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MEMORANDUM

To:	Los Angeles Department of Transportation	Date:	October 20, 2016
From:	David S. Shender, P.E. Linscott, Law & Greenspan, Engineers	LLG Ref:	5-16-0264-1
Subject:	**Technical Memorandum – Montecito Senior Housing Project**		

This Technical Memorandum has been prepared by Linscott, Law & Greenspan, Engineers (LLG) to provide a traffic assessment associated with the proposed Montecito Senior Housing project ("the Project") located in the Hollywood area of the City of Los Angeles. The Technical Memorandum has been prepared in compliance with the requirements of the Los Angeles Department of Transportation (LADOT) as provided in LADOT's traffic study policies manual.[1]

Project Description

The Project is located at 6650 Franklin Avenue. The Project site is bounded by Franklin Avenue to the north, Cherokee Avenue to the east, apartments to the south, and Canyon Co-Op School to the west.

The Project consists of the proposed development of 68 residential senior apartment units. The Project location and general vicinity are shown in ***Figure 1***. The site plan for the Project is illustrated in ***Figure 2***. The existing Project site consists of a ten-story senior apartment building. The proposed development will be constructed within the existing surface parking area adjacent to the current Montecito residential building.

Vehicle parking for the Project, as well as replacement parking for the existing surface spaces displaced by the new building will be provided in a subterranean structure on-site. Vehicular access to the Project is proposed via the existing driveway on the west side of Cherokee Avenue.

Existing Street System

The following intersections are evaluated in this traffic impact assessment for potential traffic impacts due to the Project:

1. Highland Avenue / N. Franklin Avenue
2. Highland Avenue / S. Franklin Avenue – Franklin Place
3. Cahuenga Boulevard / Franklin Avenue

[1] *Traffic Study Policies and Procedures*, LADOT, August 2014.

The intersections selected for analysis were identified as they are located closest to the Project site, and therefore have the greatest potential to have adverse traffic impacts related to the project. Further away from the Project site, project-related traffic disperses, and thus, the potential for significant traffic impacts diminish. The existing lane configurations and traffic control devices at the study intersections are provided on ***Figure 3***.

Existing Traffic Volumes

Manual traffic counts of vehicular turning movements were conducted during the week of May 9, 2016 at the study intersections during the weekday morning and afternoon commuter periods to determine the peak hour traffic volumes. The manual traffic counts at the study intersections were conducted from 7:00 AM to 10:00 AM to determine the AM peak commuter hour, and from 3:00 PM to 6:00 PM to determine the PM peak commuter hour. The summary data worksheets of the manual traffic counts at the study intersection are provided in ***Appendix A*** attached to this memorandum. The existing peak hour volumes at each study intersection are shown on ***Figures 4*** and ***5***.

Project Trip Generation

Traffic volumes expected to be generated by the proposed Project during the weekday AM and PM peak hours, as well as on a daily basis, were estimated using trip rates published in the ITE *Trip Generation* manual[1]. Trip generation rates for the Senior Adult Housing-Attached land use (ITE Land Use Code 252) were used to forecast the traffic volumes expected to be generated by the Project. The ITE Senior Adult Housing-Attached trip rates are based on the number of dwelling units proposed by the Project.

Table 1 attached to this memorandum provides the trip generation forecast for the Project. As shown in *Table 1*, the Project on a typical weekday is forecast to generate 234 net new daily trips (e.g., 117 inbound trips, 117 outbound trips), 14 net new AM peak hour trips (5 inbound trips and 9 outbound trips) and 17 net new PM peak hour trips (9 inbound trips and 8 outbound trips).

[1] Institute of Transportation Engineers *Trip Generation* manual, 9th Edition, Washington, D.C., 2012.

Project Trip Assignment

The weekday AM and PM commuter peak hour vehicle trips forecast to be generated by the Project were assigned to the study intersections. ***Figure 6*** provides the vehicular trip distribution for the Project and ***Figure 7*** and ***8*** displays the forecast AM and PM peak hour Project-related trips at the study intersections.

Traffic Volume Forecast

As required by LADOT, the traffic impact study evaluates the potential impacts of the Project through analysis of the following traffic volume conditions:

- Existing
- Existing with Project
- Future
- Future with Project

As previously noted, the existing traffic volumes at the study intersections are presented in *Figure 4.*

The Future Pre-Project traffic volumes are estimated based on application of a 1.0% annual ambient growth rate applied to the existing (2016) traffic volumes through the Project build-out year of 2018. The Future Pre-Project traffic volumes for the AM and PM peak hours are shown on ***Figure 9*** and ***10***.

Impact Criteria and Levels of Service Calculations

The study intersections were evaluated using the Critical Movement Analysis (CMA) method of analysis that determines Volume-to-Capacity (*v/c*) ratios on a critical lane basis. The overall intersection *v*/c ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). A description of the CMA method and corresponding Level of Service is provided in ***Appendix B***.

The relative impact of the added project traffic volumes to be generated by the Project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the study intersections, without and with the Project. The previously discussed capacity analysis procedures were utilized to evaluate the future v/c relationships and service level characteristics at each study intersection.

The significance of the potential impacts of project generated traffic was identified using the traffic impact criteria set forth in LADOT's *Traffic Study Policies and Procedures,* August 2014. According to the City's published traffic study guidelines, the impact is considered significant if the project-related increase in the *v/c* ratio equals or exceeds the thresholds presented in the following table.

