condominium units, 534,044 sf office, and 7,200 sf retail	4,006	467	93	560	118	423	541
89	1045 S Olive Street	1045 S. Olive St	800 condominium units and 15,000 sf retail	5,289	69	297	366	306	166	472
90	Mixed-use	1100 S Main St	379 apartment units and 25,810 sf retail	385	9	103	112	78	14	92

TABLE 3 (cont.)
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
91	1000 S Mateo Street	1000 S Mateo St	104 live/work units, 101,983 sf office, 22,109 sf retail/restaurant, 5,519 sf art production	2,238	153	83	236	90	131	221
92	2117 E Violet Street	2117 E Violet St	509 live/work units and 288,230 sf commercial	4,477	329	122	451	130	330	460
93	234 N Center Street	220 N Center St	430 apartment units and 8,742 sf retail	2,166	33	119	152	121	79	200
94	940 E 4th Street	940 E 4th St	93 live/work units and 20,248 sf commercial	788	14	37	51	44	31	75
95	2159 E Bay Street	2159 E Bay St	202,954 sf creative office and 21,720 sf commercial	4,417	193	27	220	115	245	360
96	333 S Alameda Street	333 S Alameda St	994 apartment units and 99,300 sf commercial	8,445	134	260	394	390	329	719
97	641 Imperial Street	641 Imperial St	140 live/work units and 14,700 sf of office	1,093	34	60	94	61	48	109
98	845 Olive & 842 Grand Mixed-Use	845 S Olive St	208 apartment units and 2,430 sf retail	1,305	25	76	101	77	42	119
99	Mixed-Use (Times Mirror Square)	100 S Broadway	1,127 apartment units, 285,088 sf office, 50,000 sf supermarket, and 75,589 sf restaurant	8,535	94	341	435	294	38	332
100	Southern California Flower Market Project	755 S Wall St	322 apartment units, 53,200 sf office, and 8,820 sf commercial	2,499	108	82	191	164	141	305
101	Mixed-Use	609 E 5th St	151 apartment units	1,004	15	62	77	61	33	94
102	Residential	713 E 5th St	51 apartment units	208	15	10	25	9	8	17
103	656 S Stanford Ave	656 S Stanford Ave	82 apartment units	545	8	33	41	33	18	51
104	8th/Grand/Hope Project	754 S Hope St	409 condominium units and 7,329 sf retail	2,315	35	137	172	137	78	215
105	Weingart Tower - Affordable Housing	554 S San Pedro St	378 affordable / 4-market-rate apartment units, 1,758 sf retail, 4,410 sf office, and 5,932 sf flex	2,186	107	138	245	96	88	184
106	600 S San Pedro St	600 S San Pedro St	303 apartment units and 19,909 sf commercial	636	38	25	63	30	37	67
107	508 E 4th St	508 E 4th St	41 apartment units	167	8	12	20	8	6	14
108	4th & Spring Hotel	361 S Spring St	315 hotel rooms and 2,000 sf meeting space	2,273	91	59	150	84	85	169
109	Olympic & Hill Mixed Use	1030 S Hill St	700 apartment units, 7,000 sf retail, 7,000 sf restaurant	3,392	49	193	242	181	104	285
110	Alameda District Plan	Union Station Terminal Annex	22 residential units, 7,443,200 sf of office, 645,000 sf retail, 750 hotel rooms, 20,000 sf restaurant, and 70,000 sf museum	25,312	862	527	1,389	734	1,042	1,776
111	Hellman / Banco Building	354 S Spring St	212 apartment units	1,410	22	86	108	85	46	131
112	Industrial Park	1005 S Mateo St	94,849 sf industrial park	426	40	9	49	10	39	49
113	ELACC/Bridge Housing Project	SW corner of 1st St & Soto St	66 affordable housing units, 2,500 sf high-turnover restaurant and 2,500 sf retail	496	22	26	48	13	18	41
114	900 N Alameda Street	900 N Alameda St	179,900 sf data center	178	8	8	16	3	13	16
115	Mixed-Use	640 S Santa Fe Ave	91,185 sf office, 9,430 sf retail, and 6.550 sf restaurant	1,330	90	8	98	43	114	157
116	Equity Residential Mixed-Use	340 S Hill St	406 apartment units, 22 affordable units, 2,980 sf office, and 2,630 sf retail	2,253	36	129	165	133	75	208
117	Mixed-Use	601 S Central Ave	236 apartment units and 12,000 sf commercial	1,074	17	79	96	70	32	102
118	ROW DTLA Mixed-Use	777 S Alameda St	850,400 sf of office, 117,400 sf restaurant, 66,200 sf retail, and 125 hotel rooms	916	-134	-172	-306	-157	35	-122
119	7th & Maple Mixed-Use	701 S Maple Ave	452 apartment units, 6,800 sf retail, and 6,800 sf restaurant	3,199	67	179	246	185	105	290
120	1100 5th Mixed-Use	1100 E 5th St	220 live/work units, 4,350 sf live/work office, 15,671 sf office, 19,609 sf restaurant, and 9,250 sf retail	2,583	79	119	198	133	74	207

TABLE 3 (cont.)
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
121	949 S Hope Street Mixed-Use Development	949 S Hope St	236 apartment units and 5,954 sf retail	791	8	45	53	43	7	50
122	655 S San Pedro Street Residential	655 S San Pedro St	81 apartment units	539	8	33	41	33	17	50
123	6AM	1206-1338 E 6th St/1205-1321 Wholesale St	412 hotel rooms, 1,305 apartment units, 431 condominium units, 253,500 sf office, 127,600 sf community space, 29,300 sf school and 22,400 sf art space	23,975	1,199	1,369	2,568	1,246	1,133	2,379
124	Mixed-Use	755 S Los Angeles St	60,243 sf of office, 16,694 sf retail, and 26,959 sf restaurant	2,482	110	57	167	105	100	205
125	643-655 N Spring Street	643-655 N Spring St	281 apartment units, 142 hotel rooms, 17,003 sf commercial, and 2,532 sf restaurant	2,723	61	122	183	138	91	229
126	Men's Central Jail Replacement	441 E Bauchet St	LA CO. Consolidated Correctional Treatment Facility	242	0	9	9	0	29	29
127	Mixed-Use	930 E 6th St	236 apartment units, 12,000 sf retail	1,074	17	79	96	70	32	102
128	Mixed-Use	1000 S Sante Fe St	14,193 sf market, 6,793 sf health club, 10,065 sf restaurant	966	36	38	74	49	20	69
129	Mixed-Use	810 E 3rd St	4 live-work apartment units, 3,074 sf drinking place, 285 sf quality restaurant, 6,171 sf retail, and 209 sf high-turnover restaurant	1,487	37	32	69	87	48	135
130	Hotel	124 E Olympic Bl	149-room hotel, 6,716 sf restaurant	1,334	53	45	98	58	33	91
131	Charter School	443 S Soto St	625-student charter school	277	131	112	243	32	25	57
132	Mixed-Use	323 W 5th St	31 apartment units, 190-room hotel, 6,119 sf meeting room, 29,232 sf restaurant	2,809	73	49	122	126	100	226
133	Hotel	1138 S Broadway	138-room hotel	644	20	25	45	22	25	47
134	Mixed-Use	110 S Boyle Ave	44 affordable housing units, 3,000 sf bank, 5,000 sf retail	624	29	29	58	32	21	53
135	1024 Mateo St MU	1024 S Mateo St	104 apartment units, 101,983 sf of office, 16,729 sf restaurant, 5,830 sf retail, 5,519 sf light industrial	2,095	144	79	223	82	123	205
136	Mack Urban (Site 2 & 3)	1105 S Olive St	935 high-rise apartment units, 10,919 sf retail, and 10,919 sf restaurant	5,241	122	278	700	258	160	418
137	Office, Restaurant, Fast-Food	431 S Colyton St	97,577 sf office, 10,739 sf restaurant, and 1,977 sf feast-food restaurant without drive-through	1,524	80	18	98	60	95	155

Notes
[a] Related projects list based on information provided by LADOT, Los Angeles Department of City Planning, recent case filings, and recent traffic studies within 1.5 miles of the Project Site as of June 4, 2019.
[b] Although construction of the related project may be partially complete/entirely complete, the project was not fully occupied at the time of the NOP or when traffic counts were conducted. Therefore, the related project was considered and listed to provide a more conservative analysis.
[c] The project description and trip generation information is based on *Transportation Study for the Wilshire Grand Redevelopment Project* (Gibson Transportation Consulting, Inc., April 2010), which was reviewed and approved by LADOT in April 2010. The project that was ultimately constructed contains a reduced development program (889 hotel rooms, 369,299 sf of office, 34,765 sf retail/restaurant and 46,170 sf of ancillary uses). Thus, the assumptions are conservative.
[d] The related project information based on the *Final Environmental Impact Report for the Grand Avenue Project* (Christopher A. Joseph & Associates, November 2006), and does not account for the completed phase on Parcels L and M-2.

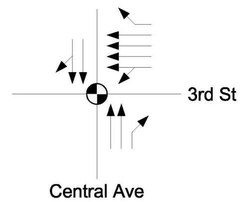
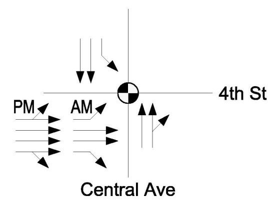
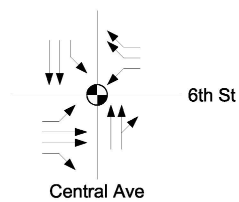
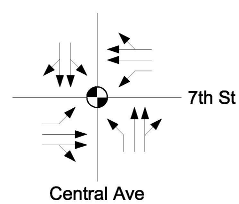
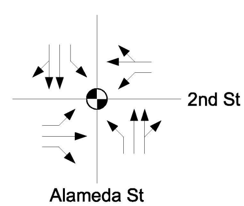
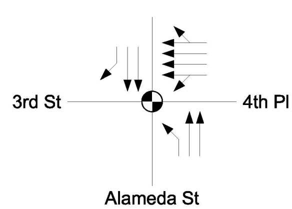
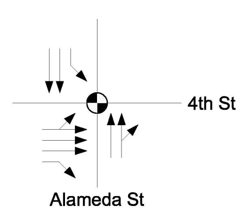
Appendix B

Intersection Lane Configurations

Gibson transportation consulting, inc.

LEGEND

Traffic Signal

	EXISTING CONDITIONS (YEAR 2017)	FUTURE CONDITIONS (YEAR 2023)
1. Central Avenue & 3rd Street		Same as Existing Conditions
2. Central Avenue & 4th Street		Same as Existing Conditions
3. Central Avenue & 6th Street		Same as Existing Conditions
4. Central Avenue & 7th Street		Same as Existing Conditions
5. Alameda Street & 2nd Street		Same as Existing Conditions
6. Alameda Street & 3rd Street/4th Place		Same as Existing Conditions
7. Alameda Street & 4th Street		Same as Existing Conditions

INTERSECTION LANE CONFIGURATIONS

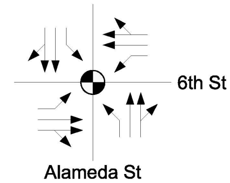
APPENDIX B

LEGEND

Traffic Signal

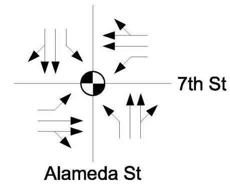
	EXISTING CONDITIONS (YEAR 2017)	FUTURE CONDITIONS (YEAR 2023)

8. Alameda Street & 6th Street



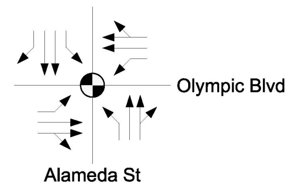
Same as Existing Conditions

9. Alameda Street & 7th Street



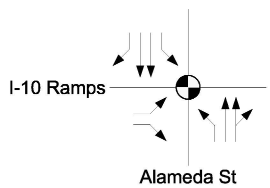
Same as Existing Conditions

10. Alameda Street & Olympic Boulevard



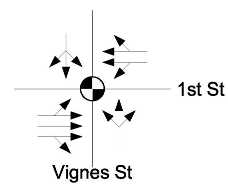
Same as Existing Conditions

11. Alameda Street & I-10 EB Ramps



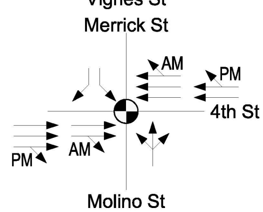
Same as Existing Conditions

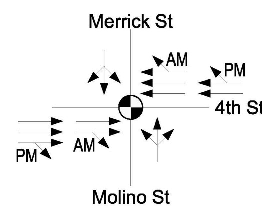
12. Vignes Street & 1st Street



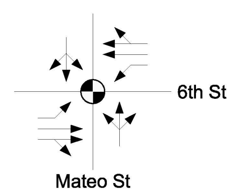
Same as Existing Conditions

13. Merrick Street/Molino Street & 4th Street



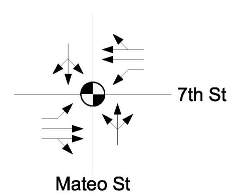


14. Mateo Street & 6th Street



Same as Existing Conditions

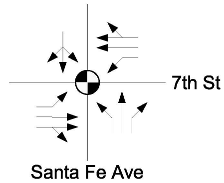
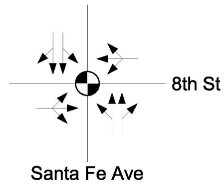
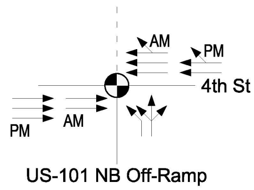
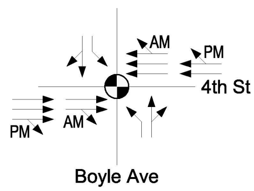
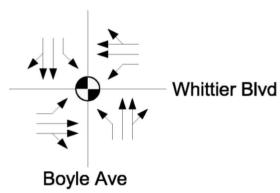
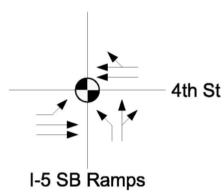
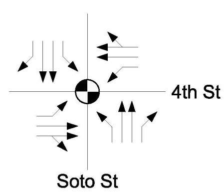
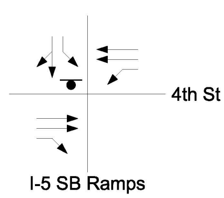
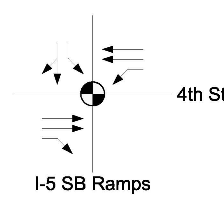
15. Mateo Street & 7th Street



Same as Existing Conditions

LEGEND

- Traffic Signal
- Stop Sign

	EXISTING CONDITIONS (YEAR 2017)	FUTURE CONDITIONS (YEAR 2023)
16. Santa Fe Avenue & 7th Street		Same as Existing Conditions
17. Santa Fe Avenue & 8th Street		Same as Existing Conditions
18. US-101 NB Off-Ramp & 4th Street		Same as Existing Conditions
19. Boyle Avenue & 4th Street		Same as Existing Conditions
20. Boyle Avenue & Whittier Boulevard		Same as Existing Conditions
21. I-5 NB Ramps & 4th Street		Same as Existing Conditions
22. Soto Street & 4th Street		Same as Existing Conditions
23. I-5 SB Ramps & 4th Street		

INTERSECTION LANE CONFIGURATIONS

APPENDIX B

Appendix C

Traffic Counts

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Central Ave

East/West 3rd St

Day: Thursday Date: November 21, 2013 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	92	48	0	212
BIKES	34	24	32	33
BUSES	15	18	0	101

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	121	8.45	162	8.30	0	0.00	708	8.00
PM PK 15 MIN	279	17.30	103	17.00	0	0.00	347	17.00
AM PK HOUR	469	8.45	515	8.00	0	0.00	2548	8.00
PM PK HOUR	1036	17.00	375	16.30	0	0.00	1241	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	112	244	0	356
8-9	137	271	0	408
9-10	158	309	0	467
15-16	114	308	0	422
16-17	171	501	0	672
17-18	289	747	0	1036
TOTAL	981	2380	0	3361

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	310	55	365
8-9	0	403	112	515
9-10	0	301	99	400
15-16	0	218	60	278
16-17	0	258	81	339
17-18	0	272	92	364
TOTAL	0	1762	499	2261

	TOTAL	**XING S/L**		**XING N/L**	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	721	18	0	16	0
8-9	923	13	0	28	0
9-10	867	39	0	41	0
15-16	700	56	0	66	0
16-17	1011	51	0	47	0
17-18	1400	30	0	32	0
TOTAL	5622	207	0	230	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	0	0	0
8-9	0	0	0	0
9-10	0	0	0	0
15-16	0	0	0	0
16-17	0	0	0	0
17-18	0	0	0	0
TOTAL	0	0	0	0

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	174	1510	36	1720
8-9	203	2260	85	2548
9-10	164	1690	99	1953
15-16	102	723	38	863
16-17	84	866	104	1054
17-18	115	994	132	1241
TOTAL	842	8043	494	9379

	TOTAL	**XING W/L**		**XING E/L**	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	1720	26	0	24	2
8-9	2548	35	0	27	0
9-10	1953	54	0	27	0
15-16	863	77	0	55	0
16-17	1054	41	0	70	0
17-18	1241	28	0	52	0
TOTAL	9379	261	0	255	2

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Central St

East/West 4th St

Day: WEDNESDAY Date: September 11, 2013 Weather: SUNNY

Hours: 7-10AM & 3-6PM Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	107	88	166	0
BIKES	40	20	37	9
BUSES	15	10	51	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	123	8.15	167	7.45	151	9.45	0	0.00
PM PK 15 MIN	295	17.45	100	17.00	410	17.15	0	0.00
AM PK HOUR	414	8.15	585	7.45	509	9.00	0	0.00
PM PK HOUR	986	17.00	349	16.30	1604	17.00	0	0.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	278	51	329
8-9	0	338	57	395
9-10	0	290	71	361
15-16	0	339	153	492
16-17	0	424	165	589
17-18	0	749	237	986
TOTAL	0	2418	734	3152

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	24	435	46	505
8-9	20	511	37	568
9-10	28	304	32	364
15-16	58	260	7	325
16-17	48	272	9	329
17-18	77	225	2	304
TOTAL	255	2007	133	2395

	TOTAL	**XING S/L**		**XING N/L**	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	834	41	0	20	0
8-9	963	46	1	9	1
9-10	725	38	0	16	0
15-16	817	35	1	6	1
16-17	918	19	1	1	0
17-18	1290	20	0	4	0
TOTAL	5547	199	3	56	2

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	10	285	76	371
8-9	18	359	89	466
9-10	39	386	84	509
15-16	34	865	81	980
16-17	40	1143	88	1271
17-18	45	1466	93	1604
TOTAL	186	4504	511	5201

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	0	0	0
8-9	0	0	0	0
9-10	0	0	0	0
15-16	0	0	0	0
16-17	0	0	0	0
17-18	0	0	0	0
TOTAL	0	0	0	0

	TOTAL	**XING W/L**		**XING E/L**	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	371	18	0	19	0
8-9	466	14	0	12	1
9-10	509	19	0	39	1
15-16	980	16	0	13	0
16-17	1271	18	1	20	0
17-18	1604	9	0	22	1
TOTAL	5201	94	1	125	3

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Central Ave

East/West 6th St

Day: TUESDAY Date: April 23, 2013 Weather: SUNNY

Hours: 7-10AM & 3-6PM Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	123	74	111	125
BIKES	45	29	29	28
BUSES	129	15	179	100

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	121	8.30	140	7.45	124	8.00	224	8.00
PM PK 15 MIN	263	17.45	103	16.30	266	17.15	132	17.45
AM PK HOUR	460	8.00	510	7.45	452	7.30	822	7.45
PM PK HOUR	909	17.00	379	16.30	951	17.00	473	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	345	50	395
8-9	0	386	74	460
9-10	0	396	45	441
15-16	0	417	81	498
16-17	0	484	101	585
17-18	0	736	173	909
TOTAL	0	2764	524	3288

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	18	377	0	395
8-9	19	470	0	489
9-10	23	325	0	348
15-16	30	304	0	334
16-17	30	323	0	353
17-18	26	318	0	344
TOTAL	146	2117	0	2263

	TOTAL	**XING S/L**		**XING N/L**	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	790	23	1	74	5
8-9	949	33	1	74	3
9-10	789	39	0	50	0
15-16	832	35	0	38	0
16-17	938	29	0	57	3
17-18	1253	33	2	66	1
TOTAL	5551	192	4	359	12

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	32	267	86	385
8-9	42	292	107	441
9-10	49	262	105	416
15-16	77	457	118	652
16-17	79	547	113	739
17-18	122	705	124	951
TOTAL	401	2530	653	3584

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	269	0	434	703
8-9	291	0	510	801
9-10	214	0	299	513
15-16	162	0	208	370
16-17	161	0	215	376
17-18	172	0	301	473
TOTAL	1269	0	1967	3236

	TOTAL	**XING W/L**		**XING E/L**	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	1088	44	4	40	1
8-9	1242	33	0	39	1
9-10	929	28	0	30	0
15-16	1022	34	0	58	0
16-17	1115	20	0	34	1
17-18	1424	40	1	32	0
TOTAL	6820	199	5	233	3

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Central Ave

East/West 7th St

Day: TUESDAY Date: April 23, 2013 Weather: SUNNY

Hours: 7-10AM & 3-6PM Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	191	126	213	220
BIKES	61	53	56	52
BUSES	68	76	156	226

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	176	8.30	237	8.00	121	9.30	250	8.15
PM PK 15 MIN	281	17.30	168	17.15	245	17.00	165	17.30
AM PK HOUR	610	7.45	898	7.45	455	8.45	958	7.30
PM PK HOUR	967	17.00	634	16.30	933	17.00	604	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	60	347	133	540
8-9	63	409	132	604
9-10	79	370	140	589
15-16	74	408	126	608
16-17	55	486	130	671
17-18	56	778	133	967
TOTAL	387	2798	794	3979

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	31	562	107	700
8-9	33	681	140	854
9-10	35	474	99	608
15-16	50	465	74	589
16-17	41	512	62	615
17-18	41	520	59	620
TOTAL	231	3214	541	3986

	TOTAL	XING S/L		XING N/L	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	1240	24	1	43	1
8-9	1458	29	0	52	1
9-10	1197	26	0	49	0
15-16	1197	54	0	79	0
16-17	1286	37	0	60	0
17-18	1587	31	0	76	4
TOTAL	7965	201	1	359	6

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	29	263	44	336
8-9	51	292	52	395
9-10	44	353	50	447
15-16	69	531	66	666
16-17	62	572	79	713
17-18	91	772	70	933
TOTAL	346	2783	361	3490

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	129	676	59	864
8-9	170	704	83	957
9-10	105	601	76	782
15-16	73	399	66	538
16-17	94	340	66	500
17-18	94	450	60	604
TOTAL	665	3170	410	4245

	TOTAL	XING W/L		XING E/L	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	1200	23	0	30	3
8-9	1352	24	0	28	0
9-10	1229	19	0	37	0
15-16	1204	25	0	43	0
16-17	1213	35	0	24	0
17-18	1537	22	0	29	0
TOTAL	7735	148	0	191	3

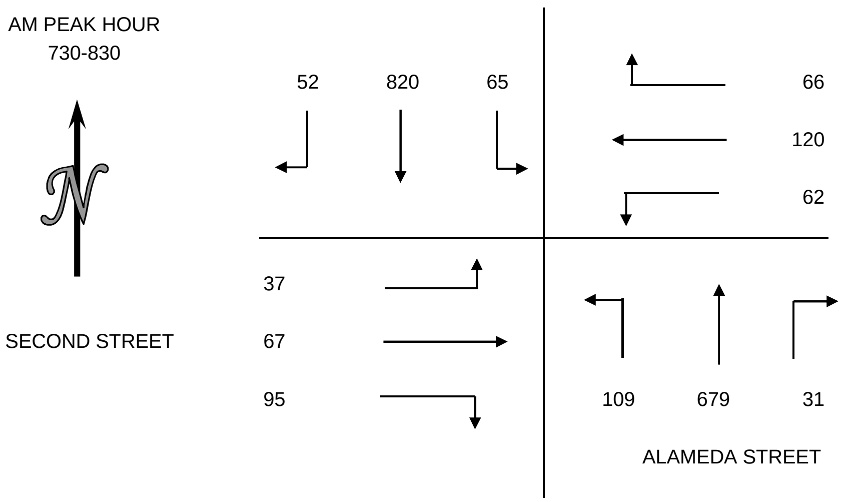
WILTEC

Phone: (626) 564-1944   Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: INTUEOR
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 28, 2009
PERIOD: 7:00 AM TO 9:00 AM
INTERSECTION: N/S ALAMEDA STREET
E/W SECOND STREET

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	TOTALS
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	
700-715	9	192	7	10	23	7	4	134	19	22	13	8	448
715-730	10	169	10	15	14	9	2	157	21	20	13	13	453
730-745	13	200	13	14	18	16	4	162	24	16	22	9	511
745-800	14	206	12	17	33	10	4	189	29	25	16	6	561
800-815	17	201	19	17	29	19	4	160	29	23	13	8	539
815-830	8	213	21	18	40	17	19	168	27	31	16	14	592
830-845	16	197	13	14	36	12	7	149	22	16	10	9	501
845-900	7	213	7	12	34	14	5	158	20	31	18	10	529
HOUR TOTALS													
700-800	46	767	42	56	88	42	14	642	93	83	64	36	1973
715-815	54	776	54	63	94	54	14	668	103	84	64	36	2064
730-830	52	820	65	66	120	62	31	679	109	95	67	37	2203
745-845	55	817	65	66	138	58	34	666	107	95	55	37	2193
800-900	48	824	60	61	139	62	35	635	98	101	57	41	2161



PEDESTRIAN COUNTS				
PERIOD 15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG
700-715	3	0	1	4
715-730	2	3	4	3
730-745	5	5	1	5
745-800	8	1	4	7
800-815	4	1	2	5
815-830	6	1	2	1
830-845	9	5	4	3
845-900	7	8	6	2
HOUR TOTALS				
700-800	18	9	10	19
715-815	19	10	11	20
730-830	23	8	9	18
745-845	27	8	12	16
800-900	26	15	14	11

WILTEC

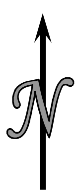
Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

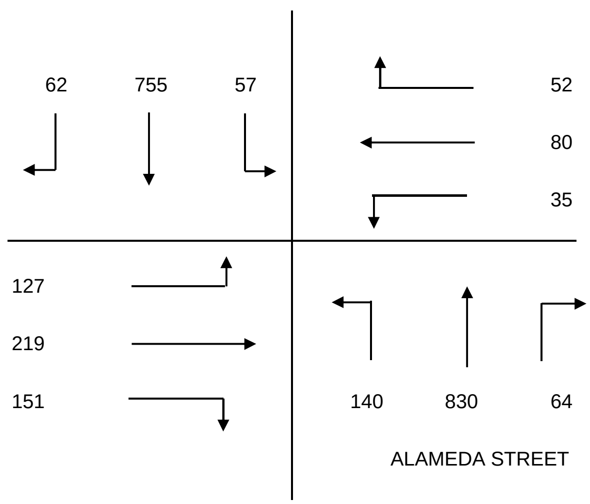
CLIENT: INTUEOR
PROJECT: DOWNTOWN LOS ANGELES TRAFFIC COUNTS
DATE: WEDNESDAY APRIL 28, 2009
PERIOD: 4:00 PM TO 6:00 PM
INTERSECTION: N/S ALAMEDA STREET
E/W SECOND STREET

15 MIN COUNTS PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
400-415	16	194	20	6	19	2	12	205	19	33	44	29	599
415-430	12	197	18	10	18	6	16	203	24	39	32	35	610
430-445	17	218	20	12	20	11	12	200	38	27	49	32	656
445-500	17	200	10	9	16	11	16	198	29	48	53	31	638
500-515	14	165	13	16	25	7	14	218	31	36	50	35	624
515-530	14	172	14	15	19	6	22	214	42	40	67	29	654
530-545	21	155	16	13	22	7	15	207	25	31	53	35	600
545-600	13	151	14	15	20	3	10	214	19	28	54	31	572
HOUR TOTALS													
400-500	62	809	68	37	73	30	56	806	110	147	178	127	2503
415-515	60	780	61	47	79	35	58	819	122	150	184	133	2528
430-530	62	755	57	52	80	35	64	830	140	151	219	127	2572
445-545	66	692	53	53	82	31	67	837	127	155	223	130	2516
500-600	62	643	57	59	86	23	61	853	117	135	224	130	2450

PM PEAK HOUR
430-530



SECOND STREET



PEDESTRIAN COUNTS				
PERIOD 15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG
400-415	8	1	4	12
415-430	16	0	7	7
430-445	12	6	11	10
445-500	12	0	9	7
500-515	14	8	9	2
515-530	11	13	4	1
530-545	7	2	3	3
545-600	16	6	10	5
HOUR TOTALS				
400-500	48	7	31	36
415-515	54	14	36	26
430-530	49	27	33	20
445-545	44	23	25	13
500-600	48	29	26	11

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:

North/South Alameda St

East/West 3rd St_4th St

Day: TUESDAY Date: May 14, 2013 Weather: SUNNY

Hours: 7-10AM & 3-6PM Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	266	227	0	181
BIKES	32	32	8	38
BUSES	41	31	0	91

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	204	7.15	281	8.30	0	0.00	644	8.15
PM PK 15 MIN	333	17.15	260	16.15	0	0.00	205	17.45
AM PK HOUR	760	7.45	1041	8.15	0	0.00	2449	7.30
PM PK HOUR	1258	17.00	1008	16.15	0	0.00	658	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	127	601	0	728
8-9	143	611	0	754
9-10	120	571	0	691
15-16	117	853	0	970
16-17	144	921	0	1065
17-18	236	1022	0	1258
TOTAL	887	4579	0	5466

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	788	138	926
8-9	0	831	199	1030
9-10	0	828	175	1003
15-16	0	813	132	945
16-17	0	859	131	990
17-18	0	718	141	859
TOTAL	0	4837	916	5753

	TOTAL	**XING S/L**		**XING N/L**	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	1654	14	0	14	0
8-9	1784	20	0	35	0
9-10	1694	33	0	40	0
15-16	1915	43	1	43	2
16-17	2055	43	0	38	0
17-18	2117	30	0	34	0
TOTAL	11219	183	1	204	2

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	0	0	0
8-9	0	0	0	0
9-10	0	0	0	0
15-16	0	0	0	0
16-17	0	0	0	0
17-18	0	0	0	0
TOTAL	0	0	0	0

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	150	2020	190	2360
8-9	149	2088	148	2385
9-10	148	1452	116	1716
15-16	69	411	59	539
16-17	89	485	55	629
17-18	86	525	47	658
TOTAL	691	6981	615	8287

	TOTAL	**XING W/L**		**XING E/L**	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	2360	11	0	18	0
8-9	2385	23	0	39	0
9-10	1716	38	0	28	0
15-16	539	51	0	41	1
16-17	629	52	0	36	0
17-18	658	69	0	44	0
TOTAL	8287	244	0	206	1

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Alameda St

East/West 4th St

Day WEDNESDAY Date September 11, 2013 Weather SUNNY

Hours 7-10AM & 3-6PM Chekrs NDS

School Day YES District I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	174	143	160	0
BIKES	27	28	37	16
BUSES	39	32	49	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	223	8.15	286	8 45	136	9.45	0	0.00
PM PK 15 MIN	261	17 30	238	16.15	463	17.30	0	0.00
AM PK HOUR	855	7.45	1038	8 00	479	8.30	0	0 00
PM PK HOUR	996	16.45	937	16.00	1762	17.00	0	0 00

NORTHBOUND Approach / **SOUTHBOUND Approach** / **TOTAL** / **XING S/L** / **XING N/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	N-S	Ped	Sch	Ped	Sch
7-8	0	688	44	732	*7-8*	47	885	0	932	1664	13	0	13	0
8-9	0	799	51	850	*8-9*	98	940	0	1038	1888	21	0	18	0
9-10	0	685	51	736	*9-10*	80	831	0	911	1647	22	0	8	0
15-16	0	821	78	899	*15-16*	113	799	0	912	1811	24	0	9	0
16-17	0	930	64	994	*16-17*	119	818	0	937	1931	30	0	13	0
17-18	0	838	62	900	*17-18*	119	674	0	793	1693	24	0	10	0
TOTAL	0	4761	350	5111	TOTAL	576	4947	0	5523	10634	134	0	71	0

EASTBOUND Approach / **WESTBOUND Approach** / **TOTAL** / **XING W/L** / **XING E/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	E-W	Ped	Sch	Ped	Sch
7-8	64	188	106	358	*7-8*	0	0	0	0	358	13	0	16	0
8-9	80	257	110	447	*8-9*	0	0	0	0	447	5	0	24	0
9-10	103	283	85	471	*9-10*	0	0	0	0	471	4	0	24	0
15-16	128	789	135	1052	*15-16*	0	0	0	0	1052	20	0	15	0
16-17	189	1074	141	1404	*16-17*	0	0	0	0	1404	19	0	14	0
17-18	216	1396	150	1762	*17-18*	0	0	0	0	1762	11	0	8	0
TOTAL	780	3987	727	5494	TOTAL	0	0	0	0	5494	72	0	101	0

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Alameda St

East/West 6th St

Day: TUESDAY Date: April 23, 2013 Weather: SUNNY

Hours: 7-10AM & 3-6PM Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	384	286	122	131
BIKES	20	26	30	32
BUSES	37	77	129	123

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	195	7.30	261	7.30	110	7.45	231	7.45
PM PK 15 MIN	259	17.15	258	16.30	258	17.15	95	17.00
AM PK HOUR	749	8.15	915	7.30	386	7.45	882	7.30
PM PK HOUR	1003	17.00	966	15.45	915	17.00	347	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	69	549	65	683
8-9	80	591	67	738
9-10	49	563	59	671
15-16	73	769	60	902
16-17	63	755	58	876
17-18	100	827	76	1003
TOTAL	434	4054	385	4873

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	50	776	47	873
8-9	43	764	65	872
9-10	43	738	69	850
15-16	57	753	93	903
16-17	57	769	84	910
17-18	77	652	78	807
TOTAL	327	4452	436	5215

	TOTAL	**XING S/L**		**XING N/L**	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	1556	12	0	24	0
8-9	1610	21	0	23	3
9-10	1521	28	0	24	1
15-16	1805	19	0	38	0
16-17	1786	18	1	24	0
17-18	1810	11	2	29	1
TOTAL	10088	109	3	162	5

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	52	187	107	346
8-9	56	221	103	380
9-10	67	184	82	333
15-16	81	395	103	579
16-17	104	504	90	698
17-18	116	711	88	915
TOTAL	476	2202	573	3251

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	111	569	114	794
8-9	109	614	89	812
9-10	66	300	66	432
15-16	52	155	59	266
16-17	62	163	43	268
17-18	45	249	53	347
TOTAL	445	2050	424	2919

	TOTAL	**XING W/L**		**XING E/L**	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	1140	13	0	36	5
8-9	1192	13	2	28	1
9-10	765	12	0	51	34
15-16	845	20	1	21	0
16-17	966	23	0	24	1
17-18	1262	25	1	27	4
TOTAL	6170	106	4	187	45

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Alameda St

East/West 7th St

Day: Wednesday Date: January 15, 2014 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	501	408	290	296
BIKES	25	28	40	28
BUSES	28	119	110	138

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	214	8.00	293	7.45	144	8.45	242	7.30
PM PK 15 MIN	261	17.15	250	16.15	266	17.30	159	17.30
AM PK HOUR	810	7.45	1130	7.30	498	8.15	878	7.00
PM PK HOUR	957	17.00	962	15.30	939	17.00	603	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	114	536	82	732
8-9	99	601	94	794
9-10	92	531	80	703
15-16	95	573	88	756
16-17	99	643	101	843
17-18	106	739	112	957
TOTAL	605	3623	557	4785

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	113	793	125	1031
8-9	102	775	156	1033
9-10	102	667	142	911
15-16	122	659	80	861
16-17	115	776	60	951
17-18	102	693	42	837
TOTAL	656	4363	605	5624

	TOTAL	**XING S/L**		**XING N/L**	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	1763	75	3	127	0
8-9	1827	46	1	64	8
9-10	1614	26	5	45	2
15-16	1617	56	0	89	0
16-17	1794	66	0	74	1
17-18	1794	39	0	89	0
TOTAL	10409	308	9	488	11

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	62	281	87	430
8-9	68	312	102	482
9-10	58	272	120	450
15-16	87	471	155	713
16-17	73	542	163	778
17-18	95	735	109	939
TOTAL	443	2613	736	3792

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	117	671	90	878
8-9	121	593	93	807
9-10	122	556	83	761
15-16	92	344	91	527
16-17	79	352	85	516
17-18	77	408	118	603
TOTAL	608	2924	560	4092

	TOTAL	**XING W/L**		**XING E/L**	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	1308	87	4	111	1
8-9	1289	49	2	50	3
9-10	1211	25	0	32	3
15-16	1240	82	0	60	0
16-17	1294	74	1	79	0
17-18	1542	59	0	57	1
TOTAL	7884	376	7	389	8

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Alameda St and 7th St , Los Angeles

Date: 1/15/2014
Day: Wednesday

Project #: 14-5018-002
City: Los Angeles

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Total Peak Hour Summary

N

Alameda St

7th St

CONTROL: Signalized

Southbound Approach

	Left	Through	Right	Northbound departure (out)
Lanes	0	2	1	
AM	162	845	123	754
NOON	0	0	0	0
PM	42	693	102	952

Eastbound Approach

	Lanes	AM	NOON	PM
Westbound departure (out)		910	0	556
Left	1	56	0	95
Through	2	300	0	735
Right	0	79	0	109

Westbound Approach

	AM	NOON	PM	Lanes
Right	95	0	118	0
Through	642	0	408	2
Left	115	0	77	1
Eastbound departure (out)	513	0	949	

Northbound Approach

	Southbound departure (out)	Left	Through	Right
AM	1039	106	603	90
NOON	0	0	0	0
PM	879	106	739	112
Lanes		1	2	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg

AM	1130	754
NOON	0	0
PM	837	952

West Leg

AM	NOON	PM
910	0	556
435	0	939

East Leg

AM	NOON	PM
852	0	603
513	0	949

South Leg

AM	1039	799
NOON	0	0
PM	879	957

Total Volume Per Leg

North Leg

AM	1884
NOON	0
PM	1789

West Leg

AM	NOON	PM
1345	0	1495

East Leg

AM	NOON	PM
1365	0	1552

South Leg

AM	1838
NOON	0
PM	1836

WILTEC

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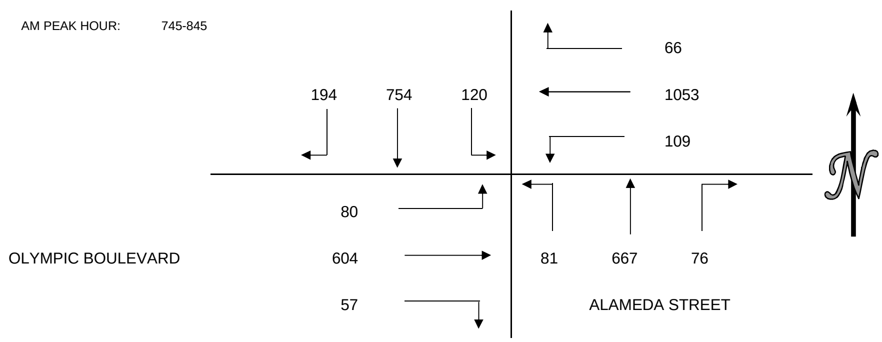
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT:		AVALON BAY ARTS DISTRICT RESIDENTIAL TRAFFIC COUNTS
DATE:		TUESDAY NOVEMBER 10, 2015
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	ALAMEDA STREET
	E/W	OLYMPIC BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	18	155	32	20	257	27	15	137	28	24	136	22	871
715-730	37	130	12	15	230	25	11	160	26	12	107	18	783
730-745	56	175	24	21	283	26	14	192	26	7	142	19	985
745-800	27	190	28	16	282	34	18	173	18	15	171	23	995
800-815	65	190	28	21	264	28	24	162	27	18	146	20	993
815-830	43	166	42	12	231	20	23	157	19	9	137	15	874
830-845	59	208	22	17	276	27	11	175	17	15	150	22	999
845-900	46	144	32	21	258	31	17	156	19	14	139	24	901
900-915	51	133	16	20	216	32	15	141	30	16	142	15	827
915-930	52	170	34	17	197	24	26	145	30	17	112	16	840
930-945	33	128	32	16	234	32	19	149	31	14	134	21	843
945-1000	40	159	30	19	216	35	24	151	28	10	139	20	871
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	138	650	96	72	1052	112	58	662	98	58	556	82	3634
715-815	185	685	92	73	1059	113	67	687	97	52	566	80	3756
730-830	191	721	122	70	1060	108	79	684	90	49	596	77	3847
745-845	194	754	120	66	1053	109	76	667	81	57	604	80	3861
800-900	213	708	124	71	1029	106	75	650	82	56	572	81	3767
815-915	199	651	112	70	981	110	66	629	85	54	568	76	3601
830-930	208	655	104	75	947	114	69	617	96	62	543	77	3567
845-945	182	575	114	74	905	119	77	591	110	61	527	76	3411
900-1000	176	590	112	72	863	123	84	586	119	57	527	72	3381

AM PEAK HOUR: 745-845



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	11	8	6	55	80
715-730	13	4	11	43	71
730-745	9	9	14	49	81
745-800	13	6	6	43	68
800-815	17	6	4	47	74
815-830	5	3	4	18	30
830-845	3	2	10	26	41
854-900	4	3	1	9	17
900-915	3	5	5	9	22
915-930	3	1	1	8	13
930-945	2	2	2	2	8
945-1000	4	2	0	9	15
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	46	27	37	190	300
715-815	52	25	35	182	294
730-830	44	24	28	157	253
745-845	38	17	24	134	213
800-900	29	14	19	100	162
815-915	15	13	20	62	110
830-930	13	11	17	52	93
845-945	12	11	9	28	60
900-1000	12	10	8	28	58

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	4	1	2	2	9
715-730	5	2	0	3	10
730-745	3	0	5	4	12
745-800	8	5	8	2	23
800-815	5	3	3	3	14
815-830	1	2	2	0	5
830-845	3	3	2	2	10
845-900	3	2	5	1	11
900-915	1	0	2	1	4
915-930	1	1	5	1	8
930-945	3	1	5	2	11
945-1000	1	0	1	1	3
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	20	8	15	11	54
715-815	21	10	16	12	59
730-830	17	10	18	9	54
745-845	17	13	15	7	52
800-900	12	10	12	6	40
815-915	8	7	11	4	30
830-930	8	6	14	5	33
845-945	8	4	17	5	34
900-1000	6	2	13	5	26

WILTEC

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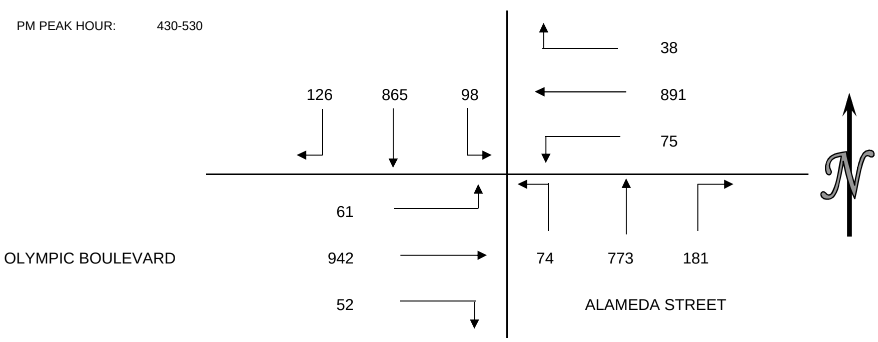
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT:		AVALON BAY ARTS DISTRICT RESIDENTIAL TRAFFIC COUNTS
DATE:		TUESDAY NOVEMBER 10, 2015
PERIOD:		3:00 PM TO 6:00 PM
INTERSECTION:	N/S	ALAMEDA STREET
	E/W	OLYMPIC BOULEVARD
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	48	213	32	12	162	17	46	133	16	14	244	15	952
315-330	21	183	30	13	162	22	41	138	26	15	258	22	931
330-345	38	194	23	10	183	15	42	157	19	10	253	16	960
345-400	47	223	33	6	176	19	31	156	20	16	240	21	988
400-415	30	199	26	7	189	13	34	148	13	5	219	24	907
415-430	41	216	29	13	219	18	27	157	26	13	266	21	1046
430-445	48	202	18	12	210	22	39	172	18	26	230	16	1013
445-500	28	199	22	9	236	16	37	199	18	9	235	15	1023
500-515	24	222	36	11	244	21	42	193	17	8	245	13	1076
515-530	26	242	22	6	201	16	63	209	21	9	232	17	1064
530-545	30	219	14	7	225	20	57	175	27	7	200	14	995
545-600	34	212	24	14	215	20	57	189	17	8	231	10	1031
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	154	813	118	41	683	73	160	584	81	55	995	74	3831
315-415	136	799	112	36	710	69	148	599	78	46	970	83	3786
330-430	156	832	111	36	767	65	134	618	78	44	978	82	3901
345-445	166	840	106	38	794	72	131	633	77	60	955	82	3954
400-500	147	816	95	41	854	69	137	676	75	53	950	76	3989
415-515	141	839	105	45	909	77	145	721	79	56	976	65	4158
430-530	126	865	98	38	891	75	181	773	74	52	942	61	4176
445-545	108	882	94	33	906	73	199	776	83	33	912	59	4158
500-600	114	895	96	38	885	77	219	766	82	32	908	54	4166

PM PEAK HOUR: 430-530



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	1	3	4	5	13
315-330	1	1	2	1	5
330-345	1	5	6	4	16
345-400	0	3	3	4	10
400-415	15	3	2	13	33
415-430	10	6	2	4	22
430-445	8	1	5	13	27
445-500	12	6	3	3	24
500-515	32	13	10	13	68
515-530	21	7	7	8	43
530-545	24	7	3	19	53
545-600	46	8	6	11	71
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	3	12	15	14	44
315-415	17	12	13	22	64
330-430	26	17	13	25	81
345-445	33	13	12	34	92
400-500	45	16	12	33	106
415-515	62	26	20	33	141
430-530	73	27	25	37	162
445-545	89	33	23	43	188
500-600	123	35	26	51	235

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	0	2	2	1	5
315-330	3	1	0	2	6
330-345	2	2	2	2	8
345-400	0	2	1	2	5
400-415	0	3	0	1	4
415-430	0	2	5	1	8
430-445	4	3	5	1	13
445-500	3	0	2	2	7
500-515	6	3	3	1	13
515-530	2	2	5	1	10
530-545	3	1	8	4	16
545-600	7	5	1	1	14
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	5	7	5	7	24
315-415	5	8	3	7	23
330-430	2	9	8	6	25
345-445	4	10	11	5	30
400-500	7	8	12	5	32
415-515	13	8	15	5	41
430-530	15	8	15	5	43
445-545	14	6	18	8	46
500-600	18	11	17	7	53

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INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT:		AVALON BAY ARTS DISTRICT RESIDENTIAL TRAFFIC COUNTS
DATE:		TUESDAY NOVEMBER 10, 2015
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	ALAMEDA STREET
	E/W	I-10 EB ON AND OFF RAMPS
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	95	199	0	1	0	0	0	254	107	120	1	55	832
715-730	130	167	0	1	0	0	0	244	96	136	0	64	838
730-745	112	197	1	0	1	0	0	280	88	117	0	71	867
745-800	86	209	0	0	0	0	3	263	84	147	0	73	865
800-815	92	225	0	1	0	0	5	245	96	120	0	64	848
815-830	79	197	0	0	0	0	1	273	73	143	0	57	823
830-845	80	190	1	0	1	0	0	238	81	129	0	65	785
845-900	79	196	2	1	0	1	1	229	70	117	0	55	751
900-915	76	180	1	0	0	0	0	226	79	124	0	44	730
915-930	69	194	4	4	1	0	1	228	64	104	0	63	732
930-945	68	210	0	0	1	0	2	187	73	94	0	59	694
945-1000	72	203	2	3	0	0	0	166	67	93	0	55	661
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	423	772	1	2	1	0	3	1041	375	520	1	263	3402
715-815	420	798	1	2	1	0	8	1032	364	520	0	272	3418
730-830	369	828	1	1	1	0	9	1061	341	527	0	265	3403
745-845	337	821	1	1	1	0	9	1019	334	539	0	259	3321
800-900	330	808	3	2	1	1	7	985	320	509	0	241	3207
815-915	314	763	4	1	1	1	2	966	303	513	0	221	3089
830-930	304	760	8	5	2	1	2	921	294	474	0	227	2998
845-945	292	780	7	5	2	1	4	870	286	439	0	221	2907
900-1000	285	787	7	7	2	0	3	807	283	415	0	221	2817

AM PEAK HOUR: 715-815

I-10 EB ON AND OFF RAMPS

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	5	0	0	5
715-730	1	1	0	2	4
730-745	0	1	0	3	4
745-800	0	1	0	1	2
800-815	0	0	0	1	1
815-830	0	1	0	1	2
830-845	0	2	0	0	2
854-900	0	0	0	0	0
900-915	0	1	0	1	2
915-930	0	1	0	2	3
930-945	0	0	0	0	0
945-1000	0	0	0	3	3
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	1	8	0	6	15
715-815	1	3	0	7	11
730-830	0	3	0	6	9
745-845	0	4	0	3	7
800-900	0	3	0	2	5
815-915	0	4	0	2	6
830-930	0	4	0	3	7
845-945	0	2	0	3	5
900-1000	0	2	0	6	8

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	1	0	0	1
715-730	0	1	0	0	1
730-745	0	2	0	3	5
745-800	0	2	0	1	3
800-815	0	0	0	0	0
815-830	0	1	0	0	1
830-845	0	2	0	1	3
845-900	0	0	0	0	0
900-915	0	0	0	0	0
915-930	0	1	0	1	2
930-945	0	2	0	0	2
945-1000	0	1	0	0	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	0	6	0	4	10
715-815	0	5	0	4	9
730-830	0	5	0	4	9
745-845	0	5	0	2	7
800-900	0	3	0	1	4
815-915	0	3	0	1	4
830-930	0	3	0	2	5
845-945	0	3	0	1	4
900-1000	0	4	0	1	5

WILTEC

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INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT:		AVALON BAY ARTS DISTRICT RESIDENTIAL TRAFFIC COUNTS
DATE:		TUESDAY NOVEMBER 10, 2015
PERIOD:		3:00 PM TO 6:00 PM
INTERSECTION:	N/S	ALAMEDA STREET
	E/W	I-10 EB ON AND OFF RAMPS
CITY:		LOS ANGELES

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	131	259	0	3	0	0	1	197	58	40	0	30	719
315-330	111	257	0	5	0	0	1	219	84	65	0	22	764
330-345	109	231	0	2	2	0	1	222	95	66	0	43	771
345-400	84	222	0	1	0	0	1	212	99	57	0	38	714
400-415	110	248	0	1	0	0	0	211	74	79	0	30	753
415-430	106	241	0	1	0	0	0	228	96	79	0	27	778
430-445	132	272	1	8	0	0	1	231	98	59	0	25	827
445-500	105	206	1	5	0	1	1	264	101	65	0	29	778
500-515	92	266	0	6	0	0	0	240	114	68	0	15	801
515-530	116	302	0	0	0	0	0	232	99	52	0	22	823
530-545	138	302	0	1	0	0	0	278	101	48	0	20	888
545-600	111	290	0	0	0	0	0	251	100	53	0	11	816
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	435	969	0	11	2	0	4	850	336	228	0	133	2968
315-415	414	958	0	9	2	0	3	864	352	267	0	133	3002
330-430	409	942	0	5	2	0	2	873	364	281	0	138	3016
345-445	432	983	1	11	0	0	2	882	367	274	0	120	3072
400-500	453	967	2	15	0	1	2	934	369	282	0	111	3136
415-515	435	985	2	20	0	1	2	963	409	271	0	96	3184
430-530	445	1046	2	19	0	1	2	967	412	244	0	91	3229
445-545	451	1076	1	12	0	1	1	1014	415	233	0	86	3290
500-600	457	1160	0	7	0	0	0	1001	414	221	0	68	3328

PM PEAK HOUR: 500-600

I-10 EB ON AND OFF RAMPS

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	0	4	0	3	7
315-330	0	0	0	0	0
330-345	0	0	0	1	1
345-400	0	1	0	1	2
400-415	0	1	0	3	4
415-430	0	2	0	2	4
430-445	1	6	0	0	7
445-500	0	3	0	5	8
500-515	1	5	0	2	8
515-530	0	4	0	2	6
530-545	0	2	0	4	6
545-600	0	2	0	1	3
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	0	5	0	5	10
315-415	0	2	0	5	7
330-430	0	4	0	7	11
345-445	1	10	0	6	17
400-500	1	12	0	10	23
415-515	2	16	0	9	27
430-530	2	18	0	9	29
445-545	1	14	0	13	28
500-600	1	13	0	9	23

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	0	2	0	1	3
315-330	0	1	0	1	2
330-345	0	2	0	2	4
345-400	0	2	0	1	3
400-415	1	4	0	0	5
415-430	0	5	0	2	7
430-445	0	2	0	3	5
445-500	0	3	0	0	3
500-515	0	1	0	1	2
515-530	0	2	0	2	4
530-545	0	1	0	1	2
545-600	0	1	0	1	2
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	0	7	0	5	12
315-415	1	9	0	4	14
330-430	1	13	0	5	19
345-445	1	13	0	6	20
400-500	1	14	0	5	20
415-515	0	11	0	6	17
430-530	0	8	0	6	14
445-545	0	7	0	4	11
500-600	0	5	0	5	10

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Vignes St

East/West 1st St

Day: Thursday Date: November 6, 2014 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	8	18	34	60
BIKES	10	18	40	59
BUSES	3	16	14	33

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	23	9.15	30	9.15	43	7.15	297	7.00
PM PK 15 MIN	51	17.30	44	17.00	231	17.00	128	17.45
AM PK HOUR	71	8.45	100	8.45	139	7.00	1047	7.00
PM PK HOUR	180	16.45	147	16.15	872	16.30	440	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	5	19	24	48
8-9	3	24	28	55
9-10	6	26	38	70
15-16	4	19	59	82
16-17	4	23	100	127
17-18	8	41	126	175
TOTAL	30	152	375	557

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	26	17	21	64
8-9	29	26	30	85
9-10	36	39	24	99
15-16	64	23	19	106
16-17	61	25	39	125
17-18	62	26	32	120
TOTAL	278	156	165	599

Hours	TOTAL N-S	XING S/L Ped	XING S/L Sch	XING N/L Ped	XING N/L Sch
7-8	112	8	0	10	0
8-9	140	8	0	9	0
9-10	169	9	0	8	0
15-16	188	16	0	9	0
16-17	252	20	0	13	0
17-18	295	13	0	5	0
TOTAL	1156	74	0	54	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	21	113	5	139
8-9	19	79	4	102
9-10	15	69	8	92
15-16	40	425	33	498
16-17	40	722	23	785
17-18	88	752	17	857
TOTAL	223	2160	90	2473

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	84	798	165	1047
8-9	119	663	150	932
9-10	66	588	95	749
15-16	41	195	54	290
16-17	57	244	41	342
17-18	52	332	56	440
TOTAL	419	2820	561	3800

Hours	TOTAL E-W	XING W/L Ped	XING W/L Sch	XING E/L Ped	XING E/L Sch
7-8	1186	12	0	0	0
8-9	1034	10	0	0	0
9-10	841	10	0	0	0
15-16	788	9	0	1	0
16-17	1127	10	0	1	0
17-18	1297	11	0	0	0
TOTAL	6273	62	0	2	0

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Merrick St_Molino St

East/West 4th St

Day: TUESDAY Date: May 14, 2013 Weather: SUNNY

Hours: 7-10AM & 3-6PM Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	15	13	159	146
BIKES	14	14	26	14
BUSES	0	44	50	54

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	18	9.15	25	9.15	101	9.00	672	7.30
PM PK 15 MIN	27	16.00	32	17.30	383	17.00	219	17.30
AM PK HOUR	58	8.30	80	8.45	369	9.00	2512	7.30
PM PK HOUR	75	15.15	111	17.00	1484	16.45	673	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	24	8	2	34
8-9	30	6	1	37
9-10	41	13	4	58
15-16	39	13	13	65
16-17	37	13	16	66
17-18	39	15	10	64
TOTAL	210	68	46	324

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	10	28	16	54
8-9	12	41	17	70
9-10	13	31	23	67
15-16	41	23	32	96
16-17	35	17	27	79
17-18	50	40	21	111
TOTAL	161	180	136	477

Hours	TOTAL N-S	XING S/L Ped	XING S/L Sch	XING N/L Ped	XING N/L Sch
7-8	88	1	0	0	0
8-9	107	1	0	4	0
9-10	125	13	0	7	0
15-16	161	2	0	1	0
16-17	145	4	0	2	0
17-18	175	0	0	7	0
TOTAL	801	21	0	21	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	195	44	239
8-9	1	279	53	333
9-10	5	316	48	369
15-16	18	900	42	960
16-17	4	1250	46	1300
17-18	12	1394	47	1453
TOTAL	40	4334	280	4654

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	4	2343	75	2422
8-9	6	2333	88	2427
9-10	8	1572	72	1652
15-16	11	476	23	510
16-17	0	563	40	603
17-18	0	613	60	673
TOTAL	29	7900	358	8287

Hours	TOTAL E-W	XING W/L Ped	XING W/L Sch	XING E/L Ped	XING E/L Sch
7-8	2661	3	0	7	0
8-9	2760	4	0	13	0
9-10	2021	12	0	4	0
15-16	1470	5	0	2	0
16-17	1903	6	0	3	0
17-18	2126	6	0	3	0
TOTAL	12941	36	0	32	0

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Mateo St

East/West 6th St

Day: TUESDAY Date: June 18, 2013 Weather: SUNNY

Hours: 7-10AM & 3-6PM Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	79	84	127	58
BIKES	19	20	39	42
BUSES	10	18	87	101

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	39	7.45	68	8.00	85	8.45	243	7.30
PM PK 15 MIN	67	17.30	65	16.30	263	17.15	69	17.15
AM PK HOUR	124	7.30	248	7.30	299	7.30	860	7.15
PM PK HOUR	204	17.00	201	16.30	866	17.00	256	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	39	65	6	110
8-9	31	72	11	114
9-10	36	67	7	110
15-16	37	94	21	152
16-17	19	80	23	122
17-18	42	123	39	204
TOTAL	204	501	107	812

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	13	170	32	215
8-9	15	165	38	218
9-10	6	89	55	150
15-16	27	112	46	185
16-17	35	115	41	191
17-18	31	110	40	181
TOTAL	127	761	252	1140

	TOTAL	**XING S/L**		**XING N/L**	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	325	12	0	8	0
8-9	332	10	0	10	0
9-10	260	5	0	7	0
15-16	337	8	0	7	0
16-17	313	5	0	5	0
17-18	385	10	0	8	0
TOTAL	1952	50	0	45	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	37	147	84	268
8-9	50	159	83	292
9-10	46	163	74	283
15-16	53	385	79	517
16-17	58	542	70	670
17-18	62	734	70	866
TOTAL	306	2130	460	2896

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	38	722	70	830
8-9	36	620	61	717
9-10	9	311	41	361
15-16	6	161	19	186
16-17	21	177	16	214
17-18	13	218	25	256
TOTAL	123	2209	232	2564

	TOTAL	**XING W/L**		**XING E/L**	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	1098	35	0	6	0
8-9	1009	27	0	6	0
9-10	644	19	0	8	0
15-16	703	15	0	4	0
16-17	884	15	0	16	0
17-18	1122	35	0	11	0
TOTAL	5460	146	0	51	0

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Mateo St

East/West 7th St

Day: Wednesday Date: January 15, 2014 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	156	142	304	283
BIKES	17	14	27	27
BUSES	12	12	143	126

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	69	9.45	75	8.00	129	9.00	233	7.30
PM PK 15 MIN	87	17.15	67	15.00	257	17.30	137	17.30
AM PK HOUR	235	9.00	282	7.45	473	8.45	875	7.15
PM PK HOUR	318	17.00	249	15.30	916	17.00	464	16.45

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	75	96	36	207
8-9	60	100	37	197
9-10	83	108	44	235
15-16	55	89	50	194
16-17	59	101	48	208
17-18	107	158	53	318
TOTAL	439	652	268	1359

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	25	117	39	181
8-9	49	179	53	281
9-10	54	120	43	217
15-16	35	165	35	235
16-17	39	142	43	224
17-18	48	116	28	192
TOTAL	250	839	241	1330

	TOTAL	**XING S/L**		**XING N/L**	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	388	28	0	11	0
8-9	478	14	0	22	0
9-10	452	14	0	9	0
15-16	429	40	0	17	0
16-17	432	40	0	13	0
17-18	510	44	0	20	0
TOTAL	2689	180	0	92	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	22	304	62	388
8-9	28	366	58	452
9-10	33	382	49	464
15-16	55	548	61	664
16-17	57	658	56	771
17-18	63	790	63	916
TOTAL	258	3048	349	3655

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	76	748	32	856
8-9	91	693	41	825
9-10	44	669	41	754
15-16	33	364	22	419
16-17	33	346	26	405
17-18	45	382	30	457
TOTAL	322	3202	192	3716

	TOTAL	**XING W/L**		**XING E/L**	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	1244	15	0	14	0
8-9	1277	32	0	14	0
9-10	1218	10	0	8	0
15-16	1083	36	0	14	0
16-17	1176	34	0	29	0
17-18	1373	21	0	34	0
TOTAL	7371	148	0	113	0

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Mateo St and 7th St , Los Angeles

Date:	1/15/2014
Day:	Wednesday
Project #:	14-5018-003
City:	Los Angeles

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Mateo St

7th St

N

Total Peak Hour Summary

Southbound Approach

	Right	Through	Left	Northbound exit
Lanes	0	1	0	
AM	44	174	34	177
NOON	0	0	0	0
PM	28	116	48	251

Eastbound Approach

Lanes	Movement	AM	NOON	PM
	Westbound exit	844	0	517
1	Left	25	0	63
2	Through	336	0	790
0	Right	71	0	63

CONTROL

Signalized

Westbound Approach

Movement	AM	NOON	PM	Lanes
Right	43	0	30	0
Through	730	0	382	2
Left	91	0	45	1
Eastbound exit	414	0	891	

Northbound Approach

	Southbound exit	Left	Through	Right
AM	336	70	109	44
NOON	0	0	0	0
PM	224	107	158	53
Lanes		0	1	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

Leg	Period	In	Out
North Leg	AM	252	177
North Leg	NOON	0	0
North Leg	PM	192	251
East Leg	AM	864	414
East Leg	NOON	0	0
East Leg	PM	457	891
West Leg	AM	432	844
West Leg	NOON	0	0
West Leg	PM	916	517
South Leg	AM	223	336
South Leg	NOON	0	0
South Leg	PM	318	224

Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	429	0	443
East Leg	1278	0	1348
West Leg	1276	0	1433
South Leg	559	0	542

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Santa Fe Ave

East/West 7th St

Day: TUESDAY Date: June 18, 2013 Weather: SUNNY

Hours: 7-10AM & 3-6PM Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	309	177	365	431
BIKES	20	15	13	18
BUSES	80	2	131	55

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	149	7.30	64	8.45	137	9.45	285	7.45
PM PK 15 MIN	168	17.30	101	16.30	234	17.45	166	17.00
AM PK HOUR	546	7.15	202	8.45	475	9.00	1032	7.30
PM PK HOUR	574	17.00	363	16.30	865	17.00	562	16.30

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	150	268	102	520
8-9	125	220	145	490
9-10	127	197	137	461
15-16	117	197	157	471
16-17	119	263	156	538
17-18	101	318	155	574
TOTAL	739	1463	852	3054

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	21	80	10	111
8-9	40	120	12	172
9-10	20	143	13	176
15-16	43	258	14	315
16-17	63	269	14	346
17-18	55	254	22	331
TOTAL	242	1124	85	1451

Hours	**TOTAL** N-S	**XING S/L** Ped	**XING S/L** Sch	**XING N/L** Ped	**XING N/L** Sch
7-8	631	7	0	7	0
8-9	662	10	0	5	0
9-10	637	18	0	5	0
15-16	786	21	0	12	0
16-17	884	16	0	2	0
17-18	905	30	0	16	0
TOTAL	4505	102	0	47	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	16	270	111	397
8-9	17	316	95	428
9-10	19	368	88	475
15-16	23	505	137	665
16-17	22	588	150	760
17-18	27	665	173	865
TOTAL	124	2712	754	3590

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	224	666	119	1009
8-9	184	671	122	977
9-10	196	569	91	856
15-16	163	263	45	471
16-17	172	274	37	483
17-18	199	302	54	555
TOTAL	1138	2745	468	4351

Hours	**TOTAL** E-W	**XING W/L** Ped	**XING W/L** Sch	**XING E/L** Ped	**XING E/L** Sch
7-8	1406	8	0	0	0
8-9	1405	16	0	0	0
9-10	1331	13	0	0	0
15-16	1136	21	0	0	0
16-17	1243	13	0	0	0
17-18	1420	18	0	0	0
TOTAL	7941	89	0	0	0

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Santa Fe Ave

East/West 8th St

Day: Wednesday Date: January 15, 2014 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	377	354	340	11
BIKES	14	26	0	1
BUSES	100	88	2	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	217	8.30	148	7.45	115	7.45	13	8.00
PM PK 15 MIN	184	17.15	195	15.30	133	17.30	15	16.30
AM PK HOUR	799	8.00	546	7.30	392	7.00	36	7.45
PM PK HOUR	704	16.45	696	16.30	444	17.00	39	15.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	238	513	14	765
8-9	259	525	15	799
9-10	205	419	14	638
15-16	236	399	13	648
16-17	274	387	11	672
17-18	219	469	12	700
TOTAL	1431	2712	79	4222

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	17	325	178	520
8-9	7	316	152	475
9-10	12	321	133	466
15-16	9	421	164	594
16-17	13	465	148	626
17-18	5	487	179	671
TOTAL	63	2335	954	3352

	TOTAL	XING S/L		XING N/L	
Hours	N-S	Ped	Sch	Ped	Sch
7-8	1285	12	0	21	0
8-9	1274	13	0	10	0
9-10	1104	0	0	0	0
15-16	1242	9	0	11	0
16-17	1298	15	0	10	0
17-18	1371	8	1	10	0
TOTAL	7574	57	1	62	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	20	9	363	392
8-9	27	6	251	284
9-10	50	5	275	330
15-16	40	9	304	353
16-17	43	16	274	333
17-18	47	14	383	444
TOTAL	227	59	1850	2136

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	3	4	11	18
8-9	7	7	20	34
9-10	2	6	11	19
15-16	12	6	21	39
16-17	13	8	16	37
17-18	9	7	15	31
TOTAL	46	38	94	178

	TOTAL	XING W/L		XING E/L	
Hours	E-W	Ped	Sch	Ped	Sch
7-8	410	7	0	22	0
8-9	318	14	0	11	0
9-10	349	3	0	6	0
15-16	392	2	0	8	0
16-17	370	6	0	14	0
17-18	475	13	1	12	0
TOTAL	2314	45	1	73	0

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Santa Fe Ave and 8th St , Los Angeles

Date:	1/15/2014
Day:	Wednesday
Project #:	14-5018-007
City:	Los Angeles

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

N

Santa Fe Ave

8th St

Total Peak Hour Summary

CONTROL: Signalized

Southbound Approach

	Right	Through	Left	Out
Lanes	0	2	0	
AM	188	344	14	562
NOON	0	0	0	0
PM	175	509	9	545

Eastbound Approach

	Lanes	AM	NOON	PM
Out		437	0	396
Left	0	24	0	54
Through	1	12	0	12
Right	0	307	0	363

Westbound Approach

	AM	NOON	PM	Lanes
Right	17	0	14	0
Through	7	0	3	1
Left	7	0	9	0
Out	44	0	30	

Northbound Approach

	Out	Left	Through	Right
AM	658	242	521	18
NOON	0	0	0	0
PM	881	218	477	9
Lanes		0	2	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg

	In	Out
AM	546	562
NOON	0	0
PM	693	545

West Leg

	AM	NOON	PM
Out	437	0	396
In	343	0	429

East Leg

	AM	NOON	PM
In	31	0	26
Out	44	0	30

South Leg

	Out	In
AM	658	781
NOON	0	0
PM	881	704

Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	1108	0	1238
West Leg	780	0	825
East Leg	75	0	56
South Leg	1439	0	1585

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South US-101 NB Off-Ramp

East/West 4th St

Day: TUESDAY Date: May 14, 2013 Weather: SUNNY

Hours: 7-10AM & 3-6PM Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	90	0	130	133
BIKES	0	0	10	19
BUSES	15	0	41	41

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	314	8.15	0	0.00	89	9.30	422	8.00
PM PK 15 MIN	166	17.45	0	0.00	296	17.30	178	17.30
AM PK HOUR	1163	7.30	0	0.00	314	8.45	1664	7.30
PM PK HOUR	535	17.00	0	0.00	1068	17.00	563	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	1095	0	21	1116
8-9	1003	1	19	1023
9-10	755	0	33	788
15-16	220	0	60	280
16-17	249	0	133	382
17-18	324	0	211	535
TOTAL	3646	1	477	4124

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	0	0	0
8-9	0	0	0	0
9-10	0	0	0	0
15-16	0	0	0	0
16-17	0	0	0	0
17-18	0	0	0	0
TOTAL	0	0	0	0

TOTAL N-S	XING S/L Ped	XING S/L Sch	XING N/L Ped	XING N/L Sch
1116	38	2	0	0
1023	37	1	0	0
788	28	0	0	0
280	32	0	0	0
382	9	0	0	0
535	20	0	0	0
4124	164	3	0	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	301	0	301
8-9	0	292	0	292
9-10	0	312	0	312
15-16	0	643	0	643
16-17	0	956	0	956
17-18	0	1068	0	1068
TOTAL	0	3572	0	3572

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	1566	1	1567
8-9	0	1570	1	1571
9-10	0	1080	0	1080
15-16	0	514	0	514
16-17	0	490	0	490
17-18	0	563	0	563
TOTAL	0	5783	2	5785

TOTAL E-W	XING W/L Ped	XING W/L Sch	XING E/L Ped	XING E/L Sch
1868	0	0	0	0
1863	0	0	0	0
1392	0	0	0	0
1157	0	0	0	0
1446	0	0	0	0
1631	0	0	0	0
9357	0	0	0	0

City Of Los Angeles
Department Of Transportation
MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Boyle Ave

East/West 4th St

Day: Thursday Date: November 6, 2014 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	107	44	143	141
BIKES	18	23	9	10
BUSES	12	15	37	48

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	167	7.15	175	7.30	106	8.30	381	8.30
PM PK 15 MIN	227	17.45	135	16.45	351	17.00	214	17.15
AM PK HOUR	609	7.00	613	7.00	380	7.45	1431	8.00
PM PK HOUR	816	17.00	510	16.15	1301	16.30	761	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	194	347	68	609
8-9	98	241	61	400
9-10	74	193	68	335
15-16	87	263	94	444
16-17	98	401	108	607
17-18	119	557	140	816
TOTAL	670	2002	539	3211

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	114	341	158	613
8-9	56	229	118	403
9-10	82	152	69	303
15-16	92	237	64	393
16-17	115	293	58	466
17-18	93	337	47	477
TOTAL	552	1589	514	2655

Hours	**TOTAL** N-S	**XING S/L** Ped	Sch	**XING N/L** Ped	Sch
7-8	1222	52	1	37	10
8-9	803	47	0	47	2
9-10	638	47	0	30	0
15-16	837	52	0	32	3
16-17	1073	34	0	19	0
17-18	1293	36	0	33	3
TOTAL	5866	268	1	198	18

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	286	47	333
8-9	1	303	57	361
9-10	16	296	33	345
15-16	37	798	79	914
16-17	4	1067	104	1175
17-18	4	1126	112	1242
TOTAL	62	3876	432	4370

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	9	1218	100	1327
8-9	11	1331	89	1431
9-10	46	958	116	1120
15-16	44	494	103	641
16-17	4	494	104	602
17-18	0	608	153	761
TOTAL	114	5103	665	5882

Hours	**TOTAL** E-W	**XING W/L** Ped	Sch	**XING E/L** Ped	Sch
7-8	1660	39	3	72	16
8-9	1792	47	0	47	0
9-10	1465	53	0	34	0
15-16	1555	38	0	44	3
16-17	1777	38	0	33	1
17-18	2003	38	0	38	4
TOTAL	10252	253	3	268	24

City Of Los Angeles
Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:
North/South Boyle Ave