CITY OF LOS ANGELES INTERSECTION IMPACT THRESHOLD CRITERIA		
Final *v/c*	**Level of Service**	**Project Related Increase in *v/c***
> 0.701 - 0.800	C	equal to or greater than 0.040
> 0.801 - 0.900	D	equal to or greater than 0.020
> 0.901	E or F	equal to or greater than 0.010

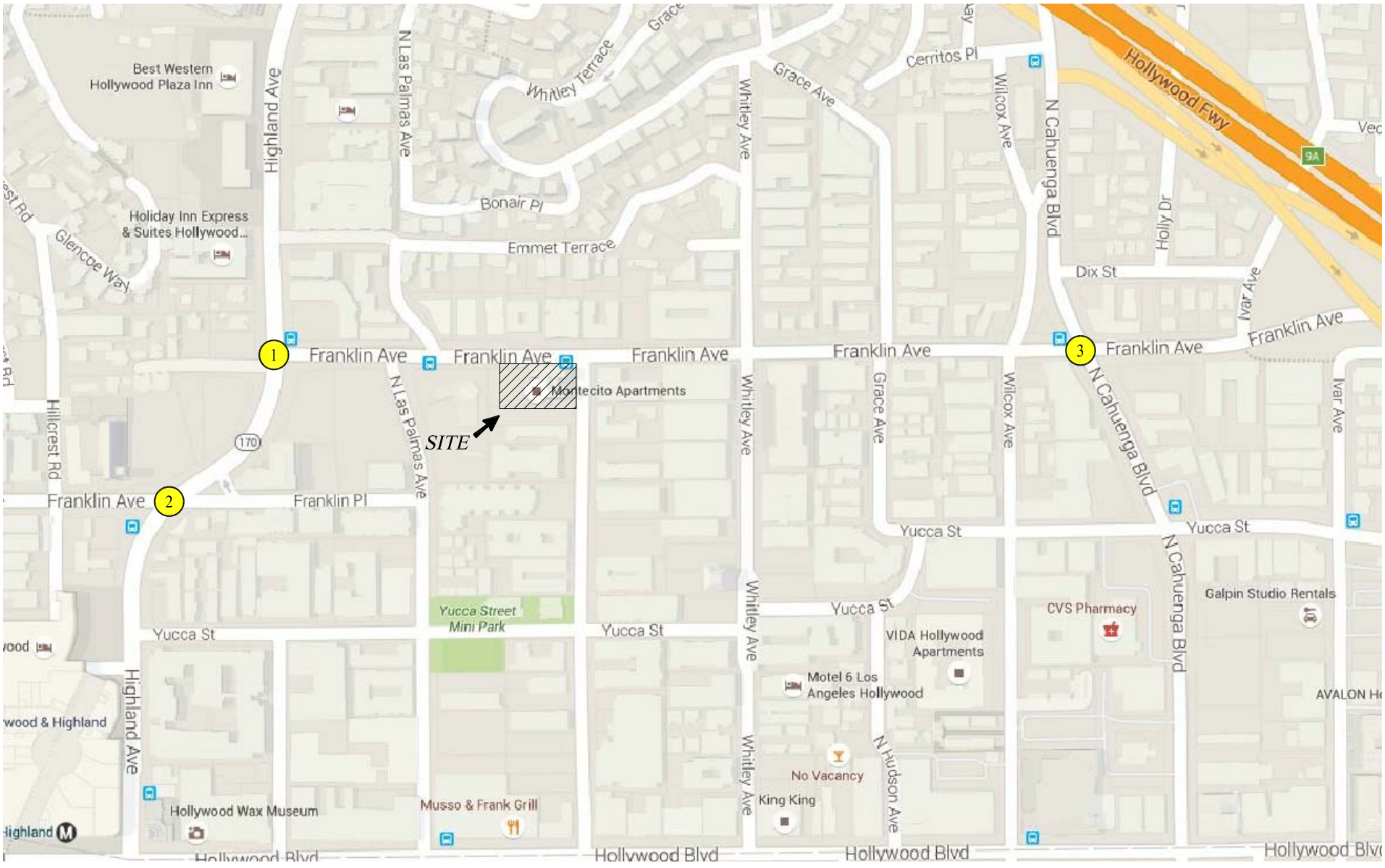
The City's Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above.

The traffic impact analysis prepared for the study intersections using the CMA methodology and application of the City of Los Angeles significant traffic impact criteria are summarized for the Project in ***Table 2***. The CMA data worksheets for the analyzed intersections are contained for each Project option in *Appendix B.*

The Existing with Project condition provided in *Table 2* includes Project-related traffic added to existing traffic at the study intersections. The forecast changes in v/c ratios at the study intersections due to Project-related traffic are calculated to be below the City's significance thresholds as shown in column [2]. Therefore, the traffic impacts of the Project in the Existing with Project condition will be less than significant for all study intersections. The Existing with Project traffic volumes are provided on ***Figure 11*** and ***12***.

The Future with Project condition provided in *Table 2* includes Project-related traffic added to the forecast future traffic volumes at the study intersections. As shown in column [4], the traffic impacts in the Future with Project condition will be less than significant for all study intersections with application of the City's thresholds. The Future with Project traffic volumes are provided on ***Figure 13*** and ***14***.

In summary, the Project-related traffic impacts at the study intersections in the Existing with Project and Future with Project conditions during the weekday AM and PM peak hours are calculated to be less than significant based on the City's thresholds of significance. Therefore, no traffic mitigation measures are required or recommended for the Project.