East/West Whittier Blvd

Day: Thursday Date: November 6, 2014 Weather: SUNNY

Hours: 7-10 & 3-6 Chekrs: NDS

School Day: YES District: I/S CODE

	N/B	S/B	E/B	W/B
DUAL-WHEELED	163	60	44	80
BIKES	7	6	22	23
BUSES	14	11	70	113

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	223	7.15	178	7.45	61	9.00	351	7.30
PM PK 15 MIN	334	17.30	153	17.15	253	17.15	147	17.45
AM PK HOUR	860	7.00	586	7.15	210	7.45	1348	7.15
PM PK HOUR	1239	17.00	540	16.45	894	17.00	549	17.00

NORTHBOUND Approach / **SOUTHBOUND Approach** / **TOTAL** / **XING S/L** / **XING N/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	N-S	Ped	Sch	Ped	Sch
7-8	232	497	131	860	*7-8*	86	367	116	569	1429	18	2	33	0
8-9	201	345	65	611	*8-9*	46	263	75	384	995	9	0	29	0
9-10	124	237	77	438	*9-10*	47	204	53	304	742	11	1	10	0
15-16	117	424	168	709	*15-16*	114	295	29	438	1147	12	0	24	0
16-17	158	616	185	959	*16-17*	101	333	29	463	1422	11	0	26	0
17-18	168	871	200	1239	*17-18*	122	374	38	534	1773	15	0	40	0
TOTAL	1000	2990	826	4816	TOTAL	516	1836	340	2692	7508	76	3	162	0

EASTBOUND Approach / **WESTBOUND Approach** / **TOTAL** / **XING W/L** / **XING E/L**

Hours	Lt	Th	Rt	Total	Hours	Lt	Th	Rt	Total	E-W	Ped	Sch	Ped	Sch
7-8	20	98	54	172	*7-8*	188	967	170	1325	1497	22	2	36	0
8-9	25	103	62	190	*8-9*	133	906	96	1135	1325	18	0	15	0
9-10	27	116	34	177	*9-10*	70	485	100	655	832	6	0	22	0
15-16	62	325	72	459	*15-16*	57	244	90	391	850	18	0	21	0
16-17	93	476	95	664	*16-17*	57	243	111	411	1075	21	0	26	0
17-18	190	600	104	894	*17-18*	51	352	146	549	1443	23	0	44	0
TOTAL	417	1718	421	2556	TOTAL	556	3197	713	4466	7022	108	2	164	0

File Name: #10 - I-5 NB Ramps & 4th St - A.M. Peak Period
Start Date: 5/6/2008
Start Time: 7:00:00 AM

Passenger Vehicles/Pedestrians

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Vehicles
07:00 AM	0	0	0	5	0	194	61	1	35	10	22	2	35	133	0	4	490
07:15 AM	0	0	0	5	0	207	55	2	51	9	16	6	40	154	0	9	532
07:30 AM	0	0	0	13	0	210	77	13	59	9	10	4	51	146	0	5	562
07:45 AM	0	0	0	6	0	210	88	9	56	14	10	8	38	162	0	4	578
08:00 AM	0	0	0	5	0	222	74	9	75	9	17	4	38	111	0	3	546
08:15 AM	0	0	0	10	0	208	57	2	49	9	13	7	39	110	0	2	485
08:30 AM	0	0	0	4	0	178	58	10	46	6	12	6	27	108	0	1	435
08:45 AM	0	0	0	2	0	150	48	6	46	9	7	8	34	84	0	1	378
Hour Totals	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
7:00 AM - 8:00 AM	0	0	0	29	0	821	281	25	201	42	58	20	164	595	0	22	2162
7:15 AM - 8:15 AM	0	0	0	29	0	849	294	33	241	41	53	22	167	573	0	21	2218
7:30 AM - 8:30 AM	0	0	0	34	0	850	296	33	239	41	50	23	166	529	0	14	2171
7:45 AM - 8:45 AM	0	0	0	25	0	818	277	30	226	38	52	25	142	491	0	10	2044
8:00 AM - 9:00 AM	0	0	0	21	0	758	237	27	216	33	49	25	138	413	0	7	1844

Trucks/Buses

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Vehicles
07:00 AM	0	0	0		0	17	4		3	0	1		17	7	0		49
07:15 AM	0	0	0		0	18	4		3	1	0		14	9	0		49
07:30 AM	0	0	0		0	19	0		4	0	1		20	9	0		53
07:45 AM	0	0	0		0	19	2		1	0	1		9	10	0		42
08:00 AM	0	0	0		0	19	3		3	0	0		10	7	0		42
08:15 AM	0	0	0		0	18	7		3	0	3		9	7	0		47
08:30 AM	0	0	0		0	15	2		7	1	0		20	6	0		51
08:45 AM	0	0	0		0	13	9		3	0	3		23	4	0		55
Hour Totals	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Total
7:00 AM - 8:00 AM	0	0	0		0	73	10		11	1	3		60	35	0		193
7:15 AM - 8:15 AM	0	0	0		0	75	9		11	1	2		53	35	0		186
7:30 AM - 8:30 AM	0	0	0		0	75	12		11	0	5		48	33	0		184
7:45 AM - 8:45 AM	0	0	0		0	71	14		14	1	4		48	30	0		182
8:00 AM - 9:00 AM	0	0	0		0	65	21		16	1	6		62	24	0		195

Total

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Vehicles
07:00 AM	0	0	0	5	0	211	65	1	38	10	23	2	52	140	0	4	539
07:15 AM	0	0	0	5	0	225	59	2	54	10	16	6	54	163	0	9	581
07:30 AM	0	0	0	13	0	229	77	13	63	9	11	4	71	155	0	5	615
07:45 AM	0	0	0	6	0	229	90	9	57	14	11	8	47	172	0	4	620
08:00 AM	0	0	0	5	0	241	77	9	78	9	17	4	48	118	0	3	588
08:15 AM	0	0	0	10	0	226	64	2	52	9	16	7	48	117	0	2	532
08:30 AM	0	0	0	4	0	193	60	10	53	7	12	6	47	114	0	1	486
08:45 AM	0	0	0	2	0	163	57	6	49	9	10	8	57	88	0	1	433
Hour Totals	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
7:00 AM - 8:00 AM	0	0	0	29	0	894	291	25	212	43	61	20	224	630	0	22	2355
7:15 AM - 8:15 AM	0	0	0	29	0	924	303	33	252	42	55	22	220	608	0	21	2404
7:30 AM - 8:30 AM	0	0	0	34	0	925	308	33	250	41	55	23	214	562	0	14	2355
7:45 AM - 8:45 AM	0	0	0	25	0	889	291	30	240	39	56	25	190	521	0	10	2226
8:00 AM - 9:00 AM	0	0	0	21	0	823	258	27	232	34	55	25	200	437	0	7	2039
Peak Hour	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	Total
7:15 AM - 8:15 AM	**0**	**0**	**0**	29	**0**	**924**	**303**	33	**252**	**42**	**55**	22	**220**	**608**	**0**	21	2404

File Name: #10 - I-5 NB Ramps & 4th St - P.M. Peak Period
Start Date: 5/6/2008
Start Time: 4:00:00 PM

Passenger Vehicles/Pedestrians

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Vehicles
04:00 PM	0	0	0	3	0	106	66	0	10	16	16	12	126	206	0	3	546
04:15 PM	0	0	0	2	0	96	47	3	11	12	14	5	116	197	0	4	493
04:30 PM	0	0	0	0	0	109	73	9	16	10	16	3	131	172	0	5	527
04:45 PM	0	0	0	1	0	111	57	1	8	8	17	0	120	211	0	1	532
05:00 PM	0	0	0	2	0	99	65	5	15	12	20	5	154	215	0	5	580
05:15 PM	0	0	0	2	0	100	58	5	10	8	17	4	177	256	0	3	626
05:30 PM	0	0	0	0	0	99	63	1	3	11	18	5	157	193	0	6	544
05:45 PM	0	0	0	1	0	83	66	6	11	14	27	10	147	207	0	5	555
Hour Totals	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
4:00 PM - 5:00 PM	0	0	0	6	0	422	243	13	45	46	63	20	493	786	0	13	2098
4:15 PM - 5:15 PM	0	0	0	5	0	415	242	18	50	42	67	13	521	795	0	15	2132
4:30 PM - 5:30 PM	0	0	0	5	0	419	253	20	49	38	70	12	582	854	0	14	2265
4:45 PM - 5:45 PM	0	0	0	5	0	409	243	12	36	39	72	14	608	875	0	15	2282
5:00 PM - 6:00 PM	0	0	0	5	0	381	252	17	39	45	82	24	635	871	0	19	2305

Trucks/Buses

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Vehicles
04:00 PM	0	0	0		0	10	4		0	0	0		3	23	0		40
04:15 PM	0	0	0		0	8	4		1	0	1		6	21	0		41
04:30 PM	0	0	0		0	10	4		1	0	0		3	18	0		36
04:45 PM	0	0	0		0	10	1		0	0	3		14	23	0		51
05:00 PM	0	0	0		0	8	8		0	0	0		4	23	0		43
05:15 PM	0	0	0		0	8	1		0	0	0		3	27	0		39
05:30 PM	0	0	0		0	8	0		0	0	0		10	21	0		39
05:45 PM	0	0	0		0	7	3		0	0	0		3	23	0		36
Hour Totals	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Total
4:00 PM - 5:00 PM	0	0	0		0	38	13		2	0	4		26	85	0		168
4:15 PM - 5:15 PM	0	0	0		0	36	17		2	0	4		27	85	0		171
4:30 PM - 5:30 PM	0	0	0		0	36	14		1	0	3		24	91	0		169
4:45 PM - 5:45 PM	0	0	0		0	34	10		0	0	3		31	94	0		172
5:00 PM - 6:00 PM	0	0	0		0	31	12		0	0	0		20	94	0		157

Total

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Vehicles
04:00 PM	0	0	0	3	0	116	70	0	10	16	16	12	129	229	0	3	586
04:15 PM	0	0	0	2	0	104	51	4	12	12	15	5	122	218	0	4	534
04:30 PM	0	0	0	0	0	119	77	9	17	10	16	3	134	190	0	5	563
04:45 PM	0	0	0	1	0	121	58	1	8	8	20	0	134	234	0	1	583
05:00 PM	0	0	0	2	0	107	73	5	15	12	20	5	158	238	0	5	623
05:15 PM	0	0	0	2	0	108	59	5	10	8	17	4	180	283	0	3	665
05:30 PM	0	0	0	0	0	107	63	1	3	11	18	5	167	214	0	6	583
05:45 PM	0	0	0	1	0	90	69	6	11	14	27	10	150	230	0	5	591
Hour Totals	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
4:00 PM - 5:00 PM	0	0	0	6	0	460	256	14	47	46	67	20	519	871	0	13	2266
4:15 PM - 5:15 PM	0	0	0	5	0	451	259	19	52	42	71	13	548	880	0	15	2303
4:30 PM - 5:30 PM	0	0	0	5	0	455	267	20	50	38	73	12	606	945	0	14	2434
4:45 PM - 5:45 PM	0	0	0	5	0	443	253	12	36	39	75	14	639	969	0	15	2454
5:00 PM - 6:00 PM	0	0	0	5	0	412	264	17	39	45	82	24	655	965	0	19	2462
Peak Hour	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	Total
5:00 PM - 6:00 PM	**0**	**0**	**0**	5	**0**	**412**	**264**	17	**39**	**45**	**82**	24	**655**	**965**	**0**	19	2462

File Name: #11 - Soto St & 4th St - A.M. Peak Period
Start Date: 5/6/2008
Start Time: 7:00:00 AM

Passenger Vehicles/Pedestrians

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Vehicles
07:00 AM	28	110	22	28	32	236	11	2	23	113	19	2	11	123	22	7	750
07:15 AM	39	135	24	17	32	232	14	3	33	90	19	4	11	161	22	14	812
07:30 AM	27	154	34	29	21	231	10	5	31	121	16	2	6	146	24	21	821
07:45 AM	25	133	29	19	47	253	15	8	45	125	15	3	9	191	26	9	913
08:00 AM	26	111	38	11	30	266	14	9	27	102	18	5	12	165	21	4	830
08:15 AM	23	139	22	13	23	236	15	9	33	75	15	8	11	130	8	5	730
08:30 AM	21	128	29	24	33	216	10	4	22	86	10	9	11	119	14	8	699
08:45 AM	24	103	24	15	23	202	11	2	23	86	18	7	11	98	9	9	632
Hour Totals	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
7:00 AM - 8:00 AM	119	532	109	93	132	952	50	18	132	449	69	11	37	621	94	51	3296
7:15 AM - 8:15 AM	117	533	125	76	130	982	53	25	136	438	68	14	38	663	93	48	3376
7:30 AM - 8:30 AM	101	537	123	72	121	986	54	31	136	423	64	18	38	632	79	39	3294
7:45 AM - 8:45 AM	95	511	118	67	133	971	54	30	127	388	58	25	43	605	69	26	3172
8:00 AM - 9:00 AM	94	481	113	63	109	920	50	24	105	349	61	29	45	512	52	26	2891

Trucks/Buses

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Vehicles
07:00 AM	1	6	1		2	6	1		2	7	1		1	9	1		38
07:15 AM	1	6	1		1	6	2		2	8	2		1	9	1		40
07:30 AM	2	6	2		1	6	1		1	8	2		2	9	2		42
07:45 AM	1	6	1		3	6	2		2	8	2		1	9	1		42
08:00 AM	2	10	2		2	7	1		2	12	1		2	11	1		53
08:15 AM	1	10	2		2	7	1		2	10	1		1	10	2		49
08:30 AM	1	7	1		1	7	1		2	8	2		1	11	1		43
08:45 AM	2	6	1		1	6	1		2	8	1		1	10	4		43
Hour Totals	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Total
7:00 AM - 8:00 AM	5	24	5		7	24	6		7	31	7		5	36	5		162
7:15 AM - 8:15 AM	6	28	6		7	25	6		7	36	7		6	38	5		177
7:30 AM - 8:30 AM	6	32	7		8	26	5		7	38	6		6	39	6		186
7:45 AM - 8:45 AM	5	33	6		8	27	5		8	38	6		5	41	5		187
8:00 AM - 9:00 AM	6	33	6		6	27	4		8	38	5		5	42	8		188

Total

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Vehicles
07:00 AM	29	116	23	28	34	242	12	2	25	120	20	2	12	132	23	7	788
07:15 AM	40	141	25	17	33	238	16	3	35	98	21	4	12	170	23	14	852
07:30 AM	29	160	36	29	22	237	11	5	32	129	18	2	8	155	26	21	863
07:45 AM	26	139	30	19	50	259	17	8	47	133	17	3	10	200	27	9	955
08:00 AM	28	121	40	11	32	273	15	9	29	114	19	5	14	176	22	4	883
08:15 AM	24	149	24	13	25	243	16	9	35	85	16	8	12	140	10	5	779
08:30 AM	22	135	30	24	34	223	11	4	24	94	12	9	12	130	15	8	742
08:45 AM	26	109	25	15	24	208	12	2	25	94	19	7	12	108	13	9	675
Hour Totals	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
7:00 AM - 8:00 AM	124	556	114	93	139	976	56	18	139	480	76	11	42	657	99	51	3458
7:15 AM - 8:15 AM	123	561	131	76	137	1007	59	25	143	474	75	14	44	701	98	48	3553
7:30 AM - 8:30 AM	107	569	130	72	129	1012	59	31	143	461	70	18	44	671	85	39	3480
7:45 AM - 8:45 AM	100	544	124	67	141	998	59	30	135	426	64	25	48	646	74	26	3359
8:00 AM - 9:00 AM	100	514	119	63	115	947	54	24	113	387	66	29	50	554	60	26	3079
Peak Hour	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	Total
7:15 AM - 8:15 AM	**123**	**561**	**131**	76	**137**	**1007**	**59**	25	**143**	**474**	**75**	14	**44**	**701**	**98**	48	3553

File Name: #11 - Soto St & 4th St - P.M. Peak Period
Start Date: 5/6/2008
Start Time: 4:00:00 PM

Passenger Vehicles/Pedestrians

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Vehicles
04:00 PM	19	112	15	3	30	104	15	11	31	122	20	15	16	156	29	9	669
04:15 PM	19	117	16	6	27	86	12	14	32	154	31	11	13	154	24	8	685
04:30 PM	20	116	10	9	19	110	15	18	29	150	26	9	16	150	43	6	704
04:45 PM	19	126	9	12	22	105	16	15	35	128	23	4	19	161	27	5	690
05:00 PM	27	112	12	11	31	118	18	24	42	157	18	2	8	188	14	11	745
05:15 PM	26	128	19	8	20	89	9	18	45	167	23	8	27	181	18	12	752
05:30 PM	20	127	19	5	25	87	16	15	35	146	33	8	23	216	25	8	772
05:45 PM	30	103	8	4	29	110	18	12	38	150	26	11	25	198	32	9	767
Hour Totals	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
4:00 PM - 5:00 PM	77	471	50	30	98	405	58	58	127	554	100	39	64	621	123	28	2748
4:15 PM - 5:15 PM	85	471	47	38	99	419	61	71	138	589	98	26	56	653	108	30	2824
4:30 PM - 5:30 PM	92	482	50	40	92	422	58	75	151	602	90	23	70	680	102	34	2891
4:45 PM - 5:45 PM	92	493	59	36	98	399	59	72	157	598	97	22	77	746	84	36	2959
5:00 PM - 6:00 PM	103	470	58	28	105	404	61	69	160	620	100	29	83	783	89	40	3036

Trucks/Buses

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Vehicles
04:00 PM	2	10	1		4	10	1		4	11	2		1	15	3		64
04:15 PM	2	10	1		3	9	1		4	13	4		1	15	3		66
04:30 PM	2	10	1		2	10	1		3	14	3		1	14	4		65
04:45 PM	2	12	1		2	10	1		4	14	2		2	15	3		68
05:00 PM	3	10	1		4	11	2		4	21	2		1	18	1		78
05:15 PM	3	12	2		2	9	1		4	18	2		3	18	2		76
05:30 PM	2	12	2		3	9	1		4	14	4		2	21	3		77
05:45 PM	4	10	1		3	10	2		4	14	3		3	19	4		77
Hour Totals	Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Left	Thru	Right		Total
4:00 PM - 5:00 PM	8	42	4		11	39	4		15	52	11		5	59	13		263
4:15 PM - 5:15 PM	9	42	4		11	40	5		15	62	11		5	62	11		277
4:30 PM - 5:30 PM	10	44	5		10	40	5		15	67	9		7	65	10		287
4:45 PM - 5:45 PM	10	46	6		11	39	5		16	67	10		8	72	9		299
5:00 PM - 6:00 PM	12	44	6		12	39	6		16	67	11		9	76	10		308

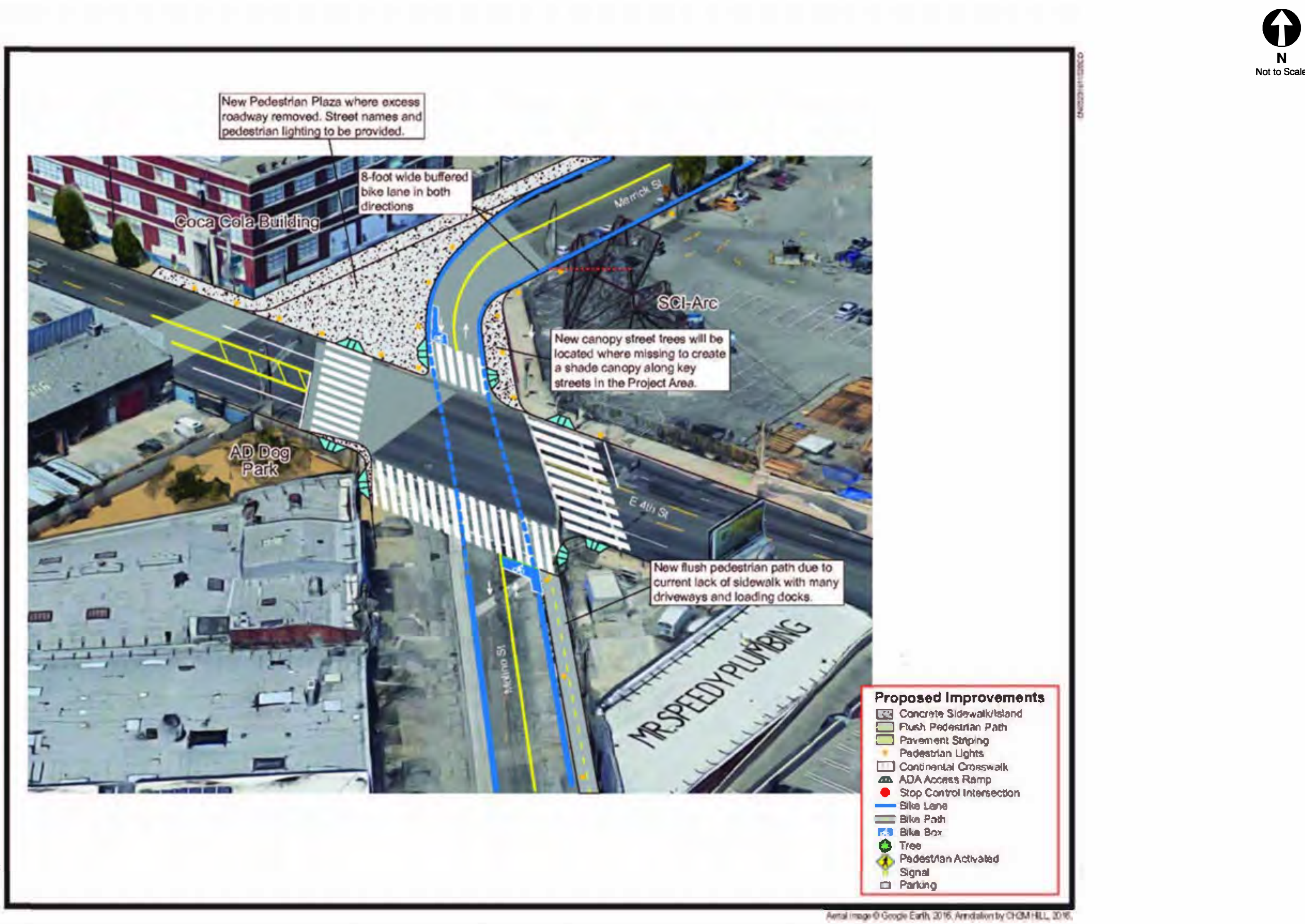
Total

	Soto St Southbound				1st St Westbound				Soto St Northbound				1st St Eastbound				Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Vehicles
04:00 PM	21	122	16	3	34	114	16	11	35	133	22	15	17	171	32	9	733
04:15 PM	21	127	17	6	30	95	13	14	36	167	35	11	14	169	27	8	751
04:30 PM	22	126	11	9	21	120	16	18	32	164	29	9	17	164	47	6	769
04:45 PM	21	138	10	12	24	115	17	15	39	142	25	4	21	176	30	5	758
05:00 PM	30	122	13	11	35	129	20	24	46	178	20	2	9	206	15	11	823
05:15 PM	29	140	21	8	22	98	10	18	49	185	25	8	30	199	20	12	828
05:30 PM	22	139	21	5	28	96	17	15	39	160	37	8	25	237	28	8	849
05:45 PM	34	113	9	4	32	120	20	12	42	164	29	11	28	217	36	9	844
Hour Totals	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Total
4:00 PM - 5:00 PM	85	513	54	30	109	444	62	58	142	606	111	39	69	680	136	28	3011
4:15 PM - 5:15 PM	94	513	51	38	110	459	66	71	153	651	109	26	61	715	119	30	3101
4:30 PM - 5:30 PM	102	526	55	40	102	462	63	75	166	669	99	23	77	745	112	34	3178
4:45 PM - 5:45 PM	102	539	65	36	109	438	64	72	173	665	107	22	85	818	93	36	3258
5:00 PM - 6:00 PM	115	514	64	28	117	443	67	69	176	687	111	29	92	859	99	40	3344
Peak Hour	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	**Left**	**Thru**	**Right**	Peds	Total
5:00 PM - 6:00 PM	**115**	**514**	**64**	28	**117**	**443**	**67**	69	**176**	**687**	**111**	29	**92**	**859**	**99**	40	3344

Appendix D

Arts District Active Transportation Program

Gibson transportation consulting, inc.



Source: City of Los Angeles, June 2016

ARTS DISTRICT ATP IMPROVEMENT - MERRICK STREET/MOLINO STREET & 4TH STREET

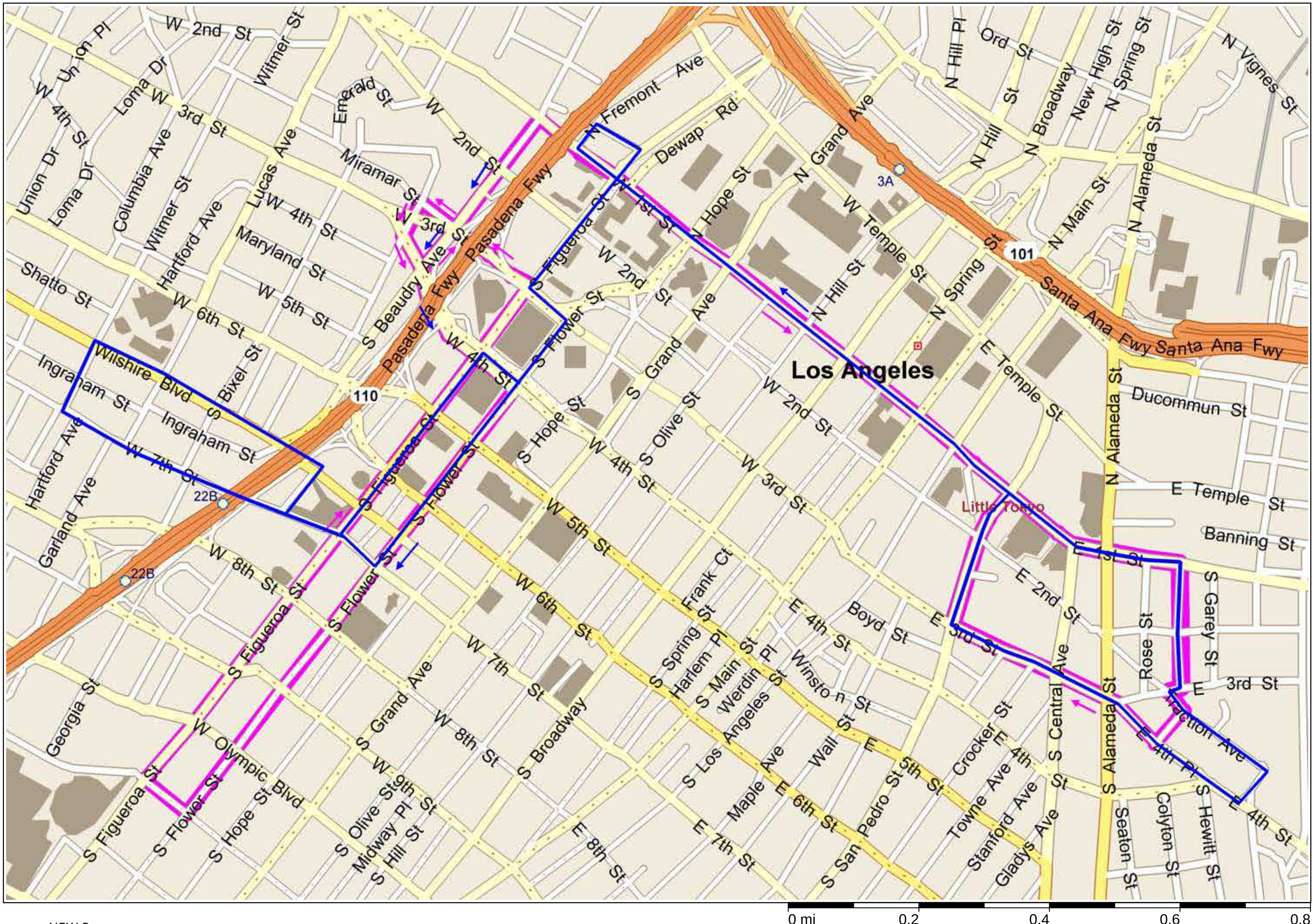
FIGURE D-1

Appendix E

Proposed LADOT DASH Extensions

EXISTING ROUTE	Tentatively planned for **late 2017**			Tentatively planned for **2018 / 2019**	
	ADDED SERVICE	EXTEND WEEKDAY HOURS	EXTEND WEEKEND HOURS	INCREASE FREQUENCIES	ROUTE CHANGE
Downtown A	Sat. & Sun.	●			●

DOWNTOWN DASH A - RECOMMENDED ROUTE CHANGE

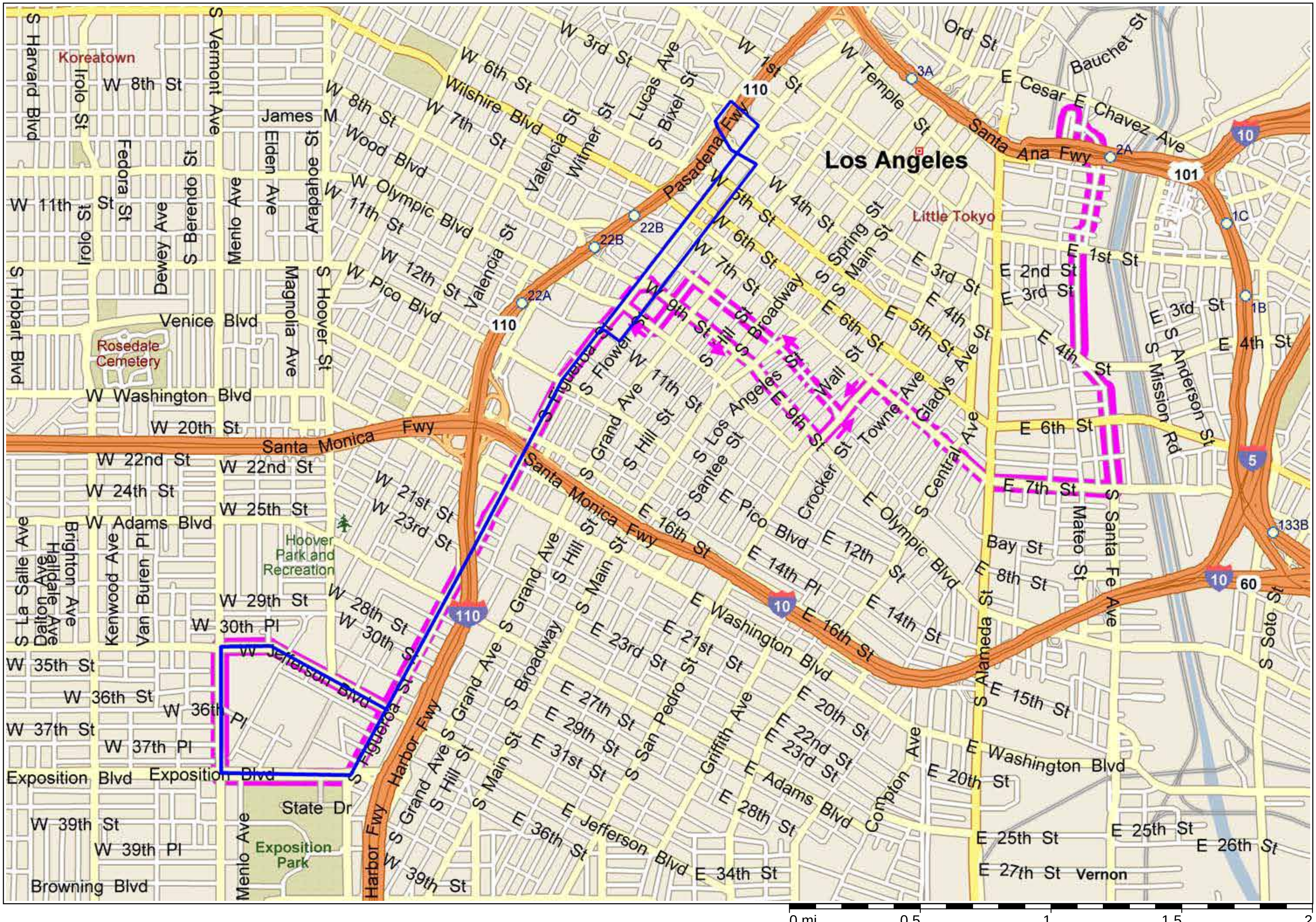


NEW Route

OLD Route

EXISTING ROUTE	Tentatively planned for **late 2017**			Tentatively planned for **2018 / 2019**	
	ADDED SERVICE	EXTEND WEEKDAY HOURS	EXTEND WEEKEND HOURS	INCREASE FREQUENCIES	ROUTE CHANGE
Downtown F		●	●		●

DOWNTOWN DASH F - RECOMMENDED ROUTE CHANGE



NEW Route

OLD Route

Appendix F

VMT Analysis

CITY OF LOS ANGELES VMT CALCULATOR Version 1.2

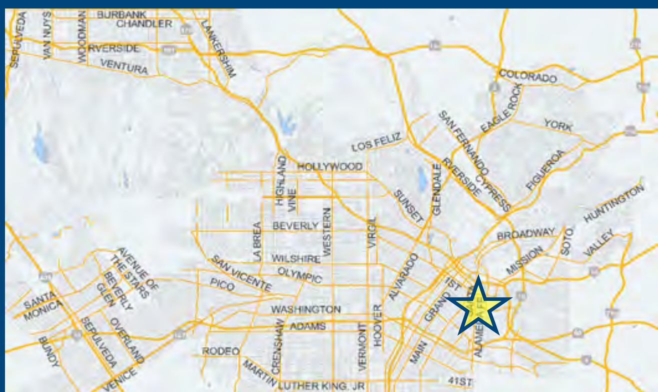
Project Screening Criteria: Is this project required to conduct a vehicle miles traveled analysis?

Project Information

Project: 4th & Hewitt

Scenario: www

Address: 401 S HEWITT ST, 90013



If the project is replacing an existing number of residential units with a smaller number of residential units, is the proposed project located within one-half mile of a fixed-rail or fixed-guideway transit station?

○ Yes ◉ No

Existing Land Use

Land Use Type	Value	Unit
Office | General Office	3.515	ksf
Office | General Office	3.515	ksf

☐ Click here to add a single custom land use type (will be included in the above list)

Proposed Project Land Use

Land Use Type	Value	Unit
Retail | High-Turnover Sit-Down Restaurant	8.149	ksf
Retail | High-Turnover Sit-Down Restaurant	8.149	ksf
Office | General Office	311.682	ksf

☐ Click here to add a single custom land use type (will be included in the above list)

Project Screening Summary

	Existing Land Use	Proposed Project
Daily Vehicle Trips	27	2,830
Daily VMT	201	20,381

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	2,803 Net Daily Trips
The net increase in daily VMT ≤ 0	20,180 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	8.149 ksf

The proposed project is required to perform VMT analysis.

Measuring the Miles

1/15/2020

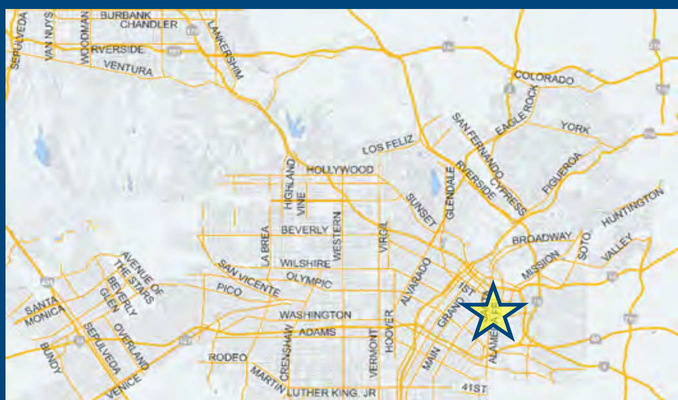
CITY OF LOS ANGELES VMT CALCULATOR Version 1.2

Project Information

Project: 4th & Hewitt

Scenario:

Address: 401 S HEWITT ST, 90013



Proposed Project Land Use Type	Value	Unit
Retail | High-Turnover Sit-Down Restaurant	8.14	
Office | General Office	311	

TDM Strategies

Select each section to show individual strategies

Use ☑ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	**No**	**No**
Max Work Based TDM Achieved?	**No**	**No**

A Parking

B Transit

C Education & Encouragement

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

Implement/Improve On-street Bicycle Facility
☐ Proposed Prj ☐ Mitigation
Select Proposed Prj or Mitigation to include this strategy

Include Bike Parking Per LAMC
☐ Proposed Prj ☐ Mitigation
Select Proposed Prj or Mitigation to include this strategy

Include Secure Bike Parking and Showers
☑ Proposed Prj ☐ Mitigation
Select Proposed Prj or Mitigation to include this strategy

G Neighborhood Enhancement

Analysis Results

	Proposed Project	With Mitigation
Daily Vehicle Trips	2,756	2,756
Daily VMT	19,848	19,848
Household VMT per Capita	0.0	0.0
Work VMT per Employee	7.2	7.2

Significant VMT Impact?

Proposed Project	With Mitigation
Household: No Threshold = 6.0 15% Below APC	**Household: No** Threshold = 6.0 15% Below APC
Work: No Threshold = 7.6 15% Below APC	**Work: No** Threshold = 7.6 15% Below APC

Measuring the Miles

1/15/2020

Project Information

Land Use Type		Value	Units
Housing	*Single Family*	*0*	*DU*
	Multi Family	*0*	*DU*
	Townhouse	*0*	*DU*
	Hotel	*0*	*Rooms*
	Motel	*0*	*Rooms*
Affordable Housing	*Family*	*0*	*DU*
	Senior	*0*	*DU*
	Special Needs	*0*	*DU*
	Permanent Supportive	*0*	*DU*
Retail	*General Retail*	*0.000*	*ksf*
	Furniture Store	*0.000*	*ksf*
	Pharmacy/Drugstore	*0.000*	*ksf*
	Supermarket	*0.000*	*ksf*
	Bank	*0.000*	*ksf*
	Health Club	*0.000*	*ksf*
	High-Turnover Sit-Down Restaurant	8.149	ksf
	Fast-Food Restaurant	*0.000*	*ksf*
	Quality Restaurant	*0.000*	*ksf*
	Auto Repair	*0.000*	*ksf*
	Home Improvement	*0.000*	*ksf*
	Free-Standing Discount	*0.000*	*ksf*
	Movie Theater	*0*	*Seats*
Office	General Office	311.682	ksf
	Medical Office	*0.000*	*ksf*
Industrial	*Light Industrial*	*0.000*	*ksf*
	Manufacturing	*0.000*	*ksf*
	Warehousing/Self-Storage	*0.000*	*ksf*
School	*University*	*0*	*Students*
	High School	*0*	*Students*
	Middle School	*0*	*Students*
	Elementary	*0*	*Students*
	Private School (K-12)	*0*	*Students*
Other		*0*	*Trips*

Analysis Results

Total Employees: 1,279
Total Population: 0

Proposed Project		*With Mitigation*	
2,756	**Daily Vehicle Trips**	**2,756**	**Daily Vehicle Trips**
19,848	**Daily VMT**	**19,848**	**Daily VMT**
0	**Household VMT per Capita**	**0**	**Household VMT per Capita**
7.2	**Work VMT per Employee**	**7.2**	**Work VMT per Employee**

Significant VMT Impact?

APC: Central

Impact Threshold: 15% Below APC Average
Household = 6.0
Work = 7.6

Proposed Project		*With Mitigation*	
VMT Threshold	**Impact**	**VMT Threshold**	**Impact**
Household > 6.0	No	Household > 6.0	No
Work > 7.6	No	Work > 7.6	No

TDM Strategy Inputs

Strategy Type		Description	Proposed Project	Mitigations
Parking	*Reduce parking supply*	*City code parking provision (spaces)*	*0*	*0*
		Actual parking provision (spaces)	*0*	*0*
	Unbundle parking	*Monthly cost for parking ($)*	*$0*	*$0*
	Parking cash-out	*Employees eligible (%)*	*0%*	*0%*
	Price workplace parking	*Daily parking charge ($)*	*$0.00*	*$0.00*
		Employees subject to priced parking (%)	*0%*	*0%*
	Residential area parking permits	*Cost of annual permit ($)*	*$0*	*$0*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Transit	*Reduce transit headways*	*Reduction in headways (increase in frequency) (%)*	*0%*	*0%*
		Existing transit mode share (as a percent of total daily trips) (%)	*0%*	*0%*
		Lines within project site improved (<50%, >=50%)	*0*	*0*
	Implement neighborhood shuttle	*Degree of implementation (low, medium, high)*	*0*	*0*
		Employees and residents eligible (%)	*0%*	*0%*
	Transit subsidies	*Employees and residents eligible (%)*	*0%*	*0%*
		Amount of transit subsidy per passenger (daily equivalent) ($)	*$0.00*	*$0.00*
Education & Encouragement	*Voluntary travel behavior change program*	*Employees and residents participating (%)*	*0%*	*0%*
	Promotions and marketing	*Employees and residents participating (%)*	*0%*	*0%*

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Commute Trip Reductions	Required commute trip reduction program	Employees participating (%)	0%	0%
	Alternative Work Schedules and Telecommute	Employees participating (%)	0%	0%
		Type of program	0	0
	Employer sponsored vanpool or shuttle	Degree of implementation (low, medium, high)	0	0
		Employees eligible (%)	0%	0%
		Employer size (small, medium, large)	0	0
	Ride-share program	Employees eligible (%)	0%	0%
Shared Mobility	Car share	Car share project setting (Urban, Suburban, All Other)	0	0
	Bike share	Within 600 feet of existing bike share station - OR- implementing new bike share station (Yes/No)	0	0
	School carpool program	Level of implementation (Low, Medium, High)	0	0

(cont. on following page)

TDM Strategy Inputs, Cont.

Strategy Type		Description	Proposed Project	Mitigations
Bicycle Infrastructure	*Implement/Improve on-street bicycle facility*	*Provide bicycle facility along site (Yes/No)*	*0*	*0*
	Include Bike parking per LAMC	*Meets City Bike Parking Code (Yes/No)*	*0*	*0*
	Include secure bike parking and showers	Includes indoor bike parking/lockers, showers, & repair station (Yes/No)	Yes	Yes
Neighborhood Enhancement	*Traffic calming improvements*	*Streets with traffic calming improvements (%)*	*0%*	*0%*
		Intersections with traffic calming improvements (%)	*0%*	*0%*
	Pedestrian network improvements	Included (within project and connecting off-site/within project only)	within project and connecting off-site	within project and connecting off-site

TDM Adjustments by Trip Purpose & Strategy

Place type: Suburban Center

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Parking	Reduce parking supply	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Parking sections 1 - 5
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Residential area parking permits	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Transit	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Transit sections 1 - 3
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Education & Encouragement	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Education & Encouragement sections 1 - 2
	Promotions and marketing	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	TDM Strategy Appendix, Commute Trip Reductions sections 1 - 4
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	Ride-share program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Shared Mobility sections 1 - 3
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Suburban Center

		Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*		*Source*
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	
	Include secure bike parking and showers	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
Neighborhood Enhancement	Traffic calming improvements	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	TDM Strategy Appendix, Neighborhood Enhancement sections 1 - 2
	Pedestrian network improvements	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	

Final Combined & Maximum TDM Effect

	Home Based Work Production		*Home Based Work Attraction*		*Home Based Other Production*		*Home Based Other Attraction*		*Non-Home Based Other Production*		*Non-Home Based Other Attraction*	
	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*
MAX. TDM EFFECT	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*

= Minimum (X%, 1-[(1-A)*(1-B)...])
where X%=

PLACE TYPE MAX:	*urban*	*75%*
	compact infill	*40%*
	suburban center	*20%*
	suburban	*15%*

Note: (1-[(1-A)*(1-B)...]) reflects the dampened combined effectiveness of TDM Strategies (e.g., A, B,...). See the TDM Strategy Appendix (*Transportation Assessment Guidelines Attachment G)* for further discussion of dampening.

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: January 15, 2020
Project Name: 4th & Hewitt
Project Scenario:
Project Address: 401 S HEWITT ST, 90013

Version 1.2

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	6.2	0	0
Home Based Other Production	0	0.0%	0	4.6	0	0
Non-Home Based Other Production	599	-14.0%	515	7.4	4,433	3,811
Home-Based Work Attraction	1,685	-31.5%	1,154	8.2	13,817	9,463
Home-Based Other Attraction	1,267	-49.0%	646	5.9	7,475	3,811
Non-Home Based Other Attraction	599	-14.0%	515	6.4	3,834	3,296

MXD Methodology with TDM Measures

	Proposed Project			*Project with Mitigation Measures*		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-2.6%	0	0	-2.6%	0	0
Home Based Other Production	-2.6%	0	0	-2.6%	0	0
Non-Home Based Other Production	-2.6%	501	3,711	-2.6%	501	3,711
Home-Based Work Attraction	-2.6%	1,124	9,216	-2.6%	1,124	9,216
Home-Based Other Attraction	-2.6%	629	3,711	-2.6%	629	3,711
Non-Home Based Other Attraction	-2.6%	502	3,210	-2.6%	502	3,210

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0
Total Employees: 1,279
APC: Central

	Proposed Project	*Project with Mitigation Measures*
Total Home Based Production VMT	**0**	**0**
Total Home Based Work Attraction VMT	**9,216**	**9,216**
Total Home Based VMT Per Capita	**0.0**	**0.0**
Total Work Based VMT Per Employee	**7.2**	**7.2**

Appendix G

Level of Service Worksheets

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
1	East-West Street:	3rd Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition				Existing Plus Project				Existing W/O Project				Existing Condition W/ Project				Existing W/ Project W/ Mitigation			
No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	142	1	**142**	0	142	**142**	0	142	1	**142**	0	142	1	**142**	0	142	1	**142**
	Left-Through		0							0				0				0	
	Through	282	2	141	0	282	141	0	282	2	141	0	282	2	141	0	282	2	141
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	419	1	**268**	0	419	**268**	0	419	1	**268**	0	419	1	**268**	0	419	1	**268**
	Through-Right		1							1				1				1	
	Right	116	0	116	0	116	116	0	116	0	116	0	116	0	116	0	116	0	116
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	211	0	211	0	211	211	0	211	0	211	0	211	0	211	0	211	0	211
	Left-Through		1							1				1				1	
	Through	2351	3	**641**	7	2358	**642**	0	2351	3	**641**	7	2358	3	**642**	-1	2357	3	**642**
	Through-Right		0							0				0				0	
	Right	89	1	89	0	89	89	0	89	1	89	0	89	1	89	0	89	1	89
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	410		*North-South:*	410			*North-South:*	410			*North-South:*	410			*North-South:*	410
			East-West:	641		*East-West:*	642			*East-West:*	641			*East-West:*	642			*East-West:*	642
			SUM:	1051		*SUM:*	1052			*SUM:*	1051			*SUM:*	1052			*SUM:*	1052
VOLUME/CAPACITY *(V/C)* RATIO:				0.738			0.738				0.738				0.738				0.738
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.638			0.638				0.638				0.638				0.638
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

LADOT Moving LA Forward

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
2	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	351	1	206	0	351	206	0	351	1	206	0	351	1	206	0	351	1	206
	Through-Right		1							1				1				1	
	Right	60	0	60	0	60	60	0	60	0	60	0	60	0	60	0	60	0	60
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	21	1	21	0	21	21	0	21	1	21	0	21	1	21	0	21	1	21
	Left-Through		0							0				0				0	
	Through	570	2	285	0	570	285	0	570	2	285	0	570	2	285	0	570	2	285
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	19	1	19	0	19	19	0	19	1	19	0	19	1	19	0	19	1	19
	Left-Through		0							0				0				0	
	Through	374	2	187	32	406	203	0	374	2	187	32	406	2	203	-5	401	2	201
	Through-Right		0							0				0				0	
	Right	93	1	93	0	93	93	0	93	1	93	0	93	1	93	0	93	1	93
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	285	285	285	285	285
East-West:	187	203	187	203	201
SUM:	472	488	472	488	486
VOLUME/CAPACITY *(V/C)* RATIO:	0.331	0.342	0.331	0.342	0.341
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.231	0.242	0.231	0.242	0.241
LEVEL OF SERVICE (LOS):	A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.010
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
3	East-West Street:	6th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition		Existing Plus Project		Existing W/O Project		Existing Condition W/ Project		Existing W/ Project W/ Mitigation	
No. of Phases		4		4		4		4		4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		0		0		0		0		0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0
	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?		2		2		2		2		2
Override Capacity		0		0		0		0		0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	EXISTING W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	401	1	**239**	0	401	**239**	0	401	1	**239**	0	401	1	**239**	0	401	1	**239**
	Through-Right		1							1				1				1	
	Right	77	0	77	0	77	77	0	77	0	77	0	77	0	77	0	77	0	77
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	20	1	**20**	0	20	**20**	0	20	1	**20**	0	20	1	**20**	0	20	1	**20**
	Left-Through		0							0				0				0	
	Through	489	2	245	0	489	245	0	489	2	245	0	489	2	245	0	489	2	245
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	44	1	44	0	44	44	0	44	1	44	0	44	1	44	0	44	1	44
	Left-Through		0							0				0				0	
	Through	304	2	**152**	16	320	**160**	0	304	2	**152**	16	320	2	**160**	-2	318	2	**159**
	Through-Right		0							0				0				0	
	Right	111	1	111	0	111	111	0	111	1	111	0	111	1	111	0	111	1	111
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	303	1	**303**	0	303	**303**	0	303	1	**303**	0	303	1	**303**	0	303	1	**303**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	530	2	282	0	530	282	0	530	2	282	0	530	2	282	0	530	2	282
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Existing W/O Project		Existing Condition W/ Project		Existing W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	259	*North-South:*	259	*North-South:*	259	*North-South:*	259	*North-South:*	259
	East-West:	455	*East-West:*	463	*East-West:*	455	*East-West:*	463	*East-West:*	462
	SUM:	714	*SUM:*	722	*SUM:*	714	*SUM:*	722	*SUM:*	721
VOLUME/CAPACITY *(V/C)* RATIO:		0.519		0.525		0.519		0.525		0.524
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.419		0.425		0.419		0.425		0.424
LEVEL OF SERVICE (LOS):		A		A		A		A		A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
4	East-West Street:	7th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing w/o Project	Existing Condition w/ Project	Existing w/ Project w/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	66	1	66	0	66	66	0	66	1	66	0	66	1	66	0	66	1	66
	Left-Through		0							0				0				0	
	Through	425	1	281	0	425	281	0	425	1	281	0	425	1	281	0	425	1	281
	Through-Right		1							1				1				1	
	Right	137	0	137	0	137	137	0	137	0	137	0	137	0	137	0	137	0	137
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	34	0	34	0	34	34	0	34	0	34	0	34	0	34	0	34	0	34
	Left-Through		1							1				1				1	
	Through	708	0	461	0	708	461	0	708	0	461	0	708	0	461	0	708	0	461
	Through-Right		1							1				1				1	
	Right	146	0	461	0	146	461	0	146	0	461	0	146	0	461	0	146	0	461
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	53	0	53	53	0	53	1	53	0	53	1	53	0	53	1	53
	Left-Through		0							0				0				0	
	Through	304	1	179	0	304	179	0	304	1	179	0	304	1	179	0	304	1	179
	Through-Right		1							1				1				1	
	Right	54	0	54	0	54	54	0	54	0	54	0	54	0	54	0	54	0	54
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	177	1	177	0	177	177	0	177	1	177	0	177	1	177	0	177	1	177
	Left-Through		0							0				0				0	
	Through	732	1	409	3	735	411	0	732	1	409	3	735	1	411	-1	734	1	410
	Through-Right		1							1				1				1	
	Right	86	0	86	0	86	86	0	86	0	86	0	86	0	86	0	86	0	86
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Existing w/o Project		Existing Condition w/ Project		Existing w/ Project w/ Mitigation	
CRITICAL VOLUMES	*North-South:*	527	*North-South:*	527	*North-South:*	527	*North-South:*	527	*North-South:*	527
	East-West:	462	*East-West:*	464	*East-West:*	462	*East-West:*	464	*East-West:*	463
	SUM:	989	*SUM:*	991	*SUM:*	989	*SUM:*	991	*SUM:*	990
VOLUME/CAPACITY *(V/C)* RATIO:		0.659		0.661		0.659		0.661		0.660
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.559		0.561		0.559		0.561		0.560
LEVEL OF SERVICE (LOS):		A		A		A		A		A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
5	East-West Street:	2nd Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	118	1	**118**	0	118	**118**	0	118	1	**118**	0	118	1	**118**	0	118	1	**118**
	Left-Through		0							0				0				0	
	Through	733	1	383	14	747	390	0	733	1	383	14	747	1	390	-2	745	1	389
	Through-Right		1							1				1				1	
	Right	33	0	33	0	33	33	0	33	0	33	0	33	0	33	0	33	0	33
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	70	1	70	0	70	70	0	70	1	70	0	70	1	70	0	70	1	70
	Left-Through		0							0				0				0	
	Through	886	1	**471**	64	950	**503**	0	886	1	**471**	64	950	1	**503**	-10	940	1	**498**
	Through-Right		1							1				1				1	
	Right	56	0	56	0	56	56	0	56	0	56	0	56	0	56	0	56	0	56
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	40	1	**40**	0	40	**40**	0	40	1	**40**	0	40	1	**40**	0	40	1	**40**
	Left-Through		0							0				0				0	
	Through	72	1	72	0	72	72	0	72	1	72	0	72	1	72	0	72	1	72
	Through-Right		0							0				0				0	
	Right	103	1	44	0	103	44	0	103	1	44	0	103	1	44	0	103	1	44
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	67	1	67	0	67	67	0	67	1	67	0	67	1	67	0	67	1	67
	Left-Through		0							0				0				0	
	Through	130	0	**201**	0	130	**201**	0	130	0	**201**	0	130	0	**201**	0	130	0	**201**
	Through-Right		1							1				1				1	
	Right	71	0	0	0	71	0	0	71	0	0	0	71	0	0	0	71	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	589		*North-South:*	621			*North-South:*	589			*North-South:*	621			*North-South:*	616
			East-West:	241		*East-West:*	241			*East-West:*	241			*East-West:*	241			*East-West:*	241
			SUM:	830		*SUM:*	862			*SUM:*	830			*SUM:*	862			*SUM:*	857
VOLUME/CAPACITY *(V/C)* RATIO:				0.582			0.605				0.582				0.605				0.601
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.482			0.505				0.482				0.505				0.501
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.023	Δ*v/c* after mitigation:	0.019
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
6	East-West Street:	3rd Street/4th Place	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	137	1	137	0	137	137	0	137	1	137	0	137	1	137	0	137	1	137
	Left-Through		0							0				0				0	
	Through	653	2	327	0	653	327	0	653	2	327	0	653	2	327	0	653	2	327
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	866	2	433	64	930	465	0	866	2	433	64	930	2	465	-10	920	2	460
	Through-Right		0							0				0				0	
	Right	196	1	196	0	196	196	0	196	1	196	0	196	1	196	0	196	1	196
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	151	0	151	116	267	267	0	151	0	151	116	267	0	267	-17	250	0	250
	Left-Through		1							1				1				1	
	Through	2250	2	646	7	2257	680	0	2250	2	646	7	2257	2	680	-1	2256	3	627
	Through-Right		1							1				1				0	
	Right	181	0	646	14	195	680	0	181	0	646	14	195	0	680	-2	193	1	193
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	570	602	570	602	597
East-West:	646	680	646	680	627
SUM:	1216	1282	1216	1282	1224
VOLUME/CAPACITY *(V/C)* RATIO:	0.853	0.900	0.853	0.900	0.859
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.753	0.800	0.753	0.800	0.759
LEVEL OF SERVICE (LOS):	C	C	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.047	Δ*v/c* after mitigation:	0.006
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
7	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition				Existing Plus Project				Existing W/O Project				Existing Condition W/ Project				Existing W/ Project W/ Mitigation			
No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	831	1	443	0	831	507	0	831	1	443	0	831	1	507	0	831	1	497
	Through-Right		1							1				1				1	
	Right	54	0	54	128	182	182	0	54	0	54	128	182	0	182	-19	163	0	163
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	102	1	102	160	262	262	0	102	1	102	160	262	1	262	-24	238	1	238
	Left-Through		0							0				0				0	
	Through	977	2	489	21	998	499	0	977	2	489	21	998	2	499	-3	995	2	498
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	83	0	83	0	83	83	0	83	0	83	0	83	0	83	0	83	0	83
	Left-Through		1							1				1				1	
	Through	268	2	117	32	300	128	0	268	2	117	32	300	2	128	-5	295	2	126
	Through-Right		0							0				0				0	
	Right	114	1	114	0	114	114	0	114	1	114	0	114	1	114	0	114	1	114
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	545		*North-South:*	769			*North-South:*	545			*North-South:*	769			*North-South:*	735
			East-West:	117		*East-West:*	128			*East-West:*	117			*East-West:*	128			*East-West:*	126
			SUM:	662		*SUM:*	897			*SUM:*	662			*SUM:*	897			*SUM:*	861
VOLUME/CAPACITY *(V/C)* RATIO:				0.441			0.598				0.441				0.598				0.574
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.341			0.498				0.341				0.498				0.474
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.157	Δ*v/c* after mitigation:	0.133
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
8	East-West Street:	6th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	72	1	72	0	72	72	0	72	1	72	0	72	1	72	0	72	1	72
	Left-Through		0							0				0				0	
	Through	522	1	294	96	618	342	0	522	1	294	96	618	1	342	-14	604	1	335
	Through-Right		1							1				1				1	
	Right	65	0	65	0	65	65	0	65	0	65	0	65	0	65	0	65	0	65
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	47	1	47	3	50	50	0	47	1	47	3	50	1	50	-1	49	1	49
	Left-Through		0							0				0				0	
	Through	790	1	423	17	807	431	0	790	1	423	17	807	1	431	-3	804	1	430
	Through-Right		1							1				1				1	
	Right	55	0	55	0	55	55	0	55	0	55	0	55	0	55	0	55	0	55
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	43	1	43	16	59	59	0	43	1	43	16	59	1	59	-2	57	1	57
	Left-Through		0							0				0				0	
	Through	206	1	153	0	206	153	0	206	1	153	0	206	1	153	0	206	1	153
	Through-Right		1							1				1				1	
	Right	100	0	100	0	100	100	0	100	0	100	0	100	0	100	0	100	0	100
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	128	1	128	0	128	128	0	128	1	128	0	128	1	128	0	128	1	128
	Left-Through		0							0				0				0	
	Through	627	1	368	0	627	376	0	627	1	368	0	627	1	376	0	627	1	375
	Through-Right		1							1				1				1	
	Right	109	0	109	16	125	125	0	109	0	109	16	125	0	125	-2	123	0	123
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	495		*North-South:*	503			*North-South:*	495			*North-South:*	503			*North-South:*	502
			East-West:	411		*East-West:*	435			*East-West:*	411			*East-West:*	435			*East-West:*	432
			SUM:	906		*SUM:*	938			*SUM:*	906			*SUM:*	938			*SUM:*	934
VOLUME/CAPACITY *(V/C)* RATIO:				0.636			0.658				0.636				0.658				0.655
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.536			0.558				0.536				0.558				0.555
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.022 — Δ*v/c* after mitigation: 0.019

Significant impacted? NO — Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
9	East-West Street:	7th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	109	1	109	0	109	109	0	109	1	109	0	109	1	109	0	109	1	109
	Left-Through		0							0				0				0	
	Through	621	1	357	80	701	397	0	621	1	357	80	701	1	397	-12	689	1	391
	Through-Right		1							1				1				1	
	Right	93	0	93	0	93	93	0	93	0	93	0	93	0	93	0	93	0	93
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	127	1	127	0	127	127	0	127	1	127	0	127	1	127	0	127	1	127
	Left-Through		0							0				0				0	
	Through	870	1	519	14	884	527	0	870	1	519	14	884	1	527	-2	882	1	526
	Through-Right		1							1				1				1	
	Right	167	0	167	3	170	170	0	167	0	167	3	170	0	170	-1	169	0	169
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	58	1	58	0	58	58	0	58	1	58	0	58	1	58	0	58	1	58
	Left-Through		0							0				0				0	
	Through	309	1	195	0	309	195	0	309	1	195	0	309	1	195	0	309	1	195
	Through-Right		1							1				1				1	
	Right	81	0	81	0	81	81	0	81	0	81	0	81	0	81	0	81	0	81
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	118	1	118	0	118	118	0	118	1	118	0	118	1	118	0	118	1	118
	Left-Through		0							0				0				0	
	Through	661	1	380	0	661	388	0	661	1	380	0	661	1	388	0	661	1	387
	Through-Right		1							1				1				1	
	Right	98	0	98	16	114	114	0	98	0	98	16	114	0	114	-2	112	0	112
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Existing W/O Project		Existing Condition W/ Project		Existing W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	628	*North-South:*	636	*North-South:*	628	*North-South:*	636	*North-South:*	635
	East-West:	438	*East-West:*	446	*East-West:*	438	*East-West:*	446	*East-West:*	445
	SUM:	1066	*SUM:*	1082	*SUM:*	1066	*SUM:*	1082	*SUM:*	1080
VOLUME/CAPACITY *(V/C)* RATIO:		0.748		0.759		0.748		0.759		0.758
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.648		0.659		0.648		0.659		0.658
LEVEL OF SERVICE (LOS):		B		B		B		B		B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.010
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
10	East-West Street:	Olympic Boulevard	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition				Existing Plus Project				Existing W/O Project				Existing Condition W/ Project				Existing W/ Project W/ Mitigation			
No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

MOVEMENT		EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	EXISTING W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	83	1	83	0	83	83	0	83	1	83	0	83	1	83	0	83	1	83
	Left-Through		0							0				0				0	
	Through	680	1	379	64	744	411	0	680	1	379	64	744	1	411	-10	734	1	406
	Through-Right		1							1				1				1	
	Right	78	0	78	0	78	78	0	78	0	78	0	78	0	78	0	78	0	78
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	122	1	122	0	122	122	0	122	1	122	0	122	1	122	0	122	1	122
	Left-Through		0							0				0				0	
	Through	769	2	385	14	783	392	0	769	2	385	14	783	2	392	-2	781	2	391
	Through-Right		0							0				0				0	
	Right	198	1	157	0	198	157	0	198	1	157	0	198	1	157	0	198	1	157
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	82	1	82	0	82	82	0	82	1	82	0	82	1	82	0	82	1	82
	Left-Through		0							0				0				0	
	Through	616	1	337	0	616	337	0	616	1	337	0	616	1	337	0	616	1	337
	Through-Right		1							1				1				1	
	Right	58	0	58	0	58	58	0	58	0	58	0	58	0	58	0	58	0	58
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	111	1	111	0	111	111	0	111	1	111	0	111	1	111	0	111	1	111
	Left-Through		0							0				0				0	
	Through	1074	1	571	0	1074	579	0	1074	1	571	0	1074	1	579	0	1074	2	537
	Through-Right		1							1				1				0	
	Right	67	0	67	16	83	83	0	67	0	67	16	83	0	83	-2	81	1	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Existing W/O Project		Existing Condition W/ Project		Existing W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	501	*North-South:*	533	*North-South:*	501	*North-South:*	533	*North-South:*	528
	East-West:	653	*East-West:*	661	*East-West:*	653	*East-West:*	661	*East-West:*	619
	SUM:	1154	*SUM:*	1194	*SUM:*	1154	*SUM:*	1194	*SUM:*	1147
VOLUME/CAPACITY (*V/C*) RATIO:		0.769		0.796		0.769		0.796		0.765
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.669		0.696		0.669		0.696		0.665
LEVEL OF SERVICE (LOS):		B		B		B		B		B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.027	Δ*v/c* after mitigation:	-0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
11	East-West Street:	I-10 EB Ramps	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	371	1	371	0	371	371	0	371	1	371	0	371	1	371	0	371	1	371
	Left-Through		0							0				0				0	
	Through	1053	1	531	32	1085	547	0	1053	1	531	32	1085	1	547	-5	1080	1	544
	Through-Right		1							1				1				1	
	Right	8	0	8	0	8	8	0	8	0	8	0	8	0	8	0	8	0	8
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	1	1	1	0	1	1	0	1	1	1	0	1	1	1	0	1	1	1
	Left-Through		0							0				0				0	
	Through	814	2	407	7	821	411	0	814	2	407	7	821	2	411	-1	820	2	410
	Through-Right		0							0				0				0	
	Right	428	1	151	0	428	119	0	428	1	151	0	428	1	119	0	428	1	124
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	277	1	277	32	309	309	0	277	1	277	32	309	1	309	-5	304	1	304
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	530	1	159	0	530	159	0	530	1	159	0	530	1	159	0	530	1	159
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
	Through-Right		0							0				0				0	
	Right	2	0	0	0	2	0	0	2	0	0	0	2	0	0	0	2	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

CRITICAL VOLUMES		EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING W/O PROJECT	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
	North-South:	778	782	778	782	781
	East-West:	277	309	277	309	304
	SUM:	1055	1091	1055	1091	1085
VOLUME/CAPACITY *(V/C)* RATIO:		0.740	0.766	0.740	0.766	0.761
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.640	0.666	0.640	0.666	0.661
LEVEL OF SERVICE (LOS):		B	B	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.026	Δ*v/c* after mitigation:	0.021
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Vignes Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
12	East-West Street:	1st Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION		EXISTING PLUS PROJECT		EXISTING W/O PROJECT		EXISTING CONDITION W/ PROJECT		EXISTING W/ PROJECT W/ MITIGATION	
No. of Phases		3		3		3		3		3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		2		2		2		2		2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0
	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0
ATSAC-1 or ATSAC+ATCS-2?		2		2		2		2		2
Override Capacity		0		0		0		0		0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	0	5	0	5	5	0	5	0	5	0	5	0	5	0	5	0	5
	Left-Through		0							0				0				0	
	Through	20	0	**50**	0	20	**50**	0	20	0	**50**	0	20	0	**50**	0	20	0	**50**
	Through-Right		0							0				0				0	
	Right	25	0	0	0	25	0	0	25	0	0	0	25	0	0	0	25	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	27	0	**27**	0	27	**27**	0	27	0	**27**	0	27	0	**27**	0	27	0	**27**
	Left-Through		0							0				0				0	
	Through	18	0	67	0	18	67	0	18	0	67	0	18	0	67	0	18	0	67
	Through-Right		0							0				0				0	
	Right	22	0	0	0	22	0	0	22	0	0	0	22	0	0	0	22	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	22	0	22	0	22	22	0	22	0	22	0	22	0	22	0	22	0	22
	Left-Through		1							1				1				1	
	Through	116	1	**102**	0	116	**102**	0	116	1	**102**	0	116	1	**102**	0	116	1	**102**
	Through-Right		0							0				0				0	
	Right	5	1	5	0	5	5	0	5	1	5	0	5	1	5	0	5	1	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	87	0	87	0	87	87	0	87	0	87	0	87	0	87	0	87	0	87
	Left-Through		1							1				1				1	
	Through	822	0	**540**	0	822	**540**	0	822	0	**540**	0	822	0	**540**	0	822	0	**540**
	Through-Right		1							1				1				1	
	Right	170	0	540	0	170	540	0	170	0	540	0	170	0	540	0	170	0	540
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	77		*North-South:*	77			*North-South:*	77			*North-South:*	77			*North-South:*	77
			East-West:	642		*East-West:*	642			*East-West:*	642			*East-West:*	642			*East-West:*	642
			SUM:	719		*SUM:*	719			*SUM:*	719			*SUM:*	719			*SUM:*	719
VOLUME/CAPACITY (*V/C*) RATIO:				0.505			0.505				0.505				0.505				0.505
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.405			0.405				0.405				0.405				0.405
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Merrick Street/Molino Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
13	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	1	1	1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	28	0	28	0	28	28	0	28	0	28	0	28	0	28	0	28	0	28
	Left-Through		0							0				0				0	
	Through	4	0	**33**	0	4	**33**	0	4	0	**33**	0	4	0	**33**	0	4	0	**33**
	Through-Right		0							0				0				0	
	Right	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	50	1	**50**	0	50	**50**	0	50	1	**50**	0	50	1	**50**	0	50	1	**50**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	20	1	20	0	20	20	0	20	1	20	0	20	1	20	0	20	1	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	249	1	149	28	277	163	0	249	1	149	28	277	1	163	-4	273	1	161
	Through-Right		1							1				1				1	
	Right	48	0	48	0	48	48	0	48	0	48	0	48	0	48	0	48	0	48
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	2528	2	**871**	96	2624	**903**	0	2528	2	**871**	96	2624	2	**903**	-14	2610	2	**898**
	Through-Right		1							1				1				1	
	Right	84	0	84	0	84	84	0	84	0	84	0	84	0	84	0	84	0	84
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition		Existing Plus Project		Existing W/O Project		Existing Condition W/ Project		Existing W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	83	*North-South:*	83	*North-South:*	83	*North-South:*	83	*North-South:*	83
	East-West:	871	*East-West:*	903	*East-West:*	871	*East-West:*	903	*East-West:*	898
	SUM:	954	*SUM:*	986	*SUM:*	954	*SUM:*	986	*SUM:*	981
VOLUME/CAPACITY *(V/C)* RATIO:		0.669		0.692		0.669		0.692		0.688
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.569		0.592		0.569		0.592		0.588
LEVEL OF SERVICE (LOS):		A		A		A		A		A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.023	Δ*v/c* after mitigation:	0.019
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
14	East-West Street:	6th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	45	0	**45**	0	45	**45**	0	45	0	**45**	0	45	0	**45**	0	45	0	**45**
	Left-Through		0							0				0				0	
	Through	76	0	128	0	76	128	0	76	0	128	0	76	0	128	0	76	0	128
	Through-Right		0							0				0				0	
	Right	7	0	0	0	7	0	0	7	0	0	0	7	0	0	0	7	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	21	0	21	0	21	21	0	21	0	21	0	21	0	21	0	21	0	21
	Left-Through		0							0				0				0	
	Through	205	0	**258**	3	208	**261**	0	205	0	**258**	3	208	0	**261**	-1	207	0	**260**
	Through-Right		0							0				0				0	
	Right	32	0	0	0	32	0	0	32	0	0	0	32	0	0	0	32	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	47	1	**47**	0	47	**47**	0	47	1	**47**	0	47	1	**47**	0	47	1	**47**
	Left-Through		0							0				0				0	
	Through	159	1	132	3	162	134	0	159	1	132	3	162	1	134	-1	161	1	133
	Through-Right		1							1				1				1	
	Right	105	0	105	0	105	105	0	105	0	105	0	105	0	105	0	105	0	105
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	41	1	41	0	41	41	0	41	1	41	0	41	1	41	0	41	1	41
	Left-Through		0							0				0				0	
	Through	746	1	**412**	16	762	**420**	0	746	1	**412**	16	762	1	**420**	-2	760	1	**419**
	Through-Right		1							1				1				1	
	Right	77	0	77	0	77	77	0	77	0	77	0	77	0	77	0	77	0	77
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	303	306	303	306	305
East-West:	459	467	459	467	466
SUM:	762	773	762	773	771
VOLUME/CAPACITY (*V/C*) RATIO:	0.508	0.515	0.508	0.515	0.514
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.408	0.415	0.408	0.415	0.414
LEVEL OF SERVICE (LOS):	A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
15	East-West Street:	7th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	72	0	72	0	72	72	0	72	0	72	0	72	0	72	0	72	0	72
	Left-Through		0							0				0				0	
	Through	112	0	229	0	112	229	0	112	0	229	0	112	0	229	0	112	0	229
	Through-Right		0							0				0				0	
	Right	45	0	0	0	45	0	0	45	0	0	0	45	0	0	0	45	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	35	0	35	0	35	35	0	35	0	35	0	35	0	35	0	35	0	35
	Left-Through		0							0				0				0	
	Through	179	0	259	3	182	262	0	179	0	259	3	182	0	262	-1	181	0	261
	Through-Right		0							0				0				0	
	Right	45	0	0	0	45	0	0	45	0	0	0	45	0	0	0	45	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	26	1	26	0	26	26	0	26	1	26	0	26	1	26	0	26	1	26
	Left-Through		0							0				0				0	
	Through	346	1	210	0	346	210	0	346	1	210	0	346	1	210	0	346	1	210
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	0	73	0	73	0	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	94	1	94	0	94	94	0	94	1	94	0	94	1	94	0	94	1	94
	Left-Through		0							0				0				0	
	Through	752	1	398	16	768	406	0	752	1	398	16	768	1	406	-2	766	1	405
	Through-Right		1							1				1				1	
	Right	44	0	44	0	44	44	0	44	0	44	0	44	0	44	0	44	0	44
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	331	334	331	334	333
East-West:	424	432	424	432	431
SUM:	755	766	755	766	764
VOLUME/CAPACITY *(V/C)* RATIO:	0.503	0.511	0.503	0.511	0.509
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.403	0.411	0.403	0.411	0.409
LEVEL OF SERVICE (LOS):	A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Santa Fe Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
17	East-West Street:	8th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	249	0	249	0	249	249	0	249	0	249	0	249	0	249	0	249	0	249
	Left-Through		1							1				1				1	
	Through	537	0	**527**	0	537	**527**	0	537	0	**527**	0	537	0	**527**	0	537	0	**527**
	Through-Right		1							1				1				1	
	Right	19	0	527	0	19	527	0	19	0	527	0	19	0	527	0	19	0	527
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	14	0	**14**	0	14	**14**	0	14	0	**14**	0	14	0	**14**	0	14	0	**14**
	Left-Through		1							1				1				1	
	Through	354	0	288	0	354	288	0	354	0	288	0	354	0	288	0	354	0	288
	Through-Right		1							1				1				1	
	Right	194	0	288	0	194	288	0	194	0	288	0	194	0	288	0	194	0	288
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	25	0	25	0	25	25	0	25	0	25	0	25	0	25	0	25	0	25
	Left-Through		0							0				0				0	
	Through	12	0	**353**	0	12	**353**	0	12	0	**353**	0	12	0	**353**	0	12	0	**353**
	Through-Right		0							0				0				0	
	Right	316	0	0	0	316	0	0	316	0	0	0	316	0	0	0	316	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	7	0	**7**	0	7	**7**	0	7	0	**7**	0	7	0	**7**	0	7	0	**7**
	Left-Through		0							0				0				0	
	Through	7	0	32	0	7	32	0	7	0	32	0	7	0	32	0	7	0	32
	Through-Right		0							0				0				0	
	Right	18	0	0	0	18	0	0	18	0	0	0	18	0	0	0	18	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	541	541	541	541	541
East-West:	360	360	360	360	360
SUM:	901	901	901	901	901
VOLUME/CAPACITY *(V/C)* RATIO:	0.601	0.601	0.601	0.601	0.601
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.501	0.501	0.501	0.501	0.501
LEVEL OF SERVICE (LOS):	A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	US 101 NB Off-Ramp	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
18	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	1185	1	605	48	1233	629	0	1185	1	605	48	1233	1	629	-7	1226	1	626
	Left-Through		0							0				0				0	
	Through	1	0	605	0	1	629	0	1	0	605	0	1	0	629	0	1	0	626
	Through-Right		0							0				0				0	
	Right	24	0	0	0	24	0	0	24	0	0	0	24	0	0	0	24	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	315	2	158	10	325	163	0	315	2	158	10	325	2	163	-2	323	2	162
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1731	2	577	48	1779	593	0	1731	2	577	48	1779	2	593	-7	1772	2	591
	Through-Right		1							1				1				1	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	605		*North-South:*	629			*North-South:*	605			*North-South:*	629			*North-South:*	626
			East-West:	577		*East-West:*	593			*East-West:*	577			*East-West:*	593			*East-West:*	591
			SUM:	1182		*SUM:*	1222			*SUM:*	1182			*SUM:*	1222			*SUM:*	1217
VOLUME/CAPACITY *(V/C)* RATIO:				0.788			0.815				0.788				0.815				0.811
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.688			0.715				0.688				0.715				0.711
LEVEL OF SERVICE (LOS):				B			C				B				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.027	Δ*v/c* after mitigation:	0.023
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
19	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING W/O PROJECT	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	EXISTING W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	200	1	200	0	200	200	0	200	1	200	0	200	1	200	0	200	1	200
	Left-Through		0							0				0				0	
	Through	357	0	427	0	357	427	0	357	0	427	0	357	0	427	0	357	0	427
	Through-Right		1							1				1				1	
	Right	70	0	0	0	70	0	0	70	0	0	0	70	0	0	0	70	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	117	1	117	0	117	117	0	117	1	117	0	117	1	117	0	117	1	117
	Left-Through		0							0				0				0	
	Through	351	0	514	0	351	514	0	351	0	514	0	351	0	514	0	351	0	514
	Through-Right		1							1				1				1	
	Right	163	0	0	0	163	0	0	163	0	0	0	163	0	0	0	163	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	1	0	0
	Left-Through		0							0				0				0	
	Through	295	1	172	9	304	176	0	295	1	172	9	304	1	176	-1	303	1	176
	Through-Right		1							1				1				1	
	Right	48	0	48	0	48	48	0	48	0	48	0	48	0	48	0	48	0	48
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1255	2	453	48	1303	469	0	1255	2	453	48	1303	2	469	-7	1296	2	466
	Through-Right		1							1				1				1	
	Right	103	0	103	0	103	103	0	103	0	103	0	103	0	103	0	103	0	103
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING W/O PROJECT	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES *North-South:*	714	714	714	714	714
East-West:	453	469	453	469	466
SUM:	1167	1183	1167	1183	1180
VOLUME/CAPACITY (*V/C*) RATIO:	0.819	0.830	0.819	0.830	0.828
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.719	0.730	0.719	0.730	0.728
LEVEL OF SERVICE (LOS):	C	C	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