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MAP SOURCE: GOOGLE MAPS

PROJECT SITE

XX STUDY INTERSECTION

FIGURE 1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

MONTECITO SENIOR HOUSING PROJECT

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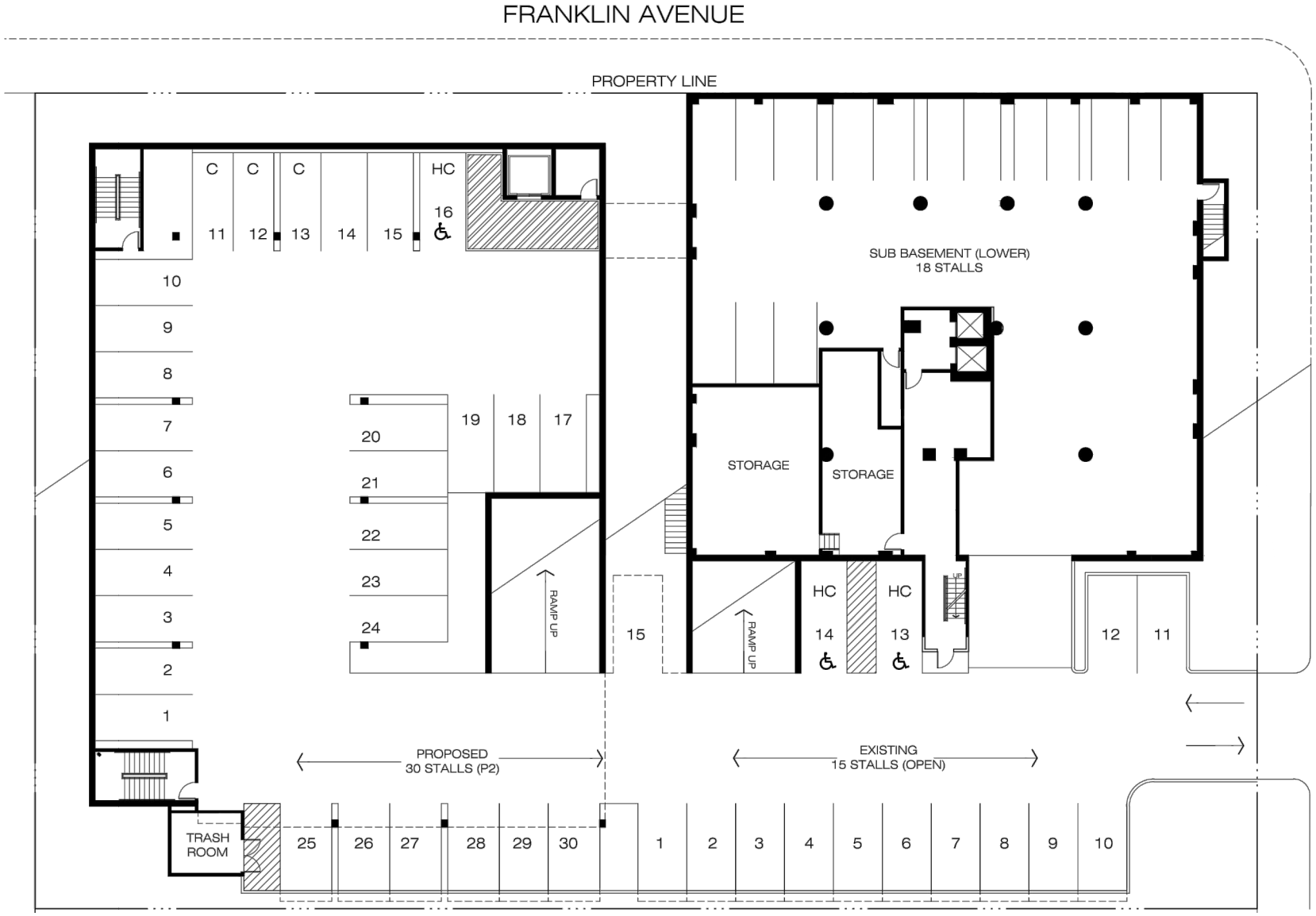

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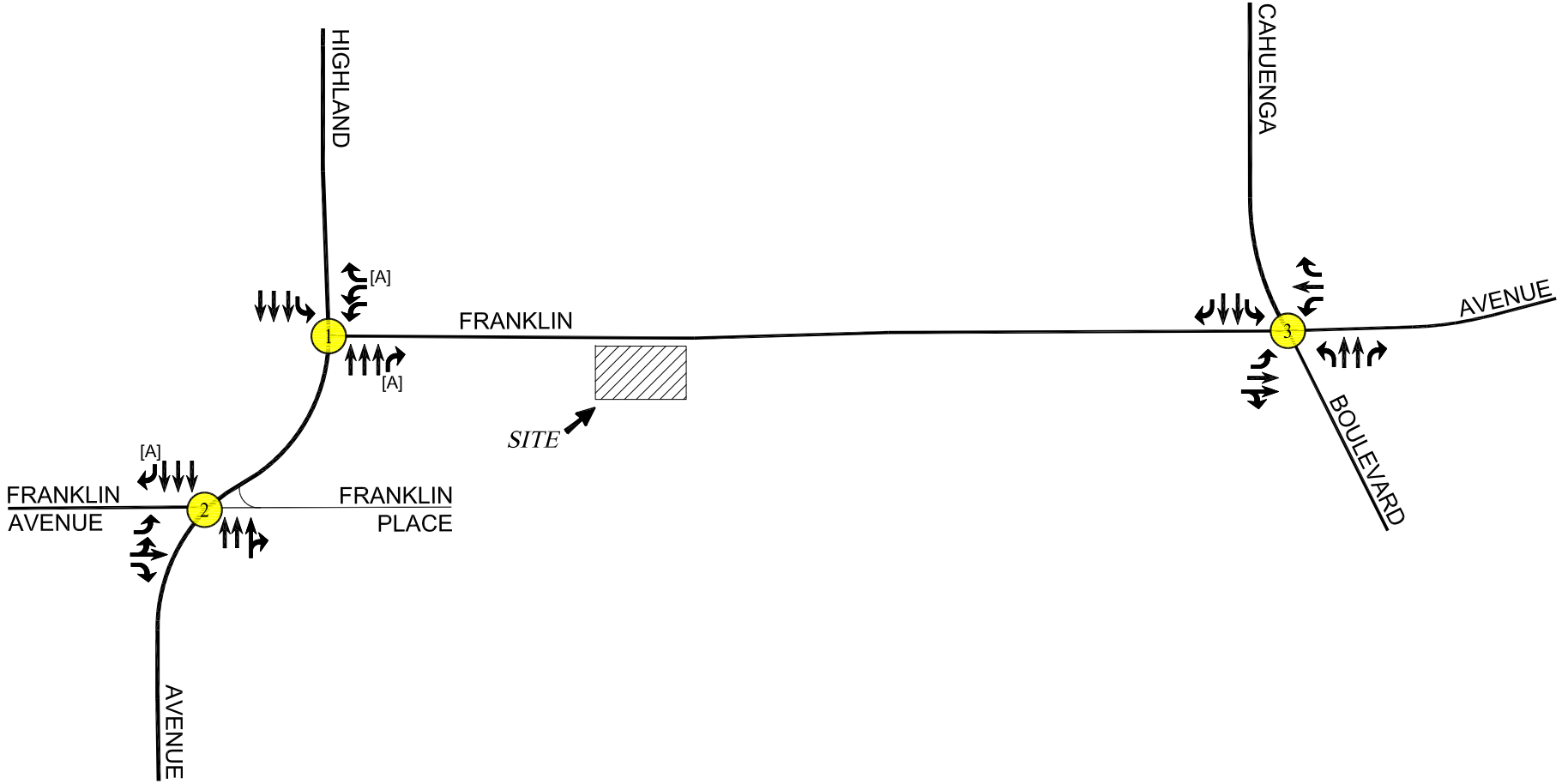
MAP SOURCE: WITHEE MALCOLM ARCHITECTS, LLP