LADOT Moving LA Forward

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
20	East-West Street:	Whittier Boulevard	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	238	1	**238**	0	238	**238**	0	238	1	**238**	0	238	1	**238**	0	238	1	**238**
	Left-Through		0							0				0				0	
	Through	520	1	316	0	520	316	0	520	1	316	0	520	1	316	0	520	1	316
	Through-Right		1							1				1				1	
	Right	112	0	112	0	112	112	0	112	0	112	0	112	0	112	0	112	0	112
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	95	1	95	0	95	95	0	95	1	95	0	95	1	95	0	95	1	95
	Left-Through		0							0				0				0	
	Through	391	1	**254**	0	391	**254**	0	391	1	**254**	0	391	1	**254**	0	391	1	**254**
	Through-Right		1							1				1				1	
	Right	117	0	117	0	117	117	0	117	0	117	0	117	0	117	0	117	0	117
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	27	1	**27**	0	27	**27**	0	27	1	**27**	0	27	1	**27**	0	27	1	**27**
	Left-Through		0							0				0				0	
	Through	110	1	89	3	113	91	0	110	1	89	3	113	1	91	-1	112	1	90
	Through-Right		1							1				1				1	
	Right	68	0	68	0	68	68	0	68	0	68	0	68	0	68	0	68	0	68
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	201	1	201	0	201	201	0	201	1	201	0	201	1	201	0	201	1	201
	Left-Through		0							0				0				0	
	Through	1086	1	**626**	16	1102	**634**	0	1086	1	**626**	16	1102	1	**634**	-2	1100	1	**633**
	Through-Right		1							1				1				1	
	Right	166	0	166	0	166	166	0	166	0	166	0	166	0	166	0	166	0	166
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing W/O Project	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	492	492	492	492	492
East-West:	653	661	653	661	660
SUM:	1145	1153	1145	1153	1152
VOLUME/CAPACITY *(V/C)* RATIO:	0.804	0.809	0.804	0.809	0.808
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.704	0.709	0.704	0.709	0.708
LEVEL OF SERVICE (LOS):	C	C	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 Northbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
21	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition		Existing Plus Project		Existing W/O Project		Existing Condition W/ Project		Existing W/ Project W/ Mitigation	
No. of Phases		3		3		3		3		3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		0		0		0		0		0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0
	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?		2		2		2		2		2
Override Capacity		0		0		0		0		0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	275	1	**275**	0	275	**275**	0	275	1	**275**	0	275	1	**275**	0	275	1	**275**
	Left-Through		0							0				0				0	
	Through	46	0	106	0	46	106	0	46	0	106	0	46	0	106	0	46	0	106
	Through-Right		1							1				1				1	
	Right	60	0	0	0	60	0	0	60	0	0	0	60	0	0	0	60	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	240	1	**240**	6	246	**246**	0	240	1	**240**	6	246	1	**246**	-1	245	1	**245**
	Left-Through		0							0				0				0	
	Through	663	2	332	3	666	333	0	663	2	332	3	666	2	333	-1	665	2	333
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1007	1	**669**	16	1023	**677**	0	1007	1	**669**	16	1023	1	**677**	-2	1021	1	**676**
	Through-Right		1							1				1				1	
	Right	330	0	330	0	330	330	0	330	0	330	0	330	0	330	0	330	0	330
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Existing W/O Project		Existing Condition W/ Project		Existing W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	275	*North-South:*	275	*North-South:*	275	*North-South:*	275	*North-South:*	275
	East-West:	909	*East-West:*	923	*East-West:*	909	*East-West:*	923	*East-West:*	921
	SUM:	1184	*SUM:*	1198	*SUM:*	1184	*SUM:*	1198	*SUM:*	1196
VOLUME/CAPACITY *(V/C)* RATIO:		0.831		0.841		0.831		0.841		0.839
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.731		0.741		0.731		0.741		0.739
LEVEL OF SERVICE (LOS):		C		C		C		C		C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.008
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
22	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING W/O PROJECT	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 3 / EB-- 0 WB-- 0	NB-- 0 SB-- 3 / EB-- 0 WB-- 0	NB-- 0 SB-- 3 / EB-- 0 WB-- 0	NB-- 0 SB-- 3 / EB-- 0 WB-- 0	NB-- 0 SB-- 3 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING W/O PROJECT				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	156	1	156	0	156	156	0	156	1	156	0	156	1	156	0	156	1	156
	Left-Through		0							0				0				0	
	Through	517	2	259	0	517	259	0	517	2	259	0	517	2	259	0	517	2	259
	Through-Right		0							0				0				0	
	Right	82	1	8	0	82	8	0	82	1	8	0	82	1	8	0	82	1	8
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	134	1	134	0	134	134	0	134	1	134	0	134	1	134	0	134	1	134
	Left-Through		0							0				0				0	
	Through	611	2	306	0	611	306	0	611	2	306	0	611	2	306	0	611	2	306
	Through-Right		0							0				0				0	
	Right	143	1	95	0	143	95	0	143	1	95	0	143	1	95	0	143	1	95
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	48	1	48	0	48	48	0	48	1	48	0	48	1	48	0	48	1	48
	Left-Through		0							0				0				0	
	Through	764	1	436	3	767	437	0	764	1	436	3	767	1	437	-1	766	1	437
	Through-Right		1							1				1				1	
	Right	107	0	107	0	107	107	0	107	0	107	0	107	0	107	0	107	0	107
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	149	1	149	0	149	149	0	149	1	149	0	149	1	149	0	149	1	149
	Left-Through		0							0				0				0	
	Through	1098	1	581	16	1114	589	0	1098	1	581	16	1114	1	589	-2	1112	1	588
	Through-Right		1							1				1				1	
	Right	64	0	64	0	64	64	0	64	0	64	0	64	0	64	0	64	0	64
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION		EXISTING PLUS PROJECT		EXISTING W/O PROJECT		EXISTING CONDITION W/ PROJECT		EXISTING W/ PROJECT W/ MITIGATION	
CRITICAL VOLUMES	*North-South:*	462	*North-South:*	462	*North-South:*	462	*North-South:*	462	*North-South:*	462
	East-West:	629	*East-West:*	637	*East-West:*	629	*East-West:*	637	*East-West:*	636
	SUM:	1091	*SUM:*	1099	*SUM:*	1091	*SUM:*	1099	*SUM:*	1098
VOLUME/CAPACITY *(V/C)* RATIO:		0.766		0.771		0.766		0.771		0.771
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.666		0.671		0.666		0.671		0.671
LEVEL OF SERVICE (LOS):		B		B		B		B		B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
1	East-West Street:	3rd Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	142	1	142	0	142	142	0	151	1	151	0	151	1	151	0	151	1	151
	Left-Through		0							0				0				0	
	Through	282	2	141	0	282	141	3	302	2	151	0	302	2	151	0	302	2	151
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	419	1	268	0	419	268	18	463	1	293	0	463	1	293	0	463	1	293
	Through-Right		1							1				1				1	
	Right	116	0	116	0	116	116	0	123	0	123	0	123	0	123	0	123	0	123
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	211	0	211	0	211	211	6	230	0	230	0	230	0	230	0	230	0	230
	Left-Through		1							1				1				1	
	Through	2351	3	641	7	2358	642	400	2896	3	782	7	2903	3	783	-1	2902	3	783
	Through-Right		0							0				0				0	
	Right	89	1	89	0	89	89	0	94	1	94	0	94	1	94	0	94	1	94
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	410	410	444	444	444
East-West:	641	642	782	783	783
SUM:	1051	1052	1226	1227	1227
VOLUME/CAPACITY *(V/C)* RATIO:	0.738	0.738	0.860	0.861	0.861
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.638	0.638	0.760	0.761	0.761
LEVEL OF SERVICE (LOS):	B	B	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
2	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	351	1	206	0	351	206	3	376	1	227	0	376	1	227	0	376	1	227
	Through-Right		1							1				1				1	
	Right	60	0	60	0	60	60	14	78	0	78	0	78	0	78	0	78	0	78
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	21	1	21	0	21	21	0	22	1	22	0	22	1	22	0	22	1	22
	Left-Through		0							0				0				0	
	Through	570	2	285	0	570	285	24	629	2	315	0	629	2	315	0	629	2	315
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	19	1	19	0	19	19	0	20	1	20	0	20	1	20	0	20	1	20
	Left-Through		0							0				0				0	
	Through	374	2	187	32	406	203	332	729	2	365	32	761	2	381	-5	756	2	378
	Through-Right		0							0				0				0	
	Right	93	1	93	0	93	93	4	103	1	103	0	103	1	103	0	103	1	103
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	285	285	315	315	315
East-West:	187	203	365	381	378
SUM:	472	488	680	696	693
VOLUME/CAPACITY (*V/C*) RATIO:	0.331	0.342	0.477	0.488	0.486
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.231	0.242	0.377	0.388	0.386
LEVEL OF SERVICE (LOS):	A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
3	East-West Street:	6th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTHBOUND	Left-Through		0							0				0				0	
NORTHBOUND	Through	401	1	239	0	401	239	44	470	1	291	0	470	1	291	0	470	1	291
NORTHBOUND	Through-Right		1							1				1				1	
NORTHBOUND	Right	77	0	77	0	77	77	30	112	0	112	0	112	0	112	0	112	0	112
NORTHBOUND	Left-Through-Right		0							0				0				0	
NORTHBOUND	Left-Right		0							0				0				0	
SOUTHBOUND	Left	20	1	20	0	20	20	19	40	1	40	0	40	1	40	0	40	1	40
SOUTHBOUND	Left-Through		0							0				0				0	
SOUTHBOUND	Through	489	2	245	0	489	245	1	520	2	260	0	520	2	260	0	520	2	260
SOUTHBOUND	Through-Right		0							0				0				0	
SOUTHBOUND	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND	Left-Through-Right		0							0				0				0	
SOUTHBOUND	Left-Right		0							0				0				0	
EASTBOUND	Left	44	1	44	0	44	44	8	55	1	55	0	55	1	55	0	55	1	55
EASTBOUND	Left-Through		0							0				0				0	
EASTBOUND	Through	304	2	152	16	320	160	189	512	2	256	16	528	2	264	-2	526	2	263
EASTBOUND	Through-Right		0							0				0				0	
EASTBOUND	Right	111	1	111	0	111	111	93	211	1	211	0	211	1	211	0	211	1	211
EASTBOUND	Left-Through-Right		0							0				0				0	
EASTBOUND	Left-Right		0							0				0				0	
WESTBOUND	Left	303	1	303	0	303	303	103	425	1	425	0	425	1	425	0	425	1	425
WESTBOUND	Left-Through		0							0				0				0	
WESTBOUND	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTBOUND	Through-Right		0							0				0				0	
WESTBOUND	Right	530	2	282	0	530	282	119	682	2	355	0	682	2	355	0	682	2	355
WESTBOUND	Left-Through-Right		0							0				0				0	
WESTBOUND	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	259	259	331	331	331
	East-West:	455	463	681	689	688
	SUM:	714	722	1012	1020	1019
VOLUME/CAPACITY *(V/C)* RATIO:		0.519	0.525	0.736	0.742	0.741
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.419	0.425	0.636	0.642	0.641
LEVEL OF SERVICE (LOS):		A	A	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
4	East-West Street:	7th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	66	1	**66**	0	66	**66**	0	70	1	**70**	0	70	1	**70**	0	70	1	**70**
	Left-Through		0							0				0				0	
	Through	425	1	281	0	425	281	72	523	1	337	0	523	1	337	0	523	1	337
	Through-Right		1							1				1				1	
	Right	137	0	137	0	137	137	6	151	0	151	0	151	0	151	0	151	0	151
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	34	0	34	0	34	34	93	129	0	129	0	129	0	129	0	129	0	129
	Left-Through		1							1				1				1	
	Through	708	0	**461**	0	708	**461**	95	847	0	**763**	0	847	0	**763**	0	847	0	**763**
	Through-Right		1							1				1				1	
	Right	146	0	461	0	146	461	8	163	0	763	0	163	0	763	0	163	0	763
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	**53**	0	53	**53**	0	56	1	**56**	0	56	1	**56**	0	56	1	**56**
	Left-Through		0							0				0				0	
	Through	304	1	179	0	304	179	261	584	1	321	0	584	1	321	0	584	1	321
	Through-Right		1							1				1				1	
	Right	54	0	54	0	54	54	0	57	0	57	0	57	0	57	0	57	0	57
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	177	1	177	0	177	177	14	202	1	202	0	202	1	202	0	202	1	202
	Left-Through		0							0				0				0	
	Through	732	1	**409**	3	735	**411**	331	1108	1	**601**	3	1111	1	**602**	-1	1110	1	**602**
	Through-Right		1							1				1				1	
	Right	86	0	86	0	86	86	2	93	0	93	0	93	0	93	0	93	0	93
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	527	527	833	833	833
East-West:	462	464	657	658	658
SUM:	989	991	1490	1491	1491
VOLUME/CAPACITY *(V/C)* RATIO:	0.659	0.661	0.993	0.994	0.994
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.559	0.561	0.893	0.894	0.894
LEVEL OF SERVICE (LOS):	A	A	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
5	East-West Street:	2nd Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	118	1	**118**	0	118	**118**	0	125	1	**125**	0	125	1	**125**	0	125	1	**125**
	Left-Through		0							0				0				0	
	Through	733	1	383	14	747	390	332	1110	1	584	14	1124	1	591	-2	1122	1	590
	Through-Right		1							1				1				1	
	Right	33	0	33	0	33	33	22	57	0	57	0	57	0	57	0	57	0	57
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	70	1	70	0	70	70	0	74	1	74	0	74	1	74	0	74	1	74
	Left-Through		0							0				0				0	
	Through	886	1	**471**	64	950	**503**	195	1136	1	**598**	64	1200	1	**630**	-10	1190	1	**625**
	Through-Right		1							1				1				1	
	Right	56	0	56	0	56	56	0	59	0	59	0	59	0	59	0	59	0	59
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	40	1	**40**	0	40	**40**	0	42	1	**42**	0	42	1	**42**	0	42	1	**42**
	Left-Through		0							0				0				0	
	Through	72	1	72	0	72	72	10	86	1	86	0	86	1	86	0	86	1	86
	Through-Right		0							0				0				0	
	Right	103	1	44	0	103	44	0	109	1	47	0	109	1	47	0	109	1	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	67	1	67	0	67	67	3	74	1	74	0	74	1	74	0	74	1	74
	Left-Through		0							0				0				0	
	Through	130	0	**201**	0	130	**201**	2	140	0	**216**	0	140	0	**216**	0	140	0	**216**
	Through-Right		1							1				1				1	
	Right	71	0	0	0	71	0	1	76	0	0	0	76	0	0	0	76	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	589		*North-South:*	621			*North-South:*	723			*North-South:*	755			*North-South:*	750
			East-West:	241		*East-West:*	241			*East-West:*	258			*East-West:*	258			*East-West:*	258
			SUM:	830		*SUM:*	862			*SUM:*	981			*SUM:*	1013			*SUM:*	1008
VOLUME/CAPACITY (V/C) RATIO:				0.582			0.605				0.688				0.711				0.707
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.482			0.505				0.588				0.611				0.607
LEVEL OF SERVICE (LOS):				A			A				A				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.023	Δ*v/c* after mitigation:	0.019
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
6	East-West Street:	3rd Street/4th Place	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	137	1	137	0	137	137	78	223	1	223	0	223	1	223	0	223	1	223
	Left-Through		0							0				0				0	
	Through	653	2	327	0	653	327	321	1014	2	507	0	1014	2	507	0	1014	2	507
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	866	2	433	64	930	465	194	1113	2	557	64	1177	2	589	-10	1167	2	584
	Through-Right		0							0				0				0	
	Right	196	1	196	0	196	196	3	211	1	211	0	211	1	211	0	211	1	211
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	151	0	151	116	267	267	120	280	0	280	116	396	0	396	-17	379	0	379
	Left-Through		1							1				1				1	
	Through	2250	2	646	7	2257	680	325	2713	2	805	7	2720	2	839	-1	2719	2	834
	Through-Right		1							1				1				1	
	Right	181	0	646	14	195	680	33	225	0	805	14	239	0	839	-2	237	0	834
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	570	602	780	812	807
East-West:	646	680	805	839	834
SUM:	1216	1282	1585	1651	1641
VOLUME/CAPACITY *(V/C)* RATIO:	0.853	0.900	1.112	1.159	1.152
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.753	0.800	1.012	1.059	1.052
LEVEL OF SERVICE (LOS):	C	C	F	F	F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.047	Δ*v/c* after mitigation:	0.040
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
7	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	831	1	**443**	0	831	**507**	350	1232	1	**709**	0	1232	1	**773**	0	1232	1	**764**
	Through-Right		1							1				1				1	
	Right	54	0	54	128	182	182	129	186	0	186	128	314	0	314	-19	295	0	295
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	102	1	**102**	160	262	**262**	20	128	1	**128**	160	288	1	**288**	-24	264	1	**264**
	Left-Through		0							0				0				0	
	Through	977	2	489	21	998	499	304	1341	2	671	21	1362	2	681	-3	1359	2	680
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	83	0	83	0	83	83	30	118	0	118	0	118	0	118	0	118	0	118
	Left-Through		1							1				1				1	
	Through	268	2	**117**	32	300	**128**	206	490	2	203	32	522	2	213	-5	517	2	212
	Through-Right		0							0				0				0	
	Right	114	1	114	0	114	114	110	231	1	**231**	0	231	1	**231**	0	231	1	**231**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition w/o Project		Future Condition w/ Project		Future w/ Project w/ Mitigation	
CRITICAL VOLUMES	*North-South:*	545	*North-South:*	769	*North-South:*	837	*North-South:*	1061	*North-South:*	1028
	East-West:	117	*East-West:*	128	*East-West:*	231	*East-West:*	231	*East-West:*	231
	SUM:	662	*SUM:*	897	*SUM:*	1068	*SUM:*	1292	*SUM:*	1259
VOLUME/CAPACITY *(V/C)* RATIO:		0.441		0.598		0.712		0.861		0.839
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.341		0.498		0.612		0.761		0.739
LEVEL OF SERVICE (LOS):		A		A		B		C		C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.149	Δ*v/c* after mitigation:	0.127
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
8	East-West Street:	6th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND Left	72	1	**72**	0	72	**72**	9	85	1	85	0	85	1	85	0	85	1	85
Left-Through		0							0				0				0	
Through	522	1	294	96	618	342	196	750	1	**482**	96	846	1	**530**	-14	832	1	**523**
Through-Right		1							1				1				1	
Right	65	0	65	0	65	65	144	213	0	213	0	213	0	213	0	213	0	213
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND Left	47	1	47	3	50	50	213	263	1	**263**	3	266	1	**266**	-1	265	1	**265**
Left-Through		0							0				0				0	
Through	790	1	**423**	17	807	**431**	99	938	1	498	17	955	1	507	-3	952	1	505
Through-Right		1							1				1				1	
Right	55	0	55	0	55	55	0	58	0	58	0	58	0	58	0	58	0	58
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND Left	43	1	**43**	16	59	**59**	11	57	1	57	16	73	1	**73**	-2	71	1	**71**
Left-Through		0							0				0				0	
Through	206	1	153	0	206	153	184	403	1	**276**	0	403	1	276	0	403	1	276
Through-Right		1							1				1				1	
Right	100	0	100	0	100	100	43	149	0	149	0	149	0	149	0	149	0	149
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND Left	128	1	128	0	128	128	227	363	1	**363**	0	363	1	363	0	363	1	363
Left-Through		0							0				0				0	
Through	627	1	**368**	0	627	**376**	212	878	1	582	0	878	1	**590**	0	878	1	**589**
Through-Right		1							1				1				1	
Right	109	0	109	16	125	125	169	285	0	285	16	301	0	301	-2	299	0	299
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	

CRITICAL VOLUMES		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
	North-South:	495	503	745	796	788
	East-West:	411	435	639	663	660
	SUM:	906	938	1384	1459	1448
VOLUME/CAPACITY *(V/C)* RATIO:		0.636	0.658	0.971	1.024	1.016
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.536	0.558	0.871	0.924	0.916
LEVEL OF SERVICE (LOS):		A	A	D	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.053	Δ*v/c* after mitigation:	0.045
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
9	East-West Street:	7th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	109	1	109	0	109	109	0	116	1	116	0	116	1	116	0	116	1	116
	Left-Through		0							0				0				0	
	Through	621	1	357	80	701	397	157	816	1	492	80	896	1	532	-12	884	1	526
	Through-Right		1							1				1				1	
	Right	93	0	93	0	93	93	69	168	0	168	0	168	0	168	0	168	0	168
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	127	1	127	0	127	127	82	217	1	217	0	217	1	217	0	217	1	217
	Left-Through		0							0				0				0	
	Through	870	1	519	14	884	527	178	1102	1	696	14	1116	1	705	-2	1114	1	703
	Through-Right		1							1				1				1	
	Right	167	0	167	3	170	170	113	290	0	290	3	293	0	293	-1	292	0	292
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	58	1	58	0	58	58	51	113	1	113	0	113	1	113	0	113	1	113
	Left-Through		0							0				0				0	
	Through	309	1	195	0	309	195	308	636	1	361	0	636	1	361	0	636	1	361
	Through-Right		1							1				1				1	
	Right	81	0	81	0	81	81	0	86	0	86	0	86	0	86	0	86	0	86
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	118	1	118	0	118	118	68	193	1	193	0	193	1	193	0	193	1	193
	Left-Through		0							0				0				0	
	Through	661	1	380	0	661	388	234	936	1	587	0	936	1	595	0	936	1	594
	Through-Right		1							1				1				1	
	Right	98	0	98	16	114	114	134	238	0	238	16	254	0	254	-2	252	0	252
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	628	636	812	821	819
	East-West:	438	446	700	708	707
	SUM:	1066	1082	1512	1529	1526
VOLUME/CAPACITY *(V/C)* RATIO:		0.748	0.759	1.061	1.073	1.071
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.648	0.659	0.961	0.973	0.971
LEVEL OF SERVICE (LOS):		B	B	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.012	Δ*v/c* after mitigation:	0.010
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
10	East-West Street:	Olympic Boulevard	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	83	1	83	0	83	83	0	88	1	88	0	88	1	88	0	88	1	88
	Left-Through		0							0				0				0	
	Through	680	1	**379**	64	744	**411**	177	899	1	**491**	64	963	1	**523**	-10	953	1	**518**
	Through-Right		1							1				1				1	
	Right	78	0	78	0	78	78	0	83	0	83	0	83	0	83	0	83	0	83
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	122	1	**122**	0	122	**122**	55	185	1	**185**	0	185	1	**185**	0	185	1	**185**
	Left-Through		0							0				0				0	
	Through	769	2	385	14	783	392	191	1007	2	504	14	1021	2	511	-2	1019	2	510
	Through-Right		0							0				0				0	
	Right	198	1	157	0	198	157	0	210	1	164	0	210	1	164	0	210	1	164
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	82	1	**82**	0	82	**82**	6	93	1	**93**	0	93	1	**93**	0	93	1	**93**
	Left-Through		0							0				0				0	
	Through	616	1	337	0	616	337	147	801	1	432	0	801	1	432	0	801	1	432
	Through-Right		1							1				1				1	
	Right	58	0	58	0	58	58	0	62	0	62	0	62	0	62	0	62	0	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	111	1	111	0	111	111	0	118	1	118	0	118	1	118	0	118	1	118
	Left-Through		0							0				0				0	
	Through	1074	1	**571**	0	1074	**579**	221	1361	1	**738**	0	1361	1	**746**	0	1361	1	**745**
	Through-Right		1							1				1				1	
	Right	67	0	67	16	83	83	43	114	0	114	16	130	0	130	-2	128	0	128
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	501	533	676	708	703
East-West:	653	661	831	839	838
SUM:	1154	1194	1507	1547	1541
VOLUME/CAPACITY *(V/C)* RATIO:	0.769	0.796	1.005	1.031	1.027
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.669	0.696	0.905	0.931	0.927
LEVEL OF SERVICE (LOS):	B	B	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.026	Δ*v/c* after mitigation:	0.022
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
11	East-West Street:	I-10 EB Ramps	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	371	1	371	0	371	371	0	394	1	394	0	394	1	394	0	394	1	394
	Left-Through		0							0				0				0	
	Through	1053	1	531	32	1085	547	46	1164	1	586	32	1196	1	602	-5	1191	1	600
	Through-Right		1							1				1				1	
	Right	8	0	8	0	8	8	0	8	0	8	0	8	0	8	0	8	0	8
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	1	1	1	0	1	1	0	1	1	1	0	1	1	1	0	1	1	1
	Left-Through		0							0				0				0	
	Through	814	2	407	7	821	411	53	917	2	459	7	924	2	462	-1	923	2	462
	Through-Right		0							0				0				0	
	Right	428	1	151	0	428	119	27	481	1	156	0	481	1	124	0	481	1	129
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	277	1	277	32	309	309	31	325	1	325	32	357	1	357	-5	352	1	352
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	530	1	159	0	530	159	0	563	1	169	0	563	1	169	0	563	1	169
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
	Through-Right		0							0				0				0	
	Right	2	0	0	0	2	0	0	2	0	0	0	2	0	0	0	2	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES	*North-South:*	778	782	853	856	856
	East-West:	277	309	325	357	352
	SUM:	1055	1091	1178	1213	1208
VOLUME/CAPACITY (*V/C*) RATIO:		0.767	0.793	0.857	0.882	0.879
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.667	0.693	0.757	0.782	0.779
LEVEL OF SERVICE (LOS):		B	B	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.025	Δ*v/c* after mitigation:	0.022
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Vignes Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
12	East-West Street:	1st Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	0	5	0	5	5	0	5	0	5	0	5	0	5	0	5	0	5
	Left-Through		0							0				0				0	
	Through	20	0	50	0	20	50	0	21	0	68	0	21	0	68	0	21	0	68
	Through-Right		0							0				0				0	
	Right	25	0	0	0	25	0	15	42	0	0	0	42	0	0	0	42	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	27	0	27	0	27	27	0	29	0	29	0	29	0	29	0	29	0	29
	Left-Through		0							0				0				0	
	Through	18	0	67	0	18	67	0	19	0	71	0	19	0	71	0	19	0	71
	Through-Right		0							0				0				0	
	Right	22	0	0	0	22	0	0	23	0	0	0	23	0	0	0	23	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	22	0	22	0	22	22	0	23	0	23	0	23	0	23	0	23	0	23
	Left-Through		1							1				1				1	
	Through	116	1	102	0	116	102	22	145	1	142	0	145	1	142	0	145	1	142
	Through-Right		0							0				0				0	
	Right	5	1	5	0	5	5	0	5	1	5	0	5	1	5	0	5	1	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	87	0	87	0	87	87	0	92	0	92	0	92	0	92	0	92	0	92
	Left-Through		1							1				1				1	
	Through	822	0	540	0	822	540	4	877	0	575	0	877	0	575	0	877	0	575
	Through-Right		1							1				1				1	
	Right	170	0	540	0	170	540	0	180	0	575	0	180	0	575	0	180	0	575
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES — *North-South:*	77	77	97	97	97
East-West:	642	642	717	717	717
SUM:	719	719	814	814	814
VOLUME/CAPACITY *(V/C)* RATIO:	0.505	0.505	0.571	0.571	0.571
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.405	0.405	0.471	0.471	0.471
LEVEL OF SERVICE (LOS):	A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Merrick Street/Molino Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
13	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
No. of Phases	3	3	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	28	0	28	0	28	28	1	31	0	31	0	31	0	31	0	31	0	31
	Left-Through		0							0				0				0	
	Through	4	0	33	0	4	33	0	4	0	354	0	4	0	354	0	4	0	354
	Through-Right		0							0				0				0	
	Right	1	0	0	0	1	0	318	319	0	0	0	319	0	0	0	319	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	50	1	50	0	50	50	0	53	0	53	0	53	0	53	0	53	0	53
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	74	0	0	0	74	0	0	0	74
	Through-Right		0							0				0				0	
	Right	20	1	20	0	20	20	0	21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		0							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	249	1	149	28	277	163	22	286	1	169	28	314	1	183	-4	310	1	181
	Through-Right		1							1				1				1	
	Right	48	0	48	0	48	48	0	51	0	51	0	51	0	51	0	51	0	51
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	2528	2	871	96	2624	903	469	3153	2	1081	96	3249	2	1113	-14	3235	2	1108
	Through-Right		1							1				1				1	
	Right	84	0	84	0	84	84	0	89	0	89	0	89	0	89	0	89	0	89
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES	*North-South:*	83	83	407	407	407
	East-West:	871	903	1081	1113	1108
	SUM:	954	986	1488	1520	1515
VOLUME/CAPACITY *(V/C)* RATIO:		0.669	0.692	0.992	1.013	1.010
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.569	0.592	0.892	0.913	0.910
LEVEL OF SERVICE (LOS):		A	A	D	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.021	Δ*v/c* after mitigation:	0.018
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
14	East-West Street:	6th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition				Existing Plus Project				Future Condition W/O Project				Future Condition W/ Project				Future W/ Project W/ Mitigation			
No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	45	0	**45**	0	45	**45**	29	77	0	**77**	0	77	0	**77**	0	77	0	**77**
	Left-Through		0							0				0				0	
	Through	76	0	128	0	76	128	20	101	0	185	0	101	0	185	0	101	0	185
	Through-Right		0							0				0				0	
	Right	7	0	0	0	7	0	0	7	0	0	0	7	0	0	0	7	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	21	0	21	0	21	21	22	44	0	44	0	44	0	44	0	44	0	44
	Left-Through		0							0				0				0	
	Through	205	0	**258**	3	208	**261**	28	246	0	**367**	3	249	0	**370**	-1	248	0	**369**
	Through-Right		0							0				0				0	
	Right	32	0	0	0	32	0	43	77	0	0	0	77	0	0	0	77	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	47	1	**47**	0	47	**47**	24	74	1	**74**	0	74	1	**74**	0	74	1	**74**
	Left-Through		0							0				0				0	
	Through	159	1	132	3	162	134	81	250	1	197	3	253	1	199	-1	252	1	198
	Through-Right		1							1				1				1	
	Right	105	0	105	0	105	105	33	144	0	144	0	144	0	144	0	144	0	144
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	41	1	41	0	41	41	0	44	1	44	0	44	1	44	0	44	1	44
	Left-Through		0							0				0				0	
	Through	746	1	**412**	16	762	**420**	66	858	1	**477**	16	874	1	**485**	-2	872	1	**484**
	Through-Right		1							1				1				1	
	Right	77	0	77	0	77	77	13	95	0	95	0	95	0	95	0	95	0	95
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	303		*North-South:*	306			*North-South:*	444			*North-South:*	447			*North-South:*	446
			East-West:	459		*East-West:*	467			*East-West:*	551			*East-West:*	559			*East-West:*	558
			SUM:	762		*SUM:*	773			*SUM:*	995			*SUM:*	1006			*SUM:*	1004
VOLUME/CAPACITY *(V/C)* RATIO:				0.508			0.515				0.663				0.671				0.669
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.408			0.415				0.563				0.571				0.569
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
15	East-West Street:	7th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	72	0	72	0	72	72	562	638	0	638	0	638	0	638	0	638	0	638
	Left-Through		0							0				0				0	
	Through	112	0	229	0	112	229	21	140	0	1009	0	140	0	1009	0	140	0	1009
	Through-Right		0							0				0				0	
	Right	45	0	0	0	45	0	183	231	0	0	0	231	0	0	0	231	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	35	0	35	0	35	35	33	70	0	70	0	70	0	70	0	70	0	70
	Left-Through		0							0				0				0	
	Through	179	0	259	3	182	262	23	213	0	335	3	216	0	338	-1	215	0	337
	Through-Right		0							0				0				0	
	Right	45	0	0	0	45	0	4	52	0	0	0	52	0	0	0	52	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	26	1	26	0	26	26	3	31	1	31	0	31	1	31	0	31	1	31
	Left-Through		0							0				0				0	
	Through	346	1	210	0	346	210	200	567	1	358	0	567	1	358	0	567	1	358
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	71	148	0	148	0	148	0	148	0	148	0	148
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	94	1	94	0	94	94	114	214	1	214	0	214	1	214	0	214	1	214
	Left-Through		0							0				0				0	
	Through	752	1	398	16	768	406	227	1025	1	550	16	1041	1	558	-2	1039	1	557
	Through-Right		1							1				1				1	
	Right	44	0	44	0	44	44	27	74	0	74	0	74	0	74	0	74	0	74
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	331	334	1079	1079	1079
East-West:	424	432	581	589	588
SUM:	755	766	1660	1668	1667
VOLUME/CAPACITY *(V/C)* RATIO:	0.503	0.511	1.107	1.112	1.111
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.403	0.411	1.007	1.012	1.011
LEVEL OF SERVICE (LOS):	A	A	F	F	F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Santa Fe Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
17	East-West Street:	8th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	249	0	249	0	249	249	0	264	0	264	0	264	0	264	0	264	0	264
	Left-Through		1							1				1				1	
	Through	537	0	**527**	0	537	**527**	163	733	0	**753**	0	733	0	**753**	0	733	0	**753**
	Through-Right		1							1				1				1	
	Right	19	0	527	0	19	527	0	20	0	0	0	20	0	0	0	20	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	14	0	**14**	0	14	**14**	0	15	0	**15**	0	15	0	**15**	0	15	0	**15**
	Left-Through		1							1				1				1	
	Through	354	0	288	0	354	288	87	463	0	370	0	463	0	370	0	463	0	370
	Through-Right		1							1				1				1	
	Right	194	0	288	0	194	288	11	217	0	370	0	217	0	370	0	217	0	370
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	25	0	25	0	25	25	6	33	0	33	0	33	0	33	0	33	0	33
	Left-Through		0							0				0				0	
	Through	12	0	**353**	0	12	**353**	0	13	0	**381**	0	13	0	**381**	0	13	0	**381**
	Through-Right		0							0				0				0	
	Right	316	0	0	0	316	0	0	335	0	0	0	335	0	0	0	335	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	7	0	**7**	0	7	**7**	0	7	0	**7**	0	7	0	**7**	0	7	0	**7**
	Left-Through		0							0				0				0	
	Through	7	0	32	0	7	32	0	7	0	33	0	7	0	33	0	7	0	33
	Through-Right		0							0				0				0	
	Right	18	0	0	0	18	0	0	19	0	0	0	19	0	0	0	19	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	541	541	768	768	768
East-West:	360	360	388	388	388
SUM:	901	901	1156	1156	1156
VOLUME/CAPACITY *(V/C)* RATIO:	0.601	0.601	0.771	0.771	0.771
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.501	0.501	0.671	0.671	0.671
LEVEL OF SERVICE (LOS):	A	A	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	US 101 NB Off-Ramp	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
18	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	1185	1	605	48	1233	629	163	1421	1	724	48	1469	1	748	-7	1462	1	744
	Left-Through		0							0				0				0	
	Through	1	0	605	0	1	629	0	1	0	724	0	1	0	748	0	1	0	744
	Through-Right		0							0				0				0	
	Right	24	0	0	0	24	0	0	25	0	0	0	25	0	0	0	25	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	315	2	158	10	325	163	222	556	2	278	10	566	2	283	-2	564	2	282
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1731	2	577	48	1779	593	229	2066	2	689	48	2114	2	705	-7	2107	2	702
	Through-Right		1							1				1				1	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	605	629	724	748	744
East-West:	577	593	689	705	702
SUM:	1182	1222	1413	1453	1446
VOLUME/CAPACITY *(V/C)* RATIO:	0.788	0.815	0.942	0.969	0.964
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.688	0.715	0.842	0.869	0.864
LEVEL OF SERVICE (LOS):	B	C	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.027	Δ*v/c* after mitigation:	0.022
Significant impacted?	YES	Fully mitigated?	NO

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
19	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	200	1	200	0	200	200	0	212	1	212	0	212	1	212	0	212	1	212
	Left-Through		0							0				0				0	
	Through	357	0	427	0	357	427	0	379	0	453	0	379	0	453	0	379	0	453
	Through-Right		1							1				1				1	
	Right	70	0	0	0	70	0	0	74	0	0	0	74	0	0	0	74	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	117	1	117	0	117	117	0	124	1	124	0	124	1	124	0	124	1	124
	Left-Through		0							0				0				0	
	Through	351	0	514	0	351	514	0	373	0	546	0	373	0	546	0	373	0	546
	Through-Right		1							1				1				1	
	Right	163	0	0	0	163	0	0	173	0	0	0	173	0	0	0	173	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	1	0	0
	Left-Through		0							0				0				0	
	Through	295	1	172	9	304	176	222	535	1	293	9	544	1	298	-1	543	1	297
	Through-Right		1							1				1				1	
	Right	48	0	48	0	48	48	0	51	0	51	0	51	0	51	0	51	0	51
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1255	2	453	48	1303	469	229	1561	2	557	48	1609	2	573	-7	1602	2	570
	Through-Right		1							1				1				1	
	Right	103	0	103	0	103	103	0	109	0	109	0	109	0	109	0	109	0	109
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	714	714	758	758	758
East-West:	453	469	557	573	570
SUM:	1167	1183	1315	1331	1328
VOLUME/CAPACITY *(V/C)* RATIO:	0.819	0.830	0.923	0.934	0.932
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.719	0.730	0.823	0.834	0.832
LEVEL OF SERVICE (LOS):	C	C	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
20	East-West Street:	Whittier Boulevard	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	238	1	**238**	0	238	**238**	0	253	1	**253**	0	253	1	**253**	0	253	1	**253**
	Left-Through		0							0				0				0	
	Through	520	1	316	0	520	316	0	552	1	336	0	552	1	336	0	552	1	336
	Through-Right		1							1				1				1	
	Right	112	0	112	0	112	112	0	119	0	119	0	119	0	119	0	119	0	119
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	95	1	95	0	95	95	0	101	1	101	0	101	1	101	0	101	1	101
	Left-Through		0							0				0				0	
	Through	391	1	**254**	0	391	**254**	0	415	1	**270**	0	415	1	**270**	0	415	1	**270**
	Through-Right		1							1				1				1	
	Right	117	0	117	0	117	117	0	124	0	124	0	124	0	124	0	124	0	124
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	27	1	**27**	0	27	**27**	0	29	1	**29**	0	29	1	**29**	0	29	1	**29**
	Left-Through		0							0				0				0	
	Through	110	1	89	3	113	91	36	153	1	113	3	156	1	114	-1	155	1	114
	Through-Right		1							1				1				1	
	Right	68	0	68	0	68	68	0	72	0	72	0	72	0	72	0	72	0	72
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	201	1	201	0	201	201	0	213	1	213	0	213	1	213	0	213	1	213
	Left-Through		0							0				0				0	
	Through	1086	1	**626**	16	1102	**634**	79	1232	1	**704**	16	1248	1	**712**	-2	1246	1	**711**
	Through-Right		1							1				1				1	
	Right	166	0	166	0	166	166	0	176	0	176	0	176	0	176	0	176	0	176
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	492	492	523	523	523
East-West:	653	661	733	741	740
SUM:	1145	1153	1256	1264	1263
VOLUME/CAPACITY *(V/C)* RATIO:	0.804	0.809	0.881	0.887	0.886
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.704	0.709	0.781	0.787	0.786
LEVEL OF SERVICE (LOS):	C	C	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 Northbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
21	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	275	1	275	0	275	275	15	307	1	307	0	307	1	307	0	307	1	307
	Left-Through		0							0				0				0	
	Through	46	0	106	0	46	106	0	49	0	113	0	49	0	113	0	49	0	113
	Through-Right		1							1				1				1	
	Right	60	0	0	0	60	0	0	64	0	0	0	64	0	0	0	64	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	240	1	240	6	246	246	143	398	1	398	6	404	1	404	-1	403	1	403
	Left-Through		0							0				0				0	
	Through	663	2	332	3	666	333	56	760	2	380	3	763	2	382	-1	762	2	381
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1007	1	669	16	1023	677	43	1112	1	731	16	1128	1	739	-2	1126	1	738
	Through-Right		1							1				1				1	
	Right	330	0	330	0	330	330	0	350	0	350	0	350	0	350	0	350	0	350
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	275	275	307	307	307
	East-West:	909	923	1129	1143	1141
	SUM:	1184	1198	1436	1450	1448
VOLUME/CAPACITY *(V/C)* RATIO:		0.831	0.841	1.008	1.018	1.016
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.731	0.741	0.908	0.918	0.916
LEVEL OF SERVICE (LOS):		C	C	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.008
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet

(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
22	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION					EXISTING PLUS PROJECT					FUTURE CONDITION W/O PROJECT					FUTURE CONDITION W/ PROJECT					FUTURE W/ PROJECT W/ MITIGATION				
No. of Phases					3					3					3					3					3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0					0					0					0					0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--		3	NB--	0	SB--		3	NB--	0	SB--		3	NB--	0	SB--		3	NB--	0	SB--		3
	EB--	0	WB--		0	EB--	0	WB--		0	EB--	0	WB--		0	EB--	0	WB--		0	EB--	0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?					2					2					2					2					2
Override Capacity					0					0					0					0					0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	156	1	**156**	0	156	**156**	0	166	1	**166**	0	166	1	**166**	0	166	1	**166**
	Left-Through		0							0				0				0	
	Through	517	2	259	0	517	259	0	549	2	275	0	549	2	275	0	549	2	275
	Through-Right		0							0				0				0	
	Right	82	1	8	0	82	8	0	87	1	8	0	87	1	8	0	87	1	8
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	134	1	134	0	134	134	0	142	1	142	0	142	1	142	0	142	1	142
	Left-Through		0							0				0				0	
	Through	611	2	**306**	0	611	**306**	0	649	2	**325**	0	649	2	**325**	0	649	2	**325**
	Through-Right		0							0				0				0	
	Right	143	1	95	0	143	95	0	152	1	101	0	152	1	101	0	152	1	101
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	48	1	**48**	0	48	**48**	0	51	1	**51**	0	51	1	**51**	0	51	1	**51**
	Left-Through		0							0				0				0	
	Through	764	1	436	3	767	437	7	818	1	466	3	821	1	468	-1	820	1	467
	Through-Right		1							1				1				1	
	Right	107	0	107	0	107	107	0	114	0	114	0	114	0	114	0	114	0	114
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	149	1	149	0	149	149	0	158	1	158	0	158	1	158	0	158	1	158
	Left-Through		0							0				0				0	
	Through	1098	1	**581**	16	1114	**589**	19	1185	1	**627**	16	1201	1	**635**	-2	1199	1	**634**
	Through-Right		1							1				1				1	
	Right	64	0	64	0	64	64	0	68	0	68	0	68	0	68	0	68	0	68
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION		EXISTING PLUS PROJECT		FUTURE CONDITION W/O PROJECT		FUTURE CONDITION W/ PROJECT		FUTURE W/ PROJECT W/ MITIGATION	
CRITICAL VOLUMES	*North-South:*	462	*North-South:*	462	*North-South:*	491	*North-South:*	491	*North-South:*	491
	East-West:	629	*East-West:*	637	*East-West:*	678	*East-West:*	686	*East-West:*	685
	SUM:	1091	*SUM:*	1099	*SUM:*	1169	*SUM:*	1177	*SUM:*	1176
VOLUME/CAPACITY *(V/C)* RATIO:		0.766		0.771		0.820		0.826		0.825
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.666		0.671		0.720		0.726		0.725
LEVEL OF SERVICE (LOS):		B		B		C		C		C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 Southbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
23	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	0	0	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	92	0	0	0	92	0	0	98	1	98	0	98	1	98	0	98	1	98
	Left-Through		0							0				0				0	
	Through	3	0	0	0	3	0	0	3	0	480	0	3	0	512	0	3	0	507
	Through-Right		0							1				1				1	
	Right	385	0	0	32	417	0	68	477	0	0	32	509	0	0	-5	504	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	438	0	0	9	447	0	93	558	2	279	9	567	2	284	-1	566	2	283
	Through-Right		0							0				0				0	
	Right	69	0	0	0	69	0	19	92	1	92	0	92	1	92	0	92	1	92
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	140	0	0	0	140	0	1	150	1	150	0	150	1	150	0	150	1	150
	Left-Through		0							0				0				0	
	Through	1693	0	0	16	1709	0	34	1831	2	916	16	1847	2	924	-2	1845	2	923
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	0	0	480	512	507
East-West:	0	0	916	924	923
SUM:	0	0	1396	1436	1430
VOLUME/CAPACITY *(V/C)* RATIO:	0.000	0.000	0.980	1.008	1.004
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.000	0.000	0.880	0.908	0.904
LEVEL OF SERVICE (LOS):	A	A	D	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.028	Δ*v/c* after mitigation:	0.024
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
1	East-West Street:	3rd Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING CONDITIONS	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	301	1	301	0	301	301	0	301	1	301	0	301	1	301	0	301	1	301
	Left-Through		0							0				0				0	
	Through	777	2	389	0	777	389	0	777	2	389	0	777	2	389	0	777	2	389
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	283	1	190	0	283	190	0	283	1	190	0	283	1	190	0	283	1	190
	Through-Right		1							1				1				1	
	Right	96	0	96	0	96	96	0	96	0	96	0	96	0	96	0	96	0	96
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	119	0	119	0	119	119	0	119	0	119	0	119	0	119	0	119	0	119
	Left-Through		1							1				1				1	
	Through	1034	3	288	30	1064	296	0	1034	3	288	30	1064	3	296	-5	1059	3	295
	Through-Right		0							0				0				0	
	Right	137	1	137	0	137	137	0	137	1	137	0	137	1	137	0	137	1	137
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING CONDITIONS	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES	*North-South:*	491	491	491	491	491
	East-West:	288	296	288	296	295
	SUM:	779	787	779	787	786
VOLUME/CAPACITY *(V/C)* RATIO:		0.547	0.552	0.547	0.552	0.552
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.447	0.452	0.447	0.452	0.452
LEVEL OF SERVICE (LOS):		A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
2	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	EXISTING CONDITIONS Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	779	1	**513**	0	779	**513**	0	779	1	**513**	0	779	1	**513**	0	779	1	**513**
	Through-Right		1							1				1				1	
	Right	246	0	246	0	246	246	0	246	0	246	0	246	0	246	0	246	0	246
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	80	1	**80**	0	80	**80**	0	80	1	**80**	0	80	1	**80**	0	80	1	**80**
	Left-Through		0							0				0				0	
	Through	236	2	118	0	236	118	0	236	2	118	0	236	2	118	0	236	2	118
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	46	0	46	0	46	46	0	46	0	46	0	46	0	46	0	46	0	46
	Left-Through		1							1				1				1	
	Through	1525	2	**417**	8	1533	**419**	0	1525	2	**417**	8	1533	2	**419**	-1	1532	2	**419**
	Through-Right		1							1				1				1	
	Right	97	0	417	0	97	419	0	97	0	417	0	97	0	419	0	97	0	419
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	593	593	593	593	593
East-West:	417	419	417	419	419
SUM:	1010	1012	1010	1012	1012
VOLUME/CAPACITY *(V/C)* RATIO:	0.709	0.710	0.709	0.710	0.710
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.609	0.610	0.609	0.610	0.610
LEVEL OF SERVICE (LOS):	B	B	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
3	East-West Street:	6th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	765	1	**473**	0	765	**473**	0	765	1	**473**	0	765	1	**473**	0	765	1	**473**
	Through-Right		1							1				1				1	
	Right	180	0	180	0	180	180	0	180	0	180	0	180	0	180	0	180	0	180
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	27	1	**27**	0	27	**27**	0	27	1	**27**	0	27	1	**27**	0	27	1	**27**
	Left-Through		0							0				0				0	
	Through	331	2	166	0	331	166	0	331	2	166	0	331	2	166	0	331	2	166
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	127	1	127	0	127	127	0	127	1	127	0	127	1	127	0	127	1	127
	Left-Through		0							0				0				0	
	Through	733	2	**367**	4	737	**369**	0	733	2	**367**	4	737	2	**369**	-1	736	2	**368**
	Through-Right		0							0				0				0	
	Right	129	1	129	0	129	129	0	129	1	129	0	129	1	129	0	129	1	129
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	179	1	**179**	0	179	**179**	0	179	1	**179**	0	179	1	**179**	0	179	1	**179**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	313	2	159	0	313	159	0	313	2	159	0	313	2	159	0	313	2	159
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	500	500	500	500	500
East-West:	546	548	546	548	547
SUM:	1046	1048	1046	1048	1047
VOLUME/CAPACITY *(V/C)* RATIO:	0.761	0.762	0.761	0.762	0.761
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.661	0.662	0.661	0.662	0.661
LEVEL OF SERVICE (LOS):	B	B	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
4	East-West Street:	7th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION		EXISTING PLUS PROJECT		EXISTING CONDITIONS		EXISTING CONDITION W/ PROJECT		EXISTING W/ PROJECT W/ MITIGATION	
No. of Phases		2		2		2		2		2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		0		0		0		0		0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0
	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0
ATSAC-1 or ATSAC+ATCS-2?		2		2		2		2		2
Override Capacity		0		0		0		0		0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND Left	58	1	58	0	58	58	0	58	1	58	0	58	1	58	0	58	1	58
Left-Through		0							0				0				0	
Through	809	1	474	0	809	474	0	809	1	474	0	809	1	474	0	809	1	474
Through-Right		1							1				1				1	
Right	138	0	138	0	138	138	0	138	0	138	0	138	0	138	0	138	0	138
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND Left	43	0	43	0	43	43	0	43	0	43	0	43	0	43	0	43	0	43
Left-Through		1							1				1				1	
Through	541	0	387	0	541	387	0	541	0	387	0	541	0	387	0	541	0	387
Through-Right		1							1				1				1	
Right	61	0	387	0	61	387	0	61	0	387	0	61	0	387	0	61	0	387
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND Left	95	1	95	0	95	95	0	95	1	95	0	95	1	95	0	95	1	95
Left-Through		0							0				0				0	
Through	803	1	438	0	803	438	0	803	1	438	0	803	1	438	0	803	1	438
Through-Right		1							1				1				1	
Right	73	0	73	0	73	73	0	73	0	73	0	73	0	73	0	73	0	73
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND Left	98	1	98	0	98	98	0	98	1	98	0	98	1	98	0	98	1	98
Left-Through		0							0				0				0	
Through	468	1	265	15	483	273	0	468	1	265	15	483	1	273	-2	481	1	272
Through-Right		1							1				1				1	
Right	62	0	62	0	62	62	0	62	0	62	0	62	0	62	0	62	0	62
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	

	EXISTING CONDITION		EXISTING PLUS PROJECT		EXISTING CONDITIONS		EXISTING CONDITION W/ PROJECT		EXISTING W/ PROJECT W/ MITIGATION	
CRITICAL VOLUMES	*North-South:*	517	*North-South:*	517	*North-South:*	517	*North-South:*	517	*North-South:*	517
	East-West:	536	*East-West:*	536	*East-West:*	536	*East-West:*	536	*East-West:*	536
	SUM:	1053	*SUM:*	1053	*SUM:*	1053	*SUM:*	1053	*SUM:*	1053
VOLUME/CAPACITY *(V/C)* RATIO:		0.702		0.702		0.702		0.702		0.702
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.602		0.602		0.602		0.602		0.602
LEVEL OF SERVICE (LOS):		B		B		B		B		B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
5	East-West Street:	2nd Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0	*NB--* 0 *SB--* 0 *EB--* 0 *WB--* 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	151	1	151	0	151	151	0	151	1	151	0	151	1	151	0	151	1	151
	Left-Through		0							0				0				0	
	Through	896	1	483	60	956	513	0	896	1	483	60	956	1	513	-9	947	1	508
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	0	69	0	69	0	69	0	69	0	69	0	69
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	62	1	62	0	62	62	0	62	1	62	0	62	1	62	0	62	1	62
	Left-Through		0							0				0				0	
	Through	815	1	441	17	832	450	0	815	1	441	17	832	1	450	-3	829	1	448
	Through-Right		1							1				1				1	
	Right	67	0	67	0	67	67	0	67	0	67	0	67	0	67	0	67	0	67
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	137	1	137	0	137	137	0	137	1	137	0	137	1	137	0	137	1	137
	Left-Through		0							0				0				0	
	Through	237	1	237	0	237	237	0	237	1	237	0	237	1	237	0	237	1	237
	Through-Right		0							0				0				0	
	Right	163	1	88	0	163	88	0	163	1	88	0	163	1	88	0	163	1	88
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	38	1	38	0	38	38	0	38	1	38	0	38	1	38	0	38	1	38
	Left-Through		0							0				0				0	
	Through	86	0	142	0	86	142	0	86	0	142	0	86	0	142	0	86	0	142
	Through-Right		1							1				1				1	
	Right	56	0	0	0	56	0	0	56	0	0	0	56	0	0	0	56	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Existing Conditions		Existing Condition W/ Project		Existing W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	592	*North-South:*	601	*North-South:*	592	*North-South:*	601	*North-South:*	599
	East-West:	279	*East-West:*	279	*East-West:*	279	*East-West:*	279	*East-West:*	279
	SUM:	871	*SUM:*	880	*SUM:*	871	*SUM:*	880	*SUM:*	878
VOLUME/CAPACITY *(V/C)* RATIO:		0.611		0.618		0.611		0.618		0.616
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.511		0.518		0.511		0.518		0.516
LEVEL OF SERVICE (LOS):		A		A		A		A		A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worketheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
6	East-West Street:	3rd Street/4th Place	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition			Existing Plus Project			Existing Conditions			Existing Condition w/ Project			Existing w/ Project w/ Mitigation		
No. of Phases			3			3			3			3			3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2
Override Capacity			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	245	1	**245**	0	245	**245**	0	245	1	**245**	0	245	1	**245**	0	245	1	**245**
	Left-Through		0							0				0				0	
	Through	1063	2	532	0	1063	532	0	1063	2	532	0	1063	2	532	0	1063	2	532
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	747	2	**374**	17	764	**382**	0	747	2	**374**	17	764	2	**382**	-3	761	2	**381**
	Through-Right		0							0				0				0	
	Right	146	1	146	0	146	146	0	146	1	146	0	146	1	146	0	146	1	146
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	95	0	95	115	210	210	0	95	0	95	115	210	0	210	-18	192	0	192
	Left-Through		1							1				1				1	
	Through	625	2	**197**	30	655	**248**	0	625	2	**197**	30	655	2	**248**	-5	650	3	**211**
	Through-Right		1							1				1				0	
	Right	67	0	197	60	127	248	0	67	0	197	60	127	0	248	-9	118	1	118
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		619	*North-South:*		627	*North-South:*			619	*North-South:*			627	*North-South:*			626
		East-West:		197	*East-West:*		248	*East-West:*			197	*East-West:*			248	*East-West:*			211
		SUM:		816	*SUM:*		875	*SUM:*			816	*SUM:*			875	*SUM:*			837
VOLUME/CAPACITY *(V/C)* RATIO:				0.573			0.614				0.573				0.614				0.587
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.473			0.514				0.473				0.514				0.487
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.041	Δ*v/c* after mitigation:	0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
7	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition w/ Project	Existing w/ Project w/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	976	1	518	0	976	535	0	976	1	518	0	976	1	535	0	976	1	532
	Through-Right		1							1				1				1	
	Right	60	0	60	33	93	93	0	60	0	60	33	93	0	93	-5	88	0	88
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	117	1	117	42	159	159	0	117	1	117	42	159	1	159	-7	152	1	152
	Left-Through		0							0				0				0	
	Through	743	2	372	90	833	417	0	743	2	372	90	833	2	417	-14	819	2	410
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	224	0	224	0	224	224	0	224	0	224	0	224	0	224	0	224	0	224
	Left-Through		1							1				1				1	
	Through	1421	2	548	8	1429	551	0	1421	2	548	8	1429	2	551	-1	1428	2	551
	Through-Right		0							0				0				0	
	Right	161	1	161	0	161	161	0	161	1	161	0	161	1	161	0	161	1	161
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition w/ Project	Existing w/ Project w/ Mitigation
CRITICAL VOLUMES — *North-South:*	635	694	635	694	684
East-West:	548	551	548	551	551
SUM:	1183	1245	1183	1245	1235
VOLUME/CAPACITY (*V/C*) RATIO:	0.789	0.830	0.789	0.830	0.823
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.689	0.730	0.689	0.730	0.723
LEVEL OF SERVICE (LOS):	B	C	B	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.041 ∆*v/c* after mitigation: 0.034

Significant impacted? YES Fully mitigated? YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
8	East-West Street:	6th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	102	1	102	0	102	102	0	102	1	102	0	102	1	102	0	102	1	102
	Left-Through		0							0				0				0	
	Through	842	1	**458**	25	867	**471**	0	842	1	**458**	25	867	1	**471**	-4	863	1	**469**
	Through-Right		1							1				1				1	
	Right	74	0	74	0	74	74	0	74	0	74	0	74	0	74	0	74	0	74
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	79	1	**79**	15	94	**94**	0	79	1	**79**	15	94	1	**94**	-2	92	1	**92**
	Left-Through		0							0				0				0	
	Through	641	1	359	75	716	396	0	641	1	359	75	716	1	396	-12	704	1	390
	Through-Right		1							1				1				1	
	Right	76	0	76	0	76	76	0	76	0	76	0	76	0	76	0	76	0	76
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	110	1	110	4	114	114	0	110	1	110	4	114	1	114	-1	113	1	113
	Left-Through		0							0				0				0	
	Through	714	1	**398**	0	714	**398**	0	714	1	**398**	0	714	1	**398**	0	714	1	**398**
	Through-Right		1							1				1				1	
	Right	82	0	82	0	82	82	0	82	0	82	0	82	0	82	0	82	0	82
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	41	1	**41**	0	41	**41**	0	41	1	**41**	0	41	1	**41**	0	41	1	**41**
	Left-Through		0							0				0				0	
	Through	237	1	144	0	237	146	0	237	1	144	0	237	1	146	0	237	1	145
	Through-Right		1							1				1				1	
	Right	50	0	50	4	54	54	0	50	0	50	4	54	0	54	-1	53	0	53
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	537	565	537	565	561
East-West:	439	439	439	439	439
SUM:	976	1004	976	1004	1000
VOLUME/CAPACITY *(V/C)* RATIO:	0.685	0.705	0.685	0.705	0.702
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.585	0.605	0.585	0.605	0.602
LEVEL OF SERVICE (LOS):	A	B	A	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.020	Δ*v/c* after mitigation:	0.017
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
9	East-West Street:	7th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	109	1	109	0	109	109	0	109	1	109	0	109	1	109	0	109	1	109
	Left-Through		0							0				0				0	
	Through	761	1	438	21	782	449	0	761	1	438	21	782	1	449	-3	779	1	447
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	0	115	0	115	0	115	0	115	0	115	0	115
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	105	1	105	0	105	105	0	105	1	105	0	105	1	105	0	105	1	105
	Left-Through		0							0				0				0	
	Through	714	1	379	60	774	416	0	714	1	379	60	774	1	416	-9	765	1	411
	Through-Right		1							1				1				1	
	Right	43	0	43	15	58	58	0	43	0	43	15	58	0	58	-2	56	0	56
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	98	1	98	0	98	98	0	98	1	98	0	98	1	98	0	98	1	98
	Left-Through		0							0				0				0	
	Through	757	1	435	0	757	435	0	757	1	435	0	757	1	435	0	757	1	435
	Through-Right		1							1				1				1	
	Right	112	0	112	0	112	112	0	112	0	112	0	112	0	112	0	112	0	112
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	79	1	79	0	79	79	0	79	1	79	0	79	1	79	0	79	1	79
	Left-Through		0							0				0				0	
	Through	420	1	271	0	420	273	0	420	1	271	0	420	1	273	0	420	1	273
	Through-Right		1							1				1				1	
	Right	122	0	122	4	126	126	0	122	0	122	4	126	0	126	-1	125	0	125
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	543	554	543	554	552
East-West:	514	514	514	514	514
SUM:	1057	1068	1057	1068	1066
VOLUME/CAPACITY *(V/C)* RATIO:	0.742	0.749	0.742	0.749	0.748
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.642	0.649	0.642	0.649	0.648
LEVEL OF SERVICE (LOS):	B	B	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
10	East-West Street:	Olympic Boulevard	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	75	1	75	0	75	75	0	75	1	75	0	75	1	75	0	75	1	75
	Left-Through		0							0				0				0	
	Through	788	1	487	17	805	495	0	788	1	487	17	805	1	495	-3	802	1	494
	Through-Right		1							1				1				1	
	Right	185	0	185	0	185	185	0	185	0	185	0	185	0	185	0	185	0	185
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	100	1	100	0	100	100	0	100	1	100	0	100	1	100	0	100	1	100
	Left-Through		0							0				0				0	
	Through	882	2	441	60	942	471	0	882	2	441	60	942	2	471	-9	933	2	467
	Through-Right		0							0				0				0	
	Right	129	1	98	0	129	98	0	129	1	98	0	129	1	98	0	129	1	98
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	62	1	62	0	62	62	0	62	1	62	0	62	1	62	0	62	1	62
	Left-Through		0							0				0				0	
	Through	961	1	507	0	961	507	0	961	1	507	0	961	1	507	0	961	1	507
	Through-Right		1							1				1				1	
	Right	53	0	53	0	53	53	0	53	0	53	0	53	0	53	0	53	0	53
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	77	1	77	0	77	77	0	77	1	77	0	77	1	77	0	77	1	77
	Left-Through		0							0				0				0	
	Through	909	1	474	0	909	476	0	909	1	474	0	909	1	476	0	909	2	455
	Through-Right		1							1				1				0	
	Right	39	0	39	4	43	43	0	39	0	39	4	43	0	43	-1	42	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Existing Conditions		Existing Condition W/ Project		Existing W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	587	*North-South:*	595	*North-South:*	587	*North-South:*	595	*North-South:*	594
	East-West:	584	*East-West:*	584	*East-West:*	584	*East-West:*	584	*East-West:*	584
	SUM:	1171	*SUM:*	1179	*SUM:*	1171	*SUM:*	1179	*SUM:*	1178
VOLUME/CAPACITY *(V/C)* RATIO:		0.781		0.786		0.781		0.786		0.785
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.681		0.686		0.681		0.686		0.685
LEVEL OF SERVICE (LOS):		B		B		B		B		B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
11	East-West Street:	I-10 EB Ramps	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING CONDITIONS	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	EXISTING CONDITIONS Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	422	1	422	0	422	422	0	422	1	422	0	422	1	422	0	422	1	422
	Left-Through		0							0				0				0	
	Through	1021	1	511	8	1029	515	0	1021	1	511	8	1029	1	515	-1	1028	1	514
	Through-Right		1							1				1				1	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
	Left-Through		0							0				0				0	
	Through	1183	2	592	30	1213	607	0	1183	2	592	30	1213	2	607	-5	1208	2	604
	Through-Right		0							0				0				0	
	Right	466	1	432	0	466	428	0	466	1	432	0	466	1	428	0	466	1	428
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	69	1	69	8	77	77	0	69	1	69	8	77	1	77	-1	76	1	76
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	225	1	0	0	225	0	0	225	1	0	0	225	1	0	0	225	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	7	0	0	0	7	0	0	7	0	0	0	7	0	0	0	7	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING CONDITIONS	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES *North-South:*	1014	1029	1014	1029	1026
East-West:	69	77	69	77	76
SUM:	1083	1106	1083	1106	1102
VOLUME/CAPACITY *(V/C)* RATIO:	0.760	0.776	0.760	0.776	0.773
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.660	0.676	0.660	0.676	0.673
LEVEL OF SERVICE (LOS):	B	B	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.013
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Vignes Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
12	East-West Street:	1st Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	8	0	8	0	8	8	0	8	0	8	0	8	0	8	0	8	0	8
Left-Through		0							0				0				0	
Through	42	0	180	0	42	180	0	42	0	180	0	42	0	180	0	42	0	180
Through-Right		0							0				0				0	
Right	130	0	0	0	130	0	0	130	0	0	0	130	0	0	0	130	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	64	0	64	0	64	64	0	64	0	64	0	64	0	64	0	64	0	64
Left-Through		0							0				0				0	
Through	27	0	124	0	27	124	0	27	0	124	0	27	0	124	0	27	0	124
Through-Right		0							0				0				0	
Right	33	0	0	0	33	0	0	33	0	0	0	33	0	0	0	33	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	91	0	91	0	91	91	0	91	0	91	0	91	0	91	0	91	0	91
Left-Through		1							1				1				1	
Through	775	1	479	0	775	479	0	775	1	479	0	775	1	479	0	775	1	479
Through-Right		0							0				0				0	
Right	18	1	18	0	18	18	0	18	1	18	0	18	1	18	0	18	1	18
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	54	0	54	0	54	54	0	54	0	54	0	54	0	54	0	54	0	54
Left-Through		1							1				1				1	
Through	342	0	308	0	342	308	0	342	0	308	0	342	0	308	0	342	0	308
Through-Right		1							1				1				1	
Right	58	0	308	0	58	308	0	58	0	308	0	58	0	308	0	58	0	308
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	244	244	244	244	244
East-West:	787	787	787	787	787
SUM:	1031	1031	1031	1031	1031
VOLUME/CAPACITY (*V/C*) RATIO:	0.724	0.724	0.724	0.724	0.724
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.624	0.624	0.624	0.624	0.624
LEVEL OF SERVICE (LOS):	B	B	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Merrick Street/Molino Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
13	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	1	1	1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	37	0	37	0	37	37	0	37	0	37	0	37	0	37	0	37	0	37
	Left-Through		0							0				0				0	
	Through	13	0	64	0	13	64	0	13	0	64	0	13	0	64	0	13	0	64
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	0	14	0	0	0	14	0	0	0	14	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	87	1	87	0	87	87	0	87	1	87	0	87	1	87	0	87	1	87
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	27	1	27	0	27	27	0	27	1	27	0	27	1	27	0	27	1	27
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1521	2	521	120	1641	561	0	1521	2	521	120	1641	2	561	-18	1623	2	555
	Through-Right		1							1				1				1	
	Right	43	0	43	0	43	43	0	43	0	43	0	43	0	43	0	43	0	43
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	622	1	346	25	647	358	0	622	1	346	25	647	1	358	-4	643	1	356
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	0	69	0	69	0	69	0	69	0	69	0	69
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	151	151	151	151	151
East-West:	521	561	521	561	555
SUM:	672	712	672	712	706
VOLUME/CAPACITY *(V/C)* RATIO:	0.472	0.500	0.472	0.500	0.495
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.372	0.400	0.372	0.400	0.395
LEVEL OF SERVICE (LOS):	A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.028	Δ*v/c* after mitigation:	0.023
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
14	East-West Street:	6th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	43	0	43	0	43	43	0	43	0	43	0	43	0	43	0	43	0	43
	Left-Through		0							0				0				0	
	Through	128	0	211	0	128	211	0	128	0	211	0	128	0	211	0	128	0	211
	Through-Right		0							0				0				0	
	Right	40	0	0	0	40	0	0	40	0	0	0	40	0	0	0	40	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	32	0	32	0	32	32	0	32	0	32	0	32	0	32	0	32	0	32
	Left-Through		0							0				0				0	
	Through	114	0	187	15	129	202	0	114	0	187	15	129	0	202	-2	127	0	200
	Through-Right		0							0				0				0	
	Right	41	0	0	0	41	0	0	41	0	0	0	41	0	0	0	41	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	65	1	65	0	65	65	0	65	1	65	0	65	1	65	0	65	1	65
	Left-Through		0							0				0				0	
	Through	763	1	418	15	778	426	0	763	1	418	15	778	1	426	-2	776	1	425
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	0	73	0	73	0	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	13	1	13	0	13	13	0	13	1	13	0	13	1	13	0	13	1	13
	Left-Through		0							0				0				0	
	Through	227	1	127	4	231	129	0	227	1	127	4	231	1	129	-1	230	1	128
	Through-Right		1							1				1				1	
	Right	26	0	26	0	26	26	0	26	0	26	0	26	0	26	0	26	0	26
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition w/ Project	Existing w/ Project w/ Mitigation
CRITICAL VOLUMES	*North-South:*	243	245	243	245	243
	East-West:	431	439	431	439	438
	SUM:	674	684	674	684	681
VOLUME/CAPACITY *(V/C)* RATIO:		0.449	0.456	0.449	0.456	0.454
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.349	0.356	0.349	0.356	0.354
LEVEL OF SERVICE (LOS):		A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worketheet

(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
15	East-West Street:	7th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING CONDITIONS	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	110	0	110	0	110	110	0	110	0	110	0	110	0	110	0	110	0	110
	Left-Through		0							0				0				0	
	Through	163	0	328	0	163	328	0	163	0	328	0	163	0	328	0	163	0	328
	Through-Right		0							0				0				0	
	Right	55	0	0	0	55	0	0	55	0	0	0	55	0	0	0	55	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	49	0	49	0	49	49	0	49	0	49	0	49	0	49	0	49	0	49
	Left-Through		0							0				0				0	
	Through	119	0	197	15	134	212	0	119	0	197	15	134	0	212	-2	132	0	210
	Through-Right		0							0				0				0	
	Right	29	0	0	0	29	0	0	29	0	0	0	29	0	0	0	29	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	65	1	65	0	65	65	0	65	1	65	0	65	1	65	0	65	1	65
	Left-Through		0							0				0				0	
	Through	814	1	440	0	814	440	0	814	1	440	0	814	1	440	0	814	1	440
	Through-Right		1							1				1				1	
	Right	65	0	65	0	65	65	0	65	0	65	0	65	0	65	0	65	0	65
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	46	1	46	0	46	46	0	46	1	46	0	46	1	46	0	46	1	46
	Left-Through		0							0				0				0	
	Through	393	1	212	4	397	214	0	393	1	212	4	397	1	214	-1	396	1	214
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	0	31	0	31	0	31	0	31	0	31	0	31
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			North-South:	377		North-South:	377			North-South:	377			North-South:	377			North-South:	377
			East-West:	486		East-West:	486			East-West:	486			East-West:	486			East-West:	486
			SUM:	863		SUM:	863			SUM:	863			SUM:	863			SUM:	863
VOLUME/CAPACITY (V/C) RATIO:				0.575			0.575				0.575				0.575				0.575
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.475			0.475				0.475				0.475				0.475
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet

(Circular 212 Method)

I/S #:	North-South Street:	Santa Fe Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
17	East-West Street:	8th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	225	0	225	0	225	225	0	225	0	225	0	225	0	225	0	225	0	225
	Left-Through		1							1				1				1	
	Through	491	0	500	0	491	500	0	491	0	500	0	491	0	500	0	491	0	500
	Through-Right		1							1				1				1	
	Right	9	0	0	0	9	0	0	9	0	0	0	9	0	0	0	9	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	9	0	9	0	9	9	0	9	0	9	0	9	0	9	0	9	0	9
	Left-Through		1							1				1				1	
	Through	524	0	361	0	524	361	0	524	0	361	0	524	0	361	0	524	0	361
	Through-Right		1							1				1				1	
	Right	180	0	361	0	180	361	0	180	0	361	0	180	0	361	0	180	0	361
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	56	0	56	0	56	56	0	56	0	56	0	56	0	56	0	56	0	56
	Left-Through		0							0				0				0	
	Through	12	0	442	0	12	442	0	12	0	442	0	12	0	442	0	12	0	442
	Through-Right		0							0				0				0	
	Right	374	0	0	0	374	0	0	374	0	0	0	374	0	0	0	374	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	9	0	9	0	9	9	0	9	0	9	0	9	0	9	0	9	0	9
	Left-Through		0							0				0				0	
	Through	3	0	26	0	3	26	0	3	0	26	0	3	0	26	0	3	0	26
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	0	14	0	0	0	14	0	0	0	14	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	586	586	586	586	586
	East-West:	451	451	451	451	451
	SUM:	1037	1037	1037	1037	1037
VOLUME/CAPACITY *(V/C)* RATIO:		0.691	0.691	0.691	0.691	0.691
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.591	0.591	0.591	0.591	0.591
LEVEL OF SERVICE (LOS):		A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	US 101 NB Off-Ramp	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
18	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition w/ Project	Existing w/ Project w/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	EXISTING CONDITIONS Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	337	1	278	12	349	284	0	337	1	278	12	349	1	284	-2	347	1	283
	Left-Through		0							0				0				0	
	Through	0	0	278	0	0	284	0	0	0	278	0	0	0	284	0	0	0	283
	Through-Right		0							0				0				0	
	Right	219	0	0	0	219	0	0	219	0	0	0	219	0	0	0	219	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1111	3	370	45	1156	385	0	1111	3	370	45	1156	3	385	-7	1149	3	383
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	586	1	293	12	598	299	0	586	1	293	12	598	1	299	-2	596	1	298
	Through-Right		1							1				1				1	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition w/ Project	Existing w/ Project w/ Mitigation
CRITICAL VOLUMES *North-South:*	278	284	278	284	283
East-West:	370	385	370	385	383
SUM:	648	669	648	669	666
VOLUME/CAPACITY *(V/C)* RATIO:	0.432	0.446	0.432	0.446	0.444
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.332	0.346	0.332	0.346	0.344
LEVEL OF SERVICE (LOS):	A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.014	Δ*v/c* after mitigation:	0.012
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
19	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition w/ Project	Existing w/ Project w/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	123	1	123	0	123	123	0	123	1	123	0	123	1	123	0	123	1	123
	Left-Through		0							0				0				0	
	Through	574	0	718	0	574	718	0	574	0	718	0	574	0	718	0	574	0	718
	Through-Right		1							1				1				1	
	Right	144	0	0	0	144	0	0	144	0	0	0	144	0	0	0	144	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	96	1	96	0	96	96	0	96	1	96	0	96	1	96	0	96	1	96
	Left-Through		0							0				0				0	
	Through	347	0	395	0	347	395	0	347	0	395	0	347	0	395	0	347	0	395
	Through-Right		1							1				1				1	
	Right	48	0	0	0	48	0	0	48	0	0	0	48	0	0	0	48	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	6	6	0	0	0	0	0	6	6	0	0	-1	5	0	0
	Left-Through		0							0				0				0	
	Through	1160	2	425	39	1199	438	0	1160	2	425	39	1199	2	438	-6	1193	2	436
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	0	115	0	115	0	115	0	115	0	115	0	115
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	626	1	392	12	638	398	0	626	1	392	12	638	1	398	-2	636	1	397
	Through-Right		1							1				1				1	
	Right	158	0	158	0	158	158	0	158	0	158	0	158	0	158	0	158	0	158
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	814		*North-South:*	814			*North-South:*	814			*North-South:*	814			*North-South:*	814
			East-West:	425		*East-West:*	438			*East-West:*	425			*East-West:*	438			*East-West:*	436
			SUM:	1239		*SUM:*	1252			*SUM:*	1239			*SUM:*	1252			*SUM:*	1250
VOLUME/CAPACITY (*V/C*) RATIO:				0.869			0.879				0.869				0.879				0.877
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.769			0.779				0.769				0.779				0.777
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.008
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
20	East-West Street:	Whittier Boulevard	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

No. of Phases					3					3					3					3					3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0					0					0					0					0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0		NB--	0	SB--	0		NB--	0	SB--	0		NB--	0	SB--	0		NB--	0	SB--	0
	EB--	0	WB--	0		EB--	0	WB--	0		EB--	0	WB--	0		EB--	0	WB--	0		EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?					2					2					2					2					2
Override Capacity					0					0					0					0					0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	173	1	173	0	173	173	0	173	1	173	0	173	1	173	0	173	1	173
	Left-Through		0							0				0				0	
	Through	897	1	553	0	897	553	0	897	1	553	0	897	1	553	0	897	1	553
	Through-Right		1							1				1				1	
	Right	209	0	209	0	209	209	0	209	0	209	0	209	0	209	0	209	0	209
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	126	1	126	0	126	126	0	126	1	126	0	126	1	126	0	126	1	126
	Left-Through		0							0				0				0	
	Through	385	1	212	0	385	212	0	385	1	212	0	385	1	212	0	385	1	212
	Through-Right		1							1				1				1	
	Right	39	0	39	0	39	39	0	39	0	39	0	39	0	39	0	39	0	39
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	197	1	197	0	197	197	0	197	1	197	0	197	1	197	0	197	1	197
	Left-Through		0							0				0				0	
	Through	618	1	363	15	633	370	0	618	1	363	15	633	1	370	-2	631	1	369
	Through-Right		1							1				1				1	
	Right	107	0	107	0	107	107	0	107	0	107	0	107	0	107	0	107	0	107
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	62	1	62	0	62	62	0	62	1	62	0	62	1	62	0	62	1	62
	Left-Through		0							0				0				0	
	Through	381	1	272	4	385	274	0	381	1	272	4	385	1	274	-1	384	1	273
	Through-Right		1							1				1				1	
	Right	162	0	162	0	162	162	0	162	0	162	0	162	0	162	0	162	0	162
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			North-South:	679		North-South:	679			North-South:	679			North-South:	679			North-South:	679
			East-West:	469		East-West:	471			East-West:	469			East-West:	471			East-West:	470
			SUM:	1148		SUM:	1150			SUM:	1148			SUM:	1150			SUM:	1149
VOLUME/CAPACITY (V/C) RATIO:				0.806			0.807				0.806				0.807				0.806
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.706			0.707				0.706				0.707				0.706
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 Northbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
21	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING CONDITIONS	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	EXISTING CONDITIONS Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	EXISTING W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	43	1	43	0	43	43	0	43	1	43	0	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	49	0	138	0	49	138	0	49	0	138	0	49	0	138	0	49	0	138
	Through-Right		1							1				1				1	
	Right	89	0	0	0	89	0	0	89	0	0	0	89	0	0	0	89	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	714	1	714	24	738	738	0	714	1	714	24	738	1	738	-4	734	1	734
	Left-Through		0							0				0				0	
	Through	1052	2	526	15	1067	534	0	1052	2	526	15	1067	2	534	-2	1065	2	533
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	449	1	369	4	453	371	0	449	1	369	4	453	1	371	-1	452	1	370
	Through-Right		1							1				1				1	
	Right	288	0	288	0	288	288	0	288	0	288	0	288	0	288	0	288	0	288
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	EXISTING CONDITIONS	EXISTING CONDITION W/ PROJECT	EXISTING W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES *North-South:*	138	138	138	138	138
East-West:	1083	1109	1083	1109	1104
SUM:	1221	1247	1221	1247	1242
VOLUME/CAPACITY *(V/C)* RATIO:	0.857	0.875	0.857	0.875	0.872
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.757	0.775	0.757	0.775	0.772
LEVEL OF SERVICE (LOS):	C	C	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.018	Δ*v/c* after mitigation:	0.015
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	1/1/2017
22	East-West Street:	4th Street	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITIONS				EXISTING CONDITION W/ PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	192	1	192	0	192	192	0	192	1	192	0	192	1	192	0	192	1	192
	Left-Through		0							0				0				0	
	Through	749	2	375	0	749	375	0	749	2	375	0	749	2	375	0	749	2	375
	Through-Right		0							0				0				0	
	Right	121	1	57	0	121	57	0	121	1	57	0	121	1	57	0	121	1	57
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	125	1	125	0	125	125	0	125	1	125	0	125	1	125	0	125	1	125
	Left-Through		0							0				0				0	
	Through	560	2	280	0	560	280	0	560	2	280	0	560	2	280	0	560	2	280
	Through-Right		0							0				0				0	
	Right	70	1	20	0	70	20	0	70	1	20	0	70	1	20	0	70	1	20
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	100	1	100	0	100	100	0	100	1	100	0	100	1	100	0	100	1	100
	Left-Through		0							0				0				0	
	Through	936	1	522	15	951	530	0	936	1	522	15	951	1	530	-2	949	1	529
	Through-Right		1							1				1				1	
	Right	108	0	108	0	108	108	0	108	0	108	0	108	0	108	0	108	0	108
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	128	1	128	0	128	128	0	128	1	128	0	128	1	128	0	128	1	128
	Left-Through		0							0				0				0	
	Through	483	1	278	4	487	280	0	483	1	278	4	487	1	280	-1	486	1	280
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	0	73	0	73	0	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Existing Conditions	Existing Condition W/ Project	Existing W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	500	500	500	500	500
East-West:	800	810	800	810	809
SUM:	1300	1310	1300	1310	1309
VOLUME/CAPACITY *(V/C)* RATIO:	0.912	0.919	0.912	0.919	0.919
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.812	0.819	0.812	0.819	0.819
LEVEL OF SERVICE (LOS):	D	D	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
1	East-West Street:	3rd Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	301	1	301	0	301	301	0	320	1	320	0	320	1	320	0	320	1	320
	Left-Through		0							0				0				0	
	Through	777	2	389	0	777	389	16	841	2	421	0	841	2	421	0	841	2	421
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	283	1	190	0	283	190	4	304	1	203	0	304	1	203	0	304	1	203
	Through-Right		1							1				1				1	
	Right	96	0	96	0	96	96	0	102	0	102	0	102	0	102	0	102	0	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	119	0	119	0	119	119	22	148	0	148	0	148	0	148	0	148	0	148
	Left-Through		1							1				1				1	
	Through	1034	3	288	30	1064	296	617	1715	3	466	30	1745	3	473	-5	1740	3	472
	Through-Right		0							0				0				0	
	Right	137	1	137	0	137	137	0	145	1	145	0	145	1	145	0	145	1	145
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION		EXISTING PLUS PROJECT		FUTURE CONDITION W/O PROJECT		FUTURE CONDITION W/ PROJECT		FUTURE W/ PROJECT W/ MITIGATION	
CRITICAL VOLUMES	*North-South:*	491	*North-South:*	491	*North-South:*	523	*North-South:*	523	*North-South:*	523
	East-West:	288	*East-West:*	296	*East-West:*	466	*East-West:*	473	*East-West:*	472
	SUM:	779	*SUM:*	787	*SUM:*	989	*SUM:*	996	*SUM:*	995
VOLUME/CAPACITY *(V/C)* RATIO:		0.547		0.552		0.694		0.699		0.698
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.447		0.452		0.594		0.599		0.598
LEVEL OF SERVICE (LOS):		A		A		A		A		A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
2	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	779	1	513	0	779	513	16	843	1	558	0	843	1	558	0	843	1	558
	Through-Right		1							1				1				1	
	Right	246	0	246	0	246	246	11	272	0	272	0	272	0	272	0	272	0	272
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	80	1	80	0	80	80	0	85	1	85	0	85	1	85	0	85	1	85
	Left-Through		0							0				0				0	
	Through	236	2	118	0	236	118	26	277	2	139	0	277	2	139	0	277	2	139
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	46	0	46	0	46	46	0	49	0	49	0	49	0	49	0	49	0	49
	Left-Through		1							1				1				1	
	Through	1525	2	417	8	1533	419	390	2009	2	544	8	2017	2	546	-1	2016	2	546
	Through-Right		1							1				1				1	
	Right	97	0	417	0	97	419	15	118	0	544	0	118	0	546	0	118	0	546
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	593	*North-South:*	593	*North-South:*	643	*North-South:*	643	*North-South:*	643
	East-West:	417	*East-West:*	419	*East-West:*	544	*East-West:*	546	*East-West:*	546
	SUM:	1010	*SUM:*	1012	*SUM:*	1187	*SUM:*	1189	*SUM:*	1189
VOLUME/CAPACITY *(V/C)* RATIO:		0.709		0.710		0.833		0.834		0.834
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.609		0.610		0.733		0.734		0.734
LEVEL OF SERVICE (LOS):		B		B		C		C		C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
3	East-West Street:	6th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	765	1	473	0	765	473	52	864	1	556	0	864	1	556	0	864	1	556
	Through-Right		1							1				1				1	
	Right	180	0	180	0	180	180	57	248	0	248	0	248	0	248	0	248	0	248
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	27	1	27	0	27	27	4	33	1	33	0	33	1	33	0	33	1	33
	Left-Through		0							0				0				0	
	Through	331	2	166	0	331	166	0	351	2	176	0	351	2	176	0	351	2	176
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	127	1	127	0	127	127	31	166	1	166	0	166	1	166	0	166	1	166
	Left-Through		0							0				0				0	
	Through	733	2	367	4	737	369	300	1078	2	539	4	1082	2	541	-1	1081	2	541
	Through-Right		0							0				0				0	
	Right	129	1	129	0	129	129	187	324	1	324	0	324	1	324	0	324	1	324
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	179	1	179	0	179	179	125	315	1	315	0	315	1	315	0	315	1	315
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	313	2	159	0	313	159	139	471	2	243	0	471	2	243	0	471	2	243
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	500	500	589	589	589
East-West:	546	548	854	856	856
SUM:	1046	1048	1443	1445	1445
VOLUME/CAPACITY *(V/C)* RATIO:	0.761	0.762	1.049	1.051	1.051
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.661	0.662	0.949	0.951	0.951
LEVEL OF SERVICE (LOS):	B	B	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
4	East-West Street:	7th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	58	1	58	0	58	58	0	62	1	**62**	0	62	1	**62**	0	62	1	**62**
	Left-Through		0							0				0				0	
	Through	809	1	**474**	0	809	**474**	103	962	1	560	0	962	1	560	0	962	1	560
	Through-Right		1							1				1				1	
	Right	138	0	138	0	138	138	11	157	0	157	0	157	0	157	0	157	0	157
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	43	0	**43**	0	43	**43**	187	233	0	233	0	233	0	233	0	233	0	233
	Left-Through		1							1				1				1	
	Through	541	0	387	0	541	387	104	678	0	**764**	0	678	0	**764**	0	678	0	**764**
	Through-Right		1							1				1				1	
	Right	61	0	387	0	61	387	21	86	0	0	0	86	0	0	0	86	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	95	1	95	0	95	95	0	101	1	101	0	101	1	101	0	101	1	101
	Left-Through		0							0				0				0	
	Through	803	1	**438**	0	803	**438**	296	1148	1	**613**	0	1148	1	**613**	0	1148	1	**613**
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	0	77	0	77	0	77	0	77	0	77	0	77
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	98	1	**98**	0	98	**98**	12	116	1	**116**	0	116	1	**116**	0	116	1	**116**
	Left-Through		0							0				0				0	
	Through	468	1	265	15	483	273	463	960	1	517	15	975	1	524	-2	973	1	523
	Through-Right		1							1				1				1	
	Right	62	0	62	0	62	62	7	73	0	73	0	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	517	517	826	826	826
East-West:	536	536	729	729	729
SUM:	1053	1053	1555	1555	1555
VOLUME/CAPACITY *(V/C)* RATIO:	0.702	0.702	1.037	1.037	1.037
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.602	0.602	0.937	0.937	0.937
LEVEL OF SERVICE (LOS):	B	B	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
5	East-West Street:	2nd Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	151	1	151	0	151	151	0	160	1	160	0	160	1	160	0	160	1	160
	Left-Through		0							0				0				0	
	Through	896	1	483	60	956	513	357	1308	1	708	60	1368	1	738	-9	1359	1	733
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	34	107	0	107	0	107	0	107	0	107	0	107
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	62	1	62	0	62	62	0	66	1	66	0	66	1	66	0	66	1	66
	Left-Through		0							0				0				0	
	Through	815	1	441	17	832	450	301	1166	1	619	17	1183	1	627	-3	1180	1	626
	Through-Right		1							1				1				1	
	Right	67	0	67	0	67	67	0	71	0	71	0	71	0	71	0	71	0	71
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	137	1	137	0	137	137	0	145	1	145	0	145	1	145	0	145	1	145
	Left-Through		0							0				0				0	
	Through	237	1	237	0	237	237	15	267	1	267	0	267	1	267	0	267	1	267
	Through-Right		0							0				0				0	
	Right	163	1	88	0	163	88	0	173	1	93	0	173	1	93	0	173	1	93
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	38	1	38	0	38	38	9	49	1	49	0	49	1	49	0	49	1	49
	Left-Through		0							0				0				0	
	Through	86	0	142	0	86	142	18	109	0	177	0	109	0	177	0	109	0	177
	Through-Right		1							1				1				1	
	Right	56	0	0	0	56	0	9	68	0	0	0	68	0	0	0	68	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	592	601	779	804	799
East-West:	279	279	322	322	322
SUM:	871	880	1101	1126	1121
VOLUME/CAPACITY *(V/C)* RATIO:	0.611	0.618	0.773	0.790	0.787
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.511	0.518	0.673	0.690	0.687
LEVEL OF SERVICE (LOS):	A	A	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.017	Δ*v/c* after mitigation:	0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet

(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
6	East-West Street:	3rd Street/4th Place	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	245	1	245	0	245	245	87	347	1	347	0	347	1	347	0	347	1	347
	Left-Through		0							0				0				0	
	Through	1063	2	532	0	1063	532	350	1478	2	739	0	1478	2	739	0	1478	2	739
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	747	2	374	17	764	382	297	1090	2	545	17	1107	2	554	-3	1104	2	552
	Through-Right		0							0				0				0	
	Right	146	1	146	0	146	146	13	168	1	168	0	168	1	168	0	168	1	168
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	95	0	95	115	210	210	195	296	0	296	115	411	0	411	-18	393	0	393
	Left-Through		1							1				1				1	
	Through	625	2	197	30	655	248	540	1203	2	403	30	1233	2	455	-5	1228	2	447
	Through-Right		1							1				1				1	
	Right	67	0	197	60	127	248	43	114	0	403	60	174	0	455	-9	165	0	447
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES North-South:	619	627	892	901	899
East-West:	197	248	403	455	447
SUM:	816	875	1295	1356	1346
VOLUME/CAPACITY (V/C) RATIO:	0.573	0.614	0.909	0.952	0.945
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.473	0.514	0.809	0.852	0.845
LEVEL OF SERVICE (LOS):	A	A	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.043	Δ*v/c* after mitigation:	0.036
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
7	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

No. of Phases					2					2					2					2					2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0					0					0					0					0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0		NB--	0	SB--	0		NB--	0	SB--	0		NB--	0	SB--	0		NB--	0	SB--	0	
	EB--	0	WB--	0		EB--	0	WB--	0		EB--	0	WB--	0		EB--	0	WB--	0		EB--	0	WB--	0	
ATSAC-1 or ATSAC+ATCS-2?					2					2					2					2					2
Override Capacity					0					0					0					0					0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	976	1	**518**	0	976	**535**	394	1430	1	**835**	0	1430	1	**851**	0	1430	1	**849**
	Through-Right		1							1				1				1	
	Right	60	0	60	33	93	93	175	239	0	239	33	272	0	272	-5	267	0	267
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	117	1	**117**	42	159	**159**	27	151	1	**151**	42	193	1	**193**	-7	186	1	**186**
	Left-Through		0							0				0				0	
	Through	743	2	372	90	833	417	463	1252	2	626	90	1342	2	671	-14	1328	2	664
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	224	0	224	0	224	224	38	276	0	276	0	276	0	276	0	276	0	276
	Left-Through		1							1				1				1	
	Through	1421	2	**548**	8	1429	**551**	226	1734	2	**670**	8	1742	2	**673**	-1	1741	2	**672**
	Through-Right		0							0				0				0	
	Right	161	1	161	0	161	161	137	308	1	308	0	308	1	308	0	308	1	308
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	635		*North-South:*	694			*North-South:*	986			*North-South:*	1044			*North-South:*	1035
			East-West:	548		*East-West:*	551			*East-West:*	670			*East-West:*	673			*East-West:*	672
			SUM:	1183		*SUM:*	1245			*SUM:*	1656			*SUM:*	1717			*SUM:*	1707
VOLUME/CAPACITY (*V/C*) RATIO:				0.789			0.830				1.104				1.145				1.138
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.689			0.730				1.004				1.045				1.038
LEVEL OF SERVICE (LOS):				B			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.041	Δ*v/c* after mitigation:	0.034
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #: 8	North-South Street: Alameda Street	Year of Count: 2017	Ambient Growth: (%): 1	Conducted by: GTC	Date: 10/23/2019
	East-West Street: 6th Street	Projection Year: 2023	Peak Hour: PM	Reviewed by:	Project: 401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	102	1	102	0	102	102	8	116	1	116	0	116	1	116	0	116	1	116
	Left-Through		0							0				0				0	
	Through	842	1	458	25	867	471	248	1142	1	725	25	1167	1	738	-4	1163	1	736
	Through-Right		1							1				1				1	
	Right	74	0	74	0	74	74	229	308	0	308	0	308	0	308	0	308	0	308
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	79	1	79	15	94	94	252	336	1	336	15	351	1	351	-2	349	1	349
	Left-Through		0							0				0				0	
	Through	641	1	359	75	716	396	143	823	1	452	75	898	1	490	-12	886	1	484
	Through-Right		1							1				1				1	
	Right	76	0	76	0	76	76	0	81	0	81	0	81	0	81	0	81	0	81
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	110	1	110	4	114	114	32	149	1	149	4	153	1	153	-1	152	1	152
	Left-Through		0							0				0				0	
	Through	714	1	398	0	714	398	257	1015	1	588	0	1015	1	588	0	1015	1	588
	Through-Right		1							1				1				1	
	Right	82	0	82	0	82	82	73	160	0	160	0	160	0	160	0	160	0	160
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	41	1	41	0	41	41	252	296	1	296	0	296	1	296	0	296	1	296
	Left-Through		0							0				0				0	
	Through	237	1	144	0	237	146	256	508	1	378	0	508	1	380	0	508	1	380
	Through-Right		1							1				1				1	
	Right	50	0	50	4	54	54	195	248	0	248	4	252	0	252	-1	251	0	251
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES — *North-South:*	537	565	1061	1089	1085
East-West:	439	439	884	884	884
SUM:	976	1004	1945	1973	1969
VOLUME/CAPACITY *(V/C)* RATIO:	0.685	0.705	1.365	1.385	1.382
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.585	0.605	1.265	1.285	1.282
LEVEL OF SERVICE (LOS):	A	B	F	F	F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.020	Δ*v/c* after mitigation:	0.017
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
9	East-West Street:	7th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition				Existing Plus Project				Future Condition W/O Project				Future Condition W/ Project				Future W/ Project W/ Mitigation			
No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	109	1	109	0	109	109	0	116	1	116	0	116	1	116	0	116	1	116
	Left-Through		0							0				0				0	
	Through	761	1	**438**	21	782	**449**	227	1035	1	**623**	21	1056	1	**634**	-3	1053	1	**632**
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	89	211	0	211	0	211	0	211	0	211	0	211
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	105	1	**105**	0	105	**105**	92	203	1	**203**	0	203	1	**203**	0	203	1	**203**
	Left-Through		0							0				0				0	
	Through	714	1	379	60	774	416	233	991	1	578	60	1051	1	615	-9	1042	1	610
	Through-Right		1							1				1				1	
	Right	43	0	43	15	58	58	118	164	0	164	15	179	0	179	-2	177	0	177
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	98	1	98	0	98	98	77	181	1	181	0	181	1	181	0	181	1	181
	Left-Through		0							0				0				0	
	Through	757	1	**435**	0	757	**435**	417	1221	1	**670**	0	1221	1	**670**	0	1221	1	**670**
	Through-Right		1							1				1				1	
	Right	112	0	112	0	112	112	0	119	0	119	0	119	0	119	0	119	0	119
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	79	1	**79**	0	79	**79**	89	173	1	**173**	0	173	1	**173**	0	173	1	**173**
	Left-Through		0							0				0				0	
	Through	420	1	271	0	420	273	362	808	1	571	0	808	1	573	0	808	1	572
	Through-Right		1							1				1				1	
	Right	122	0	122	4	126	126	203	333	0	333	4	337	0	337	-1	336	0	336
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	543		*North-South:*	554			*North-South:*	826			*North-South:*	837			*North-South:*	835
			East-West:	514		*East-West:*	514			*East-West:*	843			*East-West:*	843			*East-West:*	843
			SUM:	1057		*SUM:*	1068			*SUM:*	1669			*SUM:*	1680			*SUM:*	1678
VOLUME/CAPACITY *(V/C)* RATIO:				0.742			0.749				1.171				1.179				1.178
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.642			0.649				1.071				1.079				1.078
LEVEL OF SERVICE (LOS):				B			B				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
10	East-West Street:	Olympic Boulevard	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	75	1	75	0	75	75	4	84	1	84	0	84	1	84	0	84	1	84
	Left-Through		0							0				0				0	
	Through	788	1	**487**	17	805	**495**	262	1098	1	**647**	17	1115	1	**656**	-3	1112	1	**654**
	Through-Right		1							1				1				1	
	Right	185	0	185	0	185	185	0	196	0	196	0	196	0	196	0	196	0	196
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	100	1	**100**	0	100	**100**	89	195	1	**195**	0	195	1	**195**	0	195	1	**195**
	Left-Through		0							0				0				0	
	Through	882	2	441	60	942	471	233	1169	2	585	60	1229	2	615	-9	1220	2	610
	Through-Right		0							0				0				0	
	Right	129	1	98	0	129	98	0	137	1	99	0	137	1	99	0	137	1	99
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	62	1	62	0	62	62	11	77	1	77	0	77	1	77	0	77	1	77
	Left-Through		0							0				0				0	
	Through	961	1	**507**	0	961	**507**	237	1257	1	**659**	0	1257	1	**659**	0	1257	1	**659**
	Through-Right		1							1				1				1	
	Right	53	0	53	0	53	53	5	61	0	61	0	61	0	61	0	61	0	61
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	77	1	**77**	0	77	**77**	0	82	1	**82**	0	82	1	**82**	0	82	1	**82**
	Left-Through		0							0				0				0	
	Through	909	1	474	0	909	476	190	1155	1	620	0	1155	1	622	0	1155	1	621
	Through-Right		1							1				1				1	
	Right	39	0	39	4	43	43	43	84	0	84	4	88	0	88	-1	87	0	87
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	587	595	842	851	849
East-West:	584	584	741	741	741
SUM:	1171	1179	1583	1592	1590
VOLUME/CAPACITY *(V/C)* RATIO:	0.781	0.786	1.055	1.061	1.060
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.681	0.686	0.955	0.961	0.960
LEVEL OF SERVICE (LOS):	B	B	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
11	East-West Street:	I-10 EB Ramps	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	422	1	422	0	422	422	0	448	1	448	0	448	1	448	0	448	1	448
	Left-Through		0							0				0				0	
	Through	1021	1	511	8	1029	515	70	1154	1	577	8	1162	1	581	-1	1161	1	581
	Through-Right		1							1				1				1	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
	Left-Through		0							0				0				0	
	Through	1183	2	592	30	1213	607	68	1324	2	662	30	1354	2	677	-5	1349	2	675
	Through-Right		0							0				0				0	
	Right	466	1	432	0	466	428	17	512	1	446	0	512	1	442	0	512	1	442
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	69	1	69	8	77	77	60	133	1	133	8	141	1	141	-1	140	1	140
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	225	1	0	0	225	0	0	239	1	0	0	239	1	0	0	239	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	7	0	0	0	7	0	0	7	0	0	0	7	0	0	0	7	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	North-South:	1014	1029	1110	1125	1123
	East-West:	69	77	133	141	140
	SUM:	1083	1106	1243	1266	1263
VOLUME/CAPACITY (V/C) RATIO:		0.788	0.804	0.904	0.921	0.919
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.688	0.704	0.804	0.821	0.819
LEVEL OF SERVICE (LOS):		B	C	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.017	Δ*v/c* after mitigation:	0.015
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Vignes Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
12	East-West Street:	1st Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	8	0	8	0	8	8	0	8	0	8	0	8	0	8	0	8	0	8
	Left-Through		0							0				0				0	
	Through	42	0	180	0	42	180	0	45	0	207	0	45	0	207	0	45	0	207
	Through-Right		0							0				0				0	
	Right	130	0	0	0	130	0	16	154	0	0	0	154	0	0	0	154	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	64	0	64	0	64	64	0	68	0	68	0	68	0	68	0	68	0	68
	Left-Through		0							0				0				0	
	Through	27	0	124	0	27	124	0	29	0	132	0	29	0	132	0	29	0	132
	Through-Right		0							0				0				0	
	Right	33	0	0	0	33	0	0	35	0	0	0	35	0	0	0	35	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	91	0	91	0	91	91	0	97	0	97	0	97	0	97	0	97	0	97
	Left-Through		1							1				1				1	
	Through	775	1	479	0	775	479	5	828	1	511	0	828	1	511	0	828	1	511
	Through-Right		0							0				0				0	
	Right	18	1	18	0	18	18	0	19	1	19	0	19	1	19	0	19	1	19
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	54	0	54	0	54	54	0	57	0	57	0	57	0	57	0	57	0	57
	Left-Through		1							1				1				1	
	Through	342	0	308	0	342	308	5	368	0	329	0	368	0	329	0	368	0	329
	Through-Right		1							1				1				1	
	Right	58	0	308	0	58	308	0	62	0	329	0	62	0	329	0	62	0	329
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
CRITICAL VOLUMES North-South:	244	244	275	275	275
East-West:	787	787	840	840	840
SUM:	1031	1031	1115	1115	1115
VOLUME/CAPACITY (*V/C*) RATIO:	0.724	0.724	0.782	0.782	0.782
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.624	0.624	0.682	0.682	0.682
LEVEL OF SERVICE (LOS):	B	B	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Merrick Street/Molino Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
13	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	37	0	37	0	37	37	3	42	0	42	0	42	0	42	0	42	0	42
	Left-Through		0							0				0				0	
	Through	13	0	64	0	13	64	0	14	0	435	0	14	0	435	0	14	0	435
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	364	379	0	0	0	379	0	0	0	379	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	87	1	87	0	87	87	0	92	0	92	0	92	0	92	0	92	0	92
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	121	0	0	0	121	0	0	0	121
	Through-Right		0							0				0				0	
	Right	27	1	27	0	27	27	0	29	0	0	0	29	0	0	0	29	0	0
	Left-Through-Right		0							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1521	2	521	120	1641	561	38	1653	2	566	120	1773	2	606	-18	1755	2	600
	Through-Right		1							1				1				1	
	Right	43	0	43	0	43	43	0	46	0	46	0	46	0	46	0	46	0	46
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	622	1	346	25	647	358	775	1435	1	754	25	1460	1	767	-4	1456	1	765
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	0	73	0	73	0	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	151	151	527	527	527
East-West:	521	561	754	767	765
SUM:	672	712	1281	1294	1292
VOLUME/CAPACITY *(V/C)* RATIO:	0.472	0.500	0.854	0.863	0.861
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.372	0.400	0.754	0.763	0.761
LEVEL OF SERVICE (LOS):	A	A	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.009	Δ*v/c* after mitigation:	0.007
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
14	East-West Street:	6th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition				Existing Plus Project				Future Condition W/O Project				Future Condition W/ Project				Future W/ Project W/ Mitigation			
No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	43	0	43	0	43	43	41	87	0	87	0	87	0	87	0	87	0	87
	Left-Through		0							0				0				0	
	Through	128	0	211	0	128	211	47	183	0	312	0	183	0	312	0	183	0	312
	Through-Right		0							0				0				0	
	Right	40	0	0	0	40	0	0	42	0	0	0	42	0	0	0	42	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	32	0	32	0	32	32	27	61	0	61	0	61	0	61	0	61	0	61
	Left-Through		0							0				0				0	
	Through	114	0	187	15	129	202	41	162	0	319	15	177	0	334	-2	175	0	332
	Through-Right		0							0				0				0	
	Right	41	0	0	0	41	0	52	96	0	0	0	96	0	0	0	96	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	65	1	65	0	65	65	57	126	1	126	0	126	1	126	0	126	1	126
	Left-Through		0							0				0				0	
	Through	763	1	418	15	778	426	89	899	1	506	15	914	1	514	-2	912	1	513
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	36	113	0	113	0	113	0	113	0	113	0	113
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	13	1	13	0	13	13	0	14	1	14	0	14	1	14	0	14	1	14
	Left-Through		0							0				0				0	
	Through	227	1	127	4	231	129	94	335	1	199	4	339	1	201	-1	338	1	201
	Through-Right		1							1				1				1	
	Right	26	0	26	0	26	26	35	63	0	63	0	63	0	63	0	63	0	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	243	*North-South:*	245	*North-South:*	406	*North-South:*	421	*North-South:*	419
	East-West:	431	*East-West:*	439	*East-West:*	520	*East-West:*	528	*East-West:*	527
	SUM:	674	*SUM:*	684	*SUM:*	926	*SUM:*	949	*SUM:*	946
VOLUME/CAPACITY (*V/C*) RATIO:		0.449		0.456		0.617		0.633		0.631
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.349		0.356		0.517		0.533		0.531
LEVEL OF SERVICE (LOS):		A		A		A		A		A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
15	East-West Street:	7th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0	NB-- 0 SB-- 0; EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND Left	110	0	110	0	110	110	171	288	0	288	0	288	0	288	0	288	0	288
Left-Through		0							0				0				0	
Through	163	0	328	0	163	328	50	223	0	761	0	223	0	761	0	223	0	761
Through-Right		0							0				0				0	
Right	55	0	0	0	55	0	192	250	0	0	0	250	0	0	0	250	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
SOUTHBOUND Left	49	0	49	0	49	49	36	88	0	88	0	88	0	88	0	88	0	88
Left-Through		0							0				0				0	
Through	119	0	197	15	134	212	36	162	0	285	15	177	0	300	-2	175	0	298
Through-Right		0							0				0				0	
Right	29	0	0	0	29	0	4	35	0	0	0	35	0	0	0	35	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND Left	65	1	65	0	65	65	5	74	1	74	0	74	1	74	0	74	1	74
Left-Through		0							0				0				0	
Through	814	1	440	0	814	440	510	1374	1	859	0	1374	1	859	0	1374	1	859
Through-Right		1							1				1				1	
Right	65	0	65	0	65	65	274	343	0	343	0	343	0	343	0	343	0	343
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND Left	46	1	46	0	46	46	171	220	1	220	0	220	1	220	0	220	1	220
Left-Through		0							0				0				0	
Through	393	1	212	4	397	214	160	577	1	325	4	581	1	327	-1	580	1	326
Through-Right		1							1				1				1	
Right	31	0	31	0	31	31	39	72	0	72	0	72	0	72	0	72	0	72
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES North-South:			377			377				849				849				849
East-West:			486			486				1079				1079				1079
SUM:			863			863				1928				1928				1928
VOLUME/CAPACITY (V/C) RATIO:			0.575			0.575				1.285				1.285				1.285
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.475			0.475				1.185				1.185				1.185
LEVEL OF SERVICE (LOS):			A			A				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project:	0.000	Δv/c after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Santa Fe Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
17	East-West Street:	8th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	225	0	225	0	225	225	0	239	0	239	0	239	0	239	0	239	0	239
	Left-Through		1							1				1				1	
	Through	491	0	500	0	491	500	146	667	0	677	0	667	0	677	0	667	0	677
	Through-Right		1							1				1				1	
	Right	9	0	0	0	9	0	0	10	0	0	0	10	0	0	0	10	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	9	0	9	0	9	9	0	10	0	10	0	10	0	10	0	10	0	10
	Left-Through		1							1				1				1	
	Through	524	0	361	0	524	361	109	665	0	454	0	665	0	454	0	665	0	454
	Through-Right		1							1				1				1	
	Right	180	0	361	0	180	361	11	202	0	454	0	202	0	454	0	202	0	454
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	56	0	56	0	56	56	11	70	0	70	0	70	0	70	0	70	0	70
	Left-Through		0							0				0				0	
	Through	12	0	442	0	12	442	0	13	0	480	0	13	0	480	0	13	0	480
	Through-Right		0							0				0				0	
	Right	374	0	0	0	374	0	0	397	0	0	0	397	0	0	0	397	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	9	0	9	0	9	9	0	10	0	10	0	10	0	10	0	10	0	10
	Left-Through		0							0				0				0	
	Through	3	0	26	0	3	26	0	3	0	28	0	3	0	28	0	3	0	28
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	0	15	0	0	0	15	0	0	0	15	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	586	586	693	693	693
East-West:	451	451	490	490	490
SUM:	1037	1037	1183	1183	1183
VOLUME/CAPACITY *(V/C)* RATIO:	0.691	0.691	0.789	0.789	0.789
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.591	0.591	0.689	0.689	0.689
LEVEL OF SERVICE (LOS):	A	A	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	US 101 NB Off-Ramp	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
18	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	337	1	278	12	349	284	231	589	1	411	12	601	1	417	-2	599	1	416
	Left-Through		0							0				0				0	
	Through	0	0	278	0	0	284	0	0	0	411	0	0	0	417	0	0	0	416
	Through-Right		0							0				0				0	
	Right	219	0	0	0	219	0	0	232	0	0	0	232	0	0	0	232	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1111	3	370	45	1156	385	259	1438	3	479	45	1483	3	494	-7	1476	3	492
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	586	1	293	12	598	299	395	1017	1	509	12	1029	1	515	-2	1027	1	514
	Through-Right		1							1				1				1	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	278	284	411	417	416
East-West:	370	385	509	515	514
SUM:	648	669	920	932	930
VOLUME/CAPACITY *(V/C)* RATIO:	0.432	0.446	0.613	0.621	0.620
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.332	0.346	0.513	0.521	0.520
LEVEL OF SERVICE (LOS):	A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
19	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	123	1	123	0	123	123	0	131	1	131	0	131	1	131	0	131	1	131
	Left-Through		0							0				0				0	
	Through	574	0	718	0	574	718	0	609	0	762	0	609	0	762	0	609	0	762
	Through-Right		1							1				1				1	
	Right	144	0	0	0	144	0	0	153	0	0	0	153	0	0	0	153	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	96	1	96	0	96	96	0	102	1	102	0	102	1	102	0	102	1	102
	Left-Through		0							0				0				0	
	Through	347	0	395	0	347	395	0	368	0	419	0	368	0	419	0	368	0	419
	Through-Right		1							1				1				1	
	Right	48	0	0	0	48	0	0	51	0	0	0	51	0	0	0	51	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	6	6	0	0	0	0	0	6	6	0	0	-1	5	0	0
	Left-Through		0							0				0				0	
	Through	1160	2	425	39	1199	438	259	1490	2	537	39	1529	2	550	-6	1523	2	548
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	0	122	0	122	0	122	0	122	0	122	0	122
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	626	1	392	12	638	398	395	1060	1	614	12	1072	1	620	-2	1070	1	619
	Through-Right		1							1				1				1	
	Right	158	0	158	0	158	158	0	168	0	168	0	168	0	168	0	168	0	168
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — North-South:	814	814	864	864	864
East-West:	425	438	614	620	619
SUM:	1239	1252	1478	1484	1483
VOLUME/CAPACITY (V/C) RATIO:	0.869	0.879	1.037	1.041	1.041
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.769	0.779	0.937	0.941	0.941
LEVEL OF SERVICE (LOS):	C	C	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.004 — Δ*v/c* after mitigation: 0.004

Significant impacted? NO — Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
20	East-West Street:	Whittier Boulevard	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	173	1	173	0	173	173	0	184	1	184	0	184	1	184	0	184	1	184
	Left-Through		0							0				0				0	
	Through	897	1	553	0	897	553	0	952	1	587	0	952	1	587	0	952	1	587
	Through-Right		1							1				1				1	
	Right	209	0	209	0	209	209	0	222	0	222	0	222	0	222	0	222	0	222
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	126	1	126	0	126	126	0	134	1	134	0	134	1	134	0	134	1	134
	Left-Through		0							0				0				0	
	Through	385	1	212	0	385	212	0	409	1	225	0	409	1	225	0	409	1	225
	Through-Right		1							1				1				1	
	Right	39	0	39	0	39	39	0	41	0	41	0	41	0	41	0	41	0	41
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	197	1	197	0	197	197	0	209	1	209	0	209	1	209	0	209	1	209
	Left-Through		0							0				0				0	
	Through	618	1	363	15	633	370	34	690	1	402	15	705	1	410	-2	703	1	409
	Through-Right		1							1				1				1	
	Right	107	0	107	0	107	107	0	114	0	114	0	114	0	114	0	114	0	114
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	62	1	62	0	62	62	0	66	1	66	0	66	1	66	0	66	1	66
	Left-Through		0							0				0				0	
	Through	381	1	272	4	385	274	89	493	1	333	4	497	1	335	-1	496	1	334
	Through-Right		1							1				1				1	
	Right	162	0	162	0	162	162	0	172	0	172	0	172	0	172	0	172	0	172
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	679		*North-South:*	679			*North-South:*	721			*North-South:*	721			*North-South:*	721
			East-West:	469		*East-West:*	471			*East-West:*	542			*East-West:*	544			*East-West:*	543
			SUM:	1148		*SUM:*	1150			*SUM:*	1263			*SUM:*	1265			*SUM:*	1264
VOLUME/CAPACITY (*V/C*) RATIO:				0.806			0.807				0.886				0.888				0.887
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.706			0.707				0.786				0.788				0.787
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet

(Circular 212 Method)

I/S #:	North-South Street:	I-5 Northbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
21	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND Left	43	1	43	0	43	43	27	73	1	73	0	73	1	73	0	73	1	73
Left-Through		0							0				0				0	
Through	49	0	138	0	49	138	0	52	0	146	0	52	0	146	0	52	0	146
Through-Right		1							1				1				1	
Right	89	0	0	0	89	0	0	94	0	0	0	94	0	0	0	94	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through		0							0				0				0	
Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Through-Right		0							0				0				0	
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND Left	714	1	714	24	738	738	172	930	1	930	24	954	1	954	-4	950	1	950
Left-Through		0							0				0				0	
Through	1052	2	526	15	1067	534	65	1182	2	591	15	1197	2	599	-2	1195	2	598
Through-Right		0							0				0				0	
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through		0							0				0				0	
Through	449	1	369	4	453	371	74	551	1	429	4	555	1	431	-1	554	1	430
Through-Right		1							1				1				1	
Right	288	0	288	0	288	288	0	306	0	306	0	306	0	306	0	306	0	306
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	

CRITICAL VOLUMES	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
North-South:	138	138	146	146	146
East-West:	1083	1109	1359	1385	1380
SUM:	1221	1247	1505	1531	1526
VOLUME/CAPACITY (*V/C*) RATIO:	0.857	0.875	1.056	1.074	1.071
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.757	0.775	0.956	0.974	0.971
LEVEL OF SERVICE (LOS):	C	C	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.018	Δ*v/c* after mitigation:	0.015
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

LADOT Moving LA Forward

I/S #:	North-South Street:	Soto Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
22	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	192	1	192	0	192	192	0	204	1	204	0	204	1	204	0	204	1	204
	Left-Through		0							0				0				0	
	Through	749	2	**375**	0	749	**375**	0	795	2	**398**	0	795	2	**398**	0	795	2	**398**
	Through-Right		0							0				0				0	
	Right	121	1	57	0	121	57	0	128	1	60	0	128	1	60	0	128	1	60
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	125	1	**125**	0	125	**125**	0	133	1	**133**	0	133	1	**133**	0	133	1	**133**
	Left-Through		0							0				0				0	
	Through	560	2	280	0	560	280	0	594	2	297	0	594	2	297	0	594	2	297
	Through-Right		0							0				0				0	
	Right	70	1	20	0	70	20	0	74	1	21	0	74	1	21	0	74	1	21
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	100	1	100	0	100	100	0	106	1	106	0	106	1	106	0	106	1	106
	Left-Through		0							0				0				0	
	Through	936	1	**522**	15	951	**530**	7	1001	1	**558**	15	1016	1	**566**	-2	1014	1	**565**
	Through-Right		1							1				1				1	
	Right	108	0	108	0	108	108	0	115	0	115	0	115	0	115	0	115	0	115
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	128	1	128	0	128	128	0	136	1	136	0	136	1	136	0	136	1	136
	Left-Through		0							0				0				0	
	Through	483	1	**278**	4	487	**280**	33	546	1	**312**	4	550	1	**314**	-1	549	1	**313**
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	0	77	0	77	0	77	0	77	0	77	0	77
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	500	500	531	531	531
East-West:	800	810	870	880	878
SUM:	1300	1310	1401	1411	1409
VOLUME/CAPACITY *(V/C)* RATIO:	0.912	0.919	0.983	0.990	0.989
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.812	0.819	0.883	0.890	0.889
LEVEL OF SERVICE (LOS):	D	D	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 Southbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	10/23/2019
23	East-West Street:	4th Street	Projection Year:	2023	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	0	0	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	0	0	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	137	0	0	0	137	0	0	145	1	145	0	145	1	145	0	145	1	145
	Left-Through		0							0				0				0	
	Through	2	0	0	0	2	0	0	2	0	284	0	2	0	292	0	2	0	291
	Through-Right		0							1				1				1	
	Right	150	0	0	8	158	0	123	282	0	0	8	290	0	0	-1	289	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1563	0	0	39	1602	0	107	1766	2	883	39	1805	2	903	-6	1799	2	900
	Through-Right		0							0				0				0	
	Right	80	0	0	0	80	0	19	104	1	104	0	104	1	104	0	104	1	104
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	95	0	0	0	95	0	3	104	1	104	0	104	1	104	0	104	1	104
	Left-Through		0							0				0				0	
	Through	756	0	0	4	760	0	62	865	2	433	4	869	2	435	-1	868	2	434
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	0	0	284	292	291
	East-West:	0	0	987	1007	1004
	SUM:	0	0	1271	1299	1295
VOLUME/CAPACITY *(V/C)* RATIO:		0.000	0.000	0.892	0.912	0.909
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.000	0.000	0.792	0.812	0.809
LEVEL OF SERVICE (LOS):		A	A	C	D	D

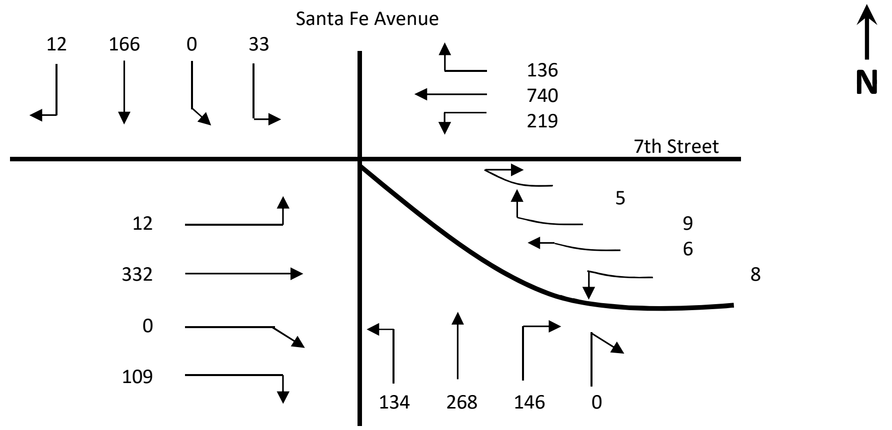
REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.020	Δ*v/c* after mitigation:	0.017
Significant impacted?	YES	Fully mitigated?	YES

Intersection 16 - Santa Fe Avenue & 7th Street
Existing Conditions (Year 2017) - AM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 12 — and

Westbound Throughs + Right:

$\frac{740 + 136}{2} = \frac{876}{2} = 438$ — or

Westbound Left: 219 — and

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{332 + 0 + 109}{2} = \frac{441}{2} = 221$

Critical Volume #1 (CV1): **450**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

5 + 9 + 6 + 8 = 28

Critical Volume #2 (CV2): **28**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

33 + 0 = 33 — and

Northbound Through: 268 *or*

Northbound Right to 7th Street and Frontage Road:

146 + 0 - 219 = -73 — or

Northbound Left: 134 — and

Southbound Left + Left to Frontage Road + Through + Right:

12 + 166 + 0 + 33 = 211

Critical Volume #3 (CV3): **345**

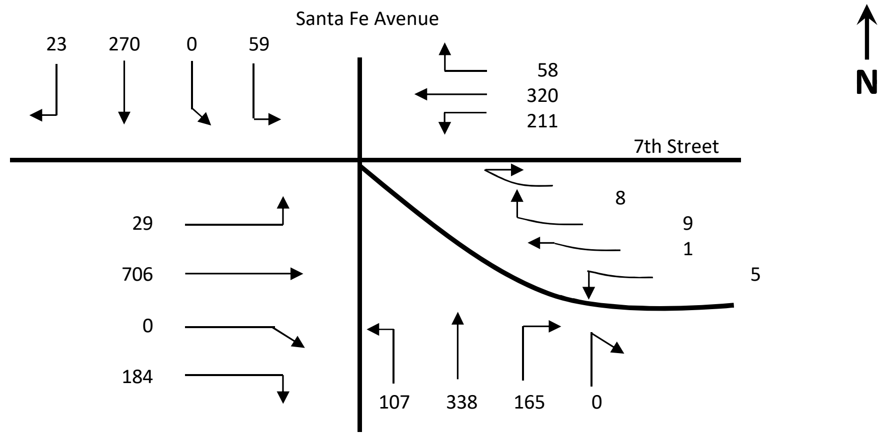
Critical Volume: 450 + 28 + 345 = **823**

Intersection V/C: $\frac{823}{1375}$ = **0.599**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.499** **Intersection LOS:** **A**

Intersection 16 - Santa Fe Avenue & 7th Street
Existing Conditions (Year 2017) - PM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 29 <u>and</u>

Westbound Throughs + Right:

$\frac{320 + 58}{2} = \frac{378}{2} = 189$ <u>or</u>

Westbound Left: 211 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{706 + 0 + 184}{2} = \frac{890}{2} = 445$

Critical Volume #1 (CV1): **656**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

8 + 9 + 1 + 5 = 23

Critical Volume #2 (CV2): **23**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

59 + 0 = 59 <u>and</u>

Northbound Through: 338 *or*

Northbound Right to 7th Street and Frontage Road:

165 + 0 - 211 = -46 <u>or</u>

Northbound Left: 107 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

23 + 270 + 0 + 59 = 352

Critical Volume #3 (CV3): **459**

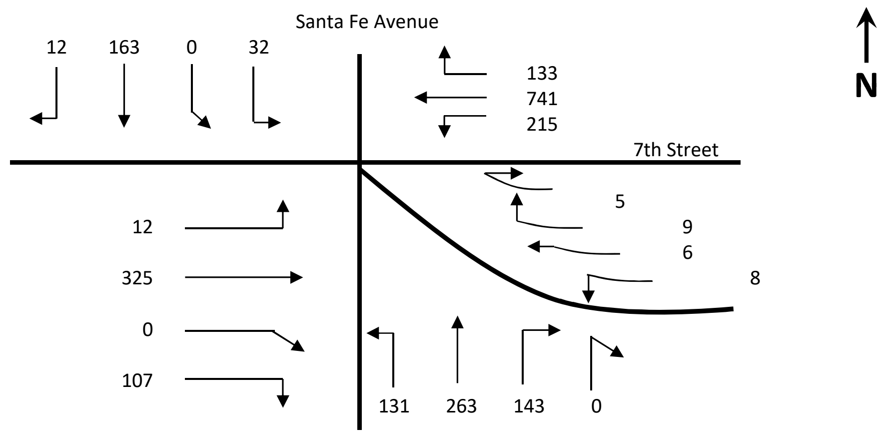
Critical Volume: 656 + 23 + 459 = **1138**

Intersection V/C: $\frac{1138}{1375}$ = **0.828**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.728** **Intersection LOS:** **C**

Intersection 16 - Santa Fe Avenue & 7th Street
Existing with Project Conditions (Year 2017) - AM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 12 <u>and</u>

Westbound Throughs + Right:

$\frac{741 + 133}{2} = \frac{874}{2} = 437$ <u>or</u>

Westbound Left: 215 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{325 + 0 + 107}{2} = \frac{432}{2} = 216$

Critical Volume #1 (CV1): **449**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

5 + 9 + 6 + 8 = 28

Critical Volume #2 (CV2): **28**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

32 + 0 = 32 <u>and</u>

Northbound Through: 263 *or*

Northbound Right to 7th Street and Frontage Road:

143 + 0 - 215 = -72 <u>or</u>

Northbound Left: 131 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

12 + 163 + 0 + 32 = 207

Critical Volume #3 (CV3): **338**

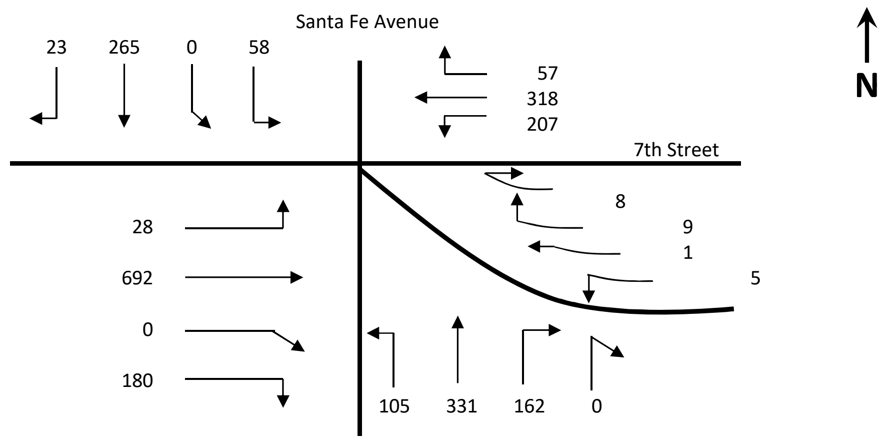
Critical Volume: 449 + 28 + 338 = **815**

Intersection V/C: $\frac{815}{1375}$ = **0.593**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.493** **Intersection LOS:** **A**

Intersection 16 - Santa Fe Avenue & 7th Street
Existing with Project Conditions (Year 2017) - PM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 28 <u>and</u>

Westbound Throughs + Right:

$\frac{318 + 57}{2} = \frac{375}{2} = 188$ <u>or</u>

Westbound Left: 207 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{692 + 0 + 180}{2} = \frac{872}{2} = 436$

Critical Volume #1 (CV1): **643**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

8 + 9 + 1 + 5 = 23

Critical Volume #2 (CV2): **23**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

58 + 0 = 58 <u>and</u>

Northbound Through: 331 *or*

Northbound Right to 7th Street and Frontage Road:

162 + 0 - 207 = -45 <u>or</u>

Northbound Left: 105 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

23 + 265 + 0 + 58 = 346

Critical Volume #3 (CV3): **451**

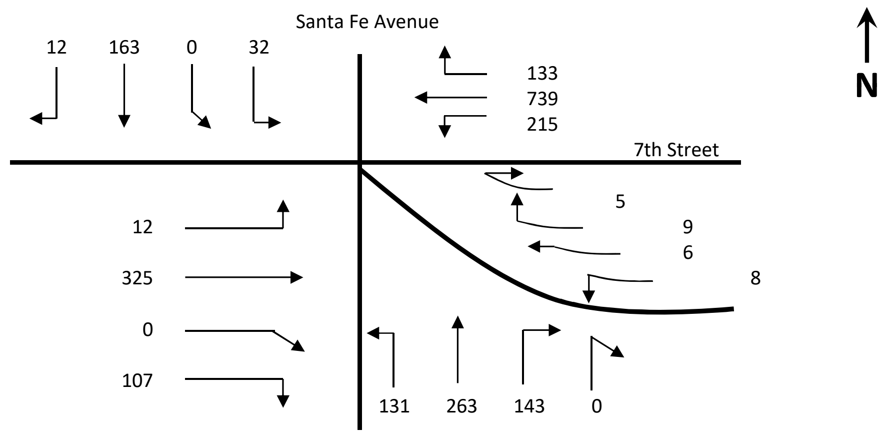
Critical Volume: 643 + 23 + 451 = **1117**

Intersection V/C: $\frac{1117}{1375}$ = **0.812**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.712** **Intersection LOS:** **C**

Intersection 16 - Santa Fe Avenue & 7th Street
Existing with Project with Mitigation Conditions (Year 2017) - AM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 12 and

Westbound Throughs + Right:
$\frac{739 + 133}{2} = \frac{872}{2} = 436$ or

Westbound Left: 215 and

Eastbound Throughs + Right to 7th Street and Frontage Road:
$\frac{325 + 0 + 107}{2} = \frac{432}{2} = 216$

Critical Volume #1 (CV1): **448**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:
5 + 9 + 6 + 8 = 28

Critical Volume #2 (CV2): **28**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:
32 + 0 = 32 and

Northbound Through: 263 *or*

Northbound Right to 7th Street and Frontage Road:
143 + 0 - 215 = -72 or

Northbound Left: 131 and

Southbound Left + Left to Frontage Road + Through + Right:
12 + 163 + 0 + 32 = 207

Critical Volume #3 (CV3): **338**

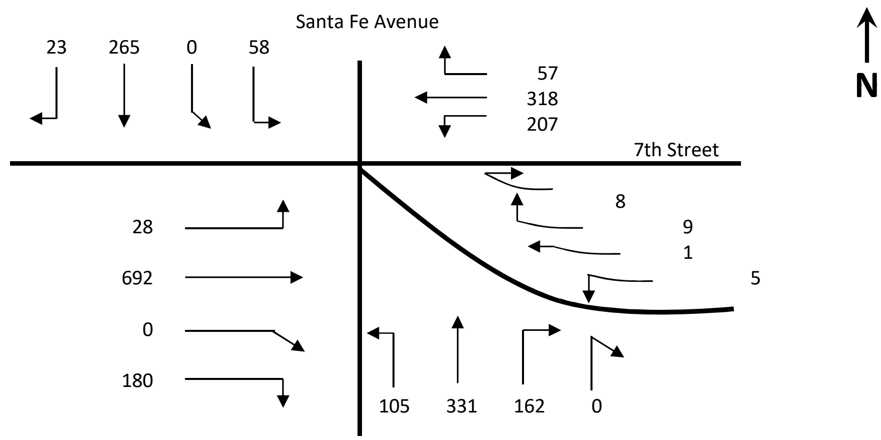
Critical Volume: 448 + 28 + 338 = **814**

Intersection V/C: $\frac{814}{1375}$ = **0.592**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.492** **Intersection LOS:** **A**

Intersection 16 - Santa Fe Avenue & 7th Street
Existing with Project with Mitigation Conditions (Year 2017) - PM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 28 <u>and</u>

Westbound Throughs + Right:

$\frac{318 + 57}{2} = \frac{375}{2} = 188$ <u>or</u>

Westbound Left: 207 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{692 + 0 + 180}{2} = \frac{872}{2} = 436$

Critical Volume #1 (CV1): **643**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

8 + 9 + 1 + 5 = 23

Critical Volume #2 (CV2): **23**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

58 + 0 = 58 <u>and</u>

Northbound Through: 331 *or*

Northbound Right to 7th Street and Frontage Road:

162 + 0 - 207 = -45 <u>or</u>

Northbound Left: 105 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

23 + 265 + 0 + 58 = 346

Critical Volume #3 (CV3): **451**

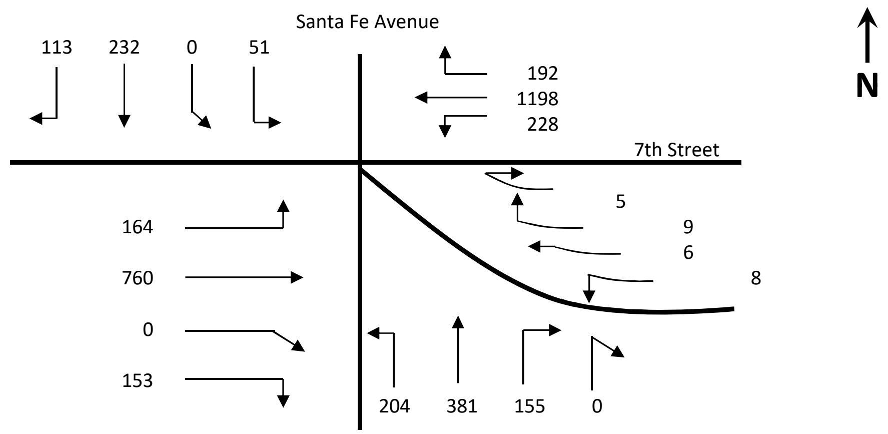
Critical Volume: 643 + 23 + 451 = **1117**

Intersection V/C: $\frac{1117}{1375}$ = **0.812**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.712** **Intersection LOS:** **C**

Intersection 16 - Santa Fe Avenue & 7th Street
Future without Project Conditions (Year 2023) - AM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 164 <u>and</u>

Westbound Throughs + Right:

$\frac{1198 + 192}{2} = \frac{1390}{2} = 695$ <u>or</u>

Westbound Left: 228 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{760 + 0 + 153}{2} = \frac{913}{2} = 457$

Critical Volume #1 (CV1): **859**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

5 + 9 + 6 + 8 = 28

Critical Volume #2 (CV2): **28**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

51 + 0 = 51 <u>and</u>

Northbound Through: 381 *or*

Northbound Right to 7th Street and Frontage Road:

155 + 0 - 228 = -73 <u>or</u>

Northbound Left: 204 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

113 + 232 + 0 + 51 = 396

Critical Volume #3 (CV3): **600**

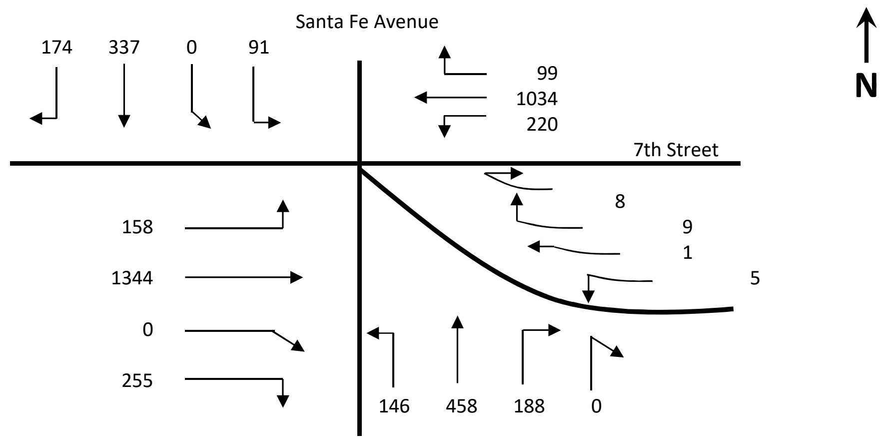
Critical Volume: 859 + 28 + 600 = **1487**

Intersection V/C: $\frac{1487}{1375}$ = **1.081**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.981** **Intersection LOS:** **E**

Intersection 16 - Santa Fe Avenue & 7th Street
Future without Project Conditions (Year 2023) - PM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 158 <u>and</u>

Westbound Throughs + Right:
$\frac{1034 + 99}{2} = \frac{1133}{2} = 567$ <u>or</u>

Westbound Left: 220 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:
$\frac{1344 + 0 + 255}{2} = \frac{1,599}{2} = 800$

Critical Volume #1 (CV1): **1,020**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:
8 + 9 + 1 + 5 = 23

Critical Volume #2 (CV2): **23**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:
91 + 0 = 91 <u>and</u>

Northbound Through: 458 *or*

Northbound Right to 7th Street and Frontage Road:
188 + 0 - 220 = -32 <u>or</u>

Northbound Left: 146 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:
174 + 337 + 0 + 91 = 602

Critical Volume #3 (CV3): **748**

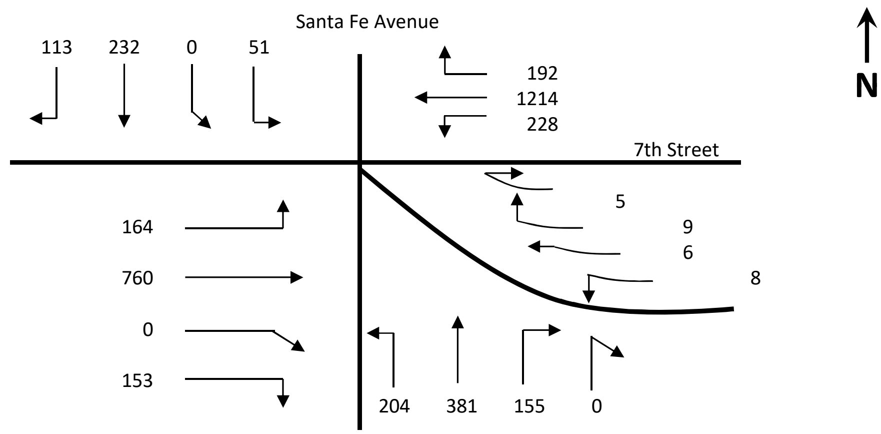
Critical Volume: 1020 + 23 + 748 = **1791**

Intersection V/C: $\frac{1791}{1375}$ = **1.303**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **1.203** **Intersection LOS:** **F**

Intersection 16 - Santa Fe Avenue & 7th Street
Future with Project Conditions (Year 2023) - AM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 164 — and

Westbound Throughs + Right:

$\frac{1214 + 192}{2} = \frac{1406}{2} = 703$ — or

Westbound Left: 228 — and

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{760 + 0 + 153}{2} = \frac{913}{2} = 457$

Critical Volume #1 (CV1): **867**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

5 + 9 + 6 + 8 = 28

Critical Volume #2 (CV2): **28**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

51 + 0 = 51 — and

Northbound Through: 381 *or*

Northbound Right to 7th Street and Frontage Road:

155 + 0 - 228 = -73 — or

Northbound Left: 204 — and

Southbound Left + Left to Frontage Road + Through + Right:

113 + 232 + 0 + 51 = 396

Critical Volume #3 (CV3): **600**

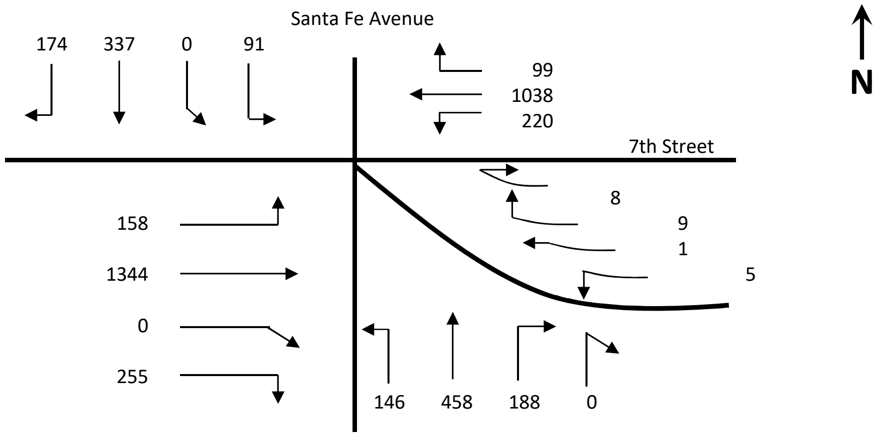
Critical Volume: 867 + 28 + 600 = **1495**

Intersection V/C: $\frac{1495}{1375}$ = **1.087**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.987** **Intersection LOS:** **E**

Intersection 16 - Santa Fe Avenue & 7th Street
Future with Project Conditions (Year 2023) - PM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 158 <u>and</u>

Westbound Throughs + Right:

$\frac{1038 + 99}{2} = \frac{1137}{2} = 569$ <u>or</u>

Westbound Left: 220 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{1344 + 0 + 255}{2} = \frac{1,599}{2} = 800$

Critical Volume #1 (CV1): **1,020**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

8 + 9 + 1 + 5 = 23

Critical Volume #2 (CV2): **23**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

91 + 0 = 91 <u>and</u>

Northbound Through: 458 *or*

Northbound Right to 7th Street and Frontage Road:

188 + 0 - 220 = -32 <u>or</u>

Northbound Left: 146 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

174 + 337 + 0 + 91 = 602

Critical Volume #3 (CV3): **748**

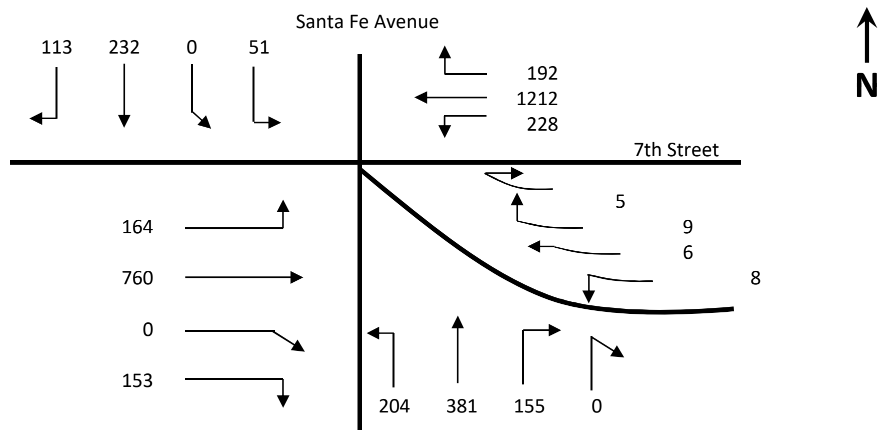
Critical Volume: 1020 + 23 + 748 = **1791**

Intersection V/C: $\frac{1791}{1375}$ = **1.303**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **1.203** **Intersection LOS:** **F**

Intersection 16 - Santa Fe Avenue & 7th Street
Future with Project with Mitigation Conditions (Year 2023) - AM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 164 <u>and</u>

Westbound Throughs + Right:
$\frac{1212 + 192}{2} = \frac{1404}{2} = 702$ <u>or</u>

Westbound Left: 228 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:
$\frac{760 + 0 + 153}{2} = \frac{913}{2} = 457$

Critical Volume #1 (CV1): **866**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:
5 + 9 + 6 + 8 = 28

Critical Volume #2 (CV2): **28**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:
51 + 0 = 51 <u>and</u>

Northbound Through: 381 *or*

Northbound Right to 7th Street and Frontage Road:
155 + 0 - 228 = -73 <u>or</u>

Northbound Left: 204 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:
113 + 232 + 0 + 51 = 396

Critical Volume #3 (CV3): **600**

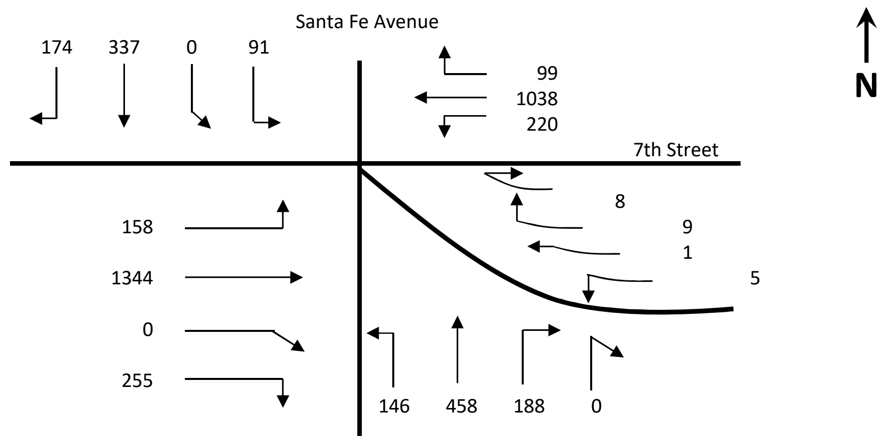
Critical Volume: 866 + 28 + 600 = **1494**

Intersection V/C: $\frac{1494}{1375}$ = **1.087**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.987** **Intersection LOS:** **E**

Intersection 16 - Santa Fe Avenue & 7th Street
Future with Project with Mitigation Conditions (Year 2023) - PM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 158 and

Westbound Throughs + Right:

$\frac{1038 + 99}{2} = \frac{1137}{2} = 569$ or

Westbound Left: 220 and

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{1344 + 0 + 255}{2} = \frac{1,599}{2} = 800$

Critical Volume #1 (CV1): **1,020**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

8 + 9 + 1 + 5 = 23

Critical Volume #2 (CV2): **23**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

91 + 0 = 91 and

Northbound Through: 458 *or*

Northbound Right to 7th Street and Frontage Road:

188 + 0 - 220 = -32 or

Northbound Left: 146 and

Southbound Left + Left to Frontage Road + Through + Right:

174 + 337 + 0 + 91 = 602

Critical Volume #3 (CV3): **748**

Critical Volume: 1020 + 23 + 748 = **1791**

Intersection V/C: $\frac{1791}{1375}$ = **1.303**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **1.203** **Intersection LOS:** **F**

Appendix H

CMP Analysis

Appendix H
Congestion Management Program Analysis

This Appendix presents an analysis of the regional transportation facilities in the vicinity of the Project Site, in accordance with the procedures outlined in the CMP.