FIGURE 2
SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

MONTECITO SENIOR HOUSING PROJECT



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PROJECT SITE

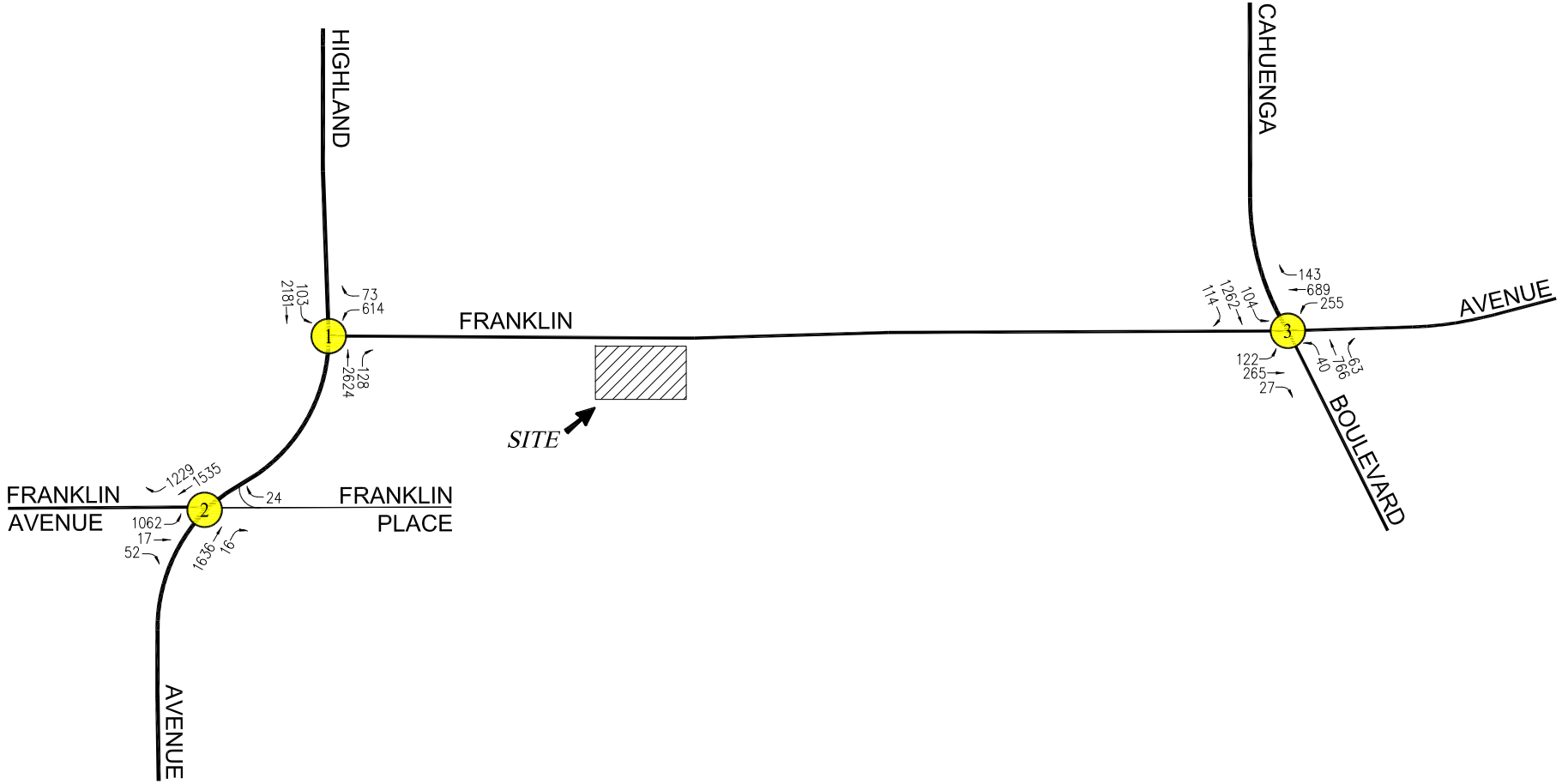
XX STUDY INTERSECTION

NOTE: ALL STUDY INTERSECTIONS ARE SIGNALIZED
[A] = RIGHT-TURN OVERLAP

FIGURE 3
EXISTING LANE CONFIGURATIONS

LINSCOTT, LAW & GREENSPAN, engineers

MONTECITO SENIOR HOUSING PROJECT



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PROJECT SITE