TRAFFIC IMPACT ANALYSIS GUIDELINES

The CMP requires that TIAs be performed on three types of facilities:

- Arterial Intersections
- Mainline Freeway Segments
- The Public Transit System

The CMP identifies specific arterial and freeway mainline locations for analysis.

Arterial Monitoring Intersection TIA Guidelines

The CMP requires that a TIA be performed for all CMP arterial monitoring intersections where a project would add 50 or more trips during either the weekday morning or afternoon peak hours. A detailed analysis is not required if the project adds fewer than 50 trips to an arterial monitoring intersection. The CMP analysis uses the same CMA methodology as used in earlier chapters for City intersections to determine intersection V/C ratio and LOS. A significant impact requiring mitigation occurs if project traffic causes an incremental increase in intersection V/C ratio of 0.02 or greater to a facility projected to operate at LOS F (V/C > 1.00) after the addition of project traffic.

Mainline Freeway Monitoring Location TIA Guidelines

The CMP requires that a TIA be performed for all CMP mainline freeway monitoring locations where a project would add 150 or more trips (in either direction) during the weekday morning or afternoon peak hours. A detailed analysis is not required if the project adds fewer than 150 trips to a mainline freeway monitoring location (in either direction) during either the weekday morning or afternoon peak hour. The CMP analysis uses a demand-to-capacity (D/C) ratio to determine facility LOS based on capacity identified in Appendix A of the CMP. Similar to arterial monitoring intersections, a significant impact requiring mitigation occurs if project traffic causes an incremental increase in intersection V/C ratio of 0.02 or greater to a facility projected to operate at LOS F (D/C > 1.00) after the addition of project traffic.

Transit Impact Review Guidelines

The CMP requires that a transit system analysis be performed to determine whether a project would increase transit ridership beyond the current capacity of the transit system.

ARTERIAL MONITORING STATION ANALYSIS

The CMP identifies the following one arterial monitoring intersection within approximately 2.0 miles of the Study Area: Alameda Street & Washington Boulevard (1.65 miles southwest of the Project Site).

Morning and afternoon peak hour traffic for this intersection, which is located outside the Study Area, was calculated based on the number of trips entering and leaving the Study Area (per Figure 9 of the Transportation Impact Study) in the direction of the outlying CMP arterial monitoring intersection, conservatively assuming there would be no diverging trips.

Based on this methodology, the number of peak hour Project trips expected at the arterial monitoring intersection is as follows:

Intersection	Peak Hour Trips		Requires CMP Analysis?
	AM	PM	
Alameda Street & Washington Boulevard	39	38	No

The Project would add fewer than 50 peak hour trips at the arterial monitoring intersection nearest the Project Study Area. Therefore, the Project's CMP arterial intersection impacts are considered to be less than significant and no further analysis is required.

FREEWAY SEGMENT ANALYSIS

The CMP identifies one mainline freeway monitoring location within the vicinity of the Project Site. The monitoring location is located at US 101 north of Vignes Street, approximately 0.75 miles northwest of the Project Site.

The Project is not anticipated to add the trips to the freeway monitoring location during either the morning or afternoon peak hour. As such, the Project would add fewer than 150 peak hour trips in each direction during both the morning and afternoon peak hours at the mainline freeway monitoring location nearest the Project Study Area. Therefore, the Project's CMP mainline freeway impacts are considered to be less than significant and no further analysis is required.

REGIONAL TRANSIT IMPACT ANALYSIS

Section D.8.4 of the CMP provides a methodology for estimating the number of transit trips expected to result from a proposed project based on the number of vehicle trips. This methodology assumes an average vehicle occupancy (AVO) factor of 1.4 in order to estimate the number of person trips to and from the Project and guidance regarding the percentage of person trips that may use public transit. Based on the assumptions in the trip generation estimates shown in Table 9 of the Transportation Impact Study, a transit/walk-in adjustment of up to five percent was applied to account for the use of non-auto travel modes (e.g., rail, light-rail, bus, bicycle, walk, etc.). For the purposes of this analysis, all the transit/walk-in trip estimates from Table 9 were conservatively assumed to travel via public transit.

As shown in Table 7, transit usage accounts for approximately 22 morning peak hour trips and 21 afternoon peak hours trips. Assuming an AVO of 1.4, the Project would generate approximately 31 net new transit trips in the morning peak hour and 29 net new transit trips in the afternoon peak hour.

As detailed in Chapter 2, the Study Area is served by numerous established transit routes. The total average residual capacity of the bus lines within the Study Area during the morning and afternoon peak hours is approximately 4,617 and 4,403 transit trips, respectively. The Project morning and afternoon peak hour person trips by transit are projected at 31 and 29 trips, respectively, or less than one percent of the total residual capacity of the transit lines within the Study Area during morning and afternoon peak.

As detailed in Tables 2 and 3 of the Transportation Impact Study, the Project Site is served by numerous transit lines, and overall the total transit capacity of the numerous lines can accommodate the Project’s transit trips, with and without the promotion of transit usage with implementation of the Project’s TDM Program. Therefore, the Project impact to the regional transit system is anticipated to be less than significant.

Furthermore, Los Angeles County voters approved Measure R, a half-cent sales tax increase for transportation, which has allowed Metro to develop projects to improve the existing transportation system. *2009 Long Range Transportation Plan* (Metro, Adopted 2009) (the “2009 LRTP”), which outlined a range of transit and highway projects throughout Los Angeles County that were aimed to improve mobility and address future growth, is currently in the process of an update to address transportation issues and projects identified by local jurisdictions, Councils of Governments, and transportation agencies. *2014 Short Range Transportation Plan* (Metro, Adopted 2014) identifies projects and programs that will be implemented in accordance with the project priorities and funding schedules of the 2009 LRTP. It is recognized that with these plans in place, Metro will continue to maintain and expand regional transit service. Although the Project (and other related projects) will cumulatively add transit ridership, Metro will continue to maintain and expand regional transit service to accommodate cumulative demand in the region. Therefore, cumulative impacts on public transit are considered to be less than significant.

Appendix I

Caltrans Analysis

Appendix I
Caltrans Analysis

This appendix presents an analysis of Caltrans facilities, including freeway mainline segments, Caltrans intersections, and off-ramp queuing to provide further information to the decision makers.

ANALYZED FACILITIES

As detailed in Table I-1, the analyses conducted on Caltrans facilities included freeway mainline segments, signalized ramp intersections, and off-ramp queuing.

Two freeway mainline segments on US 101, one freeway mainline segment on I-5, two freeway mainline segments on I-10, and one freeway mainline segment on SR 60 were analyzed using HCM methodology to determine density, speed, and LOS.

Three signalized intersections, all freeway ramp locations, were analyzed using HCM methodology to identify average vehicle delay and LOS.

Six freeway off-ramps along US 101, I-5, and I-10 were analyzed for ramp queue lengths using the Synchro software to estimate queues.

Detailed LOS worksheets for each type of analysis are provided in the Attachment.

In accordance with Caltrans' request to review the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life* ((Southern California Association of Governments, April 2016) long-range planning horizon year of 2040, the cumulative analysis of freeway facilities herein includes projections of Year 2040 conditions without and with Project traffic.

FREEWAY MAINLINE SEGMENTS

Two freeway mainline segments on US 101, one freeway mainline segment on I-5, two freeway mainline segments on I-10, and one freeway mainline segment on SR 60 were analyzed using the HCM methodology. Per discussions with Caltrans staff, a free-flow speed of 55 mph was assumed in the analysis. The LOS definitions for freeway mainline segments are presented in Table I-2.

Existing freeway volumes were based on traffic volume data for an average typical weekday in May 2017 from Caltrans' Performance Measurement System (PeMS) database. Where PeMS data was unavailable, recently published traffic count data from *2015 Traffic Volumes on California State Highways* (Caltrans, 2016), which consists of the annual average daily traffic (AADT) volumes, as well as the two-way peak hour percent of AADT factor ("K factor") and the percent of traffic in the peak direction factor ("D factor") used to develop peak hour volumes, were utilized. The freeway mainline segment volumes are summarized in Table I-3. Table I-4 summarizes the results of the HCM analysis for Existing Conditions and Existing with Project Conditions based on the density and LOS for each of the freeway mainline segments

Traffic volumes were projected for Year 2023 to reflect the Project buildout year and for Year 2040 to reflect a 23-year horizon and are summarized in Tables I-3. The existing traffic volumes were increased by both ambient growth (assumed to be one percent per year) and Related Project traffic, in the same manner as Future without Project traffic volumes were developed for Year 2023 in Chapter 3. Tables I-5 and I-6 summarize the results of the HCM analysis for Future without Project Conditions and Future with Project Conditions Years 2023 and 2040, respectively.

As shown in Table I-7, the Project would add a maximum of approximately 28 vehicles per hour in one direction of travel. While the Project would contribute to future cumulative traffic growth on the freeway system, the Project traffic represents an average increase in traffic of less than 0.5 percent, as shown in Table I-7.

INTERSECTIONS

As described in Chapter 2, a total of 23 intersections located in the City were analyzed according to the significance thresholds established by the City (the Lead Agency). As shown in Table I-1, this Caltrans analysis focuses on four signalized freeway ramp locations associated with US 101, I-5, and I-10.

Overview

As described in Section 4D, the Project would implement various mitigation measures that would improve operations at the study intersections, including the intersections within partial Caltrans jurisdiction. The Project would implement a TDM program to reduce ambient traffic and Project traffic throughout the Study Area and generally improve intersection operating conditions. The Project would fund a TMO in the Study Area that would further reduce Project-related vehicular traffic and improve intersection operating conditions.

Caltrans does not have specific criteria to determine significance of incremental changes in intersection operations. Therefore, the significance of the transportation-related impacts on Caltrans facilities is based on the Lead Agency's significance thresholds and analyses, which is presented in Chapters 1 through 5 of the Transportation Impact Study.

The intersections under Caltrans jurisdiction were further analyzed using HCM methodology and implemented using the Synchro software. Table I-8 summarizes the LOS definitions.

Intersection Analysis

The analysis of Year 2017 conditions was conducted using available traffic count data from Year 2017, provided in Appendix C. Table I-9 summarizes the results of the signalized HCM analysis for Existing Conditions and Existing with Project Conditions for Year 2017.

The Year 2023 and Year 2040 traffic volumes were developed by increasing the existing traffic volumes with both ambient growth (assumed to be one percent per year) and Related Project traffic, in the same manner as Future without Project traffic volumes were developed for Year 2023 in Chapter 2. Tables I-10 and I-11 summarize the results of the signalized HCM analysis for Future without Project Conditions and Future with Project Conditions for Years 2023 and 2040, respectively.

OFF-RAMP QUEUES

One freeway off-ramp from US 101, three freeway off-ramps from I-5, and two freeway off-ramps from I-10 were analyzed to determine whether the length of the ramps were sufficient to accommodate vehicle queue lengths. The queue lengths were estimated using Synchro, which reports the 95th percentile queue length for each approach lane on the off-ramp.

The assessment of the off-ramps includes a review of the vehicle queue length as compared to the total available queuing capacity of the ramp to determine whether the vehicle queue would extend beyond the length of the ramp onto the mainline. To this end, the queuing analysis looked at two separate components of ramp capacity: the length of each approach lane to the intersection and the remaining length of the ramp, behind any approach lane delineation lines, to the gore point where the ramp diverges from the freeway mainline. The queue may exceed the striped length of a given approach lane, but as long as there is sufficient additional queuing capacity on the ramp, it will not spill over onto the mainline.

Off-Ramp Queue Analysis

The analysis of Year 2017 conditions was conducted using available traffic count data from Year 2017. Table I-12 summarizes the results of the queuing analysis for Existing Conditions and Existing with Project Conditions for Year 2017.

The Year 2023 and 2040 traffic volumes were developed by increasing the existing traffic volumes by both ambient growth (assumed to be one percent per year) and Related Project traffic, in the same manner as Future without Project traffic volumes were developed for Year 2023 in Chapter 2. Tables I-13 and I-14 summarize the results of the queuing analysis for

Future without Project Conditions and Future with Project Conditions for Years 2023 and 2040, respectively.

Project traffic does not cause a queue to extend onto the freeway under any of the conditions tested above.

TABLE I-1
ANALYZED CALTRANS FACILITIES

ID	Location
Freeway Mainline Segments	
FS-1.	US 101 between Spring Street and Alameda Street/Los Angeles Street
FS-2.	US 101 between 4th Street and I-5
FS-3.	I-5 between 4th Street and Cesar E Chavez Drive
FS-4.	I-10 between Central Avenue and Alameda Street
FS-5.	I-10 between Alameda Street and Santa Fe Avenue
FS-6.	SR 60 between I-10 and I-5
Signalized Intersections	
11.	Alameda Street & I-10 Eastbound Ramps
18.	US 101 Northbound Off-Ramp & 4th Street
21.	I-5 Northbound Ramps & 4th Street
23.	I-5 Southbound Ramps & 4th Street [a]
Off-Ramp Queues	
Q-1.	I-10 Eastbound Off-Ramp at Alameda Street
Q-2.	US 101 Northbound Off-Ramp at 4th Street
Q-3.	I-5 Northbound Off-Ramp at 4th Street
Q-4.	I-5 Southbound Off-Ramp at 4th Street
Q-5.	I-5 Northbound Off-Ramp at 4th Street
Q-6.	I-5 Southbound Off-Ramp at 4th Street

Notes
[a] Traffic signal installation was completed in Year 2018. Thus, the intersection was unsignalized in Year 2017 under Existing Conditions.

TABLE I-2
FREEWAY SEGMENT LEVEL OF SERVICE

Level of Service	Description	Density [a]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11 and ≤ 18
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18 and ≤ 26
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 26 and ≤ 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35 and ≤ 45
F	Represents a breakdown in flow and oversaturated conditions.	> 45

Notes
Source: *Highway Capacity Manual, 6th Edition, A Guide for Multimodal Mobility Analysis* (Transportation Research Board, 2016) and Caltrans.
[a] Density is defined in vehicles per mile per lane and describes the proximity to other vehicles and is related to the freedom to maneuver within the traffic stream (*Highway Capacity Manual, 6th Edition,* Transportation Research Board, 2016).

TABLE I-3
FREEWAY MAINLINE SEGMENT TRAFFIC VOLUMES

ID	Freeway Mainline Segment	Peak Hour	Direction	Vehicles per Hour (VPH)					
				Existing Conditions [a]	Existing with Project Conditions	Future without Project Conditions (Year 2023)	Future with Project Conditions (Year 2023)	Future without Project Conditions (Year 2040)	Future with Project Conditions (Year 2040)
FS-1.	US 101 between Spring Street and Alameda Street/Los Angeles Street	AM Peak Hour	NB	4,832	4,835	6,077	6,080	7,023	7,026
			SB	5,929	5,945	7,115	7,131	8,275	8,289
		PM Peak Hour	NB	5,081	5,096	6,511	6,526	7,505	7,518
			SB	6,609	6,613	8,308	8,312	9,601	9,605
FS-2.	US 101 between 4th Street and I-5	AM Peak Hour	NB	3,775	3,775	4,960	4,960	5,699	5,699
			SB	4,155	4,155	5,190	5,190	6,003	6,003
		PM Peak Hour	NB	3,739	3,739	5,437	5,437	6,169	6,169
			SB	3,680	3,680	4,937	4,937	5,657	5,657
FS-3.	I-5 between 4th Street and Cesar E Chavez Drive	AM Peak Hour	NB	7,955	7,961	8,921	8,927	10,478	10,483
			SB	6,742	6,774	7,632	7,664	8,951	8,978
		PM Peak Hour	NB	7,972	7,996	8,994	9,018	10,554	10,574
			SB	6,730	6,738	7,872	7,880	9,189	9,196
FS-4.	I-10 between Central Avenue and Alameda Street	AM Peak Hour	EB	5,640	5,656	6,617	6,633	7,720	7,734
			WB	5,630	5,633	6,635	6,638	7,737	7,740
		PM Peak Hour	EB	4,556	4,560	5,554	5,558	6,446	6,450
			WB	5,335	5,350	6,486	6,501	7,530	7,543
FS-5.	I-10 between Alameda Street and Santa Fe Avenue	AM Peak Hour	EB	4,216	4,232	5,018	5,034	5,843	5,857
			WB	8,207	8,210	9,325	9,328	10,931	10,934
		PM Peak Hour	EB	5,864	5,868	6,917	6,921	8,064	8,068
			WB	7,868	7,883	9,065	9,080	10,604	10,617
FS-6.	SR 60 between I-10 and I-5	AM Peak Hour	EB	3,660	3,667	4,310	4,317	5,026	5,032
			WB	2,563	2,595	3,160	3,192	3,661	3,688
		PM Peak Hour	EB	5,323	5,353	6,129	6,159	7,171	7,197
			WB	3,198	3,206	3,974	3,982	4,599	4,606

Notes
[a] Traffic volume based on Caltrans' Performance Measurement System (PeMS) data for the average weekday in May 2017 on the freeway. Traffic volume data from 2015 Traffic Volumes on California State Highways (Caltrans, December 2016) was utilized where PeMS data was unavailable. An ambient growth rate of 1% per year was applied to the traffic counts to reflect year 2017 conditions

TABLE I-4
EXISTING OPERATING CONDITIONS (YEAR 2017)
FREEWAY SEGMENT LEVEL OF SERVICE EVALUATION

ID	Freeway Segment	Peak Hour	Direction	Existing Conditions		Existing with Project Conditions	
				Density [a][b]	**LOS** [c]	**Density** [a][b]	**LOS** [c]
FS-1.	US 101 between Spring Street and Alameda Street/Los Angeles Street	AM	NB	32	D	32	D
			SB	30	D	30	D
		PM	NB	34	D	34	D
			SB	33	D	33	D
FS-2.	US 101 between 4th Street and I-5	AM	NB	19	C	19	C
			SB	21	C	21	C
		PM	NB	19	C	19	C
			SB	19	C	19	C
FS-3.	I-5 between 4th Street and Cesar E Chavez Drive	AM	NB	32	D	32	D
			SB	27	D	27	D
		PM	NB	32	D	32	D
			SB	27	D	27	D
FS-4.	I-10 between Central Avenue and Alameda Street	AM	EB	23	C	23	C
			WB	23	C	23	C
		PM	EB	18	C	18	C
			WB	22	C	22	C
FS-5.	I-10 between Alameda Street and Santa Fe Avenue	AM	EB	17	B	17	B
			WB	33	D	33	D
		PM	EB	24	C	24	C
			WB	32	D	32	D
FS-6.	SR 60 between I-10 and I-5	AM	EB	25	C	25	C
			WB	13	B	13	B
		PM	EB	36	E	36	E
			WB	16	B	16	B

Notes
[a] Methodology from *Highway Capacity Manual, 6th Edition* , Transportation Research Board, 2016.
[b] Measured in vehicles per mile per lane (v/m/l) for freeway mainline segments.
[c] Calculated LOS is based on traffic volumes from Caltrans' PeMS database for an average weekday in May 2017. The LOS presented does not in every case account for vehicle queues and congestion that may be experienced due to upstream obstructions. Therefore, the calculated LOS may appear to be better than observed.

TABLE I-5
FUTURE OPERATING CONDITIONS (YEAR 2023)
FREEWAY SEGMENT LEVEL OF SERVICE EVALUATION

ID	Freeway Segment	Peak Hour	Direction	Future without Project Conditions		Future with Project Conditions	
				Density [a][b]	**LOS** [c]	**Density** [a][b]	**LOS** [c]
FS-1.	US 101 between Spring Street and Alameda Street/Los Angeles Street	AM	NB	45	E	45	E
			SB	36	E	36	E
		PM	NB	52	F	53	F
			SB	47	F	47	F
FS-2.	US 101 between 4th Street and I-5	AM	NB	25	C	25	C
			SB	26	D	26	D
		PM	NB	27	D	27	D
			SB	25	C	25	C
FS-3.	I-5 between 4th Street and Cesar E Chavez Drive	AM	NB	36	E	37	E
			SB	31	D	31	D
		PM	NB	37	E	37	E
			SB	32	D	32	D
FS-4.	I-10 between Central Avenue and Alameda Street	AM	EB	27	D	27	D
			WB	27	D	27	D
		PM	EB	22	C	22	C
			WB	26	D	26	D
FS-5.	I-10 between Alameda Street and Santa Fe Avenue	AM	EB	20	C	20	C
			WB	39	E	39	E
		PM	EB	28	D	28	D
			WB	37	E	37	E
FS-6.	SR 60 between I-10 and I-5	AM	EB	29	D	29	D
			WB	16	B	16	B
		PM	EB	46	F	46	F
			WB	20	C	20	C

Notes
[a] Methodology from *Highway Capacity Manual, 6th Edition* , Transportation Research Board, 2016.
[b] Measured in vehicles per mile per lane (v/m/l) for freeway mainline segments.
[c] Calculated LOS is based on traffic volumes from Caltrans' PeMS database for an average weekday in May 2017. The LOS presented does not in every case account for vehicle queues and congestion that may be experienced due to upstream obstructions. Therefore, the calculated LOS may appear to be better than observed.

TABLE I-6
FUTURE OPERATING CONDITIONS (YEAR 2040)
FREEWAY SEGMENT LEVEL OF SERVICE EVALUATION

ID	Freeway Segment	Peak Hour	Direction	Future without Project Conditions		Future with Project Conditions	
				Density [a][b]	LOS [c]	Density [a][b]	LOS [c]
FS-1.	US 101 between Spring Street and Alameda Street/Los Angeles Street	AM	NB	66	F	66	F
			SB	47	F	47	F
		PM	NB	87	F	88	F
			SB	72	F	72	F
FS-2.	US 101 between 4th Street and I-5	AM	NB	29	D	29	D
			SB	30	D	30	D
		PM	NB	31	D	31	D
			SB	29	D	29	D
FS-3.	I-5 between 4th Street and Cesar E Chavez Drive	AM	NB	48	F	48	F
			SB	37	E	37	E
		PM	NB	49	F	49	F
			SB	38	E	38	E
FS-4.	I-10 between Central Avenue and Alameda Street	AM	EB	31	D	31	D
			WB	31	D	31	D
		PM	EB	26	C	26	C
			WB	30	D	30	D
FS-5.	I-10 between Alameda Street and Santa Fe Avenue	AM	EB	24	C	24	C
			WB	53	F	53	F
		PM	EB	33	D	33	D
			WB	49	F	50	F
FS-6.	SR 60 between I-10 and I-5	AM	EB	34	D	34	D
			WB	18	C	19	C
		PM	EB	71	F	72	F
			WB	23	C	23	C

Notes
[a] Methodology from *Highway Capacity Manual, 6th Edition* , Transportation Research Board, 2016.
[b] Measured in vehicles per mile per lane (v/m/l) for freeway mainline segments.
[c] Calculated LOS is based on traffic volumes from Caltrans' PeMS database for an average weekday in May 2017. The LOS presented does not in every case account for vehicle queues and congestion that may be experienced due to upstream obstructions. Therefore, the calculated LOS may appear to be better than observed.

TABLE I-7
PROPORTION OF PROJECT FUTURE TRAFFIC
FUTURE YEAR 2040 CONDITIONS

ID	Freeway Mainline Segment	Peak Hour	Direction	Vehicles per Hour (VPH)					Proportion of Project-Related Traffic Growth
				Existing Conditions [a]	Related Projects	Ambient Growth	Project	Total Growth	
FS-1.	US 101 between Spring Street and Alameda Street/Los Angeles Street	AM Peak Hour	NB	4,832	1,861	1,243	3	3,107	0.10%
			SB	5,929	1,517	1,525	14	3,056	0.50%
		PM Peak Hour	NB	5,081	1,861	1,307	0	3,168	0.00%
			SB	6,609	1,364	1,700	0	3,064	0.00%
FS-2.	US 101 between 4th Street and I-5	AM Peak Hour	NB	3,775	1,065	971	5	2,041	0.20%
			SB	4,155	953	1,069	27	2,049	1.30%
		PM Peak Hour	NB	3,739	1,829	962	14	2,805	0.50%
			SB	3,680	1,149	946	3	2,098	0.10%
FS-3.	I-5 between 4th Street and Cesar E Chavez Drive	AM Peak Hour	NB	7,955	687	2,046	14	2,747	0.50%
			SB	6,742	639	1,734	3	2,376	0.10%
		PM Peak Hour	NB	7,972	728	2,050	6	2,784	0.20%
			SB	6,730	1,107	1,731	27	2,865	0.90%
FS-4.	I-10 between Central Avenue and Alameda Street	AM Peak Hour	EB	5,640	1,536	1,451	13	3,000	0.40%
			WB	5,630	1,356	1,448	4	2,808	0.10%
		PM Peak Hour	EB	4,556	1,617	1,172	0	2,789	0.00%
			WB	5,335	3,780	1,372	0	5,152	0.00%
FS-5.	I-10 between Alameda Street and Santa Fe Avenue	AM Peak Hour	EB	4,216	1,016	1,084	20	2,120	0.90%
			WB	8,207	1,240	2,111	7	3,358	0.20%
		PM Peak Hour	EB	5,864	1,799	1,508	4	3,311	0.10%
			WB	7,868	1,395	2,024	13	3,432	0.40%
FS-6.	SR 60 between I-10 and I-5	AM Peak Hour	EB	3,660	850	941	4	1,795	0.20%
			WB	2,563	878	659	13	1,550	0.80%
		PM Peak Hour	EB	5,323	958	1,369	26	2,353	1.10%
			WB	3,198	1,158	823	7	1,988	0.40%

Notes
[a] Traffic volume based on Caltrans' Performance Measurement System (PeMS) data for the average weekday in May 2017 on the freeway. Traffic volume data fron*2015 Traffic Volumes on California State Highways* (Caltrans, 2016) was ut was unavailable.

TABLE I-8
INTERSECTION LEVEL OF SERVICE

Level of Service	Description	Delay [a]	
		Signalized Intersections	Unsignalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 10	0.0 - 10.0
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20	10.1 - 15.0
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35	15.1 - 25.0
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35 and ≤ 55	25.1 - 35.0
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80	35.1 - 50.0
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80	> 50.0

Notes
Source: *Highway Capacity Manual, 6th Edition, A Guide for Multimodal Mobility Analysis* (Transportation Research Board, 2016) and Caltrans.
[a] Measured in seconds.

TABLE I-9
EXISTING WITH PROJECT CONDITIONS (YEAR 2017)
INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Intersection	Peak Hour	Existing		Existing with Project	
			Delay	LOS	Delay	LOS
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	18.8 16.1	B B	22.5 17.6	C B
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	24.1 22.2	C C	25.0 21.9	C C
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	30.6 37.8	C D	31.4 38.3	C D
23. [a]	I-5 Southbound Ramps & 4th Street	A.M. P.M.	90.5 58.0	F E	109.4 64.5	F E

Delay is measured in seconds per vehicle

LOS = Level of service

Results per Synchro 10 (HCM 6th Edition methodology).

[a] Intersection is unsignalized under Existing Conditions.

TABLE I-10
FUTURE WITH PROJECT CONDITIONS (YEAR 2023)
INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	25.2 24.6	C C	29.6 26.0	C C
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	35.8 22.8	D C	40.6 22.7	D C
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	44.6 72.0	D E	46.6 75.9	D E
23.	I-5 Southbound Ramps & 4th Street	A.M. P.M.	25.4 25.2	C C	27.3 26.8	C C

Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 10 (HCM 6th Edition methodology).

TABLE I-11
FUTURE WITH PROJECT CONDITIONS (YEAR 2040)
INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	42.7 48.1	D D	47.1 49.8	D D
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	80.9 23.1	F C	89.0 23.2	F C
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	81.9 111.5	F F	84.3 115.5	F F
23.	I-5 Southbound Ramps & 4th Street	A.M. P.M.	72.7 44.0	E D	78.1 47.7	E D

Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 10 (HCM 6th Edition methodology).

TABLE I-12
FREEWAY OFF-RAMP QUEUE EVALUATION
EXISTING OPERATING CONDITIONS (YEAR 2017)

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity [a]	Existing Conditions				Existing with Project Conditions			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?
Q-1.	I-10 Eastbound Off-Ramp	Left	225	225		158		225		200	
	to Alameda Street	Right	225	0		0		0		0	
		Ramp	865	145	NO	0	NO	240	NO	0	NO
Q-2.	US 101 Northbound Off-Ramp	Left	480	418		135		445		145	
	to 4th Street	Shared Left/Right	480	418		143		445		153	
		Ramp	185	0	NO	0	NO	0	NO	0	NO
Q-3.	I-5 Northbound Off-Ramp	Left	200	200		40		200		40	
	to 4th Street	Shared Through/Right	200	88		138		88		140	
		Ramp	520	45	NO	0	NO	48	NO	0	NO
Q-4.	I-5 Southbound Off-Ramp	Left	135	135		135		135		135	
	to 4th Street	Shared Through/Right	135	135		28		135		30	
		Ramp	885	640	NO	268	NO	735	NO	273	NO
Q-5.	I-5 Northbound Off-Ramp	Right	[c]	--	--	--	--	--	--	--	--
	to 7th Street	Ramp	860	--	--	--	--	--	--	--	--
Q-6.	I-10 Eastbound Off-Ramp	Left	150	150		45		150		150	
	to Porter Street	Right	150	18		10		20		10	
		Ramp	445	808	**YES**	0	NO	808	**YES**	5	NO

[a] Expressed in feet.
[b] 95th Percentile queue results per Synchro 10 (Methodology from *Highway Capacity Manual, 6th Edition,* Transportation Research Board, 2016).
[c] Free-flow from I-5 Northbound Off-Ramp to 7th Street.

TABLE I-13
FREEWAY OFF-RAMP QUEUE EVALUATION
FUTURE OPERATING CONDITIONS (YEAR 2023)

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity [a]	Future without Project Conditions				Future with Project Conditions			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?
Q-1.	I-10 Eastbound Off-Ramp	Left	225	225		225		225		225	
	to Alameda Street	Right	225	0		0		0		0	
		Ramp	865	260	NO	45	NO	375	NO	78	NO
Q-2.	US 101 Northbound Off-Ramp	Left	480	480		253		480		263	
	to 4th Street	Shared Left/Right	480	480		275		480		283	
		Ramp	185	260	**YES**	0	NO	355	**YES [c]**	0	NO
Q-3.	I-5 Northbound Off-Ramp	Left	200	200		73		200		73	
	to 4th Street	Shared Through/Right	200	110		160		110		160	
		Ramp	520	145	NO	0	NO	145	NO	0	NO
Q-4.	I-5 Southbound Off-Ramp	Left	135	65		135		75		135	
	to 4th Street	Shared Through/Right	135	135		135		135		135	
		Ramp	885	278	NO	368	NO	478	NO	400	NO
Q-5.	I-5 Northbound Off-Ramp	Right	[d]	--	--	--	--	--	--	--	--
	to 7th Street	Ramp	860	--	--	--	--	--	--	--	--
Q-6.	I-10 Eastbound Off-Ramp	Left	150	150		150		150		150	
	to Porter Street	Right	150	20		10		23		10	
		Ramp	445	1,668	**YES**	480	**YES**	1,668	**YES**	480	**YES**

[a] Expressed in feet.

[b] 95th Percentile queue results per Synchro 10 (Methodology from *Highway Capacity Manual, 6th Edition,* Transportation Research Board, 2016).

[c] Based a review of freeway operating speeds identified in Caltrans' Performance Measurement System database for the nearest postmile station during the AM peak hour on a typical weekday, the addition of Project trips would not cause a speed differential of 30 mph or more between the freeway mainline lane speeds and the off-ramp traffic

[d] Free-flow from I-5 Northbound Off-Ramp to 7th Street.

TABLE I-14
FREEWAY OFF-RAMP QUEUE EVALUATION
FUTURE OPERATING CONDITIONS (YEAR 2040)

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity [a]	Future without Project Conditions				Future with Project Conditions			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?
Q-1.	I-10 Eastbound Off-Ramp	Left	225	225		225		225		225	
	to Alameda Street	Right	225	0		0		0		0	
		Ramp	865	490	NO	163	NO	608	NO	195	NO
Q-2.	US 101 Northbound Off-Ramp	Left	480	480		320		480		328	
	to 4th Street	Shared Left/Right	480	480		350		480		363	
		Ramp	185	1,060	**YES**	0	NO	1,225	**YES [c]**	0	NO
Q-3.	I-5 Northbound Off-Ramp	Left	200	200		80		200		80	
	to 4th Street	Shared Through/Right	200	135		198		135		198	
		Ramp	520	318	NO	0	NO	318	NO	0	NO
Q-4.	I-5 Southbound Off-Ramp	Left	135	90		135		90		135	
	to 4th Street	Shared Through/Right	135	135		135		135		135	
		Ramp	885	715	NO	533	NO	828	NO	568	NO
Q-5.	I-5 Northbound Off-Ramp	Right	[d]	--	--	--	--	--	--	--	--
	to 7th Street	Ramp	860	--	--	--	--	--	--	--	--
Q-6.	I-10 Eastbound Off-Ramp	Left	150	150		150		150		150	
	to Porter Street	Right	150	28		15		30		15	
		Ramp	445	2,158	**YES**	678	**YES**	2,158	**YES**	678	**YES**

[a] Expressed in feet.

[b] 95th Percentile queue results per Synchro 10 (Methodology from *Highway Capacity Manual, 6th Edition,* Transportation Research Board, 2016).

[c] Based a review of freeway operating speeds identified in Caltrans' Performance Measurement System database for the nearest postmile station during the AM peak hour on a typical weekday, the addition of Project trips would not cause a speed differential of 30 mph or more between the freeway mainline lane speeds and the off-ramp traffic

[d] Free-flow from I-5 Northbound Off-Ramp to 7th Street.

Attachment

Level of Service Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	277	0	530	0	1	2	371	1053	8	1	814	428
Future Volume (veh/h)	277	0	530	0	1	2	371	1053	8	1	814	428
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	301	0	576	0	1	2	403	1145	9	1	885	465
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	0	0	0	2	4	450	2478	19	330	1825	1096
Arrive On Green	0.18	0.00	0.00	0.00	0.00	0.00	0.13	0.69	0.69	0.51	0.51	0.51
Sat Flow, veh/h	1781	301		0	557	1113	1781	3614	28	487	3554	1585
Grp Volume(v), veh/h	301	74.1		0	0	3	403	563	591	1	885	465
Grp Sat Flow(s),veh/h/ln	1781	E		0	0	1670	1781	1777	1865	487	1777	1585
Q Serve(g_s), s	15.0			0.0	0.0	0.2	8.9	13.1	13.1	0.1	14.5	11.5
Cycle Q Clear(g_c), s	15.0			0.0	0.0	0.2	8.9	13.1	13.1	0.1	14.5	11.5
Prop In Lane	1.00			0.00		0.67	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	317			0	0	5	450	1218	1279	330	1825	1096
V/C Ratio(X)	0.95			0.00	0.00	0.56	0.90	0.46	0.46	0.00	0.48	0.42
Avail Cap(c_a), veh/h	317			0	0	297	539	1218	1279	330	1825	1096
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6			0.0	0.0	44.8	13.9	6.5	6.5	10.7	14.2	6.1
Incr Delay (d2), s/veh	37.5			0.0	0.0	68.4	15.6	1.3	1.2	0.0	0.9	1.2
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.8			0.0	0.0	0.3	10.3	8.0	8.3	0.0	9.6	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.1			0.0	0.0	113.2	29.5	7.8	7.7	10.7	15.1	7.3
LnGrp LOS	E			A	A	F	C	A	A	B	B	A
Approach Vol, veh/h					3			1557			1351	
Approach Delay, s/veh					113.2			13.4			12.4	
Approach LOS					F			B			B	

Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		65.7			15.5	50.2	20.0	4.3				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		46.0			16.0	26.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s		15.1			10.9	16.5	17.0	2.2				
Green Ext Time (p_c), s		9.4			0.6	5.3	0.0	0.0				

Intersection Summary		
HCM 6th Ctrl Delay		18.8
HCM 6th LOS		B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	315	0	0	1731	1185	24
Future Volume (veh/h)	315	0	0	1731	1185	24
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	342	0	0	1882	1312	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	1524	0	0	2189	1718	777
Arrive On Green	0.43	0.00	0.00	0.43	0.48	0.00
Sat Flow, veh/h	3741	0	0	5443	3563	1610
Grp Volume(v), veh/h	342	0	0	1882	1312	0
Grp Sat Flow(s),veh/h/ln	1777	0	0	1702	1781	1610
Q Serve(g_s), s	5.5	0.0	0.0	30.0	27.2	0.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	30.0	27.2	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1524	0	0	2189	1718	777
V/C Ratio(X)	0.22	0.00	0.00	0.86	0.76	0.00
Avail Cap(c_a), veh/h	1579	0	0	2269	1718	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.2	0.0	0.0	23.3	19.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	3.5	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	0.0	0.0	17.7	16.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.3	0.0	0.0	26.8	22.4	0.0
LnGrp LOS	B	A	A	C	C	A
Approach Vol, veh/h	342			1882	1312	
Approach Delay, s/veh	16.3			26.8	22.4	
Approach LOS	B			C	C	

Timer - Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		47.4		42.6				42.6
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		42.0		40.0				40.0
Max Q Clear Time (g_c+I1), s		29.2		7.5				32.0
Green Ext Time (p_c), s		4.8		2.4				6.6

Intersection Summary			
HCM 6th Ctrl Delay			24.1
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	663	0	0	1007	330	275	46	60	0	0	0
Future Volume (veh/h)	240	663	0	0	1007	330	275	46	60	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	261	721	0	0	1095	359	299	50	65			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	300	2154	0	0	1184	383	543	225	293			
Arrive On Green	0.11	0.61	0.00	0.00	0.45	0.45	0.30	0.30	0.30			
Sat Flow, veh/h	1781	3647	0	0	2733	854	1781	738	960			
Grp Volume(v), veh/h	261	721	0	0	732	722	299	0	115			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1717	1781	0	1698			
Q Serve(g_s), s	7.9	9.0	0.0	0.0	34.8	36.0	12.6	0.0	4.5			
Cycle Q Clear(g_c), s	7.9	9.0	0.0	0.0	34.8	36.0	12.6	0.0	4.5			
Prop In Lane	1.00		0.00	0.00		0.50	1.00		0.57			
Lane Grp Cap(c), veh/h	300	2154	0	0	797	770	543	0	518			
V/C Ratio(X)	0.87	0.33	0.00	0.00	0.92	0.94	0.55	0.00	0.22			
Avail Cap(c_a), veh/h	375	2330	0	0	809	782	543	0	518			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	23.3	8.8	0.0	0.0	23.3	23.6	26.1	0.0	23.3			
Incr Delay (d2), s/veh	16.6	0.1	0.0	0.0	15.3	18.6	4.0	0.0	1.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	7.9	5.7	0.0	0.0	23.7	24.4	9.8	0.0	3.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	8.8	0.0	0.0	38.6	42.2	30.1	0.0	24.3			
LnGrp LOS	D	A	A	A	D	D	C	A	C			
Approach Vol, veh/h		982			1454			414				
Approach Delay, s/veh		17.1			40.4			28.5				
Approach LOS		B			D			C				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		31.4		58.6			14.2	44.4				
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0				
Max Green Setting (Gmax), s		23.0		59.0			14.0	41.0				
Max Q Clear Time (g_c+I1), s		14.6		11.0			9.9	38.0				
Green Ext Time (p_c), s		1.1		6.0			0.3	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			30.6									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	90.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	434	68	138	1677	0	0	0	0	91	3	381
Future Vol, veh/h	0	434	68	138	1677	0	0	0	0	91	3	381
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	115	-	-	-	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	472	74	150	1823	0	0	0	0	99	3	414

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	472	0	0				2359	2595	912
Stage 1	-	-	-	-	-	-				2123	2123	-
Stage 2	-	-	-	-	-	-				236	472	-
Critical Hdwy	-	-	-	4.14	-	-				6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-				3.52	4.02	3.32
Pot Cap-1 Maneuver	0	-	-	1086	-	0				~ 30	25	~ 276
Stage 1	0	-	-	-	-	0				~ 78	89	-
Stage 2	0	-	-	-	-	0				781	557	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1086	-	-				~ 26	0	~ 276
Mov Cap-2 Maneuver	-	-	-	-	-	-				~ 26	0	-
Stage 1	-	-	-	-	-	-				~ 78	0	-
Stage 2	-	-	-	-	-	-				673	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.7	$ 529.2
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1086	-	26	276
HCM Lane V/C Ratio	-	-	0.138	-	3.804	1.512
HCM Control Delay (s)	-	-	8.8	$ 1571.4	282.2	
HCM Lane LOS	-	-	A	-	F	F
HCM 95th %tile Q(veh)	-	-	0.5	-	12.2	24.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	145.1					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	132	99	21	379	593	150
Future Vol, veh/h	132	99	21	379	593	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	143	108	23	412	645	163

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	435	0	-	0	623	229
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	394	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1125	-	-	-	~ 450	810
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	681	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1125	-	-	-	~ 389	810
Mov Cap-2 Maneuver	-	-	-	-	~ 389	-
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	SB
HCM Control Delay, s	5	0	266.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1125	-	-	-	389	810
HCM Lane V/C Ratio	0.128	-	-	-	1.657	0.201
HCM Control Delay (s)	8.7	0	-	-	$ 331.6	10.6
HCM Lane LOS	A	A	-	-	F	B
HCM 95th %tile Q(veh)	0.4	-	-	-	38.3	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	0	225	0	0	7	422	1021	0	0	1183	466
Future Volume (veh/h)	69	0	225	0	0	7	422	1021	0	0	1183	466
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	0	245	0	0	8	459	1110	0	0	1286	507
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	0	0	0	0	13	496	2893	0	80	2092	1003
Arrive On Green	0.04	0.00	0.00	0.00	0.00	0.01	0.18	0.81	0.00	0.00	0.59	0.59
Sat Flow, veh/h	1781	75		0	0	1585	1781	3647	0	508	3554	1585
Grp Volume(v), veh/h	75	126.1		0	0	8	459	1110	0	0	1286	507
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1585	1781	1777	0	508	1777	1585
Q Serve(g_s), s	3.8			0.0	0.0	0.5	13.8	7.6	0.0	0.0	21.0	15.5
Cycle Q Clear(g_c), s	3.8			0.0	0.0	0.5	13.8	7.6	0.0	0.0	21.0	15.5
Prop In Lane	1.00			0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	79			0	0	13	496	2893	0	80	2092	1003
V/C Ratio(X)	0.95			0.00	0.00	0.63	0.92	0.38	0.00	0.00	0.61	0.51
Avail Cap(c_a), veh/h	79			0	0	282	550	2893	0	80	2092	1003
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	42.9			0.0	0.0	44.5	22.9	2.3	0.0	0.0	11.9	8.9
Incr Delay (d2), s/veh	83.2			0.0	0.0	41.1	20.6	0.4	0.0	0.0	1.4	1.8
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.3			0.0	0.0	0.6	17.9	2.9	0.0	0.0	12.5	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	126.1			0.0	0.0	85.6	43.5	2.6	0.0	0.0	13.3	10.7
LnGrp LOS	F			A	A	F	D	A	A	A	B	B
Approach Vol, veh/h					8			1569			1793	
Approach Delay, s/veh					85.6			14.6			12.6	
Approach LOS					F			B			B	
Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		77.3			20.3	57.0	8.0	4.7				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		58.0			19.0	35.0	4.0	16.0				
Max Q Clear Time (g_c+I1), s		9.6			15.8	23.0	5.8	2.5				
Green Ext Time (p_c), s		10.9			0.5	8.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			16.1									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1111	0	0	586	337	219
Future Volume (veh/h)	1111	0	0	586	337	219
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	1208	0	0	637	302	307
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	1709	0	0	1190	1027	928
Arrive On Green	0.33	0.00	0.00	0.33	0.58	0.58
Sat Flow, veh/h	5443	0	0	3741	1781	1610
Grp Volume(v), veh/h	1208	0	0	637	302	307
Grp Sat Flow(s),veh/h/ln	1702	0	0	1777	1781	1610
Q Serve(g_s), s	18.6	0.0	0.0	13.1	7.8	9.0
Cycle Q Clear(g_c), s	18.6	0.0	0.0	13.1	7.8	9.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1709	0	0	1190	1027	928
V/C Ratio(X)	0.71	0.00	0.00	0.54	0.29	0.33
Avail Cap(c_a), veh/h	2496	0	0	1737	1027	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	0.0	0.0	24.3	9.7	10.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.4	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.8	0.0	0.0	9.2	5.4	5.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.6	0.0	0.0	24.6	10.5	10.9
LnGrp LOS	C	A	A	C	B	B
Approach Vol, veh/h	1208			637	609	
Approach Delay, s/veh	26.6			24.6	10.7	
Approach LOS	C			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	55.9	34.1	34.1
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	38.0	44.0	44.0
Max Q Clear Time (g_c+I1), s	11.0	20.6	15.1
Green Ext Time (p_c), s	2.1	9.6	4.8

Intersection Summary	
HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	714	1052	0	0	449	288	43	49	89	0	0	0
Future Volume (veh/h)	714	1052	0	0	449	288	43	49	89	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	776	1143	0	0	488	313	47	53	97			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	813	2450	0	0	485	310	395	131	240			
Arrive On Green	0.41	0.69	0.00	0.00	0.23	0.23	0.22	0.22	0.22			
Sat Flow, veh/h	1781	3647	0	0	2173	1329	1781	592	1083			
Grp Volume(v), veh/h	776	1143	0	0	417	384	47	0	150			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1631	1781	0	1675			
Q Serve(g_s), s	33.7	13.3	0.0	0.0	21.0	21.0	1.9	0.0	6.9			
Cycle Q Clear(g_c), s	33.7	13.3	0.0	0.0	21.0	21.0	1.9	0.0	6.9			
Prop In Lane	1.00		0.00	0.00		0.81	1.00		0.65			
Lane Grp Cap(c), veh/h	813	2450	0	0	415	381	395	0	372			
V/C Ratio(X)	0.95	0.47	0.00	0.00	1.01	1.01	0.12	0.00	0.40			
Avail Cap(c_a), veh/h	872	2567	0	0	415	381	395	0	372			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	20.7	6.4	0.0	0.0	34.5	34.5	28.0	0.0	29.9			
Incr Delay (d2), s/veh	19.6	0.1	0.0	0.0	45.5	48.5	0.6	0.0	3.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	26.3	7.5	0.0	0.0	20.3	19.3	1.6	0.0	5.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	6.5	0.0	0.0	80.0	83.0	28.6	0.0	33.2			
LnGrp LOS	D	A	A	A	F	F	C	A	C			
Approach Vol, veh/h		1919			801			197				
Approach Delay, s/veh		20.2			81.5			32.1				
Approach LOS		C			F			C				

Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		24.0		66.0			41.0	25.0				
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0				
Max Green Setting (Gmax), s		17.0		65.0			40.0	21.0				
Max Q Clear Time (g_c+I1), s		8.9		15.3			35.7	23.0				
Green Ext Time (p_c), s		0.6		11.5			1.3	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			37.8
HCM 6th LOS			D

Intersection	
Int Delay, s/veh	58

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1549	79	94	750	0	0	0	0	136	2	149
Future Vol, veh/h	0	1549	79	94	750	0	0	0	0	136	2	149
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	115	-	-	-	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1684	86	102	815	0	0	0	0	148	2	162

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	1684	0	0				1861	2703	408
Stage 1	-	-	-	-	-	-				1019	1019	-
Stage 2	-	-	-	-	-	-				842	1684	-
Critical Hdwy	-	-	-	4.14	-	-				6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-				3.52	4.02	3.32
Pot Cap-1 Maneuver	0	-	-	376	-	0				~ 65	21	593
Stage 1	0	-	-	-	-	0				309	313	-
Stage 2	0	-	-	-	-	0				383	149	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	376	-	-				~ 47	0	593
Mov Cap-2 Maneuver	-	-	-	-	-	-				~ 47	0	-
Stage 1	-	-	-	-	-	-				309	0	-
Stage 2	-	-	-	-	-	-				279	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2	$ 551.3
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	376	-	47	593
HCM Lane V/C Ratio	-	-	0.272	-	3.145	0.277
HCM Control Delay (s)	-	-	18.1	-	$ 1148.6	13.4
HCM Lane LOS	-	-	C	-	F	B
HCM 95th %tile Q(veh)	-	-	1.1	-	16.1	1.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	4.8					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	166	129	23	572	98	70
Future Vol, veh/h	166	129	23	572	98	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	180	140	25	622	107	76

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	647	0	-	0	836	336
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	500	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	939	-	-	-	337	706
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	939	-	-	-	267	706
Mov Cap-2 Maneuver	-	-	-	-	267	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	609	-

Approach	EB	WB	SB
HCM Control Delay, s	5.5	0	20.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	939	-	-	-	267	706
HCM Lane V/C Ratio	0.192	-	-	-	0.399	0.108
HCM Control Delay (s)	9.7	0	-	-	27.2	10.7
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.7	-	-	-	1.8	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	0	530	0	1	2	371	1085	8	1	821	428
Future Volume (veh/h)	309	0	530	0	1	2	371	1085	8	1	821	428
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	336	0	576	0	1	2	403	1179	9	1	892	465
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	0	0	0	2	4	448	2478	19	322	1825	1096
Arrive On Green	0.18	0.00	0.00	0.00	0.00	0.00	0.13	0.69	0.69	0.51	0.51	0.51
Sat Flow, veh/h	1781	336		0	557	1113	1781	3615	28	472	3554	1585
Grp Volume(v), veh/h	336	104.6		0	0	3	403	580	608	1	892	465
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1670	1781	1777	1865	472	1777	1585
Q Serve(g_s), s	16.0			0.0	0.0	0.2	8.9	13.7	13.7	0.1	14.7	11.5
Cycle Q Clear(g_c), s	16.0			0.0	0.0	0.2	8.9	13.7	13.7	0.1	14.7	11.5
Prop In Lane	1.00			0.00		0.67	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	317			0	0	5	448	1218	1279	322	1825	1096
V/C Ratio(X)	1.06			0.00	0.00	0.56	0.90	0.48	0.48	0.00	0.49	0.42
Avail Cap(c_a), veh/h	317			0	0	297	537	1218	1279	322	1825	1096
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0			0.0	0.0	44.8	14.0	6.6	6.6	10.7	14.2	6.1
Incr Delay (d2), s/veh	67.6			0.0	0.0	68.4	16.1	1.3	1.3	0.0	0.9	1.2
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.2			0.0	0.0	0.3	10.3	8.3	8.6	0.0	9.7	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.6			0.0	0.0	113.2	30.1	7.9	7.9	10.7	15.2	7.3
LnGrp LOS	F			A	A	F	C	A	A	B	B	A
Approach Vol, veh/h					3			1591			1358	
Approach Delay, s/veh					113.2			13.5			12.5	
Approach LOS					F			B			B	

Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		65.7			15.5	50.2	20.0	4.3				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		46.0			16.0	26.0	16.0	16.0				
Max Q Clear Time (g_c+I1), s		15.7			10.9	16.7	18.0	2.2				
Green Ext Time (p_c), s		9.7			0.6	5.3	0.0	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			22.5
HCM 6th LOS			C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	325	0	0	1779	1233	24
Future Volume (veh/h)	325	0	0	1779	1233	24
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	353	0	0	1934	1364	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	1538	0	0	2210	1704	770
Arrive On Green	0.43	0.00	0.00	0.43	0.48	0.00
Sat Flow, veh/h	3741	0	0	5443	3563	1610
Grp Volume(v), veh/h	353	0	0	1934	1364	0
Grp Sat Flow(s),veh/h/ln	1777	0	0	1702	1781	1610
Q Serve(g_s), s	5.6	0.0	0.0	31.1	29.1	0.0
Cycle Q Clear(g_c), s	5.6	0.0	0.0	31.1	29.1	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1538	0	0	2210	1704	770
V/C Ratio(X)	0.23	0.00	0.00	0.88	0.80	0.00
Avail Cap(c_a), veh/h	1579	0	0	2269	1704	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.1	0.0	0.0	23.3	19.8	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	4.1	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.0	0.0	0.0	18.4	17.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.1	0.0	0.0	27.4	23.9	0.0
LnGrp LOS	B	A	A	C	C	A
Approach Vol, veh/h	353			1934	1364	
Approach Delay, s/veh	16.1			27.4	23.9	
Approach LOS	B			C	C	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	47.0	43.0	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	42.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	31.1	7.6	33.1
Green Ext Time (p_c), s	4.6	2.5	5.8

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	666	0	0	1023	330	275	46	60	0	0	0
Future Volume (veh/h)	246	666	0	0	1023	330	275	46	60	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	267	724	0	0	1112	359	299	50	65			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	305	2176	0	0	1194	380	532	220	287			
Arrive On Green	0.12	0.61	0.00	0.00	0.45	0.45	0.30	0.30	0.30			
Sat Flow, veh/h	1781	3647	0	0	2745	844	1781	738	960			
Grp Volume(v), veh/h	267	724	0	0	740	731	299	0	115			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1718	1781	0	1698			
Q Serve(g_s), s	8.3	8.9	0.0	0.0	35.3	36.6	12.7	0.0	4.6			
Cycle Q Clear(g_c), s	8.3	8.9	0.0	0.0	35.3	36.6	12.7	0.0	4.6			
Prop In Lane	1.00		0.00	0.00		0.49	1.00		0.57			
Lane Grp Cap(c), veh/h	305	2176	0	0	800	774	532	0	507			
V/C Ratio(X)	0.87	0.33	0.00	0.00	0.92	0.94	0.56	0.00	0.23			
Avail Cap(c_a), veh/h	373	2330	0	0	809	783	532	0	507			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	23.9	8.5	0.0	0.0	23.3	23.7	26.6	0.0	23.7			
Incr Delay (d2), s/veh	17.5	0.1	0.0	0.0	16.2	19.8	4.2	0.0	1.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	11.5	5.6	0.0	0.0	24.2	25.0	9.9	0.0	3.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.4	8.6	0.0	0.0	39.5	43.5	30.8	0.0	24.8			
LnGrp LOS	D	A	A	A	D	D	C	A	C			
Approach Vol, veh/h		991			1471			414				
Approach Delay, s/veh		17.4			41.5			29.2				
Approach LOS		B			D			C				

Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		30.9		59.1			14.6	44.5				
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0				
Max Green Setting (Gmax), s		23.0		59.0			14.0	41.0				
Max Q Clear Time (g_c+I1), s		14.7		10.9			10.3	38.6				
Green Ext Time (p_c), s		1.1		6.0			0.3	1.9				

Intersection Summary			
HCM 6th Ctrl Delay			31.4
HCM 6th LOS			C

Intersection	
Int Delay, s/veh	109.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	447	69	140	1709	0	0	0	0	92	3	417
Future Vol, veh/h	0	447	69	140	1709	0	0	0	0	92	3	417
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	115	-	-	-	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	486	75	152	1858	0	0	0	0	100	3	453

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	486	0	0				2405	2648	929
Stage 1	-	-	-	-	-	-				2162	2162	-
Stage 2	-	-	-	-	-	-				243	486	-
Critical Hdwy	-	-	-	4.14	-	-				6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-				3.52	4.02	3.32
Pot Cap-1 Maneuver	0	-	-	1073	-	0				~ 28	23	~ 269
Stage 1	0	-	-	-	-	0				~ 74	85	-
Stage 2	0	-	-	-	-	0				775	549	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1073	-	-				~ 24	0	~ 269
Mov Cap-2 Maneuver	-	-	-	-	-	-				~ 24	0	-
Stage 1	-	-	-	-	-	-				~ 74	0	-
Stage 2	-	-	-	-	-	-				665	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.7	$ 612.3
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1073	-	24	269
HCM Lane V/C Ratio	-	-	0.142	-	4.167	1.697
HCM Control Delay (s)	-	-	8.9	-	$ 1755.7	$ 361.8
HCM Lane LOS	-	-	A	-	F	F
HCM 95th %tile Q(veh)	-	-	0.5	-	12.5	29.3

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	143.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	132	99	21	379	593	166
Future Vol, veh/h	132	99	21	379	593	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	143	108	23	412	645	180

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	435	0	-	0	623	229
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	394	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1125	-	-	-	~ 450	810
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	681	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1125	-	-	-	~ 389	810
Mov Cap-2 Maneuver	-	-	-	-	~ 389	-
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	SB
HCM Control Delay, s	5	0	261.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1125	-	-	-	389	810
HCM Lane V/C Ratio	0.128	-	-	-	1.657	0.223
HCM Control Delay (s)	8.7	0	-	-	$ 331.6	10.7
HCM Lane LOS	A	A	-	-	F	B
HCM 95th %tile Q(veh)	0.4	-	-	-	38.3	0.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	0	225	0	0	7	422	1029	0	0	1213	466
Future Volume (veh/h)	77	0	225	0	0	7	422	1029	0	0	1213	466
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	0	245	0	0	8	459	1118	0	0	1318	507
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	0	0	0	0	13	496	2893	0	80	2080	998
Arrive On Green	0.04	0.00	0.00	0.00	0.00	0.01	0.18	0.81	0.00	0.00	0.59	0.59
Sat Flow, veh/h	1781	84		0	0	1585	1781	3647	0	504	3554	1585
Grp Volume(v), veh/h	84	161.8		0	0	8	459	1118	0	0	1318	507
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1585	1781	1777	0	504	1777	1585
Q Serve(g_s), s	4.0			0.0	0.0	0.5	14.1	7.7	0.0	0.0	22.0	15.7
Cycle Q Clear(g_c), s	4.0			0.0	0.0	0.5	14.1	7.7	0.0	0.0	22.0	15.7
Prop In Lane	1.00			0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	79			0	0	13	496	2893	0	80	2080	998
V/C Ratio(X)	1.06			0.00	0.00	0.63	0.93	0.39	0.00	0.00	0.63	0.51
Avail Cap(c_a), veh/h	79			0	0	282	543	2893	0	80	2080	998
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	43.0			0.0	0.0	44.5	23.4	2.3	0.0	0.0	12.3	9.1
Incr Delay (d2), s/veh	118.8			0.0	0.0	41.1	21.1	0.4	0.0	0.0	1.5	1.8
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.8			0.0	0.0	0.6	18.0	2.9	0.0	0.0	13.0	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.8			0.0	0.0	85.6	44.5	2.7	0.0	0.0	13.8	10.9
LnGrp LOS	F			A	A	F	D	A	A	A	B	B
Approach Vol, veh/h					8			1577			1825	
Approach Delay, s/veh					85.6			14.8			13.0	
Approach LOS					F			B			B	
Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		77.3			20.6	56.7	8.0	4.7				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		58.0			19.0	35.0	4.0	16.0				
Max Q Clear Time (g_c+I1), s		9.7			16.1	24.0	6.0	2.5				
Green Ext Time (p_c), s		11.1			0.5	7.8	0.0	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			17.6
HCM 6th LOS			B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1156	0	0	598	349	219
Future Volume (veh/h)	1156	0	0	598	349	219
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	1257	0	0	650	308	314
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	1766	0	0	1229	1007	910
Arrive On Green	0.35	0.00	0.00	0.35	0.57	0.57
Sat Flow, veh/h	5443	0	0	3741	1781	1610
Grp Volume(v), veh/h	1257	0	0	650	308	314
Grp Sat Flow(s),veh/h/ln	1702	0	0	1777	1781	1610
Q Serve(g_s), s	19.2	0.0	0.0	13.2	8.2	9.5
Cycle Q Clear(g_c), s	19.2	0.0	0.0	13.2	8.2	9.5
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1766	0	0	1229	1007	910
V/C Ratio(X)	0.71	0.00	0.00	0.53	0.31	0.34
Avail Cap(c_a), veh/h	2496	0	0	1737	1007	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	0.0	23.6	10.3	10.6
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.4	0.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.1	0.0	0.0	9.2	5.8	6.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.1	0.0	0.0	23.9	11.1	11.6
LnGrp LOS	C	A	A	C	B	B
Approach Vol, veh/h	1257			650	622	
Approach Delay, s/veh	26.1			23.9	11.3	
Approach LOS	C			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	54.9	35.1	35.1
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	38.0	44.0	44.0
Max Q Clear Time (g_c+I1), s	11.5	21.2	15.2
Green Ext Time (p_c), s	2.1	9.9	4.9

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes
User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	738	1067	0	0	453	288	43	49	89	0	0	0
Future Volume (veh/h)	738	1067	0	0	453	288	43	49	89	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	802	1160	0	0	492	313	47	53	97			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	835	2493	0	0	487	309	373	124	227			
Arrive On Green	0.42	0.70	0.00	0.00	0.23	0.23	0.21	0.21	0.21			
Sat Flow, veh/h	1781	3647	0	0	2180	1323	1781	592	1083			
Grp Volume(v), veh/h	802	1160	0	0	419	386	47	0	150			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1632	1781	0	1675			
Q Serve(g_s), s	35.1	13.0	0.0	0.0	21.0	21.0	1.9	0.0	7.0			
Cycle Q Clear(g_c), s	35.1	13.0	0.0	0.0	21.0	21.0	1.9	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		0.81	1.00		0.65			
Lane Grp Cap(c), veh/h	835	2493	0	0	415	381	373	0	351			
V/C Ratio(X)	0.96	0.47	0.00	0.00	1.01	1.01	0.13	0.00	0.43			
Avail Cap(c_a), veh/h	872	2567	0	0	415	381	373	0	351			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	20.4	6.0	0.0	0.0	34.5	34.5	28.9	0.0	30.9			
Incr Delay (d2), s/veh	21.1	0.1	0.0	0.0	46.8	49.7	0.7	0.0	3.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	27.4	7.2	0.0	0.0	20.5	19.5	1.6	0.0	5.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	6.1	0.0	0.0	81.3	84.2	29.6	0.0	34.6			
LnGrp LOS	D	A	A	A	F	F	C	A	C			
Approach Vol, veh/h		1962			805			197				
Approach Delay, s/veh		20.6			82.7			33.4				
Approach LOS		C			F			C				

Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		22.9		67.1			42.1	25.0				
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0				
Max Green Setting (Gmax), s		17.0		65.0			40.0	21.0				
Max Q Clear Time (g_c+I1), s		9.0		15.0			37.1	23.0				
Green Ext Time (p_c), s		0.6		11.8			1.0	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			38.3
HCM 6th LOS			D

Intersection	
Int Delay, s/veh	64.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1602	80	95	760	0	0	0	0	137	2	158
Future Vol, veh/h	0	1602	80	95	760	0	0	0	0	137	2	158
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	115	-	-	-	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1741	87	103	826	0	0	0	0	149	2	172

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	1741	0	0	1903	2773	413
Stage 1	-	-	-	-	-	-	1032	1032	-
Stage 2	-	-	-	-	-	-	871	1741	-
Critical Hdwy	-	-	-	4.14	-	-	6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	0	-	-	357	-	0	~ 61	19	588
Stage 1	0	-	-	-	-	0	304	308	-
Stage 2	0	-	-	-	-	0	370	139	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	357	-	-	~ 43	0	588
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 43	0	-
Stage 1	-	-	-	-	-	-	304	0	-
Stage 2	-	-	-	-	-	-	263	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2.1	$ 609.1
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	357	-	43	588
HCM Lane V/C Ratio	-	-	0.289	-	3.463	0.296
HCM Control Delay (s)	-	-	19.1	$	1304.4	13.7
HCM Lane LOS	-	-	C	-	F	B
HCM 95th %tile Q(veh)	-	-	1.2	-	16.6	1.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	11.6					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	166	129	23	572	196	74
Future Vol, veh/h	166	129	23	572	196	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	180	140	25	622	213	80

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	647	0	-	0	836	336
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	500	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	939	-	-	-	337	706
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	939	-	-	-	267	706
Mov Cap-2 Maneuver	-	-	-	-	267	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	609	-

Approach	EB	WB	SB
HCM Control Delay, s	5.5	0	43.7
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	939	-	-	-	267	706
HCM Lane V/C Ratio	0.192	-	-	-	0.798	0.114
HCM Control Delay (s)	9.7	0	-	-	56.1	10.8
HCM Lane LOS	A	A	-	-	F	B
HCM 95th %tile Q(veh)	0.7	-	-	-	6.2	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	325	0	563	0	1	2	394	1164	8	1	917	481
Future Volume (veh/h)	325	0	563	0	1	2	394	1164	8	1	917	481
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	353	0	612	0	1	2	428	1265	9	1	997	523
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	0	0	0	2	4	459	2440	17	283	1660	1040
Arrive On Green	0.19	0.00	0.00	0.00	0.00	0.00	0.16	0.67	0.67	0.47	0.47	0.47
Sat Flow, veh/h	1781	353		0	557	1113	1781	3617	26	434	3554	1585
Grp Volume(v), veh/h	353	99.0		0	0	3	428	621	653	1	997	523
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1670	1781	1777	1866	434	1777	1585
Q Serve(g_s), s	17.0			0.0	0.0	0.2	12.6	15.8	15.8	0.1	18.7	15.2
Cycle Q Clear(g_c), s	17.0			0.0	0.0	0.2	12.6	15.8	15.8	0.1	18.7	15.2
Prop In Lane	1.00			0.00		0.67	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	336			0	0	5	459	1199	1259	283	1660	1040
V/C Ratio(X)	1.05			0.00	0.00	0.56	0.93	0.52	0.52	0.00	0.60	0.50
Avail Cap(c_a), veh/h	336			0	0	297	466	1199	1259	283	1660	1040
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5			0.0	0.0	44.8	19.5	7.3	7.3	12.8	17.8	7.9
Incr Delay (d2), s/veh	62.5			0.0	0.0	68.4	25.6	1.6	1.5	0.0	1.6	1.7
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.4			0.0	0.0	0.3	12.5	9.4	9.7	0.0	12.1	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.0			0.0	0.0	113.2	45.1	8.9	8.9	12.8	19.4	9.7
LnGrp LOS	F			A	A	F	D	A	A	B	B	A
Approach Vol, veh/h					3			1702			1521	
Approach Delay, s/veh					113.2			18.0			16.0	
Approach LOS					F			B			B	

Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		64.7			18.7	46.1	21.0	4.3				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		45.0			15.0	26.0	17.0	16.0				
Max Q Clear Time (g_c+I1), s		17.8			14.6	20.7	19.0	2.2				
Green Ext Time (p_c), s		10.4			0.1	3.7	0.0	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			25.2
HCM 6th LOS			C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	556	0	0	2066	1421	25
Future Volume (veh/h)	556	0	0	2066	1421	25
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	604	0	0	2246	1570	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	1579	0	0	2269	1663	751
Arrive On Green	0.44	0.00	0.00	0.44	0.47	0.00
Sat Flow, veh/h	3741	0	0	5443	3563	1610
Grp Volume(v), veh/h	604	0	0	2246	1570	0
Grp Sat Flow(s),veh/h/ln	1777	0	0	1702	1781	1610
Q Serve(g_s), s	10.2	0.0	0.0	39.3	37.8	0.0
Cycle Q Clear(g_c), s	10.2	0.0	0.0	39.3	37.8	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1579	0	0	2269	1663	751
V/C Ratio(X)	0.38	0.00	0.00	0.99	0.94	0.00
Avail Cap(c_a), veh/h	1579	0	0	2269	1663	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.7	0.0	0.0	24.8	22.9	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	16.5	12.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.3	0.0	0.0	25.1	24.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.9	0.0	0.0	41.3	35.2	0.0
LnGrp LOS	B	A	A	D	D	A
Approach Vol, veh/h	604			2246	1570	
Approach Delay, s/veh	16.9			41.3	35.2	
Approach LOS	B			D	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	46.0	44.0	44.0
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	42.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	39.8	12.2	41.3
Green Ext Time (p_c), s	1.5	4.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	398	760	0	0	1112	350	307	49	64	0	0	0
Future Volume (veh/h)	398	760	0	0	1112	350	307	49	64	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	433	826	0	0	1209	380	334	53	70			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	436	2448	0	0	1189	366	396	162	215			
Arrive On Green	0.40	1.00	0.00	0.00	0.44	0.44	0.22	0.22	0.22			
Sat Flow, veh/h	1781	3647	0	0	2769	823	1781	731	966			
Grp Volume(v), veh/h	433	826	0	0	794	795	334	0	123			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1722	1781	0	1697			
Q Serve(g_s), s	17.7	0.0	0.0	0.0	40.0	40.0	16.2	0.0	5.5			
Cycle Q Clear(g_c), s	17.7	0.0	0.0	0.0	40.0	40.0	16.2	0.0	5.5			
Prop In Lane	1.00		0.00	0.00		0.48	1.00		0.57			
Lane Grp Cap(c), veh/h	436	2448	0	0	790	765	396	0	377			
V/C Ratio(X)	0.99	0.34	0.00	0.00	1.01	1.04	0.84	0.00	0.33			
Avail Cap(c_a), veh/h	436	2448	0	0	790	765	396	0	377			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.7	0.0	0.0	0.0	25.0	25.0	33.5	0.0	29.4			
Incr Delay (d2), s/veh	39.3	0.1	0.0	0.0	33.4	42.9	19.3	0.0	2.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	12.0	0.0	0.0	0.0	30.9	33.3	13.8	0.0	4.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	0.1	0.0	0.0	58.4	67.9	52.8	0.0	31.6			
LnGrp LOS	E	A	A	A	F	F	D	A	C			
Approach Vol, veh/h		1259			1589			457				
Approach Delay, s/veh		20.3			63.2			47.1				
Approach LOS		C			E			D				

Timer - Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		24.0		66.0			22.0	44.0
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		20.0		62.0			18.0	40.0
Max Q Clear Time (g_c+I1), s		18.2		2.0			19.7	42.0
Green Ext Time (p_c), s		0.4		7.2			0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	558	92	150	1831	0	0	0	0	98	3	477
Future Volume (veh/h)	0	558	92	150	1831	0	0	0	0	98	3	477
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	607	0	163	1990	0				107	3	518
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1359		195	1907	0				667	3	591
Arrive On Green	0.00	0.38	0.00	0.22	1.00	0.00				0.37	0.37	0.37
Sat Flow, veh/h	0	3647	1585	1781	3647	0				1781	9	1577
Grp Volume(v), veh/h	0	607	0	163	1990	0				107	0	521
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1777	0				1781	0	1586
Q Serve(g_s), s	0.0	11.5	0.0	7.9	0.0	0.0				3.6	0.0	27.5
Cycle Q Clear(g_c), s	0.0	11.5	0.0	7.9	0.0	0.0				3.6	0.0	27.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	1359		195	1907	0				667	0	594
V/C Ratio(X)	0.00	0.45		0.83	1.04	0.00				0.16	0.00	0.88
Avail Cap(c_a), veh/h	0	1359		297	2053	0				667	0	594
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.10	0.10	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.7	0.0	34.3	0.0	0.0				18.7	0.0	26.2
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.3	21.7	0.0				0.5	0.0	16.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.2	0.0	4.0	7.2	0.0				2.8	0.0	18.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.9	0.0	35.7	21.7	0.0				19.2	0.0	42.8
LnGrp LOS	A	C		D	F	A				B	A	D
Approach Vol, veh/h		607	A		2153						628	
Approach Delay, s/veh		20.9			22.7						38.8	
Approach LOS		C			C						D	

Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			13.9	30.0		46.2		43.8				
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0				
Max Green Setting (Gmax), s			15.0	33.0		30.0		52.0				
Max Q Clear Time (g_c+I1), s			9.9	13.5		29.5		2.0				
Green Ext Time (p_c), s			0.2	4.1		0.2		29.3				

Intersection Summary			
HCM 6th Ctrl Delay			25.4
HCM 6th LOS			C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	740.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	373	105	22	402	629	160
Future Vol, veh/h	373	105	22	402	629	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	405	114	24	437	684	174

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	461	0	-	0	1167	243
Stage 1	-	-	-	-	243	-
Stage 2	-	-	-	-	924	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1100	-	-	-	~ 214	796
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	~ 387	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1100	-	-	-	~ 130	796
Mov Cap-2 Maneuver	-	-	-	-	~ 130	-
Stage 1	-	-	-	-	~ 484	-
Stage 2	-	-	-	-	~ 387	-

Approach	EB	WB	SB
HCM Control Delay, s	7.9	0	$ 1583
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1100	-	-	-	130	796
HCM Lane V/C Ratio	0.369	-	-	-	5.259	0.218
HCM Control Delay (s)	10.2	0	-	$ 1982.9		10.8
HCM Lane LOS	B	A	-	-	F	B
HCM 95th %tile Q(veh)	1.7	-	-	-	72.7	0.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	0	239	0	0	7	448	1154	0	0	1324	512
Future Volume (veh/h)	133	0	239	0	0	7	448	1154	0	0	1324	512
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	145	0	260	0	0	8	487	1254	0	0	1439	557
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	0	0	0	0	13	468	2775	0	80	1946	991
Arrive On Green	0.08	0.00	0.00	0.00	0.00	0.01	0.19	0.78	0.00	0.00	0.55	0.55
Sat Flow, veh/h	1781	145		0	0	1585	1781	3647	0	443	3554	1585
Grp Volume(v), veh/h	145	130.9		0	0	8	487	1254	0	0	1439	557
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1585	1781	1777	0	443	1777	1585
Q Serve(g_s), s	7.0			0.0	0.0	0.5	17.0	10.8	0.0	0.0	27.7	18.3
Cycle Q Clear(g_c), s	7.0			0.0	0.0	0.5	17.0	10.8	0.0	0.0	27.7	18.3
Prop In Lane	1.00			0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	139			0	0	13	468	2775	0	80	1946	991
V/C Ratio(X)	1.05			0.00	0.00	0.63	1.04	0.45	0.00	0.00	0.74	0.56
Avail Cap(c_a), veh/h	139			0	0	282	468	2775	0	80	1946	991
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	41.5			0.0	0.0	44.5	26.8	3.3	0.0	0.0	15.5	9.7
Incr Delay (d2), s/veh	89.4			0.0	0.0	41.1	52.4	0.5	0.0	0.0	2.6	2.3
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8			0.0	0.0	0.6	23.9	4.9	0.0	0.0	16.3	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	130.9			0.0	0.0	85.6	79.2	3.9	0.0	0.0	18.1	12.0
LnGrp LOS	F			A	A	F	F	A	A	A	B	B
Approach Vol, veh/h					8			1741			1996	
Approach Delay, s/veh					85.6			24.9			16.4	
Approach LOS					F			C			B	

Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		74.3			21.0	53.3	11.0	4.7				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		55.0			17.0	34.0	7.0	16.0				
Max Q Clear Time (g_c+I1), s		12.8			19.0	29.7	9.0	2.5				
Green Ext Time (p_c), s		12.9			0.0	3.6	0.0	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			24.6
HCM 6th LOS			C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1438	0	0	1017	589	232
Future Volume (veh/h)	1438	0	0	1017	589	232
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	1563	0	0	1105	446	460
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	2060	0	0	1434	904	817
Arrive On Green	0.40	0.00	0.00	0.40	0.51	0.51
Sat Flow, veh/h	5443	0	0	3741	1781	1610
Grp Volume(v), veh/h	1563	0	0	1105	446	460
Grp Sat Flow(s),veh/h/ln	1702	0	0	1777	1781	1610
Q Serve(g_s), s	23.7	0.0	0.0	24.2	14.8	17.7
Cycle Q Clear(g_c), s	23.7	0.0	0.0	24.2	14.8	17.7
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2060	0	0	1434	904	817
V/C Ratio(X)	0.76	0.00	0.00	0.77	0.49	0.56
Avail Cap(c_a), veh/h	2440	0	0	1698	904	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	0.0	23.2	14.6	15.3
Incr Delay (d2), s/veh	1.2	0.0	0.0	1.9	1.9	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.2	0.0	0.0	15.2	10.1	11.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.3	0.0	0.0	25.1	16.5	18.1
LnGrp LOS	C	A	A	C	B	B
Approach Vol, veh/h	1563			1105	906	
Approach Delay, s/veh	24.3			25.1	17.3	
Approach LOS	C			C	B	

Timer - Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		49.7		40.3				40.3
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		39.0		43.0				43.0
Max Q Clear Time (g_c+I1), s		19.7		25.7				26.2
Green Ext Time (p_c), s		3.2		10.6				7.5

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes
User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	930	1182	0	0	551	306	73	52	94	0	0	0
Future Volume (veh/h)	930	1182	0	0	551	306	73	52	94	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	1011	1285	0	0	599	333	79	57	102			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	891	2567	0	0	489	272	336	114	203			
Arrive On Green	0.46	0.72	0.00	0.00	0.22	0.22	0.19	0.19	0.19			
Sat Flow, veh/h	1781	3647	0	0	2296	1224	1781	601	1076			
Grp Volume(v), veh/h	1011	1285	0	0	483	449	79	0	159			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1650	1781	0	1677			
Q Serve(g_s), s	41.0	14.2	0.0	0.0	20.0	20.0	3.4	0.0	7.6			
Cycle Q Clear(g_c), s	41.0	14.2	0.0	0.0	20.0	20.0	3.4	0.0	7.6			
Prop In Lane	1.00		0.00	0.00		0.74	1.00		0.64			
Lane Grp Cap(c), veh/h	891	2567	0	0	395	367	336	0	317			
V/C Ratio(X)	1.13	0.50	0.00	0.00	1.22	1.22	0.23	0.00	0.50			
Avail Cap(c_a), veh/h	891	2567	0	0	395	367	336	0	317			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.37	0.37	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	20.2	5.4	0.0	0.0	35.0	35.0	31.0	0.0	32.7			
Incr Delay (d2), s/veh	66.1	0.1	0.0	0.0	121.4	122.8	1.6	0.0	5.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	43.4	6.1	0.0	0.0	32.6	30.7	2.9	0.0	6.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.3	5.5	0.0	0.0	156.4	157.8	32.6	0.0	38.3			
LnGrp LOS	F	A	A	A	F	F	C	A	D			
Approach Vol, veh/h		2296			932			238				
Approach Delay, s/veh		41.1			157.1			36.4				
Approach LOS		D			F			D				

Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		21.0		69.0			45.0	24.0				
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0				
Max Green Setting (Gmax), s		17.0		65.0			41.0	20.0				
Max Q Clear Time (g_c+I1), s		9.6		16.2			43.0	22.0				
Green Ext Time (p_c), s		0.6		13.8			0.0	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			72.0
HCM 6th LOS			E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1766	104	104	865	0	0	0	0	145	2	282
Future Volume (veh/h)	0	1766	104	104	865	0	0	0	0	145	2	282
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1920	0	113	940	0				158	2	307
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2085		141	2512	0				377	2	334
Arrive On Green	0.00	0.59	0.00	0.08	0.71	0.00				0.21	0.21	0.21
Sat Flow, veh/h	0	3647	1585	1781	3647	0				1781	10	1576
Grp Volume(v), veh/h	0	1920	0	113	940	0				158	0	309
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1777	0				1781	0	1587
Q Serve(g_s), s	0.0	47.6	0.0	6.1	10.3	0.0				7.5	0.0	18.7
Cycle Q Clear(g_c), s	0.0	47.6	0.0	6.1	10.3	0.0				7.5	0.0	18.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	2085		141	2512	0				377	0	336
V/C Ratio(X)	0.00	0.92		0.80	0.37	0.00				0.42	0.00	0.92
Avail Cap(c_a), veh/h	0	2139		164	2611	0				377	0	336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.2	0.0	44.4	5.7	0.0				33.4	0.0	37.8
Incr Delay (d2), s/veh	0.0	7.0	0.0	2.3	0.0	0.0				3.4	0.0	32.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	26.7	0.0	3.6	4.2	0.0				6.4	0.0	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	25.2	0.0	46.7	5.7	0.0				36.8	0.0	70.3
LnGrp LOS	A	C		D	A	A				D	A	E
Approach Vol, veh/h		1920	A		1053						467	
Approach Delay, s/veh		25.2			10.1						59.0	
Approach LOS		C			B						E	

Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			11.8	61.5		24.7		73.3				
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0				
Max Green Setting (Gmax), s			9.0	59.0		18.0		72.0				
Max Q Clear Time (g_c+I1), s			8.1	49.6		20.7		12.3				
Green Ext Time (p_c), s			0.0	7.9		0.0		8.7				

Intersection Summary			
HCM 6th Ctrl Delay			25.2
HCM 6th LOS			C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	238.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	466	137	24	607	208	77
Future Vol, veh/h	466	137	24	607	208	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	507	149	26	660	226	84

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	686	0	-	0	1519	356
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	1163	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	908	-	-	-	~ 131	688
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	297	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	908	-	-	-	~ 51	688
Mov Cap-2 Maneuver	-	-	-	-	~ 51	-
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	297	-

Approach	EB	WB	SB
HCM Control Delay, s	10.7	0	$ 1248.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	908	-	-	-	51	688
HCM Lane V/C Ratio	0.558	-	-	-	4.433	0.122
HCM Control Delay (s)	13.8	0	-	-	$ 1706.8	11
HCM Lane LOS	B	A	-	-	F	B
HCM 95th %tile Q(veh)	3.5	-	-	-	25.2	0.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	357	0	563	0	1	2	394	1196	8	1	924	481
Future Volume (veh/h)	357	0	563	0	1	2	394	1196	8	1	924	481
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	388	0	612	0	1	2	428	1300	9	1	1004	523
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	0	0	0	2	4	459	2440	17	276	1658	1039
Arrive On Green	0.19	0.00	0.00	0.00	0.00	0.00	0.16	0.67	0.67	0.47	0.47	0.47
Sat Flow, veh/h	1781	388		0	557	1113	1781	3618	25	420	3554	1585
Grp Volume(v), veh/h	388	133.9		0	0	3	428	638	671	1	1004	523
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1670	1781	1777	1866	420	1777	1585
Q Serve(g_s), s	17.0			0.0	0.0	0.2	12.7	16.4	16.4	0.1	18.9	15.3
Cycle Q Clear(g_c), s	17.0			0.0	0.0	0.2	12.7	16.4	16.4	0.1	18.9	15.3
Prop In Lane	1.00			0.00		0.67	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	336			0	0	5	459	1199	1259	276	1658	1039
V/C Ratio(X)	1.15			0.00	0.00	0.56	0.93	0.53	0.53	0.00	0.61	0.50
Avail Cap(c_a), veh/h	336			0	0	297	464	1199	1259	276	1658	1039
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5			0.0	0.0	44.8	19.7	7.4	7.4	12.8	17.9	8.0
Incr Delay (d2), s/veh	97.4			0.0	0.0	68.4	25.7	1.7	1.6	0.0	1.7	1.7
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	24.6			0.0	0.0	0.3	12.5	9.7	10.1	0.0	12.3	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.9			0.0	0.0	113.2	45.4	9.1	9.1	12.9	19.5	9.7
LnGrp LOS	F			A	A	F	D	A	A	B	B	A
Approach Vol, veh/h					3			1737			1528	
Approach Delay, s/veh					113.2			18.1			16.2	
Approach LOS					F			B			B	
Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		64.7			18.7	46.0	21.0	4.3				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		45.0			15.0	26.0	17.0	16.0				
Max Q Clear Time (g_c+I1), s		18.4			14.7	20.9	19.0	2.2				
Green Ext Time (p_c), s		10.7			0.1	3.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			29.6									
HCM 6th LOS			C									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	566	0	0	2114	1469	25
Future Volume (veh/h)	566	0	0	2114	1469	25
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	615	0	0	2298	1622	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	1579	0	0	2269	1663	751
Arrive On Green	0.44	0.00	0.00	0.44	0.47	0.00
Sat Flow, veh/h	3741	0	0	5443	3563	1610
Grp Volume(v), veh/h	615	0	0	2298	1622	0
Grp Sat Flow(s),veh/h/ln	1777	0	0	1702	1781	1610
Q Serve(g_s), s	10.5	0.0	0.0	40.0	40.1	0.0
Cycle Q Clear(g_c), s	10.5	0.0	0.0	40.0	40.1	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1579	0	0	2269	1663	751
V/C Ratio(X)	0.39	0.00	0.00	1.01	0.98	0.00
Avail Cap(c_a), veh/h	1579	0	0	2269	1663	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.8	0.0	0.0	25.0	23.5	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	22.1	17.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.4	0.0	0.0	27.1	26.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.0	0.0	0.0	47.1	40.5	0.0
LnGrp LOS	B	A	A	F	D	A
Approach Vol, veh/h	615			2298	1622	
Approach Delay, s/veh	17.0			47.1	40.5	
Approach LOS	B			D	D	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	46.0	44.0	44.0
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	42.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	42.1	12.5	42.0
Green Ext Time (p_c), s	0.0	4.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	763	0	0	1128	350	307	49	64	0	0	0
Future Volume (veh/h)	404	763	0	0	1128	350	307	49	64	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	439	829	0	0	1226	380	334	53	70			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	436	2448	0	0	1194	362	396	162	215			
Arrive On Green	0.40	1.00	0.00	0.00	0.44	0.44	0.22	0.22	0.22			
Sat Flow, veh/h	1781	3647	0	0	2780	814	1781	731	966			
Grp Volume(v), veh/h	439	829	0	0	802	804	334	0	123			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1724	1781	0	1697			
Q Serve(g_s), s	18.0	0.0	0.0	0.0	40.0	40.0	16.2	0.0	5.5			
Cycle Q Clear(g_c), s	18.0	0.0	0.0	0.0	40.0	40.0	16.2	0.0	5.5			
Prop In Lane	1.00		0.00	0.00		0.47	1.00		0.57			
Lane Grp Cap(c), veh/h	436	2448	0	0	790	766	396	0	377			
V/C Ratio(X)	1.01	0.34	0.00	0.00	1.02	1.05	0.84	0.00	0.33			
Avail Cap(c_a), veh/h	436	2448	0	0	790	766	396	0	377			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.8	0.0	0.0	0.0	25.0	25.0	33.5	0.0	29.4			
Incr Delay (d2), s/veh	42.9	0.1	0.0	0.0	35.8	46.4	19.3	0.0	2.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	12.6	0.0	0.0	0.0	31.8	34.5	13.8	0.0	4.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.7	0.1	0.0	0.0	60.8	71.4	52.8	0.0	31.6			
LnGrp LOS	F	A	A	A	F	F	D	A	C			
Approach Vol, veh/h		1268			1606			457				
Approach Delay, s/veh		21.8			66.1			47.1				
Approach LOS		C			E			D				

Timer - Assigned Phs		2		4			7	8	
Phs Duration (G+Y+Rc), s		24.0		66.0			22.0	44.0	
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0	
Max Green Setting (Gmax), s		20.0		62.0			18.0	40.0	
Max Q Clear Time (g_c+I1), s		18.2		2.0			20.0	42.0	
Green Ext Time (p_c), s		0.4		7.3			0.0	0.0	

Intersection Summary			
HCM 6th Ctrl Delay			46.6
HCM 6th LOS			D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	567	92	150	1847	0	0	0	0	98	3	509
Future Volume (veh/h)	0	567	92	150	1847	0	0	0	0	98	3	509
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	616	0	163	2052	0				107	3	553
Peak Hour Factor	0.92	0.92	0.92	0.92	0.90	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1427		195	1975	0				633	3	561
Arrive On Green	0.00	0.40	0.00	0.22	1.00	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	3647	1585	1781	3647	0				1781	9	1578
Grp Volume(v), veh/h	0	616	0	163	2052	0				107	0	556
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1777	0				1781	0	1586
Q Serve(g_s), s	0.0	11.3	0.0	7.9	0.0	0.0				3.7	0.0	31.3
Cycle Q Clear(g_c), s	0.0	11.3	0.0	7.9	0.0	0.0				3.7	0.0	31.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	1427		195	1975	0				633	0	564
V/C Ratio(X)	0.00	0.43		0.83	1.04	0.00				0.17	0.00	0.99
Avail Cap(c_a), veh/h	0	1427		297	2053	0				633	0	564
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.5	0.0	34.3	0.0	0.0				19.9	0.0	28.8
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.2	19.5	0.0				0.6	0.0	34.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.0	0.0	3.9	6.7	0.0				2.9	0.0	23.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.7	0.0	35.5	19.5	0.0				20.5	0.0	63.5
LnGrp LOS	A	B		D	F	A				C	A	E
Approach Vol, veh/h		616	A		2215						663	
Approach Delay, s/veh		19.7			20.6						56.6	
Approach LOS		B			C						E	

Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			13.9	31.5		44.6		45.4				
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0				
Max Green Setting (Gmax), s			15.0	33.0		30.0		52.0				
Max Q Clear Time (g_c+I1), s			9.9	13.3		33.3		2.0				
Green Ext Time (p_c), s			0.2	4.1		0.0		30.7				

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	734

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	373	105	22	402	629	176
Future Vol, veh/h	373	105	22	402	629	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	405	114	24	437	684	191

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	461	0	-	0	1167	243
Stage 1	-	-	-	-	243	-
Stage 2	-	-	-	-	924	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1100	-	-	-	~ 214	796
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	~ 387	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1100	-	-	-	~ 130	796
Mov Cap-2 Maneuver	-	-	-	-	~ 130	-
Stage 1	-	-	-	-	~ 484	-
Stage 2	-	-	-	-	~ 387	-

Approach	EB	WB	SB
HCM Control Delay, s	7.9	0	$ 1551.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1100	-	-	-	130	796
HCM Lane V/C Ratio	0.369	-	-	-	5.259	0.24
HCM Control Delay (s)	10.2	0	-	-	$ 1982.9	10.9
HCM Lane LOS	B	A	-	-	F	B
HCM 95th %tile Q(veh)	1.7	-	-	-	72.7	0.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	0	239	0	0	7	448	1162	0	0	1354	512
Future Volume (veh/h)	141	0	239	0	0	7	448	1162	0	0	1354	512
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	0	260	0	0	8	487	1263	0	0	1472	557
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	0	0	0	0	13	464	2775	0	80	1946	991
Arrive On Green	0.08	0.00	0.00	0.00	0.00	0.01	0.19	0.78	0.00	0.00	0.55	0.55
Sat Flow, veh/h	1781	153		0	0	1585	1781	3647	0	439	3554	1585
Grp Volume(v), veh/h	153	148.7		0	0	8	487	1263	0	0	1472	557
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1585	1781	1777	0	439	1777	1585
Q Serve(g_s), s	7.0			0.0	0.0	0.5	17.0	10.9	0.0	0.0	28.8	18.3
Cycle Q Clear(g_c), s	7.0			0.0	0.0	0.5	17.0	10.9	0.0	0.0	28.8	18.3
Prop In Lane	1.00			0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	139			0	0	13	464	2775	0	80	1946	991
V/C Ratio(X)	1.10			0.00	0.00	0.63	1.05	0.46	0.00	0.00	0.76	0.56
Avail Cap(c_a), veh/h	139			0	0	282	464	2775	0	80	1946	991
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	41.5			0.0	0.0	44.5	27.1	3.4	0.0	0.0	15.7	9.7
Incr Delay (d2), s/veh	107.2			0.0	0.0	41.1	55.3	0.5	0.0	0.0	2.8	2.3
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.9			0.0	0.0	0.6	24.3	5.0	0.0	0.0	16.9	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	148.7			0.0	0.0	85.6	82.5	3.9	0.0	0.0	18.5	12.0
LnGrp LOS	F			A	A	F	F	A	A	A	B	B
Approach Vol, veh/h					8			1750			2029	
Approach Delay, s/veh					85.6			25.8			16.8	
Approach LOS					F			C			B	

Timer - Assigned Phs		2			5	6	7	8
Phs Duration (G+Y+Rc), s		74.3			21.0	53.3	11.0	4.7
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s		55.0			17.0	34.0	7.0	16.0
Max Q Clear Time (g_c+I1), s		12.9			19.0	30.8	9.0	2.5
Green Ext Time (p_c), s		13.0			0.0	2.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1483	0	0	1029	601	232
Future Volume (veh/h)	1483	0	0	1029	601	232
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	1612	0	0	1118	452	467
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	2102	0	0	1463	890	804
Arrive On Green	0.41	0.00	0.00	0.41	0.50	0.50
Sat Flow, veh/h	5443	0	0	3741	1781	1610
Grp Volume(v), veh/h	1612	0	0	1118	452	467
Grp Sat Flow(s),veh/h/ln	1702	0	0	1777	1781	1610
Q Serve(g_s), s	24.4	0.0	0.0	24.3	15.3	18.4
Cycle Q Clear(g_c), s	24.4	0.0	0.0	24.3	15.3	18.4
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2102	0	0	1463	890	804
V/C Ratio(X)	0.77	0.00	0.00	0.76	0.51	0.58
Avail Cap(c_a), veh/h	2440	0	0	1698	890	804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	0.0	22.7	15.1	15.9
Incr Delay (d2), s/veh	1.3	0.0	0.0	1.8	2.1	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.6	0.0	0.0	15.2	10.5	11.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.1	0.0	0.0	24.5	17.2	18.9
LnGrp LOS	C	A	A	C	B	B
Approach Vol, veh/h	1612			1118	919	
Approach Delay, s/veh	24.1			24.5	18.1	
Approach LOS	C			C	B	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	49.0	41.0	41.0
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	39.0	43.0	43.0
Max Q Clear Time (g_c+I1), s	20.4	26.4	26.3
Green Ext Time (p_c), s	3.2	10.6	7.6

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	954	1197	0	0	555	306	73	52	94	0	0	0
Future Volume (veh/h)	954	1197	0	0	555	306	73	52	94	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	1037	1301	0	0	603	333	79	57	102			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	891	2567	0	0	491	271	336	114	203			
Arrive On Green	0.46	0.72	0.00	0.00	0.22	0.22	0.19	0.19	0.19			
Sat Flow, veh/h	1781	3647	0	0	2302	1219	1781	601	1076			
Grp Volume(v), veh/h	1037	1301	0	0	485	451	79	0	159			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1651	1781	0	1677			
Q Serve(g_s), s	41.0	14.4	0.0	0.0	20.0	20.0	3.4	0.0	7.6			
Cycle Q Clear(g_c), s	41.0	14.4	0.0	0.0	20.0	20.0	3.4	0.0	7.6			
Prop In Lane	1.00		0.00	0.00		0.74	1.00		0.64			
Lane Grp Cap(c), veh/h	891	2567	0	0	395	367	336	0	317			
V/C Ratio(X)	1.16	0.51	0.00	0.00	1.23	1.23	0.23	0.00	0.50			
Avail Cap(c_a), veh/h	891	2567	0	0	395	367	336	0	317			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.34	0.34	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	20.2	5.5	0.0	0.0	35.0	35.0	31.0	0.0	32.7			
Incr Delay (d2), s/veh	78.1	0.1	0.0	0.0	123.4	124.8	1.6	0.0	5.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	47.5	6.1	0.0	0.0	32.9	31.0	2.9	0.0	6.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.3	5.5	0.0	0.0	158.4	159.8	32.6	0.0	38.3			
LnGrp LOS	F	A	A	A	F	F	C	A	D			
Approach Vol, veh/h		2338			936			238				
Approach Delay, s/veh		46.7			159.0			36.4				
Approach LOS		D			F			D				
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		21.0		69.0			45.0	24.0				
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0				
Max Green Setting (Gmax), s		17.0		65.0			41.0	20.0				
Max Q Clear Time (g_c+I1), s		9.6		16.4			43.0	22.0				
Green Ext Time (p_c), s		0.6		14.1			0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			75.9									
HCM 6th LOS			E									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1805	104	104	869	0	0	0	0	145	2	290
Future Volume (veh/h)	0	1805	104	104	869	0	0	0	0	145	2	290
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1962	0	113	945	0				158	2	315
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2102		141	2529	0				368	2	326
Arrive On Green	0.00	0.59	0.00	0.08	0.71	0.00				0.21	0.21	0.21
Sat Flow, veh/h	0	3647	1585	1781	3647	0				1781	10	1577
Grp Volume(v), veh/h	0	1962	0	113	945	0				158	0	317
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1777	0				1781	0	1587
Q Serve(g_s), s	0.0	49.3	0.0	6.1	10.2	0.0				7.6	0.0	19.4
Cycle Q Clear(g_c), s	0.0	49.3	0.0	6.1	10.2	0.0				7.6	0.0	19.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	2102		141	2529	0				368	0	328
V/C Ratio(X)	0.00	0.93		0.80	0.37	0.00				0.43	0.00	0.97
Avail Cap(c_a), veh/h	0	2139		164	2611	0				368	0	328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.2	0.0	44.4	5.6	0.0				33.8	0.0	38.5
Incr Delay (d2), s/veh	0.0	8.2	0.0	2.3	0.0	0.0				3.6	0.0	41.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	27.9	0.0	3.6	4.1	0.0				6.5	0.0	16.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	26.4	0.0	46.7	5.6	0.0				37.5	0.0	80.4
LnGrp LOS	A	C		D	A	A				D	A	F
Approach Vol, veh/h		1962	A		1058						475	
Approach Delay, s/veh		26.4			10.0						66.1	
Approach LOS		C			A						E	

Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			11.8	62.0		24.3		73.7				
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0				
Max Green Setting (Gmax), s			9.0	59.0		18.0		72.0				
Max Q Clear Time (g_c+I1), s			8.1	51.3		21.4		12.2				
Green Ext Time (p_c), s			0.0	6.6		0.0		8.8				

Intersection Summary			
HCM 6th Ctrl Delay			26.8
HCM 6th LOS			C

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	237.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	466	137	24	607	208	81
Future Vol, veh/h	466	137	24	607	208	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	507	149	26	660	226	88

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	686	0	-	0	1519	356
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	1163	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	908	-	-	-	~ 131	688
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	297	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	908	-	-	-	~ 51	688
Mov Cap-2 Maneuver	-	-	-	-	~ 51	-
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	297	-

Approach	EB	WB	SB
HCM Control Delay, s	10.7	0	$ 1231.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	908	-	-	-	51	688
HCM Lane V/C Ratio	0.558	-	-	-	4.433	0.128
HCM Control Delay (s)	13.8	0	-	$ 1706.8		11
HCM Lane LOS	B	A	-	-	F	B
HCM 95th %tile Q(veh)	3.5	-	-	-	25.2	0.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	0	666	0	1	3	466	1370	10	1	1076	565
Future Volume (veh/h)	379	0	666	0	1	3	466	1370	10	1	1076	565
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	412	0	724	0	1	3	507	1489	11	1	1170	614
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	0	0	0	2	5	430	2435	18	236	1643	1032
Arrive On Green	0.19	0.00	0.00	0.00	0.00	0.00	0.17	0.67	0.67	0.46	0.46	0.46
Sat Flow, veh/h	1781	412		0	412	1236	1781	3616	27	350	3554	1585
Grp Volume(v), veh/h	412	161.2		0	0	4	507	731	769	1	1170	614
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1648	1781	1777	1866	350	1777	1585
Q Serve(g_s), s	17.0			0.0	0.0	0.2	15.0	20.6	20.6	0.1	23.7	19.8
Cycle Q Clear(g_c), s	17.0			0.0	0.0	0.2	15.0	20.6	20.6	1.7	23.7	19.8
Prop In Lane	1.00			0.00		0.75	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	336			0	0	7	430	1197	1257	236	1643	1032
V/C Ratio(X)	1.22			0.00	0.00	0.57	1.18	0.61	0.61	0.00	0.71	0.59
Avail Cap(c_a), veh/h	336			0	0	293	430	1197	1257	236	1643	1032
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5			0.0	0.0	44.7	24.4	8.2	8.2	13.9	19.4	8.9
Incr Delay (d2), s/veh	124.7			0.0	0.0	57.8	102.6	2.3	2.2	0.0	2.7	2.5
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	28.6			0.0	0.0	0.4	31.3	11.8	12.2	0.0	14.9	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.2			0.0	0.0	102.5	127.0	10.5	10.4	13.9	22.0	11.5
LnGrp LOS	F			A	A	F	F	B	B	B	C	B
Approach Vol, veh/h					4			2007			1785	
Approach Delay, s/veh					102.5			39.9			18.4	
Approach LOS					F			D			B	

Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		64.6			19.0	45.6	21.0	4.4				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		45.0			15.0	26.0	17.0	16.0				
Max Q Clear Time (g_c+I1), s		22.6			17.0	25.7	19.0	2.2				
Green Ext Time (p_c), s		11.8			0.0	0.2	0.0	0.0				

Intersection Summary		
HCM 6th Ctrl Delay		42.7
HCM 6th LOS		D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	618	0	0	2405	1653	30
Future Volume (veh/h)	618	0	0	2405	1653	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	672	0	0	2614	1828	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	1579	0	0	2269	1663	751
Arrive On Green	0.44	0.00	0.00	0.44	0.47	0.00
Sat Flow, veh/h	3741	0	0	5443	3563	1610
Grp Volume(v), veh/h	672	0	0	2614	1828	0
Grp Sat Flow(s),veh/h/ln	1777	0	0	1702	1781	1610
Q Serve(g_s), s	11.7	0.0	0.0	40.0	42.0	0.0
Cycle Q Clear(g_c), s	11.7	0.0	0.0	40.0	42.0	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1579	0	0	2269	1663	751
V/C Ratio(X)	0.43	0.00	0.00	1.15	1.10	0.00
Avail Cap(c_a), veh/h	1579	0	0	2269	1663	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.1	0.0	0.0	25.0	24.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	73.9	54.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	0.0	0.0	43.7	40.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.3	0.0	0.0	98.9	78.6	0.0
LnGrp LOS	B	A	A	F	F	A
Approach Vol, veh/h	672			2614	1828	
Approach Delay, s/veh	17.3			98.9	78.6	
Approach LOS	B			F	E	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	46.0	44.0	44.0
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	42.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	44.0	13.7	42.0
Green Ext Time (p_c), s	0.0	5.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	80.9
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	445	889	0	0	1309	415	361	58	75	0	0	0
Future Volume (veh/h)	445	889	0	0	1309	415	361	58	75	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	484	966	0	0	1423	451	392	63	82			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	436	2488	0	0	1224	371	376	156	203			
Arrive On Green	0.20	0.70	0.00	0.00	0.46	0.46	0.21	0.21	0.21			
Sat Flow, veh/h	1781	3647	0	0	2780	814	1781	738	960			
Grp Volume(v), veh/h	484	966	0	0	919	955	392	0	145			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1724	1781	0	1698			
Q Serve(g_s), s	18.0	10.1	0.0	0.0	41.0	41.0	19.0	0.0	6.6			
Cycle Q Clear(g_c), s	18.0	10.1	0.0	0.0	41.0	41.0	19.0	0.0	6.6			
Prop In Lane	1.00		0.00	0.00		0.47	1.00		0.57			
Lane Grp Cap(c), veh/h	436	2488	0	0	809	785	376	0	358			
V/C Ratio(X)	1.11	0.39	0.00	0.00	1.13	1.22	1.04	0.00	0.40			
Avail Cap(c_a), veh/h	436	2488	0	0	809	785	376	0	358			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.0	5.6	0.0	0.0	24.5	24.5	35.5	0.0	30.6			
Incr Delay (d2), s/veh	73.8	0.1	0.0	0.0	75.7	109.0	57.9	0.0	3.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	20.2	5.5	0.0	0.0	46.4	56.7	20.7	0.0	5.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.8	5.6	0.0	0.0	100.2	133.5	93.4	0.0	34.0			
LnGrp LOS	F	A	A	A	F	F	F	A	C			
Approach Vol, veh/h		1450			1874			537				
Approach Delay, s/veh		38.1			117.2			77.3				
Approach LOS		D			F			E				

Timer - Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		23.0		67.0			22.0	45.0
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		19.0		63.0			18.0	41.0
Max Q Clear Time (g_c+I1), s		21.0		12.1			20.0	43.0
Green Ext Time (p_c), s		0.0		8.9			0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	81.9
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	644	106	177	2162	0	0	0	0	116	4	552
Future Volume (veh/h)	0	644	106	177	2162	0	0	0	0	116	4	552
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	700	0	192	2350	0				126	4	600
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1468		227	2067	0				600	4	531
Arrive On Green	0.00	0.41	0.00	0.13	0.58	0.00				0.34	0.34	0.34
Sat Flow, veh/h	0	3647	1585	1781	3647	0				1781	11	1576
Grp Volume(v), veh/h	0	700	0	192	2350	0				126	0	604
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1777	0				1781	0	1587
Q Serve(g_s), s	0.0	14.1	0.0	10.3	57.0	0.0				4.9	0.0	33.0
Cycle Q Clear(g_c), s	0.0	14.1	0.0	10.3	57.0	0.0				4.9	0.0	33.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	1468		227	2067	0				600	0	534
V/C Ratio(X)	0.00	0.48		0.84	1.14	0.00				0.21	0.00	1.13
Avail Cap(c_a), veh/h	0	1468		327	2067	0				600	0	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.0	0.0	41.8	20.5	0.0				23.2	0.0	32.5
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.3	62.3	0.0				0.8	0.0	80.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.7	0.0	5.6	47.2	0.0				3.9	0.0	34.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.3	0.0	43.1	82.8	0.0				24.0	0.0	112.6
LnGrp LOS	A	C		D	F	A				C	A	F
Approach Vol, veh/h		700	A		2542						730	
Approach Delay, s/veh		21.3			79.8						97.3	
Approach LOS		C			E						F	

Timer - Assigned Phs			3	4		6		8
Phs Duration (G+Y+Rc), s			16.5	44.5		37.0		61.0
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s			18.0	35.0		33.0		57.0
Max Q Clear Time (g_c+I1), s			12.3	16.1		35.0		59.0
Green Ext Time (p_c), s			0.2	4.7		0.0		0.0

Intersection Summary			
HCM 6th Ctrl Delay			72.7
HCM 6th LOS			E

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1277.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	399	124	26	476	745	190
Future Vol, veh/h	399	124	26	476	745	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	434	135	28	517	810	207

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	545	0	-	0	1290	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	1003	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1024	-	-	-	~ 180	752
Stage 1	-	-	-	-	~ 762	-
Stage 2	-	-	-	-	~ 355	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1024	-	-	-	~ 98	752
Mov Cap-2 Maneuver	-	-	-	-	~ 98	-
Stage 1	-	-	-	-	~ 413	-
Stage 2	-	-	-	-	~ 355	-

Approach	EB	WB	SB
HCM Control Delay, s	8.4	0	$ 2672.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1024	-	-	-	98	752
HCM Lane V/C Ratio	0.424	-	-	-	8.263	0.275
HCM Control Delay (s)	11.1	0	-		$ 3351.4	11.6
HCM Lane LOS	B	A	-	-	F	B
HCM 95th %tile Q(veh)	2.1	-	-	-	92.3	1.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	0	283	0	0	9	531	1354	0	0	1555	603
Future Volume (veh/h)	147	0	283	0	0	9	531	1354	0	0	1555	603
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	160	0	308	0	0	10	577	1472	0	0	1690	655
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	119	0	0	0	0	16	407	2808	0	80	2058	1024
Arrive On Green	0.07	0.00	0.00	0.00	0.00	0.01	0.17	0.79	0.00	0.00	0.58	0.58
Sat Flow, veh/h	1781	160		0	0	1585	1781	3647	0	359	3554	1585
Grp Volume(v), veh/h	160	243.8		0	0	10	577	1472	0	0	1690	655
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1585	1781	1777	0	359	1777	1585
Q Serve(g_s), s	6.0			0.0	0.0	0.6	15.0	13.4	0.0	0.0	34.4	22.5
Cycle Q Clear(g_c), s	6.0			0.0	0.0	0.6	15.0	13.4	0.0	0.0	34.4	22.5
Prop In Lane	1.00			0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	119			0	0	16	407	2808	0	80	2058	1024
V/C Ratio(X)	1.35			0.00	0.00	0.64	1.42	0.52	0.00	0.00	0.82	0.64
Avail Cap(c_a), veh/h	119			0	0	282	407	2808	0	80	2058	1024
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	42.0			0.0	0.0	44.4	29.2	3.4	0.0	0.0	15.2	9.6
Incr Delay (d2), s/veh	201.8			0.0	0.0	36.5	201.8	0.7	0.0	0.0	3.8	3.1
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.5			0.0	0.0	0.7	47.3	5.8	0.0	0.0	19.4	12.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	243.8			0.0	0.0	80.9	230.9	4.1	0.0	0.0	19.0	12.7
LnGrp LOS	F			A	A	F	F	A	A	A	B	B
Approach Vol, veh/h					10			2049			2345	
Approach Delay, s/veh					80.9			68.0			17.3	
Approach LOS					F			E			B	
Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		75.1			19.0	56.1	10.0	4.9				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		56.0			15.0	37.0	6.0	16.0				
Max Q Clear Time (g_c+I1), s		15.4			17.0	36.4	8.0	2.6				
Green Ext Time (p_c), s		16.4			0.0	0.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			48.1									
HCM 6th LOS			D									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1656	0	0	1132	655	275
Future Volume (veh/h)	1656	0	0	1132	655	275
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	1800	0	0	1230	506	520
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	2267	0	0	1578	832	752
Arrive On Green	0.44	0.00	0.00	0.44	0.47	0.47
Sat Flow, veh/h	5443	0	0	3741	1781	1610
Grp Volume(v), veh/h	1800	0	0	1230	506	520
Grp Sat Flow(s),veh/h/ln	1702	0	0	1777	1781	1610
Q Serve(g_s), s	27.2	0.0	0.0	26.5	19.0	22.9
Cycle Q Clear(g_c), s	27.2	0.0	0.0	26.5	19.0	22.9
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2267	0	0	1578	832	752
V/C Ratio(X)	0.79	0.00	0.00	0.78	0.61	0.69
Avail Cap(c_a), veh/h	2496	0	0	1737	832	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	0.0	0.0	21.3	17.8	18.9
Incr Delay (d2), s/veh	1.7	0.0	0.0	2.1	3.3	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.9	0.0	0.0	16.2	12.8	14.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	0.0	0.0	23.4	21.1	24.0
LnGrp LOS	C	A	A	C	C	C
Approach Vol, veh/h	1800			1230	1026	
Approach Delay, s/veh	23.2			23.4	22.6	
Approach LOS	C			C	C	

Timer - Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		46.0		44.0				44.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		38.0		44.0				44.0
Max Q Clear Time (g_c+I1), s		24.9		29.2				28.5
Green Ext Time (p_c), s		3.3		10.7				8.0

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1070	1388	0	0	638	362	81	62	112	0	0	0
Future Volume (veh/h)	1070	1388	0	0	638	362	81	62	112	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	1163	1509	0	0	693	393	88	67	122			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	872	2567	0	0	510	289	336	112	204			
Arrive On Green	0.44	0.72	0.00	0.00	0.23	0.23	0.19	0.19	0.19			
Sat Flow, veh/h	1781	3647	0	0	2280	1238	1781	594	1082			
Grp Volume(v), veh/h	1163	1509	0	0	563	523	88	0	189			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1647	1781	0	1676			
Q Serve(g_s), s	40.0	18.5	0.0	0.0	21.0	21.0	3.8	0.0	9.3			
Cycle Q Clear(g_c), s	40.0	18.5	0.0	0.0	21.0	21.0	3.8	0.0	9.3			
Prop In Lane	1.00		0.00	0.00		0.75	1.00		0.65			
Lane Grp Cap(c), veh/h	872	2567	0	0	415	384	336	0	317			
V/C Ratio(X)	1.33	0.59	0.00	0.00	1.36	1.36	0.26	0.00	0.60			
Avail Cap(c_a), veh/h	872	2567	0	0	415	384	336	0	317			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.14	0.14	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	20.7	6.0	0.0	0.0	34.5	34.5	31.1	0.0	33.4			
Incr Delay (d2), s/veh	151.5	0.0	0.0	0.0	176.2	178.2	1.9	0.0	8.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	71.5	6.7	0.0	0.0	44.2	41.6	3.2	0.0	7.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	172.2	6.1	0.0	0.0	210.7	212.7	33.0	0.0	41.4			
LnGrp LOS	F	A	A	A	F	F	C	A	D			
Approach Vol, veh/h		2672			1086			277				
Approach Delay, s/veh		78.4			211.7			38.8				
Approach LOS		E			F			D				

Timer - Assigned Phs		2		4			7	8
Phs Duration (G+Y+Rc), s		21.0		69.0			44.0	25.0
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0
Max Green Setting (Gmax), s		17.0		65.0			40.0	21.0
Max Q Clear Time (g_c+I1), s		11.3		20.5			42.0	23.0
Green Ext Time (p_c), s		0.6		17.6			0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	111.5
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2072	120	122	1012	0	0	0	0	172	3	312
Future Volume (veh/h)	0	2072	120	122	1012	0	0	0	0	172	3	312
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2252	0	133	1100	0				187	3	339
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2248		145	2683	0				291	2	257
Arrive On Green	0.00	0.63	0.00	0.08	0.76	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	3647	1585	1781	3647	0				1781	14	1573
Grp Volume(v), veh/h	0	2252	0	133	1100	0				187	0	342
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1777	0				1781	0	1587
Q Serve(g_s), s	0.0	62.0	0.0	7.3	10.8	0.0				9.6	0.0	16.0
Cycle Q Clear(g_c), s	0.0	62.0	0.0	7.3	10.8	0.0				9.6	0.0	16.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	2248		145	2683	0				291	0	259
V/C Ratio(X)	0.00	1.00		0.91	0.41	0.00				0.64	0.00	1.32
Avail Cap(c_a), veh/h	0	2248		145	2683	0				291	0	259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.0	0.0	44.7	4.3	0.0				38.3	0.0	41.0
Incr Delay (d2), s/veh	0.0	19.4	0.0	8.5	0.0	0.0				10.5	0.0	168.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	36.5	0.0	4.4	3.8	0.0				8.7	0.0	28.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	37.4	0.0	53.1	4.3	0.0				48.8	0.0	209.4
LnGrp LOS	A	F		D	A	A				D	A	F
Approach Vol, veh/h		2252	A		1233						529	
Approach Delay, s/veh		37.4			9.5						152.6	
Approach LOS		D			A						F	

Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			12.0	66.0		20.0		78.0				
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0				
Max Green Setting (Gmax), s			8.0	62.0		16.0		74.0				
Max Q Clear Time (g_c+I1), s			9.3	64.0		18.0		12.8				
Green Ext Time (p_c), s			0.0	0.0		0.0		11.1				

Intersection Summary			
HCM 6th Ctrl Delay			44.0
HCM 6th LOS			D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	609.9					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	499	162	29	719	246	91
Future Vol, veh/h	499	162	29	719	246	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	542	176	32	782	267	99

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	814	0	-	0	1683	423
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	1260	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	813	-	-	-	~ 104	631
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	~ 267	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	813	-	-	-	~ 27	631
Mov Cap-2 Maneuver	-	-	-	-	~ 27	-
Stage 1	-	-	-	-	~ 173	-
Stage 2	-	-	-	-	~ 267	-

Approach	EB	WB	SB
HCM Control Delay, s	13.5	0	$ 3133.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	813	-	-	-	27	631
HCM Lane V/C Ratio	0.667	-	-	-	9.903	0.157
HCM Control Delay (s)	17.8	0	-	-	$ 4288	11.8
HCM Lane LOS	C	A	-	-	F	B
HCM 95th %tile Q(veh)	5.2	-	-	-	33.1	0.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	406	0	666	0	1	3	466	1397	10	1	1082	565
Future Volume (veh/h)	406	0	666	0	1	3	466	1397	10	1	1082	565
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	441	0	724	0	1	3	507	1518	11	1	1176	614
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	336	0	0	0	2	5	429	2436	18	229	1643	1032
Arrive On Green	0.19	0.00	0.00	0.00	0.00	0.00	0.17	0.67	0.67	0.46	0.46	0.46
Sat Flow, veh/h	1781	441		0	412	1236	1781	3616	26	340	3554	1585
Grp Volume(v), veh/h	441	196.1		0	0	4	507	746	783	1	1176	614
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1648	1781	1777	1866	340	1777	1585
Q Serve(g_s), s	17.0			0.0	0.0	0.2	15.0	21.2	21.3	0.1	23.9	19.8
Cycle Q Clear(g_c), s	17.0			0.0	0.0	0.2	15.0	21.2	21.3	2.4	23.9	19.8
Prop In Lane	1.00			0.00		0.75	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	336			0	0	7	429	1197	1257	229	1643	1032
V/C Ratio(X)	1.31			0.00	0.00	0.57	1.18	0.62	0.62	0.00	0.72	0.59
Avail Cap(c_a), veh/h	336			0	0	293	429	1197	1257	229	1643	1032
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.5			0.0	0.0	44.7	24.5	8.3	8.3	14.3	19.4	8.9
Incr Delay (d2), s/veh	159.6			0.0	0.0	57.8	103.6	2.4	2.3	0.0	2.7	2.5
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	33.8			0.0	0.0	0.4	31.5	12.1	12.6	0.0	15.0	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	196.1			0.0	0.0	102.5	128.0	10.7	10.6	14.3	22.1	11.5
LnGrp LOS	F			A	A	F	F	B	B	B	C	B
Approach Vol, veh/h					4			2036			1791	
Approach Delay, s/veh					102.5			39.9			18.5	
Approach LOS					F			D			B	

Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		64.6			19.0	45.6	21.0	4.4				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		45.0			15.0	26.0	17.0	16.0				
Max Q Clear Time (g_c+I1), s		23.3			17.0	25.9	19.0	2.2				
Green Ext Time (p_c), s		11.9			0.0	0.1	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	47.1
HCM 6th LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	627	0	0	2446	1694	30
Future Volume (veh/h)	627	0	0	2446	1694	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	682	0	0	2659	1872	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	1579	0	0	2269	1663	751
Arrive On Green	0.44	0.00	0.00	0.44	0.47	0.00
Sat Flow, veh/h	3741	0	0	5443	3563	1610
Grp Volume(v), veh/h	682	0	0	2659	1872	0
Grp Sat Flow(s),veh/h/ln	1777	0	0	1702	1781	1610
Q Serve(g_s), s	11.9	0.0	0.0	40.0	42.0	0.0
Cycle Q Clear(g_c), s	11.9	0.0	0.0	40.0	42.0	0.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1579	0	0	2269	1663	751
V/C Ratio(X)	0.43	0.00	0.00	1.17	1.13	0.00
Avail Cap(c_a), veh/h	1579	0	0	2269	1663	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.2	0.0	0.0	25.0	24.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	82.3	65.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.2	0.0	0.0	46.4	44.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.4	0.0	0.0	107.3	89.1	0.0
LnGrp LOS	B	A	A	F	F	A
Approach Vol, veh/h	682			2659	1872	
Approach Delay, s/veh	17.4			107.3	89.1	
Approach LOS	B			F	F	

Timer - Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		46.0		44.0				44.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		42.0		40.0				40.0
Max Q Clear Time (g_c+I1), s		44.0		13.9				42.0
Green Ext Time (p_c), s		0.0		5.1				0.0

Intersection Summary	
HCM 6th Ctrl Delay	89.0
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	892	0	0	1323	415	361	58	75	0	0	0
Future Volume (veh/h)	450	892	0	0	1323	415	361	58	75	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	489	970	0	0	1438	451	392	63	82			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	436	2488	0	0	1228	368	376	156	203			
Arrive On Green	0.20	0.70	0.00	0.00	0.46	0.46	0.21	0.21	0.21			
Sat Flow, veh/h	1781	3647	0	0	2789	807	1781	738	960			
Grp Volume(v), veh/h	489	970	0	0	925	964	392	0	145			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1725	1781	0	1698			
Q Serve(g_s), s	18.0	10.1	0.0	0.0	41.0	41.0	19.0	0.0	6.6			
Cycle Q Clear(g_c), s	18.0	10.1	0.0	0.0	41.0	41.0	19.0	0.0	6.6			
Prop In Lane	1.00		0.00	0.00		0.47	1.00		0.57			
Lane Grp Cap(c), veh/h	436	2488	0	0	809	786	376	0	358			
V/C Ratio(X)	1.12	0.39	0.00	0.00	1.14	1.23	1.04	0.00	0.40			
Avail Cap(c_a), veh/h	436	2488	0	0	809	786	376	0	358			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.0	5.6	0.0	0.0	24.5	24.5	35.5	0.0	30.6			
Incr Delay (d2), s/veh	77.9	0.1	0.0	0.0	78.6	113.3	57.9	0.0	3.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	21.0	5.6	0.0	0.0	47.5	58.2	20.7	0.0	5.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.9	5.7	0.0	0.0	103.1	137.8	93.4	0.0	34.0			
LnGrp LOS	F	A	A	A	F	F	F	A	C			
Approach Vol, veh/h		1459			1889			537				
Approach Delay, s/veh		39.6			120.8			77.3				
Approach LOS		D			F			E				

Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		23.0		67.0			22.0	45.0				
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0				
Max Green Setting (Gmax), s		19.0		63.0			18.0	41.0				
Max Q Clear Time (g_c+I1), s		21.0		12.1			20.0	43.0				
Green Ext Time (p_c), s		0.0		9.0			0.0	0.0				

Intersection Summary		
HCM 6th Ctrl Delay		84.3
HCM 6th LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	652	106	177	2176	0	0	0	0	116	4	579
Future Volume (veh/h)	0	652	106	177	2176	0	0	0	0	116	4	579
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	709	0	192	2365	0				126	4	629
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1468		227	2067	0				600	3	531
Arrive On Green	0.00	0.41	0.00	0.13	0.58	0.00				0.34	0.34	0.34
Sat Flow, veh/h	0	3647	1585	1781	3647	0				1781	10	1577
Grp Volume(v), veh/h	0	709	0	192	2365	0				126	0	633
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1777	0				1781	0	1587
Q Serve(g_s), s	0.0	14.3	0.0	10.3	57.0	0.0				4.9	0.0	33.0
Cycle Q Clear(g_c), s	0.0	14.3	0.0	10.3	57.0	0.0				4.9	0.0	33.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	1468		227	2067	0				600	0	534
V/C Ratio(X)	0.00	0.48		0.84	1.14	0.00				0.21	0.00	1.18
Avail Cap(c_a), veh/h	0	1468		327	2067	0				600	0	534
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.1	0.0	41.8	20.5	0.0				23.2	0.0	32.5
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.3	65.5	0.0				0.8	0.0	101.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.8	0.0	5.6	48.5	0.0				3.9	0.0	39.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.3	0.0	43.1	86.0	0.0				24.0	0.0	133.5
LnGrp LOS	A	C		D	F	A				C	A	F
Approach Vol, veh/h		709	A		2557						759	
Approach Delay, s/veh		21.3			82.8						115.3	
Approach LOS		C			F						F	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			16.5	44.5		37.0		61.0				
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0				
Max Green Setting (Gmax), s			18.0	35.0		33.0		57.0				
Max Q Clear Time (g_c+I1), s			12.3	16.3		35.0		59.0				
Green Ext Time (p_c), s			0.2	4.8		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			78.1									
HCM 6th LOS			E									

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	1268.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	399	124	26	476	745	204
Future Vol, veh/h	399	124	26	476	745	204
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	434	135	28	517	810	222

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	545	0	-	0	1290	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	1003	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1024	-	-	-	~ 180	752
Stage 1	-	-	-	-	~ 762	-
Stage 2	-	-	-	-	~ 355	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1024	-	-	-	~ 98	752
Mov Cap-2 Maneuver	-	-	-	-	~ 98	-
Stage 1	-	-	-	-	~ 413	-
Stage 2	-	-	-	-	~ 355	-

Approach	EB	WB	SB
HCM Control Delay, s	8.4	0	$ 2633.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1024	-	-	-	98	752
HCM Lane V/C Ratio	0.424	-	-	-	8.263	0.295
HCM Control Delay (s)	11.1	0	-	$	3351.4	11.8
HCM Lane LOS	B	A	-	-	F	B
HCM 95th %tile Q(veh)	2.1	-	-	-	92.3	1.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	0	283	0	0	9	531	1361	0	0	1581	603
Future Volume (veh/h)	154	0	283	0	0	9	531	1361	0	0	1581	603
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	167	0	308	0	0	10	577	1479	0	0	1718	655
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	119	0	0	0	0	16	404	2808	0	80	2058	1024
Arrive On Green	0.07	0.00	0.00	0.00	0.00	0.01	0.17	0.79	0.00	0.00	0.58	0.58
Sat Flow, veh/h	1781	167		0	0	1585	1781	3647	0	357	3554	1585
Grp Volume(v), veh/h	167	267.4		0	0	10	577	1479	0	0	1718	655
Grp Sat Flow(s),veh/h/ln	1781	F		0	0	1585	1781	1777	0	357	1777	1585
Q Serve(g_s), s	6.0			0.0	0.0	0.6	15.0	13.5	0.0	0.0	35.5	22.5
Cycle Q Clear(g_c), s	6.0			0.0	0.0	0.6	15.0	13.5	0.0	0.0	35.5	22.5
Prop In Lane	1.00			0.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	119			0	0	16	404	2808	0	80	2058	1024
V/C Ratio(X)	1.41			0.00	0.00	0.64	1.43	0.53	0.00	0.00	0.83	0.64
Avail Cap(c_a), veh/h	119			0	0	282	404	2808	0	80	2058	1024
HCM Platoon Ratio	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00			0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	42.0			0.0	0.0	44.4	29.4	3.4	0.0	0.0	15.4	9.6
Incr Delay (d2), s/veh	225.4			0.0	0.0	36.5	205.9	0.7	0.0	0.0	4.2	3.1
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.8			0.0	0.0	0.7	47.8	5.9	0.0	0.0	20.0	12.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	267.4			0.0	0.0	80.9	235.2	4.1	0.0	0.0	19.6	12.7
LnGrp LOS	F			A	A	F	F	A	A	A	B	B
Approach Vol, veh/h					10			2056			2373	
Approach Delay, s/veh					80.9			69.0			17.7	
Approach LOS					F			E			B	
Timer - Assigned Phs		2			5	6	7	8				
Phs Duration (G+Y+Rc), s		75.1			19.0	56.1	10.0	4.9				
Change Period (Y+Rc), s		4.0			4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s		56.0			15.0	37.0	6.0	16.0				
Max Q Clear Time (g_c+I1), s		15.5			17.0	37.5	8.0	2.6				
Green Ext Time (p_c), s		16.5			0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			49.8									
HCM 6th LOS			D									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1694	0	0	1143	666	275
Future Volume (veh/h)	1694	0	0	1143	666	275
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	0	0	1870	1870	1900
Adj Flow Rate, veh/h	1841	0	0	1242	512	527
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	2	2	0
Cap, veh/h	2294	0	0	1596	823	744
Arrive On Green	0.45	0.00	0.00	0.45	0.46	0.46
Sat Flow, veh/h	5443	0	0	3741	1781	1610
Grp Volume(v), veh/h	1841	0	0	1242	512	527
Grp Sat Flow(s),veh/h/ln	1702	0	0	1777	1781	1610
Q Serve(g_s), s	28.0	0.0	0.0	26.6	19.5	23.6
Cycle Q Clear(g_c), s	28.0	0.0	0.0	26.6	19.5	23.6
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2294	0	0	1596	823	744
V/C Ratio(X)	0.80	0.00	0.00	0.78	0.62	0.71
Avail Cap(c_a), veh/h	2496	0	0	1737	823	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	0.0	0.0	21.0	18.3	19.4
Incr Delay (d2), s/veh	1.8	0.0	0.0	2.1	3.5	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.2	0.0	0.0	16.3	13.2	14.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.2	0.0	0.0	23.1	21.8	25.0
LnGrp LOS	C	A	A	C	C	C
Approach Vol, veh/h	1841			1242	1039	
Approach Delay, s/veh	23.2			23.1	23.4	
Approach LOS	C			C	C	

Timer - Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	45.6	44.4	44.4
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	38.0	44.0	44.0
Max Q Clear Time (g_c+I1), s	25.6	30.0	28.6
Green Ext Time (p_c), s	3.3	10.5	8.1

Intersection Summary	
HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1090	1401	0	0	642	362	81	62	112	0	0	0
Future Volume (veh/h)	1090	1401	0	0	642	362	81	62	112	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	1185	1523	0	0	698	393	88	67	122			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	872	2567	0	0	512	288	336	112	204			
Arrive On Green	0.44	0.72	0.00	0.00	0.23	0.23	0.19	0.19	0.19			
Sat Flow, veh/h	1781	3647	0	0	2286	1233	1781	594	1082			
Grp Volume(v), veh/h	1185	1523	0	0	565	526	88	0	189			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1648	1781	0	1676			
Q Serve(g_s), s	40.0	18.7	0.0	0.0	21.0	21.0	3.8	0.0	9.3			
Cycle Q Clear(g_c), s	40.0	18.7	0.0	0.0	21.0	21.0	3.8	0.0	9.3			
Prop In Lane	1.00		0.00	0.00		0.75	1.00		0.65			
Lane Grp Cap(c), veh/h	872	2567	0	0	415	385	336	0	317			
V/C Ratio(X)	1.36	0.59	0.00	0.00	1.36	1.37	0.26	0.00	0.60			
Avail Cap(c_a), veh/h	872	2567	0	0	415	385	336	0	317			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.10	0.10	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	20.7	6.1	0.0	0.0	34.5	34.5	31.1	0.0	33.4			
Incr Delay (d2), s/veh	162.5	0.0	0.0	0.0	178.7	180.7	1.9	0.0	8.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	75.0	6.6	0.0	0.0	44.6	42.0	3.2	0.0	7.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	183.2	6.1	0.0	0.0	213.2	215.2	33.0	0.0	41.4			
LnGrp LOS	F	A	A	A	F	F	C	A	D			
Approach Vol, veh/h		2708			1091			277				
Approach Delay, s/veh		83.6			214.2			38.8				
Approach LOS		F			F			D				

Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		21.0		69.0			44.0	25.0				
Change Period (Y+Rc), s		4.0		4.0			4.0	4.0				
Max Green Setting (Gmax), s		17.0		65.0			40.0	21.0				
Max Q Clear Time (g_c+I1), s		11.3		20.7			42.0	23.0				
Green Ext Time (p_c), s		0.6		17.8			0.0	0.0				

Intersection Summary			
HCM 6th Ctrl Delay			115.5
HCM 6th LOS			F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2105	120	122	1016	0	0	0	0	172	3	319
Future Volume (veh/h)	0	2105	120	122	1016	0	0	0	0	172	3	319
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2288	0	133	1104	0				187	3	347
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2248		145	2683	0				291	2	257
Arrive On Green	0.00	0.63	0.00	0.08	0.76	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	3647	1585	1781	3647	0				1781	14	1574
Grp Volume(v), veh/h	0	2288	0	133	1104	0				187	0	350
Grp Sat Flow(s),veh/h/ln	0	1777	1585	1781	1777	0				1781	0	1587
Q Serve(g_s), s	0.0	62.0	0.0	7.3	10.8	0.0				9.6	0.0	16.0
Cycle Q Clear(g_c), s	0.0	62.0	0.0	7.3	10.8	0.0				9.6	0.0	16.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	2248		145	2683	0				291	0	259
V/C Ratio(X)	0.00	1.02		0.91	0.41	0.00				0.64	0.00	1.35
Avail Cap(c_a), veh/h	0	2248		145	2683	0				291	0	259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.0	0.0	44.7	4.3	0.0				38.3	0.0	41.0
Incr Delay (d2), s/veh	0.0	23.5	0.0	8.5	0.0	0.0				10.5	0.0	181.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	38.5	0.0	4.4	3.9	0.0				8.7	0.0	30.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	41.5	0.0	53.1	4.3	0.0				48.8	0.0	222.1
LnGrp LOS	A	F		D	A	A				D	A	F
Approach Vol, veh/h		2288	A		1237						537	
Approach Delay, s/veh		41.5			9.5						161.8	
Approach LOS		D			A						F	

Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			12.0	66.0		20.0		78.0				
Change Period (Y+Rc), s			4.0	4.0		4.0		4.0				
Max Green Setting (Gmax), s			8.0	62.0		16.0		74.0				
Max Q Clear Time (g_c+I1), s			9.3	64.0		18.0		12.8				
Green Ext Time (p_c), s			0.0	0.0		0.0		11.1				

Intersection Summary			
HCM 6th Ctrl Delay			47.7
HCM 6th LOS			D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	608.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	499	162	29	719	246	95
Future Vol, veh/h	499	162	29	719	246	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	542	176	32	782	267	103

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	814	0	-	0	1683	423
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	1260	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	813	-	-	-	~ 104	631
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	~ 267	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	813	-	-	-	~ 27	631
Mov Cap-2 Maneuver	-	-	-	-	~ 27	-
Stage 1	-	-	-	-	~ 173	-
Stage 2	-	-	-	-	~ 267	-

Approach	EB		WB		SB	
HCM Control Delay, s	13.5		0		$ 3096.7	
HCM LOS					F	

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	813	-	-	-	27	631
HCM Lane V/C Ratio	0.667	-	-	-	9.903	0.164
HCM Control Delay (s)	17.8	0	-	-	$ 4288	11.8
HCM Lane LOS	C	A	-	-	F	B
HCM 95th %tile Q(veh)	5.2	-	-	-	33.1	0.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	3	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	4,832	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,783	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **32.4** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,929	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,641	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **29.8** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,775	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,045	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **19.0** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,155	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,150	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \leq$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **20.9** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,955	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,761	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **32.0** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive ***AM Peak Hour***

GEOMETRIC DATA INPUTS			**DEMAND INPUTS**		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,742	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,493	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **27.1** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	4	ft
Total Ramp Density (TRD):	2.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	5,640	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,249	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **22.7** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,630	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,246	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **22.7** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,216	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	933	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **17.0** pc/mi/ln

Level of Service (LOS): LOS: **B**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,207	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,817	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **33.0** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,660	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,351	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **24.6** pc/mi/ln

Level of Service (LOS): — LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

EXISTING YEAR 2017 CONDITIONS

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	2,563	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	709	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **12.9** pc/mi/ln

Level of Service (LOS): LOS: **B**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,081	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,875	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)\ ^\wedge a]}{(c_{adj} - BP)\ ^\wedge a}$

S: **54.9** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **34.2** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,609	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,829	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **33.3** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,739	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,035	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \leq$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

		S:	**55.0**	mi/h
Density (D):	D = v_p / S *(Eq. 12-11)*	D:	**18.8**	pc/mi/ln
Level of Service (LOS):		LOS:	**C**	

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS | **DEMAND INPUTS**

Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,680	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,018	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **18.5** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,972	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,765	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **32.1** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,730	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,490	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **27.1** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,556	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,009	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **18.3** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,335	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,181	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **21.5** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	4	ft
Total Ramp Density (TRD):	2.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	5,864	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961	]
		v_p:	1,298	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **23.6** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS / DEMAND INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,868	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,742	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **31.7** pc/mi/ln

Level of Service (LOS): — LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,323	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,964	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **54.3** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **36.2** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 | ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,198	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	885	pc/h/ln
	Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)?		NO	

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **16.1** pc/mi/ln

Level of Service (LOS): LOS: **B**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,835	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,784	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **32.4** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,945	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,645	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **29.9** pc/mi/ln

Level of Service (LOS): — LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,775	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,045	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **19.0** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,155	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,150	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)\ ^\wedge\ a]}{(c_{adj} - BP)\ ^\wedge\ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **20.9** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,961	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,763	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **32.0** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,774	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,500	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **27.3** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,656	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Item	Formula		Value	Units
Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,252	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **22.8** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	2.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	5,633	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,247	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **22.7** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue **AM Peak Hour**

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,232	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	937	pc/h/ln
Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)?			NO	

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)\ ^\wedge\ a]}{(c_{adj} - BP)\ ^\wedge\ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **17.0** pc/mi/ln

Level of Service (LOS): LOS: **B**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,210	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,818	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **33.0** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,667	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,353	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **24.6** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	2,595	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	718	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)\ ^\wedge\ a]}{(c_{adj} - BP)\ ^\wedge\ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **13.1** pc/mi/ln

Level of Service (LOS): LOS: **B**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS / **DEMAND INPUTS**

Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,096	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,880	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **54.8** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **34.3** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	4	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	6,613	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,830	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **33.3** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,739	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,035	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **18.8** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 **_PM Peak Hour_**

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,680	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,018	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **18.5** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,996	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,770	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **32.2** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,738	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,492	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **27.1** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,560	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,010	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **18.4** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,350	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,184	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **21.5** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,868	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\dfrac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,299	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \dfrac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **23.6** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

EXISTING WITH PROJECT YEAR 2017 CONDITIONS

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,883	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,745	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **31.7** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,353	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,975	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **54.2** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **36.4** pc/mi/ln

Level of Service (LOS): — LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 **PM Peak Hour**

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,206	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	887	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \leq$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **16.1** pc/mi/ln

Level of Service (LOS): LOS: **B**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	3	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	6,077	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,242	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **50.2** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **44.7** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2023 WITHOUT PROJECT CONDITIONS

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,115	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,969	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **54.3** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **36.3** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,960	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,373	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **25.0** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,190	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,436	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **26.1** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,921	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,975	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **54.2** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **36.4** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,632	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,690	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \leq$ c: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **30.7** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street | ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,617	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,465	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **26.6** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS / DEMAND INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,635	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,469	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)\ ^\wedge\ a]}{(c_{adj} - BP)\ ^\wedge\ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **26.7** pc/mi/ln

Level of Service (LOS): — LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue — ***AM Peak Hour***

GEOMETRIC DATA INPUTS / DEMAND INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,018	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,111	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **20.2** pc/mi/ln

Level of Service (LOS): — LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2023 WITHOUT PROJECT CONDITIONS

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	9,325	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,065	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **53.3** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **38.7** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2023 WITHOUT PROJECT CONDITIONS

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,310	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,590	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **28.9** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 | ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,160	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	875	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **15.9** pc/mi/ln

Level of Service (LOS): LOS: **B**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street | ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	3	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	6,511	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,403	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **46.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **52.2** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	4	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	8,308	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,299	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **48.8** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **47.1** pc/mi/ln

Level of Service (LOS): — LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 — ***PM Peak Hour***

GEOMETRIC DATA INPUTS / DEMAND INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,437	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,505	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **27.4** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2023 WITHOUT PROJECT CONDITIONS

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,937	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,366	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **24.8** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,994	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,991	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **54.1** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **36.8** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,872	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,743	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **31.7** pc/mi/ln

Level of Service (LOS): — LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	4	ft
Total Ramp Density (TRD):	2.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	5,554	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,230	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **22.4** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,486	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,436	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **26.1** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,917	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,531	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **27.8** pc/mi/ln

Level of Service (LOS): — LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	9,065	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,007	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **53.9** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **37.2** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2023 WITHOUT PROJECT CONDITIONS

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,129	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,262	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **49.7** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **45.5** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,974	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,100	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **20.0** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	3	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	6,080	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961	]
		v_p:	2,244	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **50.1** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **44.8** pc/mi/ln

Level of Service (LOS): — LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	4	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	7,131	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,974	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **54.3** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **36.3** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 **AM Peak Hour**

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,960	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,373	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **25.0** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 | ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,190	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,436	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **26.1** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive | ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,927	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,976	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **54.2** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **36.5** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,664	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,697	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **30.9** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	4	ft
Total Ramp Density (TRD):	2.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	6,633	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961	]
		v_p:	1,469	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **26.7** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,638	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,470	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **26.7** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,034	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,115	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **20.3** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue **AM Peak Hour**

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	9,328	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,065	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **53.3** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **38.7** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,317	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,593	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **29.0** pc/mi/ln

Level of Service (LOS): — LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2023 WITH PROJECT CONDITIONS

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 **AM Peak Hour**

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,192	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	883	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **16.1** pc/mi/ln

Level of Service (LOS): LOS: **B**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,526	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,408	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **45.9** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **52.5** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,312	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961	]
		v_p:	2,300	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$$

S: **48.8** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **47.1** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,437	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,505	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **27.4** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,937	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,366	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **24.8** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive — ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	2	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	9,018	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,997	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **54.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **37.0** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,880	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,745	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **31.7** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,558	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,231	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **22.4** pc/mi/ln

Level of Service (LOS): — LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,501	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,439	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **26.2** pc/mi/ln

Level of Service (LOS): — LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,921	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,532	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **27.9** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	9,080	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,010	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **53.9** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **37.3** pc/mi/ln

Level of Service (LOS): — LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,159	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,273	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \leq$ c: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)\ ^\wedge\ a]}{(c_{adj} - BP)\ ^\wedge\ a}$$

S: **49.5** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **45.9** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,982	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,102	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **20.0** pc/mi/ln

Level of Service (LOS): — LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street **_AM Peak Hour_**

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,023	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,591	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **39.5** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **65.6** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2040 WITHOUT PROJECT CONDITIONS

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,275	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,290	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **49.1** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **46.6** pc/mi/ln

Level of Service (LOS): — LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2040 WITHOUT PROJECT CONDITIONS

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,699	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,577	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **28.7** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,003	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,661	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **30.2** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	10,478	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,320	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **48.3** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **48.0** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,951	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,982	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **54.2** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **36.6** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,720	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,709	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **31.1** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,737	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,713	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **31.1** pc/mi/ln

Level of Service (LOS): — LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2040 WITHOUT PROJECT CONDITIONS

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,843	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,294	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **23.5** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2040 WITHOUT PROJECT CONDITIONS

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	10,931	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,420	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **45.5** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **53.2** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,026	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,855	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **54.9** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **33.8** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2040 WITHOUT PROJECT CONDITIONS

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	3,661	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,013	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **18.4** pc/mi/ln

Level of Service (LOS): — LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	3	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	7,505	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,769	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **31.8** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **87.1** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2040 WITHOUT PROJECT CONDITIONS

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	9,601	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,657	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **36.9** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **72.0** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,169	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,707	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)\ ^\wedge\ a]}{(c_{adj} - BP)\ ^\wedge\ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **31.0** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 **PM Peak Hour**

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,657	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,566	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **28.5** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	10,554	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,337	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **47.9** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **48.8** pc/mi/ln

Level of Service (LOS): — LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	9,189	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,034	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **53.6** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **38.0** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS / DEMAND INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,446	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,427	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **25.9** pc/mi/ln

Level of Service (LOS): — LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	2.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	7,530	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,667	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **30.3** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,064	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961	]
		v_p:	1,785	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **32.5** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS / DEMAND INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	10,604	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,348	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$$

S: **47.6** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **49.3** pc/mi/ln

Level of Service (LOS): — LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,171	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,646	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **37.3** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **70.9** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,599	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,273	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **23.1** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,026	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,593	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **39.5** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **65.6** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,289	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,294	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **49.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **46.8** pc/mi/ln

Level of Service (LOS): — LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,699	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,577	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **28.7** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2040 WITH PROJECT CONDITIONS

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,003	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,661	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **30.2** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	10,483	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,321	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) \wedge a]}{(c_{adj} - BP) \wedge a}$

S: **48.3** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **48.1** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	2	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	8,978	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,988	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **54.1** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **36.7** pc/mi/ln

Level of Service (LOS): LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	4	ft
Total Ramp Density (TRD):	2.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	7,734	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,712	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **31.1** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,740	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,714	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \leq BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \leq c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **31.2** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue — ***AM Peak Hour***

GEOMETRIC DATA INPUTS / DEMAND INPUTS

Measured Free Flow Speed (FFS):	55.0 mi/h	Hourly Demand Volume (V):	5,857	veh/h
Mainline Lanes (N):	5 lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12 ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4 ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0 ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level	Density at Capacity (D_c):	45.0	pc/mi/ln
		Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,297	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **23.6** pc/mi/ln

Level of Service (LOS): — LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	2.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	10,934	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,421	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **45.5** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* — D: **53.2** pc/mi/ln

Level of Service (LOS): — LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,032	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,857	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$$

S: **54.9** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **33.8** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 — ***AM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	4	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	1.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	3,688	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,021	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **18.6** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Northbound

between Spring Street and Alameda Street/Los Angeles Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,518	veh/h
Mainline Lanes (N):	3	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,774	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **31.6** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **87.8** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

1 US 101 Southbound

between Spring Street and Alameda Street/Los Angeles Street ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	9,605	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961	]
		v_p:	2,658	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$

S: **36.8** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **72.2** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Northbound

between 4th Street and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	4	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	4	ft
Total Ramp Density (TRD):	3.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	6,169	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,707	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **31.0** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

2 US 101 Southbound

between 4th Street and I-5 — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	5,657	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	3.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961	]
		v_p:	1,566	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* D: **28.5** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Northbound

between 4th Street and Cesar E Chavez Drive — ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	5	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	2	ft
Total Ramp Density (TRD):	4.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	10,574	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\dfrac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961	]
		v_p:	2,341	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \dfrac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **47.8** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **49.0** pc/mi/ln

Level of Service (LOS): — LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

3 I-5 Southbound

between 4th Street and Cesar E Chavez Drive — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	9,196	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	2	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	4.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,036	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **53.6** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **38.0** pc/mi/ln

Level of Service (LOS): — LOS: **E**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Eastbound

between Central Avenue and Alameda Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	6,450	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,428	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **26.0** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

FUTURE YEAR 2040 WITH PROJECT CONDITIONS

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

4 I-10 Westbound

between Central Avenue and Alameda Street — ***PM Peak Hour***

GEOMETRIC DATA INPUTS | **DEMAND INPUTS**

Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	7,543	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,670	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le$ BP: FFS_{adj} *(Eq. 12-1)*

If BP < $v_p \le$ c: $$FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^\wedge a]}{(c_{adj} - BP) ^\wedge a}$$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **30.4** pc/mi/ln

Level of Service (LOS): LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Eastbound

between Alameda Street and Santa Fe Avenue — ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	8,068	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	4	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,786	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **32.5** pc/mi/ln

Level of Service (LOS): — LOS: **D**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

5 I-10 Westbound

between Alameda Street and Santa Fe Avenue ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	10,617	veh/h
Mainline Lanes (N):	5	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	2.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,351	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **47.5** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **49.5** pc/mi/ln

Level of Service (LOS): LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

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Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Eastbound

between I-10 and I-5 — ***PM Peak Hour***

GEOMETRIC DATA INPUTS

Measured Free Flow Speed (FFS):	55.0	mi/h
Mainline Lanes (N):	3	lanes
Lane Widths:	12	ft
Right-Side Lateral Clearance:	6	ft
Total Ramp Density (TRD):	1.0	ramps/mi
Terrain Type:	Level	

DEMAND INPUTS

Hourly Demand Volume (V):	7,197	veh/h
Heavy Vehicle Percentage (P_T):	4.04	%
Peak Hour Factor (PHF):	0.940	
Capacity Adj. Factor (CAF):	1.00	
Speed Adj. Factor (SAF):	1.00	
Density at Capacity (D_c):	45.0	pc/mi/ln
Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	2,656	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity ($v_p > c_{adj}$)? **YES**

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): *(Eq. 12-1)*

If $v_p \le BP$: FFS_{adj}

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP)^a]}{(c_{adj} - BP)^a}$

S: **36.9** mi/h

Density (D): $D = v_p / S$ *(Eq. 12-11)* — D: **72.0** pc/mi/ln

Level of Service (LOS): — LOS: **F**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

4th & Hewitt

Highway Capacity Manual 6th Edition - Basic Freeway Segments Worksheet

6 SR 60 Westbound

between I-10 and I-5 ***PM Peak Hour***

GEOMETRIC DATA INPUTS			DEMAND INPUTS		
Measured Free Flow Speed (FFS):	55.0	mi/h	Hourly Demand Volume (V):	4,606	veh/h
Mainline Lanes (N):	4	lanes	Heavy Vehicle Percentage (P_T):	4.04	%
Lane Widths:	12	ft	Peak Hour Factor (PHF):	0.940	
Right-Side Lateral Clearance:	6	ft	Capacity Adj. Factor (CAF):	1.00	
Total Ramp Density (TRD):	1.0	ramps/mi	Speed Adj. Factor (SAF):	1.00	
Terrain Type:	Level		Density at Capacity (D_c):	45.0	pc/mi/ln
			Exponent Calibration Parameter (a):	2.00	

FREE FLOW SPEED, CAPACITY, & FLOW CALCULATIONS

Adjusted Free Flow Speed (FFS_{adj}):	FFS x SAF *(Eq. 12-5)*	FFS_{adj}:	55.0	mi/h
Basic Freeway Seg. Capacity (c):	2,200 + 10 x (FFS_{adj} - 50) *(Eq. 12-6)*	c:	2,250	pc/h/ln
Adj. Freeway Seg. Capacity (c_{adj}):	c x CAF *(Eq. 12-8)*	c_{adj}:	2,250	pc/h/ln
Breakpoint (BP):	[1,000 + 40 x (75 - FFS_{adj})] x CAF ^ 2 *(Ex. 12-6)*	BP:	1,800	pc/h/ln
Flow Rate (v_p):	$\frac{V}{(PHF \times N \times f_{HV})}$ *(Eq. 12-9)*	[f_{HV}:	0.961]	
		v_p:	1,275	pc/h/ln

Flow Rate > Adjusted Freeway Segment Capacity (v_p > c_{adj})? NO

SPEED, DENSITY, & LEVEL OF SERVICE

Mean Speed (S): If $v_p \le BP$: FFS_{adj} *(Eq. 12-1)*

If $BP < v_p \le c$: $FFS_{adj} - \frac{[(FFS_{adj} - c_{adj} / D_c) \times (v_p - BP) ^ a]}{(c_{adj} - BP) ^ a}$

S: **55.0** mi/h

Density (D): D = v_p / S *(Eq. 12-11)* D: **23.2** pc/mi/ln

Level of Service (LOS): LOS: **C**

Notes: Methodology from *Highway Capacity Manual 6th Edition* , Transportation Research Board, 2016.