XX STUDY INTERSECTION

FIGURE 4
EXISTING TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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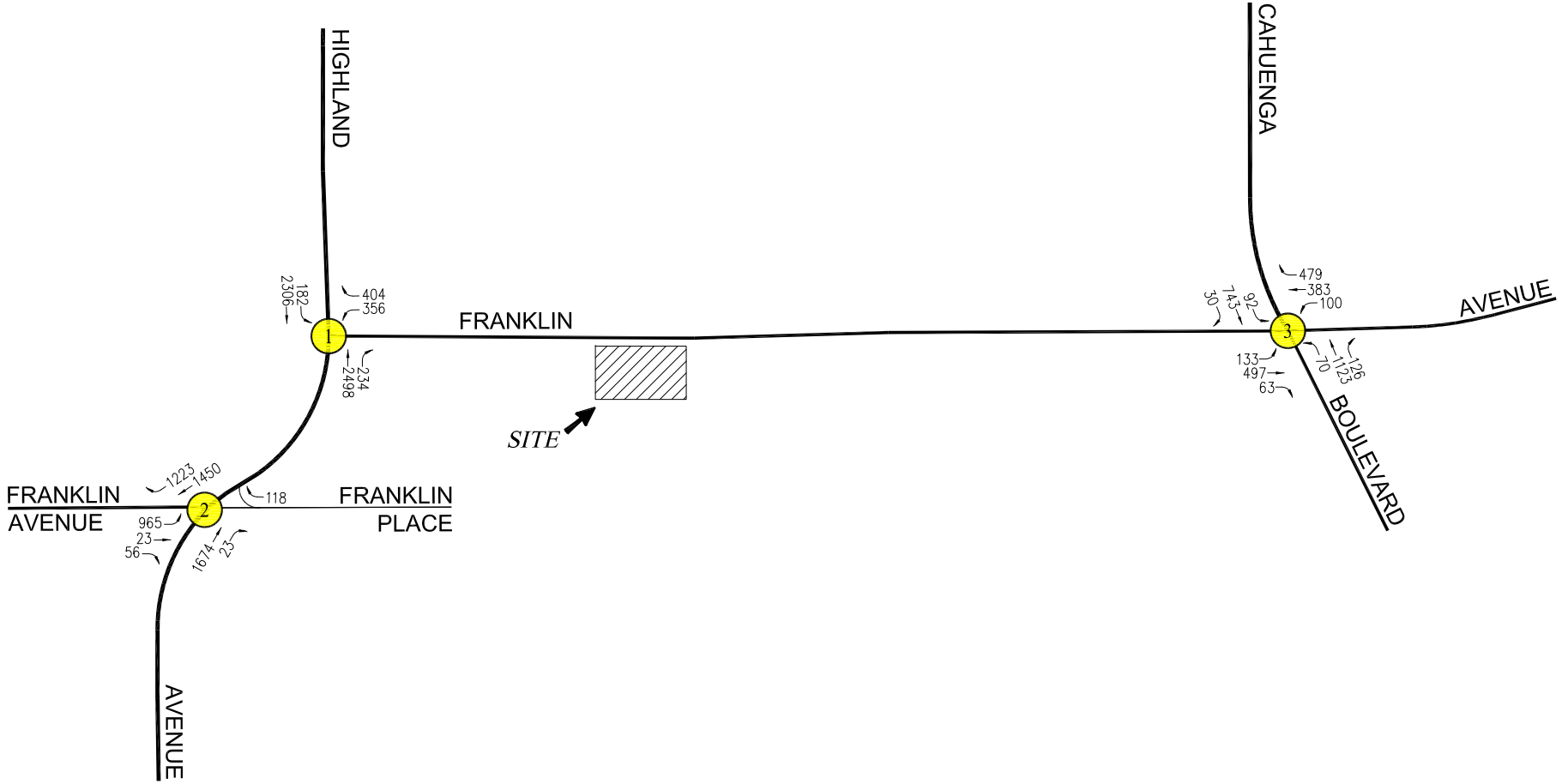

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PROJECT SITE

XX STUDY INTERSECTION

FIGURE 5
EXISTING TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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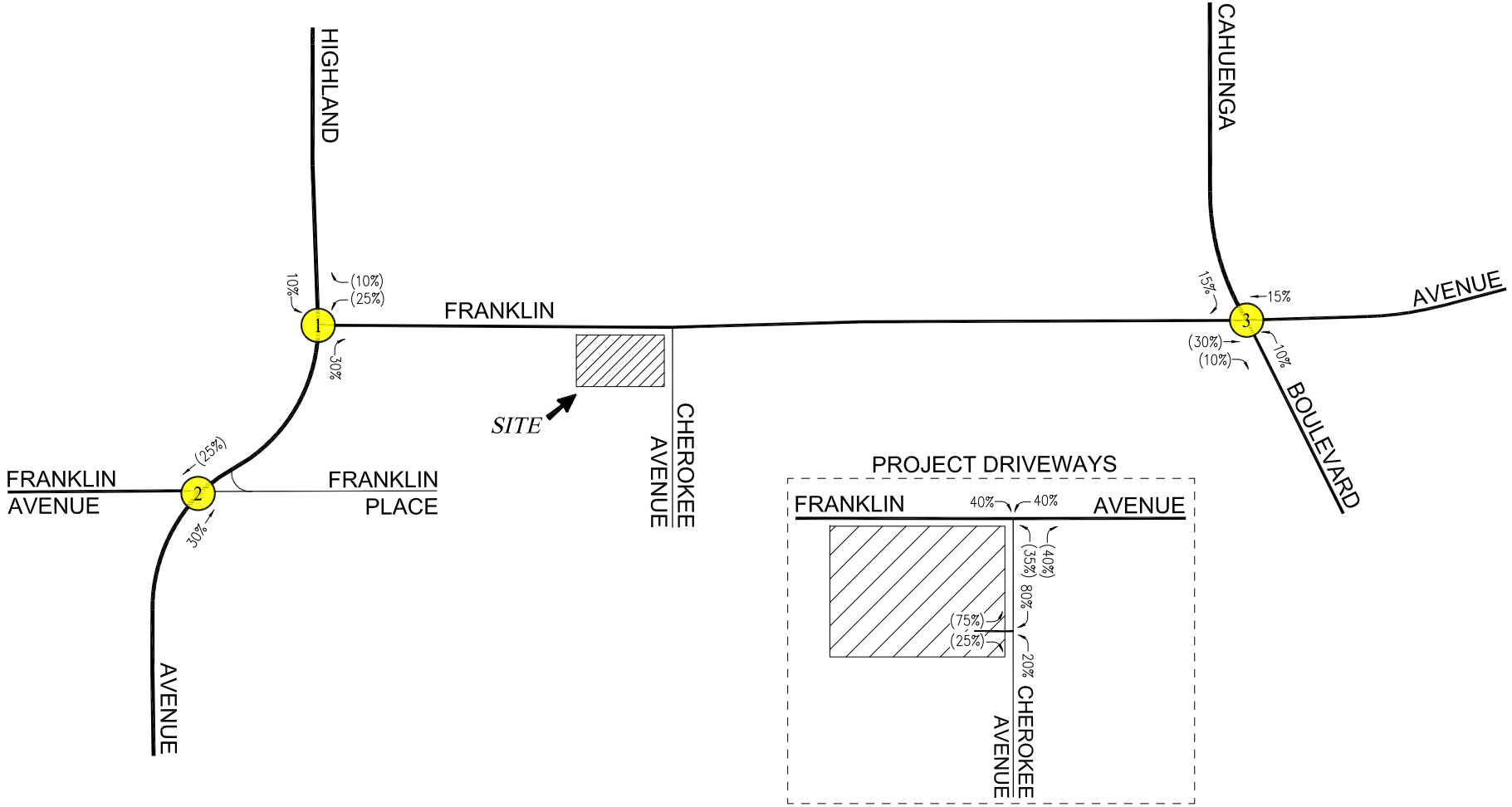

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PROJECT SITE

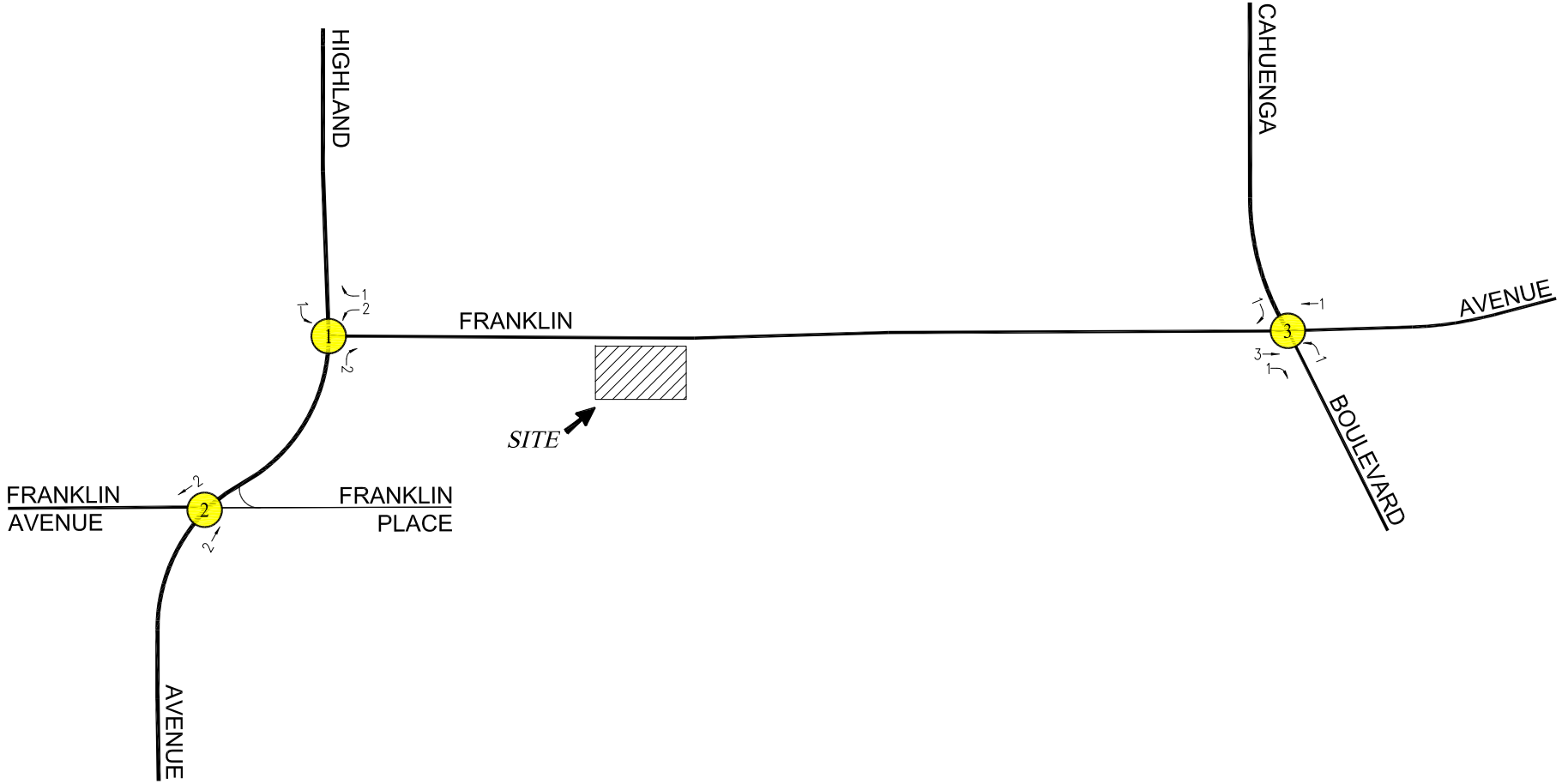
XX STUDY INTERSECTION

XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

FIGURE 6
PROJECT TRIP DISTRIBUTION

LINSCOTT, LAW & GREENSPAN, engineers

MONTECITO SENIOR HOUSING PROJECT



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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE 7
PROJECT TRIP VOLUMES