Appendix J

TDM Program Case Studies

TABLE J-1
TDM PROGRAM SUMMARY

Case Study or Example	Telecommuting/ Teleworking	Light Rail Option	Parking Cashout	Parking Management	Rideshare Program - Carpool/ Sponsored Vanpool	Worksite Flextime	Buspool/shuttle Program	Bicycle Program	Compressed Workweek	Better Transit Information	Incentive Program	Guaranteed Ride Home	Discounted/Free Transit passes	Result	Source	Other	Evolution Plan
University of Washington												x		13% Reduction of Average Trips per month	TDM Case Studies & Commuter Testimonials, Transportation Demand Management Institute of the Association for Commuter Transportation.	13.0%	0.0 to 2.5%
Rehoboth Beach, DE										x				13% increase in ridership from the year before	"Demand Framework" Mitigating Traffic Congestion- The Role of Demand-Side Strategies. USDOT/FHWA. (pg. 6)	13.0%	0.0 to 3.0%
A survey conducted by Artery Business Committee Tranportation Management Association in Boston												x		7% of commuters who used to drive alone switched to transit once they became aware of a GRH service	"Demand Framework" Mitigating Traffic Congestion- The Role of Demand-Side Strategies. USDOT/FHWA. (pg. 14)	7.0%	0.0 to 2.5%
Downtown area in Ann Arbor, Michigan													x	Daily bus trips increased 9.2% and number of vehicles coming into downtown decreased by 3.5% between 2000 and 2001	"Demand Framework" Mitigating Traffic Congestion- The Role of Demand-Side Strategies. USDOT/FHWA. (pg. 14)	9.2%	0.0 to 7.8%
Bishop Ranch in California						x								Peak-period traffic demand decreased: employees starting work before 7:00am increased from 8-17%, and employees starting work after 9:00am increased from 1-9%. Employees leaving before 4pm increased by 12-17%.	"Demand Framework" Mitigating Traffic Congestion- The Role of Demand-Side Strategies. USDOT/FHWA. (pg. 14)	9.0%	0.0 to 4.0%
1995 Study on Southern California Employees									x					Employees on 9/80 drove 13 fewer miles per week and those on 4/40 drove 20 miles less per week	"Traveler Choices." Mitigating Traffic Congestion- The Role of Demand-Side Strategies USDOT/FHWA. (pg. 6)		
Contra Costa SchoolPool					x									Annual Vehicle Trip reduction of 965, 640 and a VMT reduction of 2,896,920	Mitigating Traffic Congestion- The Role of Demand-Side Strategies USDOT/FHWA.		
Orenco Station Mixed-Use Development- Hillsboro, OR		x											x	53% increase in transit usage after Westside light rail opened	Mitigating Traffic Congestion- The Role of Demand-Side Strategies USDOT/FHWA.		
Bal Harbour Village - FL					x									48% SOV, 12% Vanpool, 2% Telework, 38% Flextime	Mitigating Traffic Congestion- The Role of Demand-Side Strategies USDOT/FHWA.	2.0%	0.0 to 2.5%
Calibre - Alexandria, VA	x		x	x									x	2% Transit, 2% Carpool, 5% Telework	Mitigating Traffic Congestion- The Role of Demand-Side Strategies USDOT/FHWA.	5.0%	0.0 to 4.5%
CH2M Hill - Denver, CO	x					x								17% Mode Shift, 8% Telework and Flextime, 3% Transit, 5% Carpool, .5% Bike	Mitigating Traffic Congestion- The Role of Demand-Side Strategies USDOT/FHWA.	8.0%	0.0 to 6.5%
Georgia Power Company - Atlanta GA	x				x								x	15% Compressed/Flextime, 13% Vanpool/Carpool, 5% Telework	Mitigating Traffic Congestion- The Role of Demand-Side Strategies USDOT/FHWA.	15.0% 13.0% 5.0%	0.0 to 4.0% 0.0 to 2.5% 0.0 to 2.0%
Florida Hospital					x									10% Carpool/Vanpool	Commute Alternative Systems Handbook pg.21	10.0%	0.0 to 2.5%
3M Company in Minnesota					x									7% Vanpool	Commute Alternative Systems Handbook pg.35	7.0%	0.0 to 2.5%
National Geographic							x							35% of employees use the buspool program	Commute Alternative Systems Handbook pg.36	7.0%	0.0 to 2.5%
Georgia Pacific	x				x	x		x			x		x	Transit Ridership increased by 10%; Carpools increased by 157%	Quantifying the business benefits of TDM pg.17-18	10.0%	0.0 to 7.8%

Attachment B

Revised Project Assessment

MEMORANDUM

TO: Wes Pringle, Los Angeles Department of Transportation

FROM: Emily Wong, P.E.
Janet Ye, EIT

DATE: December 21, 2021

RE: Transportation Assessment for the
4th & Hewitt Project
Los Angeles, California **Ref:** J1509

This memorandum presents an assessment for the 4th & Hewitt Project (Project) located at 401 South Hewitt Street in the Arts District community of the City of Los Angeles (City). Since the issuance of the Los Angeles Department of Transportation's (LADOT) *Inter-Departmental Correspondence: Updated Transportation Impact Analysis for the 4th and Hewitt Commercial Development Located at 405 South Hewitt Street* (April 14, 2020) (LADOT Assessment Letter) relative to the *Transportation Impact Study for the 4th & Hewitt Project* (Gibson Transportation Consulting, Inc., Revised February 2020) (Approved Transportation Study), the Project's anticipated future buildout year has been refined.

The Project's potential California Environmental Quality Act (CEQA) transportation impacts were evaluated in the Approved Transportation Study in accordance with the adopted methodology and guidelines in effect at the time of the initial approval, *Transportation Assessment Guidelines* (LADOT, July 2019) (2019 TAG). LADOT has since released an updated version of *Transportation Assessment Guidelines* (July 2020) (2020 TAG); however, the CEQA analysis methodology and impact thresholds remain consistent with the 2019 TAG. Therefore, the analysis presented below is consistent with the guidelines and methodology of both the 2019 TAG and 2020 TAG. As further detailed below, the refinement to the Project's future buildout year would not affect the CEQA transportation impact analysis presented in the Approved Transportation Study. Therefore, the conclusions of the Approved Transportation Study remain valid, and no further CEQA analysis would be required.

The Project's non-CEQA transportation analysis in the Approved Transportation Study was based on the level of service (LOS) methodology, in accordance with the adopted methodology and guidelines at the time of the Project's Notice of Preparation, *Transportation Impact Study Guidelines* (LADOT, December 2016). According to LADOT guidance, the analysis presented in this memorandum satisfies the requirements for non-CEQA analysis of both the 2019 TAG and 2020 TAG.

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APPROVED TRANSPORTATION STUDY

The Approved Transportation Study included the analysis of the Project with approximately 311,682 square feet (sf) of office space and approximately 8,149 sf of commercial space. The Project would retain the existing 7,800 sf building formerly occupied by the A+D Museum[1], but replace the existing office and storage uses currently on-site. The Approved Transportation Study assumed full buildout of the Project in Year 2023.

Vehicular access to the on-site parking garage would be provided via two driveways on 4th Street. Access to the loading dock would be provided via Hewitt Street. Pedestrian access into the Project Site would be provided from Colyton Street into the existing building formerly occupied by the A+D Museum, from 4th Street and Hewitt Street to each of the ground floor uses, and from Colyton Street and Hewitt Street to the passageway to the commercial office building main lobby.

As detailed in the Approved Transportation Study, the Project would not result in a significant impact under any of the CEQA thresholds identified in the 2019 TAG and 2020 TAG, which include the following:

- Threshold T-1: Conflicting with plans, programs, ordinances, or policies
- Threshold T-2.1: Causing substantial vehicle miles traveled
- Threshold T-2.2: Substantially inducing automobile travel
- Threshold T-3: Substantially increasing hazards due to a geometric design feature or incompatible use

Thus, no mitigation measures would be required for the Project. Nevertheless, the Project would implement the following measures to address potential non-CEQA operational deficiencies that may result from the Project:

- Transportation Demand Management program to reduce overall trip generation by discouraging single occupancy vehicle use and by promoting the use of alternative travel modes.

- Areawide Transportation Management Organization to increase transit and mode choices in the Study Area

The Approved Transportation Study also proposed implementation of Transportation Systems Management (TSM) and physical improvement measures; however, those improvements were not available for Project implementation as TSM improvements have already been fully deployed in the Project area and the physical improvement measures were ultimately deemed infeasible by LADOT due to the geometric limitations of the existing intersection configurations.

---

[1] At the time that the issuance of the Project's Notice of Preparation (September 20, 2017) and Approved Transportation Study (February 2020), the 7,800 sf existing building was occupied by the A+D Museum. In the summer of Year 2020, the A+D Museum moved out of the building and began operating virtually. The building is currently vacant. While there are no plans for reoccupation as of the date of this study, it is anticipated that the building would be re-occupied with a use that is consistent with historic uses, such as the A+D Museum. The Project's requested discretionary approvals would not physically alter the 7,800-sf building.

PROJECT REFINEMENTS

With the recent refinements to the Project, the development program would be maintained and would continue to include approximately 311,682 sf of office space and approximately 8,149 sf of commercial space, as well as retain the existing 7,800 sf building formerly occupied by the A+D Museum. In addition, the site access and circulation plan in the Approved Transportation Study would also be maintained. Therefore, no revisions to the CEQA impact analysis would be required, and the conclusions of the Approved Transportation Study remain valid.

However, the anticipated future buildout year of the Project has been extended from Year 2023 to Year 2025. Therefore, the non-CEQA Future Conditions operational analysis was updated to reflect Year 2025 conditions, to correspond with the refined anticipated buildout year of the Project. Details of the analysis are presented below.

LOS Evaluation

Consistent with the Approved Transportation Study, the LOS analysis was conducted for all 23 study intersections using the "Critical Movement Analysis (CMA) – Planning" (*Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, Transportation Research Board, 1980) methodology.

Detailed LOS calculation worksheets are provided in the Attachment.

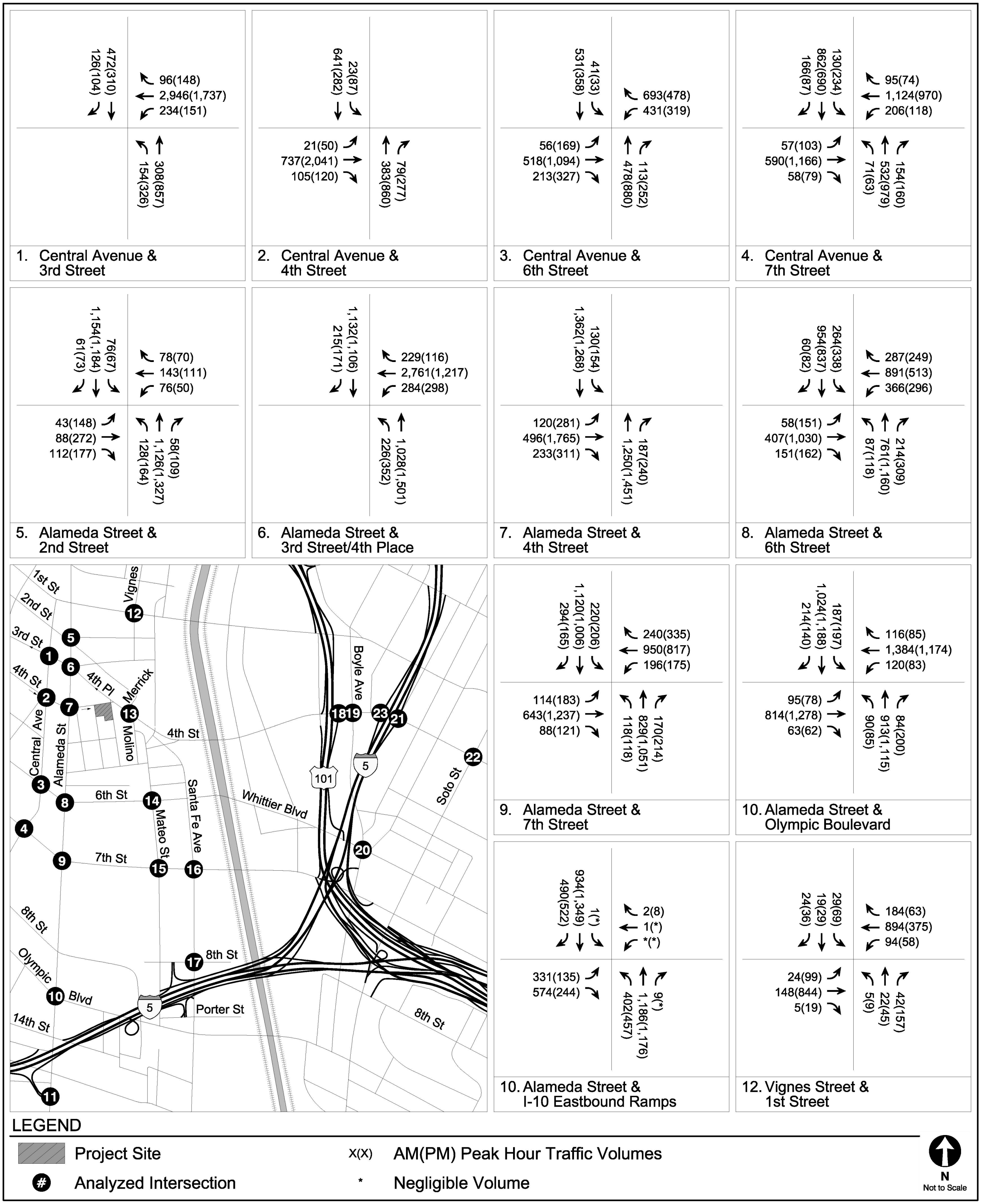
Future Conditions. All future cumulative traffic growth (i.e., ambient and Cumulative Project traffic growth) and transportation infrastructure improvements described in Chapter 3 of the Approved Transportation Study are incorporated into this analysis. The revised Future without Project Conditions, Future with Project Conditions, and Future with Project with Transportation Improvements Conditions traffic volumes for Year 2025 are illustrated in Figures 1 through 3.

Table 1 summarizes the results of the Future without Project, Future with Project, and Future with Project with Transportation Improvements Conditions during the weekday morning and afternoon peak hours for the 23 study intersections in Year 2025. As shown in Table 1, the Project's proposed transportation improvement measures from the Approved Transportation Study would also effectively improve the intersection operating conditions at the 23 study intersections under Future with Project Conditions in Year 2025.

CONCLUSIONS

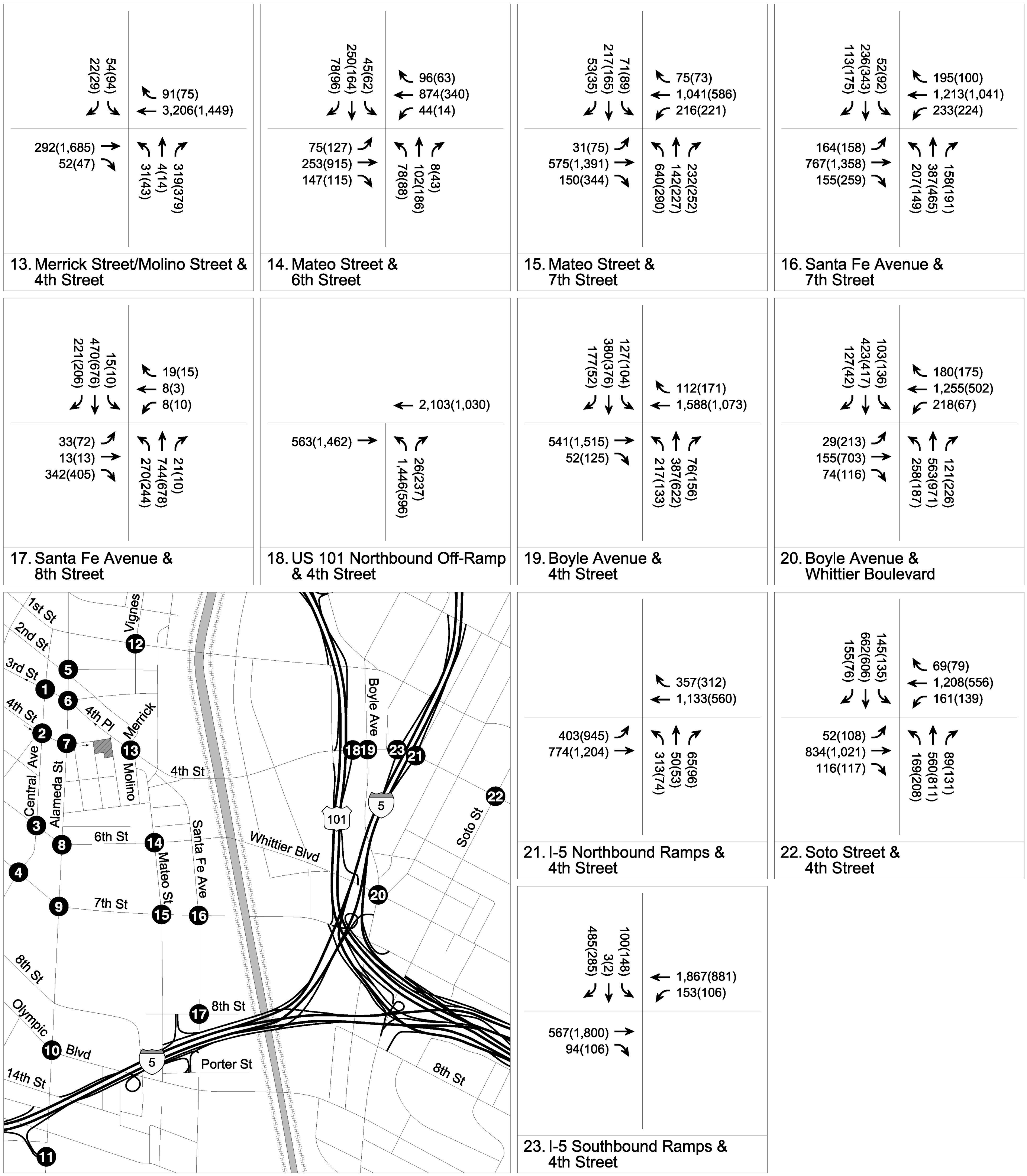
With the recent refinements to the Project, the development program and site access and circulation plan of the Approved Transportation Study would be maintained. Therefore, no additional CEQA transportation analysis would be required and the CEQA impact conclusions of the Approved Transportation Study remain valid. Although the buildout of the Project has been extended to Year 2025, the Project's operating conditions at the 23 study intersections would be consistent with those identified in the Approved Transportation Study. Furthermore, the Project's proposed transportation improvement measures outlined in the Approved Transportation Study would also effectively improve intersection operations in Year 2025. Therefore, no further improvement measures would be required.

transportation consulting, inc.



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 1



LEGEND

Project Site

Analyzed Intersection

X(X) AM(PM) Peak Hour Traffic Volumes

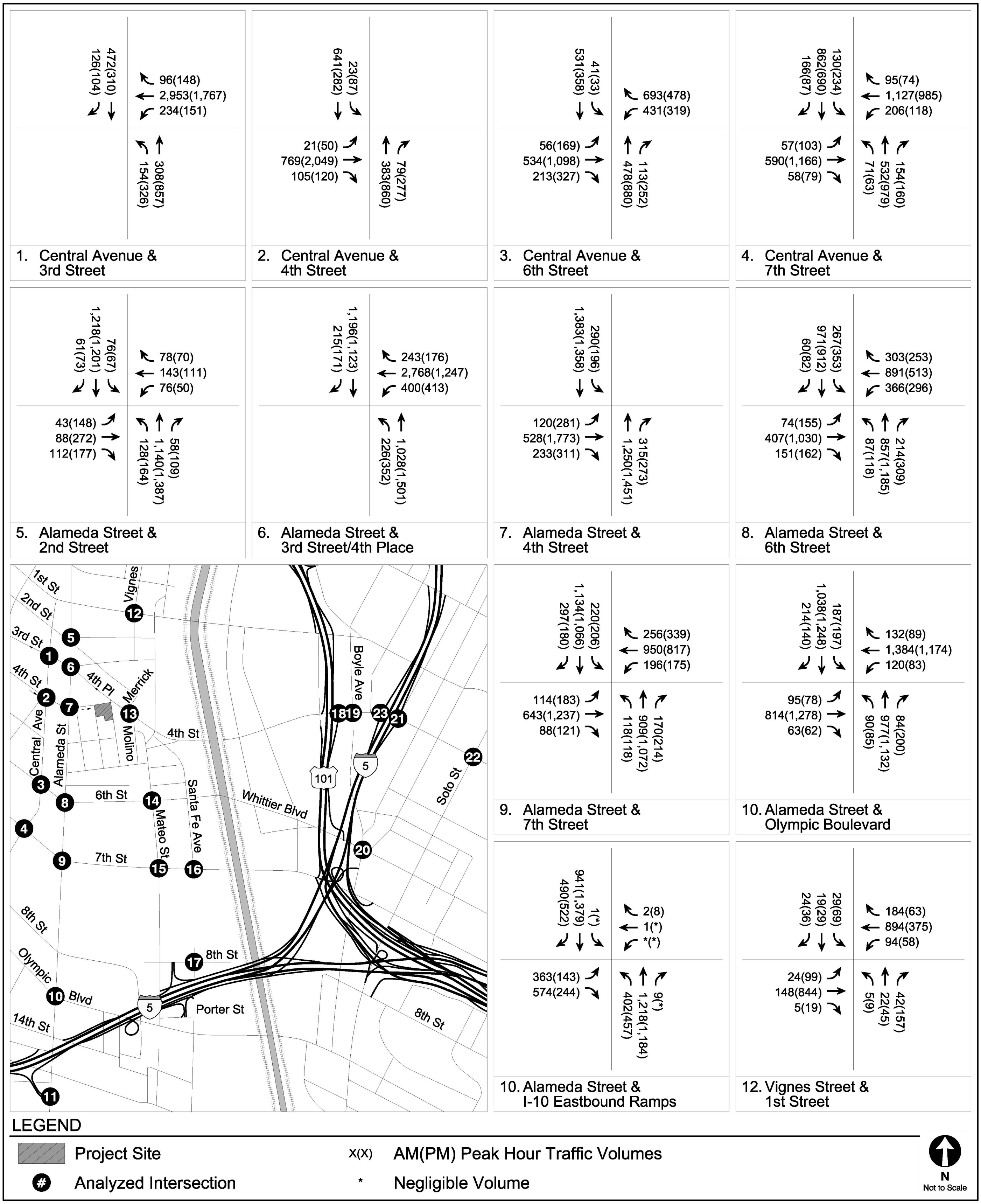
* Negligible Volume

N
Not to Scale

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2025)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
1 (CONT.)

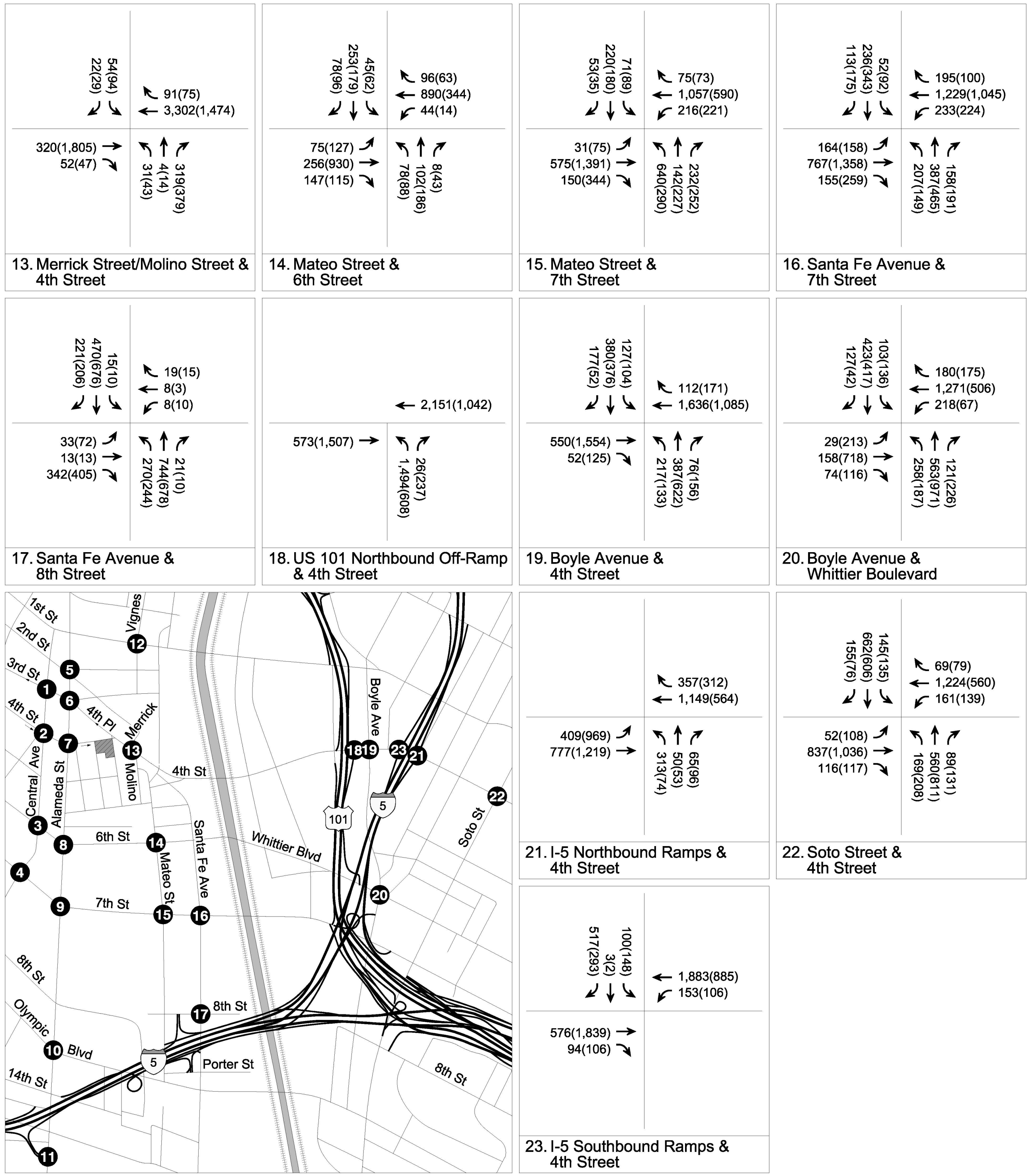
Gibson
transportation consulting, inc.



FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 2

Gibson transportation consulting, inc.



LEGEND

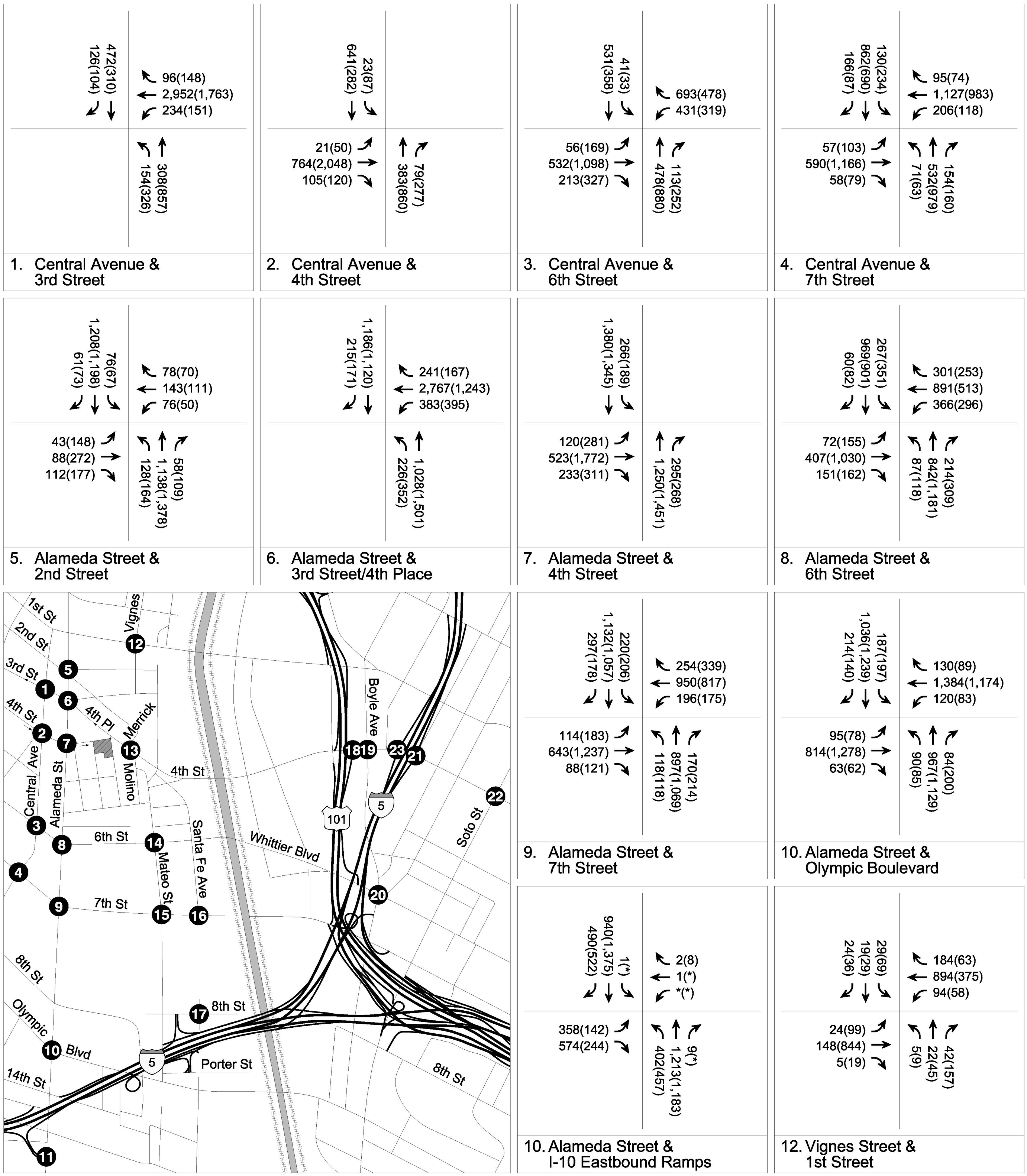
Project Site	X(X) AM(PM) Peak Hour Traffic Volumes
# Analyzed Intersection	* Negligible Volume

N
Not to Scale

FUTURE WITH PROJECT CONDITIONS (YEAR 2025)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 2 (CONT.)

Gibson transportation consulting, inc.



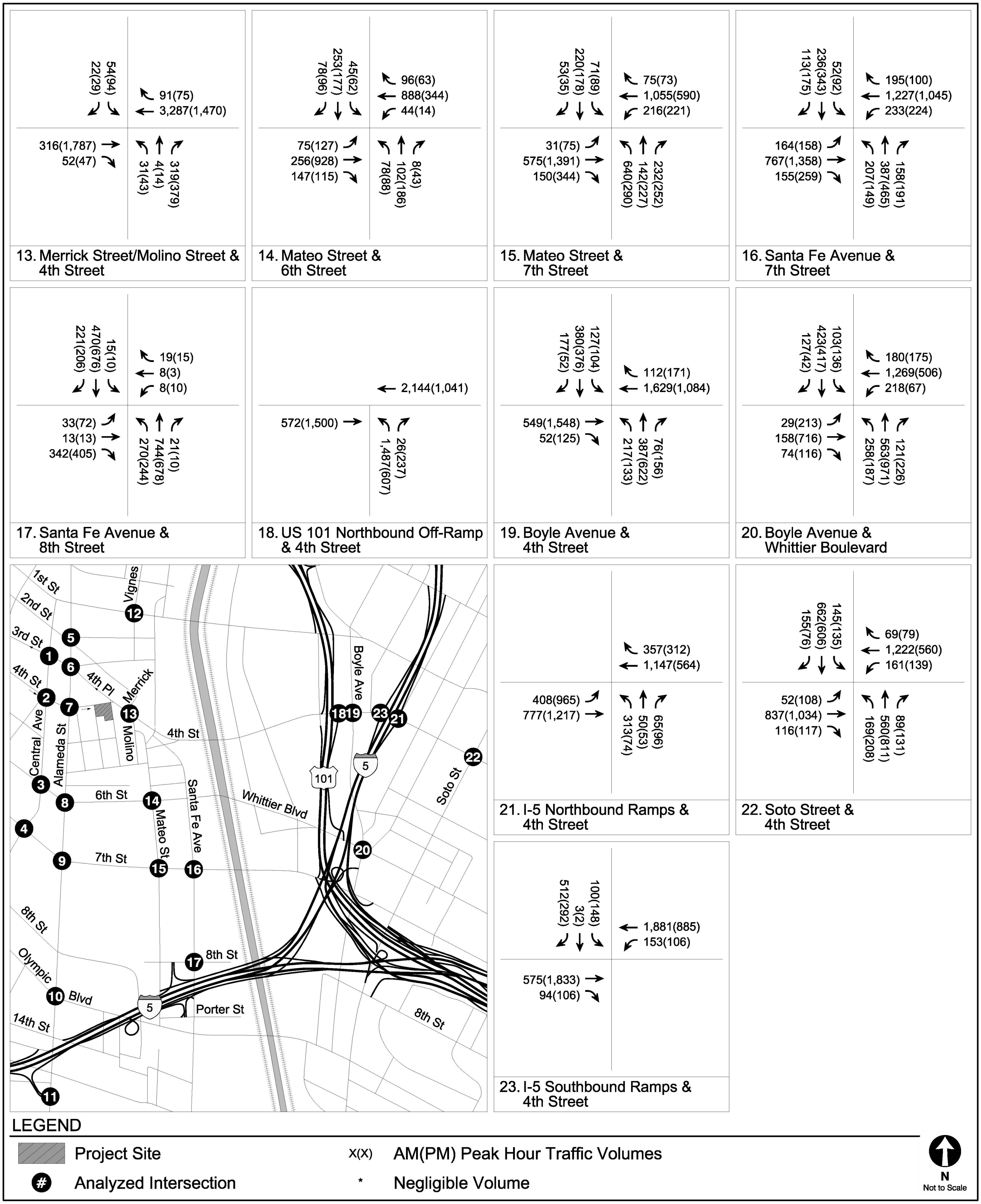
LEGEND

	Project Site	X(X)	AM(PM) Peak Hour Traffic Volumes
#	Analyzed Intersection	*	Negligible Volume

N
Not to Scale

FUTURE WITH PROJECT WITH TRANSPORTATION IMPROVEMENTS CONDITIONS (YEAR 2025)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 3



FUTURE WITH PROJECT WITH TRANSPORTATION IMPROVEMENTS CONDITIONS (YEAR 2025)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 3 (CONT.)

TABLE 1
FUTURE WITH PROJECT CONDITIONS WITH TRANSPORTATION IMPROVEMENTS (YEAR 2025)
INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions		Future with Project Conditions with Transportation Improvements	
			V/C	LOS	V/C	LOS	V/C	LOS
1.	Central Avenue & 3rd Street	A.M. P.M.	0.776 0.605	C B	0.761 0.599	C A	0.751 0.588	C A
2.	Central Avenue & 4th Street	A.M. P.M.	0.384 0.748	A C	0.388 0.734	A C	0.376 0.724	A C
3.	Central Avenue & 6th Street	A.M. P.M.	0.647 0.965	B E	0.642 0.951	B E	0.631 0.941	B E
4.	Central Avenue & 7th Street	A.M. P.M.	0.908 0.954	E E	0.894 0.937	D E	0.884 0.927	D E
5.	Alameda Street & 2nd Street	A.M. P.M.	0.602 0.687	B B	0.611 0.690	B B	0.597 0.677	A B
6.	Alameda Street & 3rd Street/4th Place	A.M. P.M.	1.031 0.821	F D	1.059 0.852	F D	1.042 0.835	F D
7.	Alameda Street & 4th Street	A.M. P.M.	0.621 1.021	B F	0.761 1.045	C F	0.729 1.028	C F
8.	Alameda Street & 6th Street	A.M. P.M.	0.882 1.279	D F	0.924 1.285	E F	0.906 1.272	E F
9.	Alameda Street & 7th Street	A.M. P.M.	0.976 1.088	E F	0.973 1.079	E F	0.961 1.068	E F
10.	Alameda Street & Olympic Boulevard	A.M. P.M.	0.921 0.972	E E	0.931 0.961	E E	0.917 0.950	E E
11.	Alameda Street & I-10 Eastbound Ramps	A.M. P.M.	0.773 0.821	C D	0.782 0.821	C D	0.769 0.809	C D
12.	Vignes Street & 1st Street	A.M. P.M.	0.482 0.697	A B	0.471 0.682	A B	0.461 0.672	A B
13.	Merrick Street/Molino Street & 4th Street	A.M. P.M.	0.905 0.761	E C	0.913 0.763	E C	0.900 0.751	D C
14.	Mateo Street & 6th Street	A.M. P.M.	0.574 0.526	A A	0.571 0.533	A A	0.559 0.521	A A
15.	Mateo Street & 7th Street	A.M. P.M.	1.016 1.198	F F	1.012 1.185	F F	1.001 1.175	F F
16.	Santa Fe Avenue & 7th Street	A.M. P.M.	0.994 1.220	E F	1.000 1.220	E F	0.989 1.210	E F
17.	Santa Fe Avenue & 8th Street	A.M. P.M.	0.684 0.703	B C	0.671 0.689	B B	0.661 0.679	B B
18.	US 101 Northbound Off-Ramp & 4th Street	A.M. P.M.	0.859 0.521	D A	0.869 0.521	D A	0.854 0.510	D A
19.	Boyle Avenue & 4th Street	A.M. P.M.	0.841 0.955	D E	0.834 0.941	D E	0.822 0.931	D E
20.	Boyle Avenue & Whittier Boulevard	A.M. P.M.	0.798 0.803	C D	0.787 0.788	C C	0.776 0.777	C C
21.	I-5 Northbound Ramps & 4th Street	A.M. P.M.	0.925 0.974	E E	0.918 0.974	E E	0.906 0.961	E E
22.	Soto Street & 4th Street	A.M. P.M.	0.736 0.902	C E	0.726 0.890	C D	0.715 0.879	C D
23.	I-5 Southbound Ramps & 4th Street	A.M. P.M.	0.898 0.807	D D	0.908 0.812	E D	0.894 0.799	D C

Attachment

LOS Worksheets

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
1	East-West Street:	3rd Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND Left	142	1	142	0	142	142	0	154	1	154	0	154	1	154	0	154	1	154
NORTHBOUND Left-Through		0							0				0				0	
NORTHBOUND Through	282	2	141	0	282	141	3	308	2	154	0	308	2	154	0	308	2	154
NORTHBOUND Through-Right		0							0				0				0	
NORTHBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTHBOUND Left-Through-Right		0							0				0				0	
NORTHBOUND Left-Right		0							0				0				0	
SOUTHBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTHBOUND Left-Through		0							0				0				0	
SOUTHBOUND Through	419	1	268	0	419	268	18	472	1	299	0	472	1	299	0	472	1	299
SOUTHBOUND Through-Right		1							1				1				1	
SOUTHBOUND Right	116	0	116	0	116	116	0	126	0	126	0	126	0	126	0	126	0	126
SOUTHBOUND Left-Through-Right		0							0				0				0	
SOUTHBOUND Left-Right		0							0				0				0	
EASTBOUND Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EASTBOUND Left-Through		0							0				0				0	
EASTBOUND Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EASTBOUND Through-Right		0							0				0				0	
EASTBOUND Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EASTBOUND Left-Through-Right		0							0				0				0	
EASTBOUND Left-Right		0							0				0				0	
WESTBOUND Left	211	0	211	0	211	211	6	234	0	234	0	234	0	234	0	234	0	234
WESTBOUND Left-Through		1							1				1				1	
WESTBOUND Through	2351	3	641	7	2358	642	400	2946	3	795	7	2953	3	797	-1	2952	3	797
WESTBOUND Through-Right		0							0				0				0	
WESTBOUND Right	89	1	89	0	89	89	0	96	1	96	0	96	1	96	0	96	1	96
WESTBOUND Left-Through-Right		0							0				0				0	
WESTBOUND Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES North-South:	410	410	453	453	453
East-West:	641	642	795	797	797
SUM:	1051	1052	1248	1250	1250
VOLUME/CAPACITY *(V/C)* RATIO:	0.738	0.738	0.876	0.877	0.877
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.638	0.638	0.776	0.777	0.777
LEVEL OF SERVICE (LOS):	B	B	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
2	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	351	1	206	0	351	206	3	383	1	231	0	383	1	231	0	383	1	231
	Through-Right		1							1				1				1	
	Right	60	0	60	0	60	60	14	79	0	79	0	79	0	79	0	79	0	79
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	21	1	21	0	21	21	0	23	1	23	0	23	1	23	0	23	1	23
	Left-Through		0							0				0				0	
	Through	570	2	285	0	570	285	24	641	2	321	0	641	2	321	0	641	2	321
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	19	1	19	0	19	19	0	21	1	21	0	21	1	21	0	21	1	21
	Left-Through		0							0				0				0	
	Through	374	2	187	32	406	203	332	737	2	369	32	769	2	385	-5	764	2	382
	Through-Right		0							0				0				0	
	Right	93	1	93	0	93	93	4	105	1	105	0	105	1	105	0	105	1	105
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	285	285	321	321	321
	East-West:	187	203	369	385	382
	SUM:	472	488	690	706	703
VOLUME/CAPACITY *(V/C)* RATIO:		0.331	0.342	0.484	0.495	0.493
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.231	0.242	0.384	0.395	0.393
LEVEL OF SERVICE (LOS):		A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
3	East-West Street:	6th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	401	1	**239**	0	401	**239**	44	478	1	**296**	0	478	1	**296**	0	478	1	**296**
	Through-Right		1							1				1				1	
	Right	77	0	77	0	77	77	30	113	0	113	0	113	0	113	0	113	0	113
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	20	1	**20**	0	20	**20**	19	41	1	**41**	0	41	1	**41**	0	41	1	**41**
	Left-Through		0							0				0				0	
	Through	489	2	245	0	489	245	1	531	2	266	0	531	2	266	0	531	2	266
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	44	1	44	0	44	44	8	56	1	56	0	56	1	56	0	56	1	56
	Left-Through		0							0				0				0	
	Through	304	2	**152**	16	320	**160**	189	518	2	**259**	16	534	2	**267**	-2	532	2	**266**
	Through-Right		0							0				0				0	
	Right	111	1	111	0	111	111	93	213	1	213	0	213	1	213	0	213	1	213
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	303	1	**303**	0	303	**303**	103	431	1	**431**	0	431	1	**431**	0	431	1	**431**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	530	2	282	0	530	282	119	693	2	361	0	693	2	361	0	693	2	361
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES — *North-South:*	259	259	337	337	337
East-West:	455	463	690	698	697
SUM:	714	722	1027	1035	1034
VOLUME/CAPACITY *(V/C)* RATIO:	0.519	0.525	0.747	0.753	0.752
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.419	0.425	0.647	0.653	0.652
LEVEL OF SERVICE (LOS):	A	A	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.006

Significant impacted? NO

Δ*v/c* after mitigation: 0.005

Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
4	East-West Street:	7th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	66	1	**66**	0	66	**66**	0	71	1	**71**	0	71	1	**71**	0	71	1	**71**
	Left-Through		0							0				0				0	
	Through	425	1	281	0	425	281	72	532	1	343	0	532	1	343	0	532	1	343
	Through-Right		1							1				1				1	
	Right	137	0	137	0	137	137	6	154	0	154	0	154	0	154	0	154	0	154
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	34	0	34	0	34	34	93	130	0	130	0	130	0	130	0	130	0	130
	Left-Through		1							1				1				1	
	Through	708	0	**461**	0	708	**461**	95	862	0	**774**	0	862	0	**774**	0	862	0	**774**
	Through-Right		1							1				1				1	
	Right	146	0	461	0	146	461	8	166	0	774	0	166	0	774	0	166	0	774
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	53	1	**53**	0	53	**53**	0	57	1	**57**	0	57	1	**57**	0	57	1	**57**
	Left-Through		0							0				0				0	
	Through	304	1	179	0	304	179	261	590	1	324	0	590	1	324	0	590	1	324
	Through-Right		1							1				1				1	
	Right	54	0	54	0	54	54	0	58	0	58	0	58	0	58	0	58	0	58
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	177	1	177	0	177	177	14	206	1	206	0	206	1	206	0	206	1	206
	Left-Through		0							0				0				0	
	Through	732	1	**409**	3	735	**411**	331	1124	1	**610**	3	1127	1	**611**	-1	1126	1	**611**
	Through-Right		1							1				1				1	
	Right	86	0	86	0	86	86	2	95	0	95	0	95	0	95	0	95	0	95
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	527		*North-South:*	527			*North-South:*	845			*North-South:*	845			*North-South:*	845
			East-West:	462		*East-West:*	464			*East-West:*	667			*East-West:*	668			*East-West:*	668
			SUM:	989		*SUM:*	991			*SUM:*	1512			*SUM:*	1513			*SUM:*	1513
VOLUME/CAPACITY *(V/C)* RATIO:				0.659			0.661				1.008				1.009				1.009
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.559			0.561				0.908				0.909				0.909
LEVEL OF SERVICE (LOS):				A			A				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet

(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
5	East-West Street:	2nd Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	118	1	118	0	118	118	0	128	1	128	0	128	1	128	0	128	1	128
	Left-Through		0							0				0				0	
	Through	733	1	383	14	747	390	332	1126	1	592	14	1140	1	599	-2	1138	1	598
	Through-Right		1							1				1				1	
	Right	33	0	33	0	33	33	22	58	0	58	0	58	0	58	0	58	0	58
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	70	1	70	0	70	70	0	76	1	76	0	76	1	76	0	76	1	76
	Left-Through		0							0				0				0	
	Through	886	1	471	64	950	503	195	1154	1	608	64	1218	1	640	-10	1208	1	635
	Through-Right		1							1				1				1	
	Right	56	0	56	0	56	56	0	61	0	61	0	61	0	61	0	61	0	61
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	40	1	40	0	40	40	0	43	1	43	0	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	72	1	72	0	72	72	10	88	1	88	0	88	1	88	0	88	1	88
	Through-Right		0							0				0				0	
	Right	103	1	44	0	103	44	0	112	1	48	0	112	1	48	0	112	1	48
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	67	1	67	0	67	67	3	76	1	76	0	76	1	76	0	76	1	76
	Left-Through		0							0				0				0	
	Through	130	0	201	0	130	201	2	143	0	221	0	143	0	221	0	143	0	221
	Through-Right		1							1				1				1	
	Right	71	0	0	0	71	0	1	78	0	0	0	78	0	0	0	78	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	North-South:	589	621	736	768	763
	East-West:	241	241	264	264	264
	SUM:	830	862	1000	1032	1027
VOLUME/CAPACITY (V/C) RATIO:		0.582	0.605	0.702	0.724	0.721
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.482	0.505	0.602	0.624	0.621
LEVEL OF SERVICE (LOS):		A	A	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.022	Δ*v/c* after mitigation:	0.019
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
6	East-West Street:	3rd Street/4th Place	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
No. of Phases		3		3		3		3		3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		0		0		0		0		0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0
	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0
ATSAC-1 or ATSAC+ATCS-2?		2		2		2		2		2
Override Capacity		0		0		0		0		0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	137	1	137	0	137	137	78	226	1	226	0	226	1	226	0	226	1	226
	Left-Through		0							0				0				0	
	Through	653	2	327	0	653	327	321	1028	2	514	0	1028	2	514	0	1028	2	514
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	866	2	433	64	930	465	194	1132	2	566	64	1196	2	598	-10	1186	2	593
	Through-Right		0							0				0				0	
	Right	196	1	196	0	196	196	3	215	1	215	0	215	1	215	0	215	1	215
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	151	0	151	116	267	267	120	284	0	284	116	400	0	400	-17	383	0	383
	Left-Through		1							1				1				1	
	Through	2250	2	646	7	2257	680	325	2761	2	819	7	2768	2	853	-1	2767	2	848
	Through-Right		1							1				1				1	
	Right	181	0	646	14	195	680	33	229	0	819	14	243	0	853	-2	241	0	848
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			North-South:	570		North-South:	602			North-South:	792			North-South:	824			North-South:	819
			East-West:	646		East-West:	680			East-West:	819			East-West:	853			East-West:	848
			SUM:	1216		SUM:	1282			SUM:	1611			SUM:	1677			SUM:	1667
VOLUME/CAPACITY (V/C) RATIO:				0.853			0.900				1.131				1.177				1.170
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.753			0.800				1.031				1.077				1.070
LEVEL OF SERVICE (LOS):				C			C				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project:	0.046	Δv/c after mitigation:	0.039
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
7	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0
	Left-Through		0				
	Through	831	1	**443**	0	831	**507**
	Through-Right		1				
	Right	54	0	54	128	182	182
	Left-Through-Right		0				
	Left-Right		0				
SOUTHBOUND	Left	102	1	**102**	160	262	**262**
	Left-Through		0				
	Through	977	2	489	21	998	499
	Through-Right		0				
	Right	0	0	0	0	0	0
	Left-Through-Right		0				
	Left-Right		0				
EASTBOUND	Left	83	0	83	0	83	83
	Left-Through		1				
	Through	268	2	**117**	32	300	**128**
	Through-Right		0				
	Right	114	1	114	0	114	114
	Left-Through-Right		0				
	Left-Right		0				
WESTBOUND	Left	0	0	**0**	0	0	**0**
	Left-Through		0				
	Through	0	0	0	0	0	0
	Through-Right		0				
	Right	0	0	0	0	0	0
	Left-Through-Right		0				
	Left-Right		0				
CRITICAL VOLUMES		North-South:		545	North-South:		769
		East-West:		117	East-West:		128
		SUM:		662	SUM:		897
VOLUME/CAPACITY (V/C) RATIO:				0.441			0.598
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.341			0.498
LEVEL OF SERVICE (LOS):				A			A

MOVEMENT		FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through			0				0				0	
	Through	350	1250	1	**719**	0	1250	1	**783**	0	1250	1	**773**
	Through-Right			1				1				1	
	Right	129	187	0	187	128	315	0	315	-19	296	0	296
	Left-Through-Right			0				0				0	
	Left-Right			0				0				0	
SOUTHBOUND	Left	20	130	1	**130**	160	290	1	**290**	-24	266	1	**266**
	Left-Through			0				0				0	
	Through	304	1362	2	681	21	1383	2	692	-3	1380	2	690
	Through-Right			0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right			0				0				0	
	Left-Right			0				0				0	
EASTBOUND	Left	30	120	0	120	0	120	0	120	0	120	0	120
	Left-Through			1				1				1	
	Through	206	496	2	205	32	528	2	216	-5	523	2	214
	Through-Right			0				0				0	
	Right	110	233	1	**233**	0	233	1	**233**	0	233	1	**233**
	Left-Through-Right			0				0				0	
	Left-Right			0				0				0	
WESTBOUND	Left	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through			0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right			0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right			0				0				0	
	Left-Right			0				0				0	
CRITICAL VOLUMES				North-South:	849			North-South:	1073			North-South:	1039
				East-West:	233			East-West:	233			East-West:	233
				SUM:	1082			SUM:	1306			SUM:	1272
VOLUME/CAPACITY (V/C) RATIO:					0.721				0.871				0.848
V/C LESS ATSAC/ATCS ADJUSTMENT:					0.621				0.771				0.748
LEVEL OF SERVICE (LOS):					B				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.150	Δ*v/c* after mitigation:	0.127
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
8	East-West Street:	6th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	72	1	72	0	72	72	9	87	1	87	0	87	1	87	0	87	1	87
	Left-Through		0							0				0				0	
	Through	522	1	294	96	618	342	196	761	1	488	96	857	1	536	-14	843	1	529
	Through-Right		1							1				1				1	
	Right	65	0	65	0	65	65	144	214	0	214	0	214	0	214	0	214	0	214
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	47	1	47	3	50	50	213	264	1	264	3	267	1	267	-1	266	1	266
	Left-Through		0							0				0				0	
	Through	790	1	423	17	807	431	99	954	1	507	17	971	1	516	-3	968	1	514
	Through-Right		1							1				1				1	
	Right	55	0	55	0	55	55	0	60	0	60	0	60	0	60	0	60	0	60
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	43	1	43	16	59	59	11	58	1	58	16	74	1	74	-2	72	1	72
	Left-Through		0							0				0				0	
	Through	206	1	153	0	206	153	184	407	1	279	0	407	1	279	0	407	1	279
	Through-Right		1							1				1				1	
	Right	100	0	100	0	100	100	43	151	0	151	0	151	0	151	0	151	0	151
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	128	1	128	0	128	128	227	366	1	366	0	366	1	366	0	366	1	366
	Left-Through		0							0				0				0	
	Through	627	1	368	0	627	376	212	891	1	589	0	891	1	597	0	891	1	596
	Through-Right		1							1				1				1	
	Right	109	0	109	16	125	125	169	287	0	287	16	303	0	303	-2	301	0	301
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES North-South:	495	503	752	803	795
East-West:	411	435	647	671	668
SUM:	906	938	1399	1474	1463
VOLUME/CAPACITY (V/C) RATIO:	0.636	0.658	0.982	1.034	1.027
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.536	0.558	0.882	0.934	0.927
LEVEL OF SERVICE (LOS):	A	A	D	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.052	Δ*v/c* after mitigation:	0.045
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
9	East-West Street:	7th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	109	1	**109**	0	109	**109**	0	118	1	**118**	0	118	1	**118**	0	118	1	**118**
	Left-Through		0							0				0				0	
	Through	621	1	357	80	701	397	157	829	1	500	80	909	1	540	-12	897	1	534
	Through-Right		1							1				1				1	
	Right	93	0	93	0	93	93	69	170	0	170	0	170	0	170	0	170	0	170
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	127	1	127	0	127	127	82	220	1	220	0	220	1	220	0	220	1	220
	Left-Through		0							0				0				0	
	Through	870	1	**519**	14	884	**527**	178	1120	1	**707**	14	1134	1	**716**	-2	1132	1	**714**
	Through-Right		1							1				1				1	
	Right	167	0	167	3	170	170	113	294	0	294	3	297	0	297	-1	296	0	296
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	58	1	**58**	0	58	**58**	51	114	1	**114**	0	114	1	**114**	0	114	1	**114**
	Left-Through		0							0				0				0	
	Through	309	1	195	0	309	195	308	643	1	366	0	643	1	366	0	643	1	366
	Through-Right		1							1				1				1	
	Right	81	0	81	0	81	81	0	88	0	88	0	88	0	88	0	88	0	88
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	118	1	118	0	118	118	68	196	1	196	0	196	1	196	0	196	1	196
	Left-Through		0							0				0				0	
	Through	661	1	**380**	0	661	**388**	234	950	1	**595**	0	950	1	**603**	0	950	1	**602**
	Through-Right		1							1				1				1	
	Right	98	0	98	16	114	114	134	240	0	240	16	256	0	256	-2	254	0	254
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
CRITICAL VOLUMES *North-South:*	628	636	825	834	832
East-West:	438	446	709	717	716
SUM:	1066	1082	1534	1551	1548
VOLUME/CAPACITY *(V/C)* RATIO:	0.748	0.759	1.076	1.088	1.086
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.648	0.659	0.976	0.988	0.986
LEVEL OF SERVICE (LOS):	B	B	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.012   Δ*v/c* after mitigation: 0.010

Significant impacted? YES   Fully mitigated? NO

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
10	East-West Street:	Olympic Boulevard	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
No. of Phases		2		2		2		2		2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		0		0		0		0		0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0
	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0
ATSAC-1 or ATSAC+ATCS-2?		2		2		2		2		2
Override Capacity		0		0		0		0		0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	83	1	83	0	83	83	0	90	1	90	0	90	1	90	0	90	1	90
	Left-Through		0							0				0				0	
	Through	680	1	379	64	744	411	177	913	1	499	64	977	1	531	-10	967	1	526
	Through-Right		1							1				1				1	
	Right	78	0	78	0	78	78	0	84	0	84	0	84	0	84	0	84	0	84
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	122	1	122	0	122	122	55	187	1	187	0	187	1	187	0	187	1	187
	Left-Through		0							0				0				0	
	Through	769	2	385	14	783	392	191	1024	2	512	14	1038	2	519	-2	1036	2	518
	Through-Right		0							0				0				0	
	Right	198	1	157	0	198	157	0	214	1	167	0	214	1	167	0	214	1	167
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	82	1	82	0	82	82	6	95	1	95	0	95	1	95	0	95	1	95
	Left-Through		0							0				0				0	
	Through	616	1	337	0	616	337	147	814	1	439	0	814	1	439	0	814	1	439
	Through-Right		1							1				1				1	
	Right	58	0	58	0	58	58	0	63	0	63	0	63	0	63	0	63	0	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	111	1	111	0	111	111	0	120	1	120	0	120	1	120	0	120	1	120
	Left-Through		0							0				0				0	
	Through	1074	1	571	0	1074	579	221	1384	1	750	0	1384	1	758	0	1384	1	757
	Through-Right		1							1				1				1	
	Right	67	0	67	16	83	83	43	116	0	116	16	132	0	132	-2	130	0	130
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	501	*North-South:*	533	*North-South:*	686	*North-South:*	718	*North-South:*	713
	East-West:	653	*East-West:*	661	*East-West:*	845	*East-West:*	853	*East-West:*	852
	SUM:	1154	*SUM:*	1194	*SUM:*	1531	*SUM:*	1571	*SUM:*	1565
VOLUME/CAPACITY *(V/C)* RATIO:		0.769		0.796		1.021		1.047		1.043
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.669		0.696		0.921		0.947		0.943
LEVEL OF SERVICE (LOS):		B		B		E		E		E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.026	Δ*v/c* after mitigation:	0.022
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
11	East-West Street:	I-10 EB Ramps	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0	NB-- 0 SB-- 3 EB-- 3 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	371	1	**371**	0	371	**371**	0	402	1	**402**	0	402	1	**402**	0	402	1	**402**
	Left-Through		0							0				0				0	
	Through	1053	1	531	32	1085	547	46	1186	1	598	32	1218	1	614	-5	1213	1	611
	Through-Right		1							1				1				1	
	Right	8	0	8	0	8	8	0	9	0	9	0	9	0	9	0	9	0	9
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	1	1	1	0	1	1	0	1	1	1	0	1	1	1	0	1	1	1
	Left-Through		0							0				0				0	
	Through	814	2	**407**	7	821	**411**	53	934	2	**467**	7	941	2	**471**	-1	940	2	**470**
	Through-Right		0							0				0				0	
	Right	428	1	151	0	428	119	27	490	1	159	0	490	1	127	0	490	1	132
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	277	1	**277**	32	309	**309**	31	331	1	**331**	32	363	1	**363**	-5	358	1	**358**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	530	1	159	0	530	159	0	574	1	172	0	574	1	172	0	574	1	172
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1	0	**0**	0	1	**0**	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
	Through-Right		0							0				0				0	
	Right	2	0	0	0	2	0	0	2	0	0	0	2	0	0	0	2	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

CRITICAL VOLUMES	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
North-South:	778	782	869	873	872
East-West:	277	309	331	363	358
SUM:	1055	1091	1200	1236	1230
VOLUME/CAPACITY *(V/C)* RATIO:	0.767	0.793	0.873	0.899	0.895
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.667	0.693	0.773	0.799	0.795
LEVEL OF SERVICE (LOS):	B	B	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.026	Δ*v/c* after mitigation:	0.022
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Vignes Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
12	East-West Street:	1st Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
No. of Phases		3		3		3		3		3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		2		2		2		2		2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0
	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?		2		2		2		2		2
Override Capacity		0		0		0		0		0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	5	0	5	0	5	5	0	5	0	5	0	5	0	5	0	5	0	5
	Left-Through		0							0				0				0	
	Through	20	0	50	0	20	50	0	22	0	69	0	22	0	69	0	22	0	69
	Through-Right		0							0				0				0	
	Right	25	0	0	0	25	0	15	42	0	0	0	42	0	0	0	42	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	27	0	27	0	27	27	0	29	0	29	0	29	0	29	0	29	0	29
	Left-Through		0							0				0				0	
	Through	18	0	67	0	18	67	0	19	0	72	0	19	0	72	0	19	0	72
	Through-Right		0							0				0				0	
	Right	22	0	0	0	22	0	0	24	0	0	0	24	0	0	0	24	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	22	0	22	0	22	22	0	24	0	24	0	24	0	24	0	24	0	24
	Left-Through		1							1				1				1	
	Through	116	1	102	0	116	102	22	148	1	146	0	148	1	146	0	148	1	146
	Through-Right		0							0				0				0	
	Right	5	1	5	0	5	5	0	5	1	5	0	5	1	5	0	5	1	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	87	0	87	0	87	87	0	94	0	94	0	94	0	94	0	94	0	94
	Left-Through		1							1				1				1	
	Through	822	0	540	0	822	540	4	894	0	586	0	894	0	586	0	894	0	586
	Through-Right		1							1				1				1	
	Right	170	0	540	0	170	540	0	184	0	586	0	184	0	586	0	184	0	586
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
CRITICAL VOLUMES	North-South:	77	North-South:	77	North-South:	98	North-South:	98	North-South:	98
	East-West:	642	East-West:	642	East-West:	732	East-West:	732	East-West:	732
	SUM:	719	SUM:	719	SUM:	830	SUM:	830	SUM:	830
VOLUME/CAPACITY *(V/C)* RATIO:		0.505		0.505		0.582		0.582		0.582
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.405		0.405		0.482		0.482		0.482
LEVEL OF SERVICE (LOS):		A		A		A		A		A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Merrick Street/Molino Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
13	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3? NB-- / SB--	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
Right Turns: EB-- / WB--	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	28	0	28	0	28	28	1	31	0	31	0	31	0	31	0	31	0	31
	Left-Through		0							0				0				0	
	Through	4	0	33	0	4	33	0	4	0	354	0	4	0	354	0	4	0	354
	Through-Right		0							0				0				0	
	Right	1	0	0	0	1	0	318	319	0	0	0	319	0	0	0	319	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	50	1	50	0	50	50	0	54	0	54	0	54	0	54	0	54	0	54
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	76	0	0	0	76	0	0	0	76
	Through-Right		0							0				0				0	
	Right	20	1	20	0	20	20	0	22	0	0	0	22	0	0	0	22	0	0
	Left-Through-Right		0							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	249	1	149	28	277	163	22	292	1	172	28	320	1	186	-4	316	1	184
	Through-Right		1							1				1				1	
	Right	48	0	48	0	48	48	0	52	0	52	0	52	0	52	0	52	0	52
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	2528	2	871	96	2624	903	469	3206	2	1099	96	3302	2	1131	-14	3288	2	1126
	Through-Right		1							1				1				1	
	Right	84	0	84	0	84	84	0	91	0	91	0	91	0	91	0	91	0	91
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	83	83	408	408	408
	East-West:	871	903	1099	1131	1126
	SUM:	954	986	1507	1539	1534
VOLUME/CAPACITY *(V/C)* RATIO:		0.669	0.692	1.005	1.026	1.023
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.569	0.592	0.905	0.926	0.923
LEVEL OF SERVICE (LOS):		A	A	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.021	Δ*v/c* after mitigation:	0.018
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count: 2017	Ambient Growth: (%): 1	Conducted by: GTC	Date:	12/9/2021
14	East-West Street:	6th Street	Projection Year: 2025	Peak Hour: AM	Reviewed by:	Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	45	0	**45**	0	45	**45**	29	78	0	**78**	0	78	0	**78**	0	78	0	**78**
	Left-Through		0							0				0				0	
	Through	76	0	128	0	76	128	20	102	0	188	0	102	0	188	0	102	0	188
	Through-Right		0							0				0				0	
	Right	7	0	0	0	7	0	0	8	0	0	0	8	0	0	0	8	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	21	0	21	0	21	21	22	45	0	45	0	45	0	45	0	45	0	45
	Left-Through		0							0				0				0	
	Through	205	0	**258**	3	208	**261**	28	250	0	**373**	3	253	0	**376**	-1	252	0	**375**
	Through-Right		0							0				0				0	
	Right	32	0	0	0	32	0	43	78	0	0	0	78	0	0	0	78	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	47	1	**47**	0	47	**47**	24	75	1	**75**	0	75	1	**75**	0	75	1	**75**
	Left-Through		0							0				0				0	
	Through	159	1	132	3	162	134	81	253	1	200	3	256	1	202	-1	255	1	201
	Through-Right		1							1				1				1	
	Right	105	0	105	0	105	105	33	147	0	147	0	147	0	147	0	147	0	147
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	41	1	41	0	41	41	0	44	1	44	0	44	1	44	0	44	1	44
	Left-Through		0							0				0				0	
	Through	746	1	**412**	16	762	**420**	66	874	1	**485**	16	890	1	**493**	-2	888	1	**492**
	Through-Right		1							1				1				1	
	Right	77	0	77	0	77	77	13	96	0	96	0	96	0	96	0	96	0	96
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	303	306	451	454	453
	East-West:	459	467	560	568	567
	SUM:	762	773	1011	1022	1020
VOLUME/CAPACITY *(V/C)* RATIO:		0.508	0.515	0.674	0.681	0.680
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.408	0.415	0.574	0.581	0.580
LEVEL OF SERVICE (LOS):		A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
15	East-West Street:	7th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	72	0	72	0	72	72	562	640	0	640	0	640	0	640	0	640	0	640
	Left-Through		0							0				0				0	
	Through	112	0	229	0	112	229	21	142	0	1014	0	142	0	1014	0	142	0	1014
	Through-Right		0							0				0				0	
	Right	45	0	0	0	45	0	183	232	0	0	0	232	0	0	0	232	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	35	0	35	0	35	35	33	71	0	71	0	71	0	71	0	71	0	71
	Left-Through		0							0				0				0	
	Through	179	0	259	3	182	262	23	217	0	341	3	220	0	344	-1	219	0	343
	Through-Right		0							0				0				0	
	Right	45	0	0	0	45	0	4	53	0	0	0	53	0	0	0	53	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	26	1	26	0	26	26	3	31	1	31	0	31	1	31	0	31	1	31
	Left-Through		0							0				0				0	
	Through	346	1	210	0	346	210	200	575	1	363	0	575	1	363	0	575	1	363
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	71	150	0	150	0	150	0	150	0	150	0	150
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	94	1	94	0	94	94	114	216	1	216	0	216	1	216	0	216	1	216
	Left-Through		0							0				0				0	
	Through	752	1	398	16	768	406	227	1041	1	558	16	1057	1	566	-2	1055	1	565
	Through-Right		1							1				1				1	
	Right	44	0	44	0	44	44	27	75	0	75	0	75	0	75	0	75	0	75
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			North-South:	331		North-South:	334			North-South:	1085			North-South:	1085			North-South:	1085
			East-West:	424		East-West:	432			East-West:	589			East-West:	597			East-West:	596
			SUM:	755		SUM:	766			SUM:	1674			SUM:	1682			SUM:	1681
VOLUME/CAPACITY (V/C) RATIO:				0.503			0.511				1.116				1.121				1.121
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.403			0.411				1.016				1.021				1.021
LEVEL OF SERVICE (LOS):				A			A				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project:	0.005	Δv/c after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Santa Fe Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
16	East-West Street:	7th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3 SB-- 0 EB-- 0 WB-- 0	NB-- 3 SB-- 0 EB-- 0 WB-- 0	NB-- 3 SB-- 0 EB-- 0 WB-- 0	NB-- 3 SB-- 0 EB-- 0 WB-- 0	NB-- 3 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	131	1	**131**	0	131	**131**	65	207	1	**207**	0	207	1	**207**	0	207	1	**207**
	Left-Through		0							0				0				0	
	Through	263	1	263	0	263	263	102	387	1	387	0	387	1	387	0	387	1	387
	Through-Right		0							0				0				0	
	Right	143	1	0	0	143	0	3	158	1	0	0	158	1	0	0	158	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	32	0	32	0	32	32	17	52	0	52	0	52	0	52	0	52	0	52
	Left-Through		0							0				0				0	
	Through	163	0	**207**	0	163	**207**	59	236	0	**401**	0	236	0	**401**	0	236	0	**401**
	Through-Right		0							0				0				0	
	Right	12	0	0	0	12	0	100	113	0	0	0	113	0	0	0	113	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	12	1	**12**	0	12	**12**	151	164	1	**164**	0	164	1	**164**	0	164	1	**164**
	Left-Through		0							0				0				0	
	Through	325	1	216	0	325	216	415	767	1	461	0	767	1	461	0	767	1	461
	Through-Right		1							1				1				1	
	Right	107	0	107	0	107	107	39	155	0	155	0	155	0	155	0	155	0	155
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	215	1	215	0	215	215	0	233	1	233	0	233	1	233	0	233	1	233
	Left-Through		0							0				0				0	
	Through	725	1	**429**	14	739	**436**	428	1213	1	**704**	14	1227	1	**711**	-2	1225	1	**710**
	Through-Right		1							1				1				1	
	Right	133	0	133	0	133	133	51	195	0	195	0	195	0	195	0	195	0	195
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	338	338	608	608	608
	East-West:	441	448	868	875	874
	SUM:	779	786	1476	1483	1482
VOLUME/CAPACITY *(V/C)* RATIO:		0.567	0.572	1.073	1.079	1.078
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.467	0.472	0.973	0.979	0.978
LEVEL OF SERVICE (LOS):		A	A	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Santa Fe Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
17	East-West Street:	8th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	249	0	249	0	249	249	0	270	0	270	0	270	0	270	0	270	0	270
	Left-Through		1							1				1				1	
	Through	537	0	**527**	0	537	**527**	163	744	0	**765**	0	744	0	**765**	0	744	0	**765**
	Through-Right		1							1				1				1	
	Right	19	0	527	0	19	527	0	21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	14	0	**14**	0	14	**14**	0	15	0	**15**	0	15	0	**15**	0	15	0	**15**
	Left-Through		1							1				1				1	
	Through	354	0	288	0	354	288	87	470	0	376	0	470	0	376	0	470	0	376
	Through-Right		1							1				1				1	
	Right	194	0	288	0	194	288	11	221	0	376	0	221	0	376	0	221	0	376
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	25	0	25	0	25	25	6	33	0	33	0	33	0	33	0	33	0	33
	Left-Through		0							0				0				0	
	Through	12	0	**353**	0	12	**353**	0	13	0	**388**	0	13	0	**388**	0	13	0	**388**
	Through-Right		0							0				0				0	
	Right	316	0	0	0	316	0	0	342	0	0	0	342	0	0	0	342	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	7	0	**7**	0	7	**7**	0	8	0	**8**	0	8	0	**8**	0	8	0	**8**
	Left-Through		0							0				0				0	
	Through	7	0	32	0	7	32	0	8	0	35	0	8	0	35	0	8	0	35
	Through-Right		0							0				0				0	
	Right	18	0	0	0	18	0	0	19	0	0	0	19	0	0	0	19	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	541	*North-South:*	541	*North-South:*	780	*North-South:*	780	*North-South:*	780
	East-West:	360	*East-West:*	360	*East-West:*	396	*East-West:*	396	*East-West:*	396
	SUM:	901	*SUM:*	901	*SUM:*	1176	*SUM:*	1176	*SUM:*	1176
VOLUME/CAPACITY *(V/C)* RATIO:		0.601		0.601		0.784		0.784		0.784
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.501		0.501		0.684		0.684		0.684
LEVEL OF SERVICE (LOS):		A		A		B		B		B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	US 101 NB Off-Ramp	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
18	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	1185	1	605	48	1233	629	163	1446	1	737	48	1494	1	761	-7	1487	1	757
	Left-Through		0							0				0				0	
	Through	1	0	605	0	1	629	0	1	0	737	0	1	0	761	0	1	0	757
	Through-Right		0							0				0				0	
	Right	24	0	0	0	24	0	0	26	0	0	0	26	0	0	0	26	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	315	2	158	10	325	163	222	563	2	282	10	573	2	287	-2	571	2	286
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1731	2	577	48	1779	593	229	2103	2	701	48	2151	2	717	-7	2144	2	715
	Through-Right		1							1				1				1	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES North-South:	605	629	737	761	757
East-West:	577	593	701	717	715
SUM:	1182	1222	1438	1478	1472
VOLUME/CAPACITY *(V/C)* RATIO:	0.788	0.815	0.959	0.985	0.981
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.688	0.715	0.859	0.885	0.881
LEVEL OF SERVICE (LOS):	B	C	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.026	Δ*v/c* after mitigation:	0.022
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
19	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	200	1	**200**	0	200	**200**	0	217	1	**217**	0	217	1	**217**	0	217	1	**217**
	Left-Through		0							0				0				0	
	Through	357	0	427	0	357	427	0	387	0	463	0	387	0	463	0	387	0	463
	Through-Right		1							1				1				1	
	Right	70	0	0	0	70	0	0	76	0	0	0	76	0	0	0	76	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	117	1	117	0	117	117	0	127	1	127	0	127	1	127	0	127	1	127
	Left-Through		0							0				0				0	
	Through	351	0	**514**	0	351	**514**	0	380	0	**557**	0	380	0	**557**	0	380	0	**557**
	Through-Right		1							1				1				1	
	Right	163	0	0	0	163	0	0	177	0	0	0	177	0	0	0	177	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	**0**	1	1	**0**	0	0	0	**0**	1	1	0	**0**	0	1	0	**0**
	Left-Through		0							0				0				0	
	Through	295	1	172	9	304	176	222	541	1	297	9	550	1	301	-1	549	1	301
	Through-Right		1							1				1				1	
	Right	48	0	48	0	48	48	0	52	0	52	0	52	0	52	0	52	0	52
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1255	2	**453**	48	1303	**469**	229	1588	2	**567**	48	1636	2	**583**	-7	1629	2	**580**
	Through-Right		1							1				1				1	
	Right	103	0	103	0	103	103	0	112	0	112	0	112	0	112	0	112	0	112
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