WEEKDAY AM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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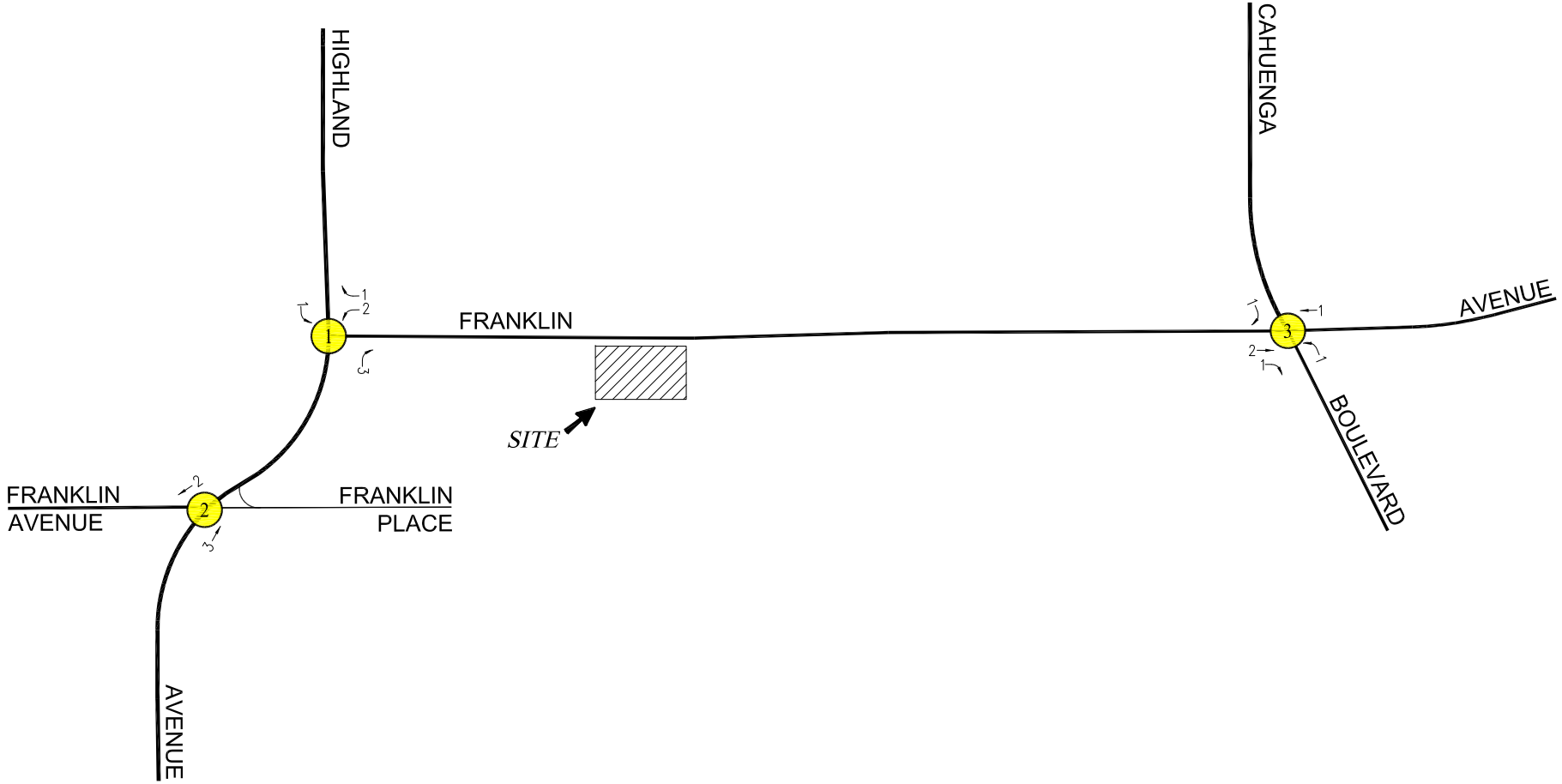

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE 8
PROJECT TRIP VOLUMES

WEEKDAY PM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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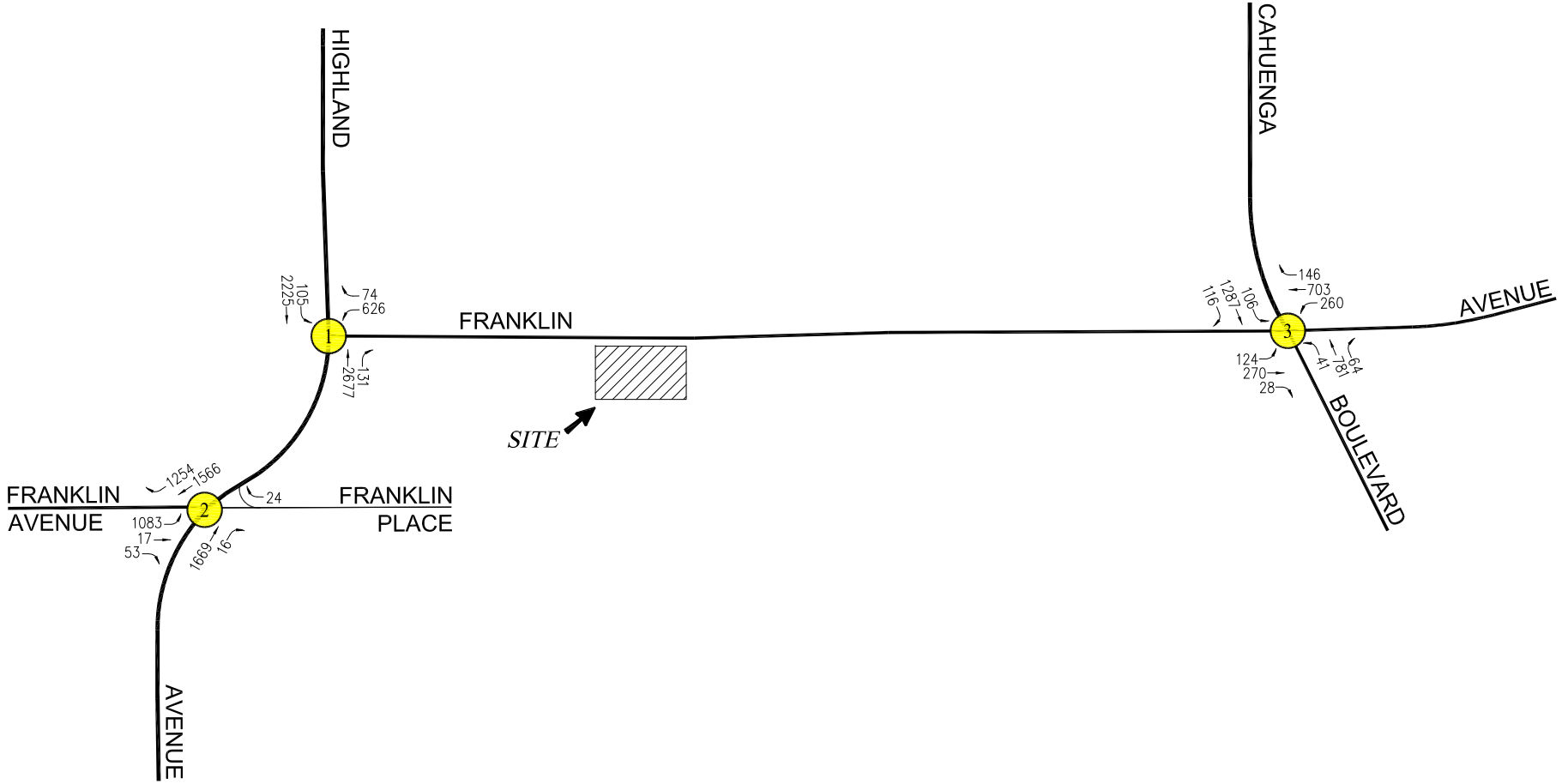