CRITICAL VOLUMES		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
	North-South:	714	714	774	774	774
	East-West:	453	469	567	583	580
	SUM:	1167	1183	1341	1357	1354
VOLUME/CAPACITY *(V/C)* RATIO:		0.819	0.830	0.941	0.952	0.950
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.719	0.730	0.841	0.852	0.850
LEVEL OF SERVICE (LOS):		C	C	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.009
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
20	East-West Street:	Whittier Boulevard	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	238	1	**238**	0	238	**238**	0	258	1	**258**	0	258	1	**258**	0	258	1	**258**
	Left-Through		0							0				0				0	
	Through	520	1	316	0	520	316	0	563	1	342	0	563	1	342	0	563	1	342
	Through-Right		1							1				1				1	
	Right	112	0	112	0	112	112	0	121	0	121	0	121	0	121	0	121	0	121
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	95	1	95	0	95	95	0	103	1	103	0	103	1	103	0	103	1	103
	Left-Through		0							0				0				0	
	Through	391	1	**254**	0	391	**254**	0	423	1	**275**	0	423	1	**275**	0	423	1	**275**
	Through-Right		1							1				1				1	
	Right	117	0	117	0	117	117	0	127	0	127	0	127	0	127	0	127	0	127
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	27	1	**27**	0	27	**27**	0	29	1	**29**	0	29	1	**29**	0	29	1	**29**
	Left-Through		0							0				0				0	
	Through	110	1	89	3	113	91	36	155	1	115	3	158	1	116	-1	157	1	116
	Through-Right		1							1				1				1	
	Right	68	0	68	0	68	68	0	74	0	74	0	74	0	74	0	74	0	74
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	201	1	201	0	201	201	0	218	1	218	0	218	1	218	0	218	1	218
	Left-Through		0							0				0				0	
	Through	1086	1	**626**	16	1102	**634**	79	1255	1	**718**	16	1271	1	**726**	-2	1269	1	**725**
	Through-Right		1							1				1				1	
	Right	166	0	166	0	166	166	0	180	0	180	0	180	0	180	0	180	0	180
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES *North-South:*	492	492	533	533	533
East-West:	653	661	747	755	754
SUM:	1145	1153	1280	1288	1287
VOLUME/CAPACITY *(V/C)* RATIO:	0.804	0.809	0.898	0.904	0.903
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.704	0.709	0.798	0.804	0.803
LEVEL OF SERVICE (LOS):	C	C	C	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.006 | Δ*v/c* after mitigation: 0.005

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #: 21	North-South Street: I-5 Northbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by: GTC	Date: 12/9/2021
	East-West Street: 4th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:	Project: 401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	275	1	275	0	275	275	15	313	1	313	0	313	1	313	0	313	1	313
	Left-Through		0							0				0				0	
	Through	46	0	106	0	46	106	0	50	0	115	0	50	0	115	0	50	0	115
	Through-Right		1							1				1				1	
	Right	60	0	0	0	60	0	0	65	0	0	0	65	0	0	0	65	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	240	1	240	6	246	246	143	403	1	403	6	409	1	409	-1	408	1	408
	Left-Through		0							0				0				0	
	Through	663	2	332	3	666	333	56	774	2	387	3	777	2	389	-1	776	2	388
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1007	1	669	16	1023	677	43	1133	1	745	16	1149	1	753	-2	1147	1	752
	Through-Right		1							1				1				1	
	Right	330	0	330	0	330	330	0	357	0	357	0	357	0	357	0	357	0	357
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
CRITICAL VOLUMES	*North-South:*	275	275	313	313	313
	East-West:	909	923	1148	1162	1160
	SUM:	1184	1198	1461	1475	1473
VOLUME/CAPACITY *(V/C)* RATIO:		0.831	0.841	1.025	1.035	1.034
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.731	0.741	0.925	0.935	0.934
LEVEL OF SERVICE (LOS):		C	C	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.009
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
22	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0	NB-- 0 SB-- 3 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	156	1	156	0	156	156	0	169	1	169	0	169	1	169	0	169	1	169
	Left-Through		0							0				0				0	
	Through	517	2	259	0	517	259	0	560	2	280	0	560	2	280	0	560	2	280
	Through-Right		0							0				0				0	
	Right	82	1	8	0	82	8	0	89	1	9	0	89	1	9	0	89	1	9
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	134	1	134	0	134	134	0	145	1	145	0	145	1	145	0	145	1	145
	Left-Through		0							0				0				0	
	Through	611	2	306	0	611	306	0	662	2	331	0	662	2	331	0	662	2	331
	Through-Right		0							0				0				0	
	Right	143	1	95	0	143	95	0	155	1	103	0	155	1	103	0	155	1	103
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	48	1	48	0	48	48	0	52	1	52	0	52	1	52	0	52	1	52
	Left-Through		0							0				0				0	
	Through	764	1	436	3	767	437	7	834	1	475	3	837	1	477	-1	836	1	476
	Through-Right		1							1				1				1	
	Right	107	0	107	0	107	107	0	116	0	116	0	116	0	116	0	116	0	116
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	149	1	149	0	149	149	0	161	1	161	0	161	1	161	0	161	1	161
	Left-Through		0							0				0				0	
	Through	1098	1	581	16	1114	589	19	1208	1	639	16	1224	1	647	-2	1222	1	646
	Through-Right		1							1				1				1	
	Right	64	0	64	0	64	64	0	69	0	69	0	69	0	69	0	69	0	69
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	462	462	500	500	500
	East-West:	629	637	691	699	698
	SUM:	1091	1099	1191	1199	1198
VOLUME/CAPACITY *(V/C)* RATIO:		0.766	0.771	0.836	0.841	0.841
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.666	0.671	0.736	0.741	0.741
LEVEL OF SERVICE (LOS):		B	B	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 Southbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
23	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	AM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION		EXISTING PLUS PROJECT		FUTURE CONDITION W/O PROJECT		FUTURE CONDITION W/ PROJECT		FUTURE W/ PROJECT W/ MITIGATION	
No. of Phases		0		0		3		3		3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		0		0		0		0		0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0
	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?		0		0		2		2		2
Override Capacity		0		0		0		0		0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	92	0	0	0	92	0	0	100	1	100	0	100	1	100	0	100	1	100
	Left-Through		0							0				0				0	
	Through	3	0	0	0	3	0	0	3	0	488	0	3	0	520	0	3	0	515
	Through-Right		0							1				1				1	
	Right	385	0	0	32	417	0	68	485	0	0	32	517	0	0	-5	512	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	438	0	0	9	447	0	93	567	2	284	9	576	2	288	-1	575	2	288
	Through-Right		0							0				0				0	
	Right	69	0	0	0	69	0	19	94	1	94	0	94	1	94	0	94	1	94
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	140	0	0	0	140	0	1	153	1	153	0	153	1	153	0	153	1	153
	Left-Through		0							0				0				0	
	Through	1693	0	0	16	1709	0	34	1867	2	934	16	1883	2	942	-2	1881	2	941
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION		EXISTING PLUS PROJECT		FUTURE CONDITION W/O PROJECT		FUTURE CONDITION W/ PROJECT		FUTURE W/ PROJECT W/ MITIGATION	
CRITICAL VOLUMES	*North-South:*	0	*North-South:*	0	*North-South:*	488	*North-South:*	520	*North-South:*	515
	East-West:	0	*East-West:*	0	*East-West:*	934	*East-West:*	942	*East-West:*	941
	SUM:	0	*SUM:*	0	*SUM:*	1422	*SUM:*	1462	*SUM:*	1456
VOLUME/CAPACITY *(V/C)* RATIO:		0.000		0.000		0.998		1.026		1.022
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.000		0.000		0.898		0.926		0.922
LEVEL OF SERVICE (LOS):		A		A		D		E		E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.028	Δ*v/c* after mitigation:	0.024
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
1	East-West Street:	3rd Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	301	1	301	0	301	301	0	326	1	326	0	326	1	326	0	326	1	326
	Left-Through		0							0				0				0	
	Through	777	2	389	0	777	389	16	857	2	429	0	857	2	429	0	857	2	429
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	283	1	190	0	283	190	4	310	1	207	0	310	1	207	0	310	1	207
	Through-Right		1							1				1				1	
	Right	96	0	96	0	96	96	0	104	0	104	0	104	0	104	0	104	0	104
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	119	0	119	0	119	119	22	151	0	151	0	151	0	151	0	151	0	151
	Left-Through		1							1				1				1	
	Through	1034	3	288	30	1064	296	617	1737	3	472	30	1767	3	480	-5	1762	3	478
	Through-Right		0							0				0				0	
	Right	137	1	137	0	137	137	0	148	1	148	0	148	1	148	0	148	1	148
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — North-South:	491	491	533	533	533
East-West:	288	296	472	480	478
SUM:	779	787	1005	1013	1011
VOLUME/CAPACITY (V/C) RATIO:	0.547	0.552	0.705	0.711	0.709
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.447	0.452	0.605	0.611	0.609
LEVEL OF SERVICE (LOS):	A	A	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worketheet

(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
2	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	779	1	**513**	0	779	**513**	16	860	1	**569**	0	860	1	**569**	0	860	1	**569**
	Through-Right		1							1				1				1	
	Right	246	0	246	0	246	246	11	277	0	277	0	277	0	277	0	277	0	277
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	80	1	**80**	0	80	**80**	0	87	1	**87**	0	87	1	**87**	0	87	1	**87**
	Left-Through		0							0				0				0	
	Through	236	2	118	0	236	118	26	282	2	141	0	282	2	141	0	282	2	141
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	46	0	46	0	46	46	0	50	0	50	0	50	0	50	0	50	0	50
	Left-Through		1							1				1				1	
	Through	1525	2	**417**	8	1533	**419**	390	2041	2	**553**	8	2049	2	**555**	-1	2048	2	**555**
	Through-Right		1							1				1				1	
	Right	97	0	417	0	97	419	15	120	0	553	0	120	0	555	0	120	0	555
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — North-South:	593	593	656	656	656
East-West:	417	419	553	555	555
SUM:	1010	1012	1209	1211	1211
VOLUME/CAPACITY (V/C) RATIO:	0.709	0.710	0.848	0.850	0.850
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.609	0.610	0.748	0.750	0.750
LEVEL OF SERVICE (LOS):	B	B	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
3	East-West Street:	6th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	765	1	**473**	0	765	**473**	52	880	1	**566**	0	880	1	**566**	0	880	1	**566**
	Through-Right		1							1				1				1	
	Right	180	0	180	0	180	180	57	252	0	252	0	252	0	252	0	252	0	252
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	27	1	**27**	0	27	**27**	4	33	1	**33**	0	33	1	**33**	0	33	1	**33**
	Left-Through		0							0				0				0	
	Through	331	2	166	0	331	166	0	358	2	179	0	358	2	179	0	358	2	179
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	127	1	127	0	127	127	31	169	1	169	0	169	1	169	0	169	1	169
	Left-Through		0							0				0				0	
	Through	733	2	**367**	4	737	**369**	300	1094	2	**547**	4	1098	2	**549**	-1	1097	2	**549**
	Through-Right		0							0				0				0	
	Right	129	1	129	0	129	129	187	327	1	327	0	327	1	327	0	327	1	327
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	179	1	**179**	0	179	**179**	125	319	1	**319**	0	319	1	**319**	0	319	1	**319**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	313	2	159	0	313	159	139	478	2	247	0	478	2	247	0	478	2	247
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	500	500	599	599	599
East-West:	546	548	866	868	868
SUM:	1046	1048	1465	1467	1467
VOLUME/CAPACITY *(V/C)* RATIO:	0.761	0.762	1.065	1.067	1.067
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.661	0.662	0.965	0.967	0.967
LEVEL OF SERVICE (LOS):	B	B	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Central Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
4	East-West Street:	7th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	58	1	58	0	58	58	0	63	1	63	0	63	1	63	0	63	1	63
	Left-Through		0							0				0				0	
	Through	809	1	474	0	809	474	103	979	1	570	0	979	1	570	0	979	1	570
	Through-Right		1							1				1				1	
	Right	138	0	138	0	138	138	11	160	0	160	0	160	0	160	0	160	0	160
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	43	0	43	0	43	43	187	234	0	234	0	234	0	234	0	234	0	234
	Left-Through		1							1				1				1	
	Through	541	0	387	0	541	387	104	690	0	777	0	690	0	777	0	690	0	777
	Through-Right		1							1				1				1	
	Right	61	0	387	0	61	387	21	87	0	0	0	87	0	0	0	87	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	95	1	95	0	95	95	0	103	1	103	0	103	1	103	0	103	1	103
	Left-Through		0							0				0				0	
	Through	803	1	438	0	803	438	296	1166	1	623	0	1166	1	623	0	1166	1	623
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	0	79	0	79	0	79	0	79	0	79	0	79
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	98	1	98	0	98	98	12	118	1	118	0	118	1	118	0	118	1	118
	Left-Through		0							0				0				0	
	Through	468	1	265	15	483	273	463	970	1	522	15	985	1	530	-2	983	1	529
	Through-Right		1							1				1				1	
	Right	62	0	62	0	62	62	7	74	0	74	0	74	0	74	0	74	0	74
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — North-South:	517	517	840	840	840
East-West:	536	536	741	741	741
SUM:	1053	1053	1581	1581	1581
VOLUME/CAPACITY (V/C) RATIO:	0.702	0.702	1.054	1.054	1.054
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.602	0.602	0.954	0.954	0.954
LEVEL OF SERVICE (LOS):	B	B	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
5	East-West Street:	2nd Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	151	1	151	0	151	151	0	164	1	164	0	164	1	164	0	164	1	164
	Left-Through		0							0				0				0	
	Through	896	1	483	60	956	513	357	1327	1	718	60	1387	1	748	-9	1378	1	744
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	34	109	0	109	0	109	0	109	0	109	0	109
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	62	1	62	0	62	62	0	67	1	67	0	67	1	67	0	67	1	67
	Left-Through		0							0				0				0	
	Through	815	1	441	17	832	450	301	1184	1	629	17	1201	1	637	-3	1198	1	636
	Through-Right		1							1				1				1	
	Right	67	0	67	0	67	67	0	73	0	73	0	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	137	1	137	0	137	137	0	148	1	148	0	148	1	148	0	148	1	148
	Left-Through		0							0				0				0	
	Through	237	1	237	0	237	237	15	272	1	272	0	272	1	272	0	272	1	272
	Through-Right		0							0				0				0	
	Right	163	1	88	0	163	88	0	177	1	95	0	177	1	95	0	177	1	95
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	38	1	38	0	38	38	9	50	1	50	0	50	1	50	0	50	1	50
	Left-Through		0							0				0				0	
	Through	86	0	142	0	86	142	18	111	0	181	0	111	0	181	0	111	0	181
	Through-Right		1							1				1				1	
	Right	56	0	0	0	56	0	9	70	0	0	0	70	0	0	0	70	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	592	601	793	815	811
	East-West:	279	279	329	329	329
	SUM:	871	880	1122	1144	1140
VOLUME/CAPACITY *(V/C)* RATIO:		0.611	0.618	0.787	0.803	0.800
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.511	0.518	0.687	0.703	0.700
LEVEL OF SERVICE (LOS):		A	A	B	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.013
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
6	East-West Street:	3rd Street/4th Place	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	245	1	245	0	245	245	87	352	1	352	0	352	1	352	0	352	1	352
	Left-Through		0							0				0				0	
	Through	1063	2	532	0	1063	532	350	1501	2	751	0	1501	2	751	0	1501	2	751
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	747	2	374	17	764	382	297	1106	2	553	17	1123	2	562	-3	1120	2	560
	Through-Right		0							0				0				0	
	Right	146	1	146	0	146	146	13	171	1	171	0	171	1	171	0	171	1	171
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	95	0	95	115	210	210	195	298	0	298	115	413	0	413	-18	395	0	395
	Left-Through		1							1				1				1	
	Through	625	2	197	30	655	248	540	1217	2	408	30	1247	2	459	-5	1242	2	451
	Through-Right		1							1				1				1	
	Right	67	0	197	60	127	248	43	116	0	408	60	176	0	459	-9	167	0	451
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	619	627	905	914	912
East-West:	197	248	408	459	451
SUM:	816	875	1313	1373	1363
VOLUME/CAPACITY *(V/C)* RATIO:	0.573	0.614	0.921	0.964	0.956
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.473	0.514	0.821	0.864	0.856
LEVEL OF SERVICE (LOS):	A	A	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.043	Δ*v/c* after mitigation:	0.035
Significant impacted?	YES	Fully mitigated?	NO

LADOT Moving LA Forward

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
7	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition		Existing Plus Project		Future Condition w/o Project		Future Condition w/ Project		Future w/ Project w/ Mitigation	
No. of Phases		2		2		2		2		2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		0		0		0		0		0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0	NB-- 0	SB-- 0
	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0	EB-- 0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?		2		2		2		2		2
Override Capacity		0		0		0		0		0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	976	1	518	0	976	535	394	1451	1	846	0	1451	1	862	0	1451	1	860
	Through-Right		1							1				1				1	
	Right	60	0	60	33	93	93	175	240	0	240	33	273	0	273	-5	268	0	268
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	117	1	117	42	159	159	27	154	1	154	42	196	1	196	-7	189	1	189
	Left-Through		0							0				0				0	
	Through	743	2	372	90	833	417	463	1268	2	634	90	1358	2	679	-14	1344	2	672
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	224	0	224	0	224	224	38	281	0	281	0	281	0	281	0	281	0	281
	Left-Through		1							1				1				1	
	Through	1421	2	548	8	1429	551	226	1765	2	682	8	1773	2	685	-1	1772	2	684
	Through-Right		0							0				0				0	
	Right	161	1	161	0	161	161	137	311	1	311	0	311	1	311	0	311	1	311
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition w/o Project		Future Condition w/ Project		Future w/ Project w/ Mitigation	
CRITICAL VOLUMES	*North-South:*	635	*North-South:*	694	*North-South:*	1000	*North-South:*	1058	*North-South:*	1049
	East-West:	548	*East-West:*	551	*East-West:*	682	*East-West:*	685	*East-West:*	684
	SUM:	1183	*SUM:*	1245	*SUM:*	1682	*SUM:*	1743	*SUM:*	1733
VOLUME/CAPACITY *(V/C)* RATIO:		0.789		0.830		1.121		1.162		1.155
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.689		0.730		1.021		1.062		1.055
LEVEL OF SERVICE (LOS):		B		C		F		F		F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.041	Δ*v/c* after mitigation:	0.034
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date: 12/9/2021
8	East-West Street:	6th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project: 401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	102	1	102	0	102	102	8	118	1	118	0	118	1	118	0	118	1	118
	Left-Through		0							0				0				0	
	Through	842	1	**458**	25	867	**471**	248	1160	1	**735**	25	1185	1	**747**	-4	1181	1	**745**
	Through-Right		1							1				1				1	
	Right	74	0	74	0	74	74	229	309	0	309	0	309	0	309	0	309	0	309
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	79	1	**79**	15	94	**94**	252	338	1	**338**	15	353	1	**353**	-2	351	1	**351**
	Left-Through		0							0				0				0	
	Through	641	1	359	75	716	396	143	837	1	460	75	912	1	497	-12	900	1	491
	Through-Right		1							1				1				1	
	Right	76	0	76	0	76	76	0	82	0	82	0	82	0	82	0	82	0	82
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	110	1	110	4	114	114	32	151	1	151	4	155	1	155	-1	154	1	154
	Left-Through		0							0				0				0	
	Through	714	1	**398**	0	714	**398**	257	1030	1	**596**	0	1030	1	**596**	0	1030	1	**596**
	Through-Right		1							1				1				1	
	Right	82	0	82	0	82	82	73	162	0	162	0	162	0	162	0	162	0	162
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	41	1	**41**	0	41	**41**	252	296	1	**296**	0	296	1	**296**	0	296	1	**296**
	Left-Through		0							0				0				0	
	Through	237	1	144	0	237	146	256	513	1	381	0	513	1	383	0	513	1	383
	Through-Right		1							1				1				1	
	Right	50	0	50	4	54	54	195	249	0	249	4	253	0	253	-1	252	0	252
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
CRITICAL VOLUMES	*North-South:*	537	565	1073	1100	1096
	East-West:	439	439	892	892	892
	SUM:	976	1004	1965	1992	1988
VOLUME/CAPACITY (*V/C*) RATIO:		0.685	0.705	1.379	1.398	1.395
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.585	0.605	1.279	1.298	1.295
LEVEL OF SERVICE (LOS):		A	B	F	F	F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.019	Δ*v/c* after mitigation:	0.016
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
9	East-West Street:	7th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	109	1	109	0	109	109	0	118	1	118	0	118	1	118	0	118	1	118
	Left-Through		0							0				0				0	
	Through	761	1	438	21	782	449	227	1051	1	633	21	1072	1	643	-3	1069	1	642
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	89	214	0	214	0	214	0	214	0	214	0	214
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	105	1	105	0	105	105	92	206	1	206	0	206	1	206	0	206	1	206
	Left-Through		0							0				0				0	
	Through	714	1	379	60	774	416	233	1006	1	586	60	1066	1	623	-9	1057	1	618
	Through-Right		1							1				1				1	
	Right	43	0	43	15	58	58	118	165	0	165	15	180	0	180	-2	178	0	178
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	98	1	98	0	98	98	77	183	1	183	0	183	1	183	0	183	1	183
	Left-Through		0							0				0				0	
	Through	757	1	435	0	757	435	417	1237	1	679	0	1237	1	679	0	1237	1	679
	Through-Right		1							1				1				1	
	Right	112	0	112	0	112	112	0	121	0	121	0	121	0	121	0	121	0	121
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	79	1	79	0	79	79	89	175	1	175	0	175	1	175	0	175	1	175
	Left-Through		0							0				0				0	
	Through	420	1	271	0	420	273	362	817	1	576	0	817	1	578	0	817	1	578
	Through-Right		1							1				1				1	
	Right	122	0	122	4	126	126	203	335	0	335	4	339	0	339	-1	338	0	338
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	543	554	839	849	848
East-West:	514	514	854	854	854
SUM:	1057	1068	1693	1703	1702
VOLUME/CAPACITY *(V/C)* RATIO:	0.742	0.749	1.188	1.195	1.194
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.642	0.649	1.088	1.095	1.094
LEVEL OF SERVICE (LOS):	B	B	F	F	F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
10	East-West Street:	Olympic Boulevard	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION: Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT: Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT: Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT: Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION: Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	75	1	75	0	75	75	4	85	1	85	0	85	1	85	0	85	1	85
	Left-Through		0							0				0				0	
	Through	788	1	**487**	17	805	**495**	262	1115	1	**658**	17	1132	1	**666**	-3	1129	1	**665**
	Through-Right		1							1				1				1	
	Right	185	0	185	0	185	185	0	200	0	200	0	200	0	200	0	200	0	200
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	100	1	**100**	0	100	**100**	89	197	1	**197**	0	197	1	**197**	0	197	1	**197**
	Left-Through		0							0				0				0	
	Through	882	2	441	60	942	471	233	1188	2	594	60	1248	2	624	-9	1239	2	620
	Through-Right		0							0				0				0	
	Right	129	1	98	0	129	98	0	140	1	101	0	140	1	101	0	140	1	101
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	62	1	62	0	62	62	11	78	1	78	0	78	1	78	0	78	1	78
	Left-Through		0							0				0				0	
	Through	961	1	**507**	0	961	**507**	237	1278	1	**670**	0	1278	1	**670**	0	1278	1	**670**
	Through-Right		1							1				1				1	
	Right	53	0	53	0	53	53	5	62	0	62	0	62	0	62	0	62	0	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	77	1	**77**	0	77	**77**	0	83	1	**83**	0	83	1	**83**	0	83	1	**83**
	Left-Through		0							0				0				0	
	Through	909	1	474	0	909	476	190	1174	1	630	0	1174	1	632	0	1174	1	631
	Through-Right		1							1				1				1	
	Right	39	0	39	4	43	43	43	85	0	85	4	89	0	89	-1	88	0	88
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — North-South:	587	595	855	863	862
East-West:	584	584	753	753	753
SUM:	1171	1179	1608	1616	1615
VOLUME/CAPACITY (V/C) RATIO:	0.781	0.786	1.072	1.077	1.077
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.681	0.686	0.972	0.977	0.977
LEVEL OF SERVICE (LOS):	B	B	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
11	East-West Street:	I-10 EB Ramps	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0	NB-- 0 SB-- 0 EB-- 3 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	422	1	**422**	0	422	**422**	0	457	1	**457**	0	457	1	**457**	0	457	1	**457**
	Left-Through		0							0				0				0	
	Through	1021	1	511	8	1029	515	70	1176	1	588	8	1184	1	592	-1	1183	1	592
	Through-Right		1							1				1				1	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
	Left-Through		0							0				0				0	
	Through	1183	2	**592**	30	1213	**607**	68	1349	2	**675**	30	1379	2	**690**	-5	1374	2	**687**
	Through-Right		0							0				0				0	
	Right	466	1	432	0	466	428	17	522	1	455	0	522	1	451	0	522	1	451
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	69	1	**69**	8	77	**77**	60	135	1	**135**	8	143	1	**143**	-1	142	1	**142**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	225	1	0	0	225	0	0	244	1	0	0	244	1	0	0	244	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	7	0	0	0	7	0	0	8	0	0	0	8	0	0	0	8	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	1014	1029	1132	1147	1144
East-West:	69	77	135	143	142
SUM:	1083	1106	1267	1290	1286
VOLUME/CAPACITY *(V/C)* RATIO:	0.788	0.804	0.921	0.938	0.935
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.688	0.704	0.821	0.838	0.835
LEVEL OF SERVICE (LOS):	B	C	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.017	Δ*v/c* after mitigation:	0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Vignes Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
12	East-West Street:	1st Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	8	0	8	0	8	8	0	9	0	9	0	9	0	9	0	9	0	9
	Left-Through		0							0				0				0	
	Through	42	0	180	0	42	180	0	45	0	211	0	45	0	211	0	45	0	211
	Through-Right		0							0				0				0	
	Right	130	0	0	0	130	0	16	157	0	0	0	157	0	0	0	157	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	64	0	64	0	64	64	0	69	0	69	0	69	0	69	0	69	0	69
	Left-Through		0							0				0				0	
	Through	27	0	124	0	27	124	0	29	0	134	0	29	0	134	0	29	0	134
	Through-Right		0							0				0				0	
	Right	33	0	0	0	33	0	0	36	0	0	0	36	0	0	0	36	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	91	0	91	0	91	91	0	99	0	99	0	99	0	99	0	99	0	99
	Left-Through		1							1				1				1	
	Through	775	1	479	0	775	479	5	844	1	521	0	844	1	521	0	844	1	521
	Through-Right		0							0				0				0	
	Right	18	1	18	0	18	18	0	19	1	19	0	19	1	19	0	19	1	19
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	54	0	54	0	54	54	0	58	0	58	0	58	0	58	0	58	0	58
	Left-Through		1							1				1				1	
	Through	342	0	308	0	342	308	5	375	0	335	0	375	0	335	0	375	0	335
	Through-Right		1							1				1				1	
	Right	58	0	308	0	58	308	0	63	0	335	0	63	0	335	0	63	0	335
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
CRITICAL VOLUMES — *North-South:*	244	244	280	280	280
East-West:	787	787	856	856	856
SUM:	1031	1031	1136	1136	1136
VOLUME/CAPACITY *(V/C)* RATIO:	0.724	0.724	0.797	0.797	0.797
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.624	0.624	0.697	0.697	0.697
LEVEL OF SERVICE (LOS):	B	B	B	B	B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Merrick Street/Molino Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
13	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	37	0	37	0	37	37	3	43	0	43	0	43	0	43	0	43	0	43
	Left-Through		0							0				0				0	
	Through	13	0	64	0	13	64	0	14	0	436	0	14	0	436	0	14	0	436
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	364	379	0	0	0	379	0	0	0	379	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	87	1	87	0	87	87	0	94	0	94	0	94	0	94	0	94	0	94
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	123	0	0	0	123	0	0	0	123
	Through-Right		0							0				0				0	
	Right	27	1	27	0	27	27	0	29	0	0	0	29	0	0	0	29	0	0
	Left-Through-Right		0							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1521	2	521	120	1641	561	38	1685	2	577	120	1805	2	617	-18	1787	2	611
	Through-Right		1							1				1				1	
	Right	43	0	43	0	43	43	0	47	0	47	0	47	0	47	0	47	0	47
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	622	1	346	25	647	358	775	1449	1	762	25	1474	1	775	-4	1470	1	773
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	0	75	0	75	0	75	0	75	0	75	0	75
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	151	151	530	530	530
	East-West:	521	561	762	775	773
	SUM:	672	712	1292	1305	1303
VOLUME/CAPACITY *(V/C)* RATIO:		0.472	0.500	0.861	0.870	0.869
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.372	0.400	0.761	0.770	0.769
LEVEL OF SERVICE (LOS):		A	A	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.009	Δ*v/c* after mitigation:	0.008
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
14	East-West Street:	6th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	43	0	43	0	43	**43**	41	88	0	**88**	0	88	0	**88**	0	88	0	**88**
	Left-Through		0							0				0				0	
	Through	128	0	**211**	0	128	211	47	186	0	317	0	186	0	317	0	186	0	317
	Through-Right		0							0				0				0	
	Right	40	0	0	0	40	0	0	43	0	0	0	43	0	0	0	43	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	32	0	**32**	0	32	32	27	62	0	62	0	62	0	62	0	62	0	62
	Left-Through		0							0				0				0	
	Through	114	0	187	15	129	**202**	41	164	0	**322**	15	179	0	**337**	-2	177	0	**335**
	Through-Right		0							0				0				0	
	Right	41	0	0	0	41	0	52	96	0	0	0	96	0	0	0	96	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	65	1	65	0	65	65	57	127	1	127	0	127	1	127	0	127	1	127
	Left-Through		0							0				0				0	
	Through	763	1	**418**	15	778	**426**	89	915	1	**515**	15	930	1	**523**	-2	928	1	**522**
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	36	115	0	115	0	115	0	115	0	115	0	115
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	13	1	**13**	0	13	**13**	0	14	1	**14**	0	14	1	**14**	0	14	1	**14**
	Left-Through		0							0				0				0	
	Through	227	1	127	4	231	129	94	340	1	202	4	344	1	204	-1	343	1	203
	Through-Right		1							1				1				1	
	Right	26	0	26	0	26	26	35	63	0	63	0	63	0	63	0	63	0	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	243	245	410	425	423
	East-West:	431	439	529	537	536
	SUM:	674	684	939	962	959
VOLUME/CAPACITY *(V/C)* RATIO:		0.449	0.456	0.626	0.641	0.639
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.349	0.356	0.526	0.541	0.539
LEVEL OF SERVICE (LOS):		A	A	A	A	A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.015	Δ*v/c* after mitigation:	0.013
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Mateo Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
15	East-West Street:	7th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	110	0	110	0	110	110	171	290	0	290	0	290	0	290	0	290	0	290
	Left-Through		0							0				0				0	
	Through	163	0	328	0	163	328	50	227	0	769	0	227	0	769	0	227	0	769
	Through-Right		0							0				0				0	
	Right	55	0	0	0	55	0	192	252	0	0	0	252	0	0	0	252	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	49	0	49	0	49	49	36	89	0	89	0	89	0	89	0	89	0	89
	Left-Through		0							0				0				0	
	Through	119	0	197	15	134	212	36	165	0	289	15	180	0	304	-2	178	0	302
	Through-Right		0							0				0				0	
	Right	29	0	0	0	29	0	4	35	0	0	0	35	0	0	0	35	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	65	1	65	0	65	65	5	75	1	75	0	75	1	75	0	75	1	75
	Left-Through		0							0				0				0	
	Through	814	1	440	0	814	440	510	1391	1	868	0	1391	1	868	0	1391	1	868
	Through-Right		1							1				1				1	
	Right	65	0	65	0	65	65	274	344	0	344	0	344	0	344	0	344	0	344
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	46	1	46	0	46	46	171	221	1	221	0	221	1	221	0	221	1	221
	Left-Through		0							0				0				0	
	Through	393	1	212	4	397	214	160	586	1	330	4	590	1	332	-1	589	1	331
	Through-Right		1							1				1				1	
	Right	31	0	31	0	31	31	39	73	0	73	0	73	0	73	0	73	0	73
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	377	*North-South:*	377	*North-South:*	858	*North-South:*	858	*North-South:*	858
	East-West:	486	*East-West:*	486	*East-West:*	1089	*East-West:*	1089	*East-West:*	1089
	SUM:	863	*SUM:*	863	*SUM:*	1947	*SUM:*	1947	*SUM:*	1947
VOLUME/CAPACITY *(V/C)* RATIO:		0.575		0.575		1.298		1.298		1.298
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.475		0.475		1.198		1.198		1.198
LEVEL OF SERVICE (LOS):		A		A		F		F		F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Santa Fe Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
16	East-West Street:	7th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3 SB-- 0 EB-- 0 WB-- 0	NB-- 3 SB-- 0 EB-- 0 WB-- 0	NB-- 3 SB-- 0 EB-- 0 WB-- 0	NB-- 3 SB-- 0 EB-- 0 WB-- 0	NB-- 3 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	105	1	105	0	105	105	35	149	1	149	0	149	1	149	0	149	1	149
	Left-Through		0							0				0				0	
	Through	331	1	331	0	331	331	107	465	1	465	0	465	1	465	0	465	1	465
	Through-Right		0							0				0				0	
	Right	162	1	0	0	162	0	16	191	1	0	0	191	1	0	0	191	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	58	0	58	0	58	58	29	92	0	92	0	92	0	92	0	92	0	92
	Left-Through		0							0				0				0	
	Through	265	0	346	0	265	346	56	343	0	610	0	343	0	610	0	343	0	610
	Through-Right		0							0				0				0	
	Right	23	0	0	0	23	0	150	175	0	0	0	175	0	0	0	175	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	28	1	28	0	28	28	128	158	1	158	0	158	1	158	0	158	1	158
	Left-Through		0							0				0				0	
	Through	692	1	436	0	692	436	609	1358	1	809	0	1358	1	809	0	1358	1	809
	Through-Right		1							1				1				1	
	Right	180	0	180	0	180	180	64	259	0	259	0	259	0	259	0	259	0	259
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	207	1	207	0	207	207	0	224	1	224	0	224	1	224	0	224	1	224
	Left-Through		0							0				0				0	
	Through	314	1	186	4	318	188	701	1041	1	571	4	1045	1	573	-1	1044	1	572
	Through-Right		1							1				1				1	
	Right	57	0	57	0	57	57	38	100	0	100	0	100	0	100	0	100	0	100
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES North-South:	451	451	759	759	759
East-West:	643	643	1033	1033	1033
SUM:	1094	1094	1792	1792	1792
VOLUME/CAPACITY (V/C) RATIO:	0.796	0.796	1.303	1.303	1.303
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.696	0.696	1.203	1.203	1.203
LEVEL OF SERVICE (LOS):	B	B	F	F	F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in v/c due to project:	0.000	Δv/c after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Santa Fe Avenue	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
17	East-West Street:	8th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0	NB-- 0 SB-- 0
	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0	EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	225	0	225	0	225	225	0	244	0	244	0	244	0	244	0	244	0	244
	Left-Through		1							1				1				1	
	Through	491	0	500	0	491	500	146	678	0	688	0	678	0	688	0	678	0	688
	Through-Right		1							1				1				1	
	Right	9	0	0	0	9	0	0	10	0	0	0	10	0	0	0	10	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	9	0	9	0	9	9	0	10	0	10	0	10	0	10	0	10	0	10
	Left-Through		1							1				1				1	
	Through	524	0	361	0	524	361	109	676	0	461	0	676	0	461	0	676	0	461
	Through-Right		1							1				1				1	
	Right	180	0	361	0	180	361	11	206	0	461	0	206	0	461	0	206	0	461
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	56	0	56	0	56	56	11	72	0	72	0	72	0	72	0	72	0	72
	Left-Through		0							0				0				0	
	Through	12	0	442	0	12	442	0	13	0	490	0	13	0	490	0	13	0	490
	Through-Right		0							0				0				0	
	Right	374	0	0	0	374	0	0	405	0	0	0	405	0	0	0	405	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	9	0	9	0	9	9	0	10	0	10	0	10	0	10	0	10	0	10
	Left-Through		0							0				0				0	
	Through	3	0	26	0	3	26	0	3	0	28	0	3	0	28	0	3	0	28
	Through-Right		0							0				0				0	
	Right	14	0	0	0	14	0	0	15	0	0	0	15	0	0	0	15	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	586	586	705	705	705
East-West:	451	451	500	500	500
SUM:	1037	1037	1205	1205	1205
VOLUME/CAPACITY *(V/C)* RATIO:	0.691	0.691	0.803	0.803	0.803
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.591	0.591	0.703	0.703	0.703
LEVEL OF SERVICE (LOS):	A	A	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	US 101 NB Off-Ramp	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
18	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
No. of Phases		2		2		2		2		2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?		0		0		0		0		0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0
	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0
ATSAC-1 or ATSAC+ATCS-2?		2		2		2		2		2
Override Capacity		0		0		0		0		0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	337	1	**278**	12	349	**284**	231	596	1	**417**	12	608	1	**423**	-2	606	1	**422**
	Left-Through		0							0				0				0	
	Through	0	0	278	0	0	284	0	0	0	417	0	0	0	423	0	0	0	422
	Through-Right		0							0				0				0	
	Right	219	0	0	0	219	0	0	237	0	0	0	237	0	0	0	237	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	1111	3	**370**	45	1156	**385**	259	1462	3	487	45	1507	3	502	-7	1500	3	500
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	586	1	293	12	598	299	395	1030	1	**515**	12	1042	1	**521**	-2	1040	1	**520**
	Through-Right		1							1				1				1	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	278	*North-South:*	284	*North-South:*	417	*North-South:*	423	*North-South:*	422
	East-West:	370	*East-West:*	385	*East-West:*	515	*East-West:*	521	*East-West:*	520
	SUM:	648	*SUM:*	669	*SUM:*	932	*SUM:*	944	*SUM:*	942
VOLUME/CAPACITY *(V/C)* RATIO:		0.432		0.446		0.621		0.629		0.628
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.332		0.346		0.521		0.529		0.528
LEVEL OF SERVICE (LOS):		A		A		A		A		A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.007
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
19	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	123	1	123	0	123	123	0	133	1	133	0	133	1	133	0	133	1	133
	Left-Through		0							0				0				0	
	Through	574	0	718	0	574	718	0	622	0	778	0	622	0	778	0	622	0	778
	Through-Right		1							1				1				1	
	Right	144	0	0	0	144	0	0	156	0	0	0	156	0	0	0	156	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	96	1	96	0	96	96	0	104	1	104	0	104	1	104	0	104	1	104
	Left-Through		0							0				0				0	
	Through	347	0	395	0	347	395	0	376	0	428	0	376	0	428	0	376	0	428
	Through-Right		1							1				1				1	
	Right	48	0	0	0	48	0	0	52	0	0	0	52	0	0	0	52	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	6	6	0	0	0	0	0	6	6	0	0	-1	5	0	0
	Left-Through		0							0				0				0	
	Through	1160	2	425	39	1199	438	259	1515	2	547	39	1554	2	560	-6	1548	2	558
	Through-Right		1							1				1				1	
	Right	115	0	115	0	115	115	0	125	0	125	0	125	0	125	0	125	0	125
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	626	1	392	12	638	398	395	1073	1	622	12	1085	1	628	-2	1083	1	627
	Through-Right		1							1				1				1	
	Right	158	0	158	0	158	158	0	171	0	171	0	171	0	171	0	171	0	171
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES *North-South:*	814	814	882	882	882
East-West:	425	438	622	628	627
SUM:	1239	1252	1504	1510	1509
VOLUME/CAPACITY *(V/C)* RATIO:	0.869	0.879	1.055	1.060	1.059
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.769	0.779	0.955	0.960	0.959
LEVEL OF SERVICE (LOS):	C	C	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Boyle Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
20	East-West Street:	Whittier Boulevard	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	173	1	173	0	173	173	0	187	1	187	0	187	1	187	0	187	1	187
	Left-Through		0							0				0				0	
	Through	897	1	**553**	0	897	**553**	0	971	1	**599**	0	971	1	**599**	0	971	1	**599**
	Through-Right		1							1				1				1	
	Right	209	0	209	0	209	209	0	226	0	226	0	226	0	226	0	226	0	226
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	126	1	**126**	0	126	**126**	0	136	1	**136**	0	136	1	**136**	0	136	1	**136**
	Left-Through		0							0				0				0	
	Through	385	1	212	0	385	212	0	417	1	230	0	417	1	230	0	417	1	230
	Through-Right		1							1				1				1	
	Right	39	0	39	0	39	39	0	42	0	42	0	42	0	42	0	42	0	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	197	1	**197**	0	197	**197**	0	213	1	**213**	0	213	1	**213**	0	213	1	**213**
	Left-Through		0							0				0				0	
	Through	618	1	363	15	633	370	34	703	1	410	15	718	1	417	-2	716	1	416
	Through-Right		1							1				1				1	
	Right	107	0	107	0	107	107	0	116	0	116	0	116	0	116	0	116	0	116
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	62	1	62	0	62	62	0	67	1	67	0	67	1	67	0	67	1	67
	Left-Through		0							0				0				0	
	Through	381	1	**272**	4	385	**274**	89	502	1	**339**	4	506	1	**341**	-1	505	1	**340**
	Through-Right		1							1				1				1	
	Right	162	0	162	0	162	162	0	175	0	175	0	175	0	175	0	175	0	175
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES — *North-South:*	679	679	735	735	735
East-West:	469	471	552	554	553
SUM:	1148	1150	1287	1289	1288
VOLUME/CAPACITY *(V/C)* RATIO:	0.806	0.807	0.903	0.905	0.904
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.706	0.707	0.803	0.805	0.804
LEVEL OF SERVICE (LOS):	C	C	D	D	D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 Northbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
21	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	43	1	43	0	43	43	27	74	1	74	0	74	1	74	0	74	1	74
	Left-Through		0							0				0				0	
	Through	49	0	**138**	0	49	**138**	0	53	0	**149**	0	53	0	**149**	0	53	0	**149**
	Through-Right		1							1				1				1	
	Right	89	0	0	0	89	0	0	96	0	0	0	96	0	0	0	96	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	714	1	**714**	24	738	**738**	172	945	1	**945**	24	969	1	**969**	-4	965	1	**965**
	Left-Through		0							0				0				0	
	Through	1052	2	526	15	1067	534	65	1204	2	602	15	1219	2	610	-2	1217	2	609
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	449	1	**369**	4	453	**371**	74	560	1	**436**	4	564	1	**438**	-1	563	1	**438**
	Through-Right		1							1				1				1	
	Right	288	0	288	0	288	288	0	312	0	312	0	312	0	312	0	312	0	312
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	138	*North-South:*	138	*North-South:*	149	*North-South:*	149	*North-South:*	149
	East-West:	1083	*East-West:*	1109	*East-West:*	1381	*East-West:*	1407	*East-West:*	1403
	SUM:	1221	*SUM:*	1247	*SUM:*	1530	*SUM:*	1556	*SUM:*	1552
VOLUME/CAPACITY *(V/C)* RATIO:		0.857		0.875		1.074		1.092		1.089
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.757		0.775		0.974		0.992		0.989
LEVEL OF SERVICE (LOS):		C		C		E		E		E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.018	Δ*v/c* after mitigation:	0.015
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Soto Street	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
22	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	2	2	2	2	2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	192	1	192	0	192	192	0	208	1	208	0	208	1	208	0	208	1	208
	Left-Through		0							0				0				0	
	Through	749	2	**375**	0	749	**375**	0	811	2	**406**	0	811	2	**406**	0	811	2	**406**
	Through-Right		0							0				0				0	
	Right	121	1	57	0	121	57	0	131	1	62	0	131	1	62	0	131	1	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	125	1	**125**	0	125	**125**	0	135	1	**135**	0	135	1	**135**	0	135	1	**135**
	Left-Through		0							0				0				0	
	Through	560	2	280	0	560	280	0	606	2	303	0	606	2	303	0	606	2	303
	Through-Right		0							0				0				0	
	Right	70	1	20	0	70	20	0	76	1	22	0	76	1	22	0	76	1	22
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	100	1	100	0	100	100	0	108	1	108	0	108	1	108	0	108	1	108
	Left-Through		0							0				0				0	
	Through	936	1	**522**	15	951	**530**	7	1021	1	**569**	15	1036	1	**577**	-2	1034	1	**576**
	Through-Right		1							1				1				1	
	Right	108	0	108	0	108	108	0	117	0	117	0	117	0	117	0	117	0	117
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	128	1	128	0	128	128	0	139	1	139	0	139	1	139	0	139	1	139
	Left-Through		0							0				0				0	
	Through	483	1	**278**	4	487	**280**	33	556	1	**318**	4	560	1	**320**	-1	559	1	**319**
	Through-Right		1							1				1				1	
	Right	73	0	73	0	73	73	0	79	0	79	0	79	0	79	0	79	0	79
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

CRITICAL VOLUMES	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
North-South:	500	500	541	541	541
East-West:	800	810	887	897	895
SUM:	1300	1310	1428	1438	1436
VOLUME/CAPACITY *(V/C)* RATIO:	0.912	0.919	1.002	1.009	1.008
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.812	0.819	0.902	0.909	0.908
LEVEL OF SERVICE (LOS):	D	D	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.007	Δ*v/c* after mitigation:	0.006
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	I-5 Southbound Ramps	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	12/9/2021
23	East-West Street:	4th Street	Projection Year:	2025	Peak Hour:	PM	Reviewed by:		Project:	401 S Hewitt

	Existing Condition					Existing Plus Project					Future Condition W/O Project					Future Condition W/ Project					Future W/ Project W/ Mitigation				
No. of Phases					0					0					3					3					3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0					0					0					0					0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--		0	NB--	0	SB--		0	NB--	0	SB--		0	NB--	0	SB--		0	NB--	0	SB--		0
	EB--	0	WB--		0	EB--	0	WB--		0	EB--	0	WB--		0	EB--	0	WB--		0	EB--	0	WB--		0
ATSAC-1 or ATSAC+ATCS-2?					0					0					2					2					2
Override Capacity					0					0					0					0					0

	MOVEMENT	EXISTING CONDITION Volume	No. of Lanes	Lane Volume	EXISTING PLUS PROJECT Project Traffic	Total Volume	Lane Volume	FUTURE CONDITION W/O PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE CONDITION W/ PROJECT Added Volume	Total Volume	No. of Lanes	Lane Volume	FUTURE W/ PROJECT W/ MITIGATION Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	137	0	0	0	137	0	0	148	1	148	0	148	1	148	0	148	1	148
	Left-Through		0							0				0				0	
	Through	2	0	0	0	2	0	0	2	0	287	0	2	0	295	0	2	0	294
	Through-Right		0							1				1				1	
	Right	150	0	0	8	158	0	123	285	0	0	8	293	0	0	-1	292	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	1563	0	0	39	1602	0	107	1800	2	900	39	1839	2	920	-6	1833	2	917
	Through-Right		0							0				0				0	
	Right	80	0	0	0	80	0	19	106	1	106	0	106	1	106	0	106	1	106
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	95	0	0	0	95	0	3	106	1	106	0	106	1	106	0	106	1	106
	Left-Through		0							0				0				0	
	Through	756	0	0	4	760	0	62	881	2	441	4	885	2	443	-1	884	2	442
	Through-Right		0							0				0				0	
	Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

CRITICAL VOLUMES		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
	North-South:	0	0	287	295	294
	East-West:	0	0	1006	1026	1023
	SUM:	0	0	1293	1321	1317
VOLUME/CAPACITY *(V/C)* RATIO:		0.000	0.000	0.907	0.927	0.924
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.000	0.000	0.807	0.827	0.824
LEVEL OF SERVICE (LOS):		A	A	D	D	D

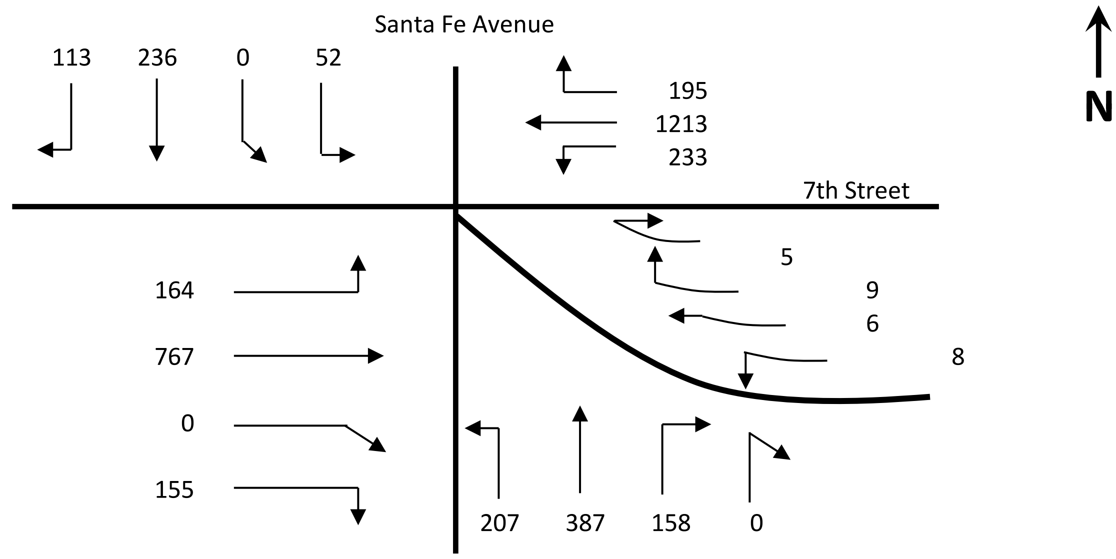
REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.020	Δ*v/c* after mitigation:	0.017
Significant impacted?	YES	Fully mitigated?	YES

Intersection 16 - Santa Fe Avenue & 7th Street
Future without Project Conditions (Year 2025) - AM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 164 <u>and</u>

Westbound Throughs + Right:

$\frac{1213 + 195}{2} = \frac{1408}{2} = 704$ <u>or</u>

Westbound Left: 233 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{767 + 0 + 155}{2} = \frac{922}{2} = 461$

Critical Volume #1 (CV1): **868**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

5 + 9 + 6 + 8 = 28

Critical Volume #2 (CV2): **28**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

52 + 0 = 52 <u>and</u>

Northbound Through: 387 *or*

Northbound Right to 7th Street and Frontage Road:

158 + 0 - 233 = -75 <u>or</u>

Northbound Left: 207 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

113 + 236 + 0 + 52 = 401

Critical Volume #3 (CV3): **608**

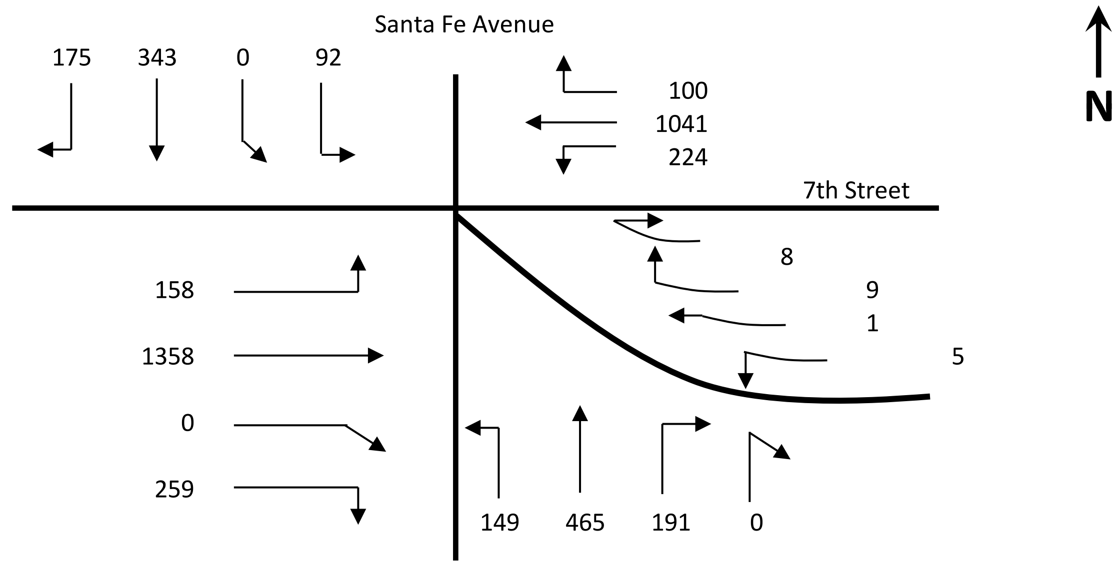
Critical Volume: 868 + 28 + 608 = **1504**

Intersection V/C: $\frac{1504}{1375}$ = **1.094**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.994** **Intersection LOS:** **E**

Intersection 16 - Santa Fe Avenue & 7th Street
Future without Project Conditions (Year 2025) - PM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 158 <u>and</u>

Westbound Throughs + Right:

$\frac{1041 + 100}{2} = \frac{1141}{2} = 571$ <u>or</u>

Westbound Left: 224 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{1358 + 0 + 259}{2} = \frac{1,617}{2} = 809$

Critical Volume #1 (CV1): **1,033**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

8 + 9 + 1 + 5 = 23

Critical Volume #2 (CV2): **23**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

92 + 0 = 92 <u>and</u>

Northbound Through: 465 *or*

Northbound Right to 7th Street and Frontage Road:

191 + 0 - 224 = -33 <u>or</u>

Northbound Left: 149 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

175 + 343 + 0 + 92 = 610

Critical Volume #3 (CV3): **759**

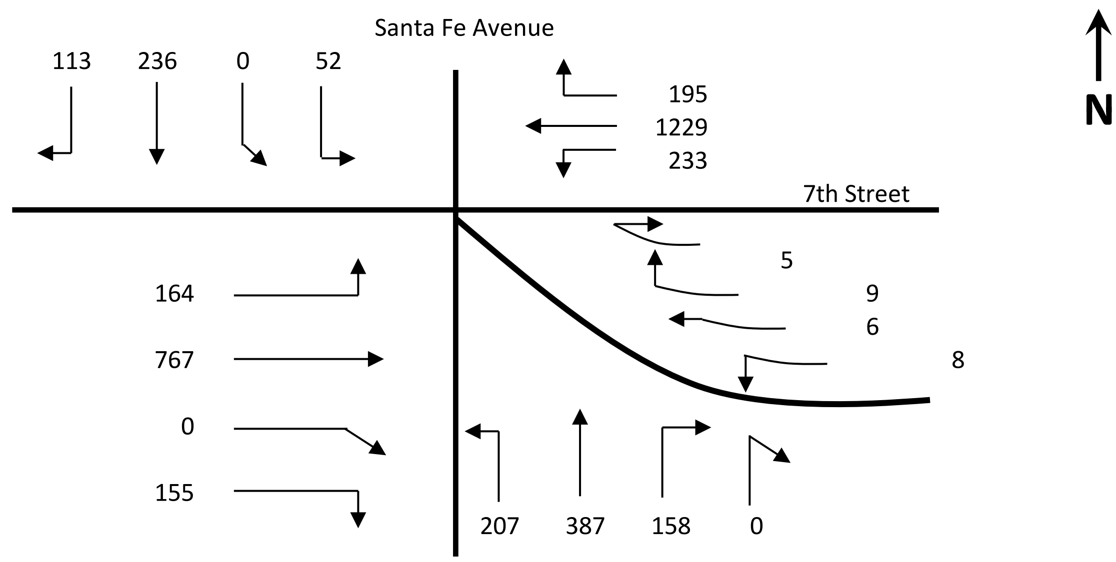
Critical Volume: 1033 + 23 + 759 = **1815**

Intersection V/C: $\frac{1815}{1375}$ = **1.32**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **1.220** **Intersection LOS:** **F**

Intersection 16 - Santa Fe Avenue & 7th Street
Future with Project Conditions (Year 2025) - AM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 164 <u>and</u>

Westbound Throughs + Right:

$\frac{1229 + 195}{2} = \frac{1424}{2} = 712$ <u>or</u>

Westbound Left: 233 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{767 + 0 + 155}{2} = \frac{922}{2} = 461$

Critical Volume #1 (CV1): **876**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

5 + 9 + 6 + 8 = 28

Critical Volume #2 (CV2): **28**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

52 + 0 = 52 <u>and</u>

Northbound Through: 387 *or*

Northbound Right to 7th Street and Frontage Road:

158 + 0 - 233 = -75 <u>or</u>

Northbound Left: 207 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

113 + 236 + 0 + 52 = 401

Critical Volume #3 (CV3): **608**

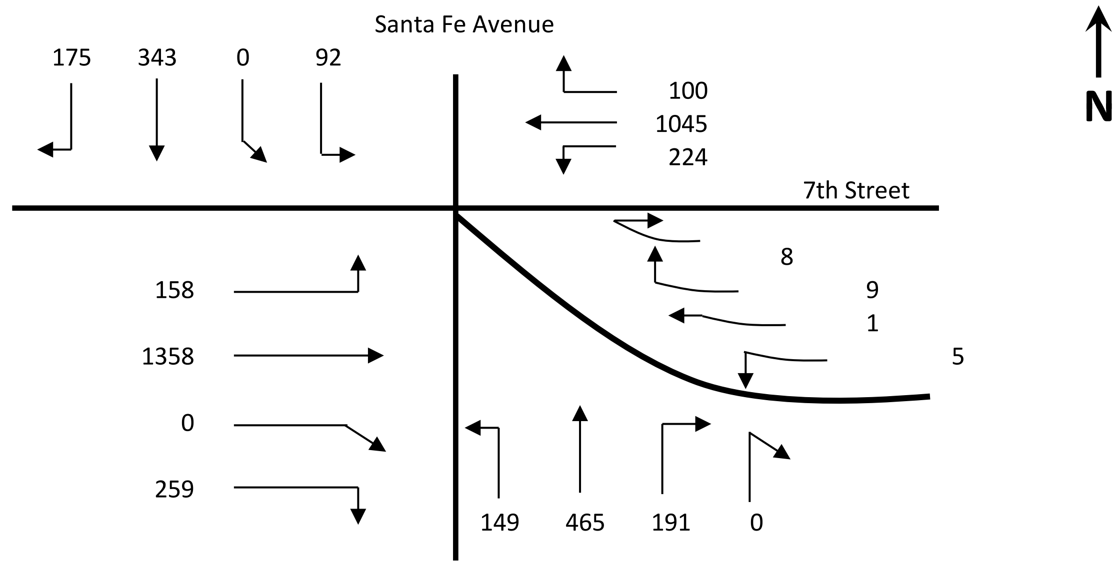
Critical Volume: 876 + 28 + 608 = **1512**

Intersection V/C: $\frac{1512}{1375}$ = **1.1**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **1.000** **Intersection LOS:** **F**

Intersection 16 - Santa Fe Avenue & 7th Street
Future with Project Conditions (Year 2025) - PM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 158 <u>and</u>

Westbound Throughs + Right:

$\frac{1045 + 100}{2} = \frac{1145}{2} = 573$ <u>or</u>

Westbound Left: 224 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{1358 + 0 + 259}{2} = \frac{1,617}{2} = 809$

Critical Volume #1 (CV1): **1,033**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

8 + 9 + 1 + 5 = 23

Critical Volume #2 (CV2): **23**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

92 + 0 = 92 <u>and</u>

Northbound Through: 465 *or*

Northbound Right to 7th Street and Frontage Road:

191 + 0 - 224 = -33 <u>or</u>

Northbound Left: 149 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

175 + 343 + 0 + 92 = 610

Critical Volume #3 (CV3): **759**

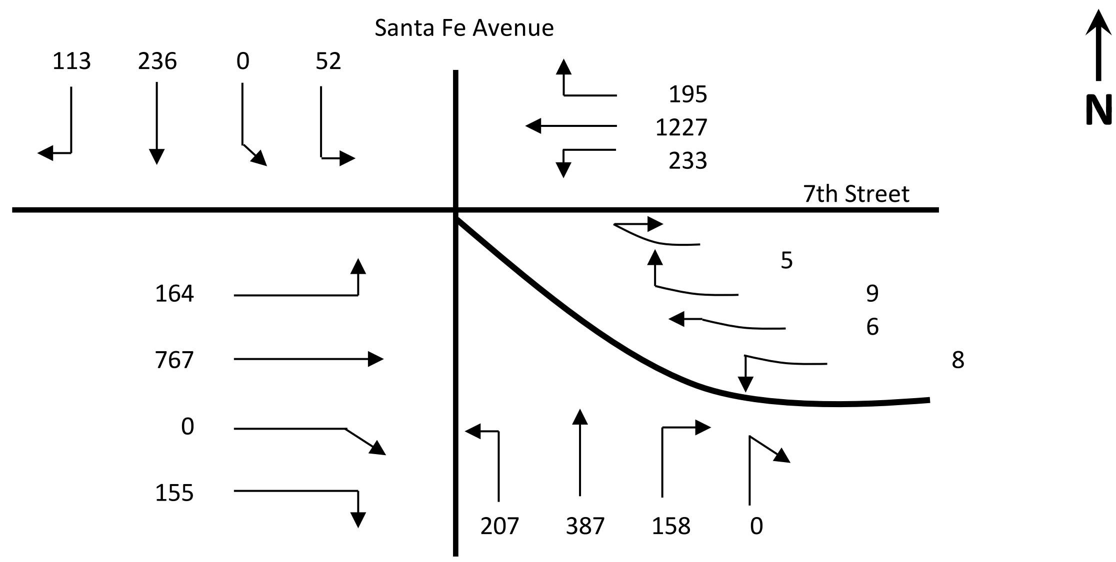
Critical Volume: 1033 + 23 + 759 = **1815**

Intersection V/C: $\frac{1815}{1375}$ = **1.32**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **1.220** **Intersection LOS:** **F**

Intersection 16 - Santa Fe Avenue & 7th Street
Future with Project with Mitigation Conditions (Year 2025) - AM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 164 and

Westbound Throughs + Right:
$\frac{1227 + 195}{2} = \frac{1422}{2} = 711$ or

Westbound Left: 233 and

Eastbound Throughs + Right to 7th Street and Frontage Road:
$\frac{767 + 0 + 155}{2} = \frac{922}{2} = 461$

Critical Volume #1 (CV1): **875**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:
5 + 9 + 6 + 8 = 28

Critical Volume #2 (CV2): **28**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:
52 + 0 = 52 and

Northbound Through: 387 *or*

Northbound Right to 7th Street and Frontage Road:
158 + 0 - 233 = -75 or

Northbound Left: 207 and

Southbound Left + Left to Frontage Road + Through + Right:
113 + 236 + 0 + 52 = 401

Critical Volume #3 (CV3): **608**

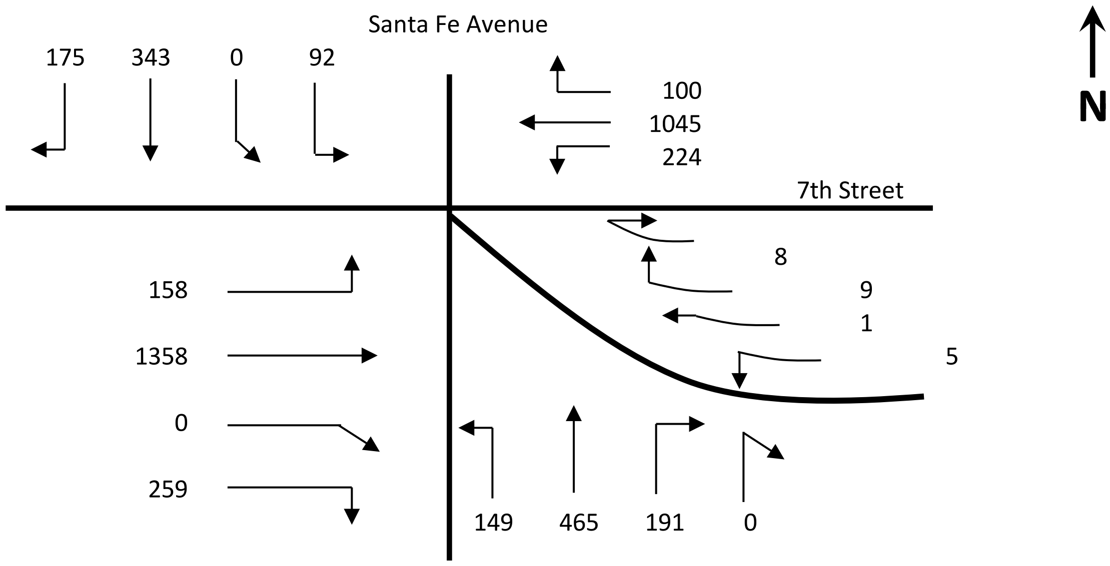
Critical Volume: 875 + 28 + 608 = **1511**

Intersection V/C: $\frac{1511}{1375}$ = **1.099**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **0.999** **Intersection LOS:** **E**

Intersection 16 - Santa Fe Avenue & 7th Street
Future with Project with Mitigation Conditions (Year 2025) - PM Peak Hour



1) Critical volume calculation for eastbound/westbound traffic on 7th Street

Eastbound Left : 158 <u>and</u>

Westbound Throughs + Right:

$\frac{1045 + 100}{2} = \frac{1145}{2} = 573$ <u>or</u>

Westbound Left: 224 <u>and</u>

Eastbound Throughs + Right to 7th Street and Frontage Road:

$\frac{1358 + 0 + 259}{2} = \frac{1,617}{2} = 809$

Critical Volume #1 (CV1): **1,033**

2) Critical volume calculation for northeastbound traffic on Frontage Road

Northeastbound Lefts + Throughs + Rights + Sharp Right:

8 + 9 + 1 + 5 = 23

Critical Volume #2 (CV2): **23**

3) Critical volume calculation for northbound/southbound traffic on Santa Fe Avenue

Southbound Left to 7th Street and Frontage Road:

92 + 0 = 92 <u>and</u>

Northbound Through: 465 *or*

Northbound Right to 7th Street and Frontage Road:

191 + 0 - 224 = -33 <u>or</u>

Northbound Left: 149 <u>and</u>

Southbound Left + Left to Frontage Road + Through + Right:

175 + 343 + 0 + 92 = 610

Critical Volume #3 (CV3): **759**

Critical Volume: 1033 + 23 + 759 = **1815**

Intersection V/C: $\frac{1815}{1375}$ = **1.32**

ATSAC/ATCS Credit: 0.10

Final intersection V/C: **1.220** **Intersection LOS:** **F**