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PROJECT SITE

XX STUDY INTERSECTION

FIGURE 9
FUTURE PRE-PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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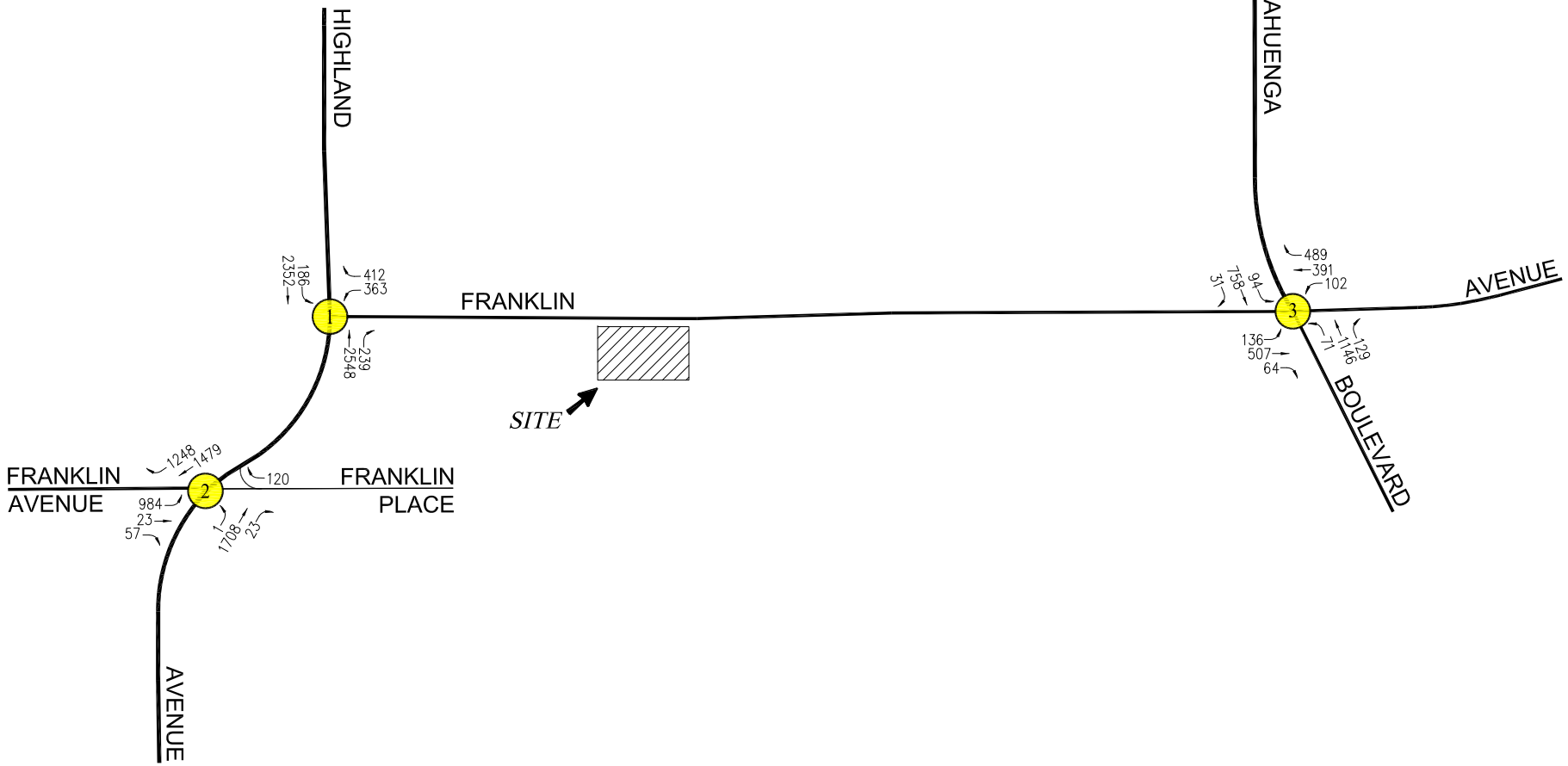

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PROJECT SITE

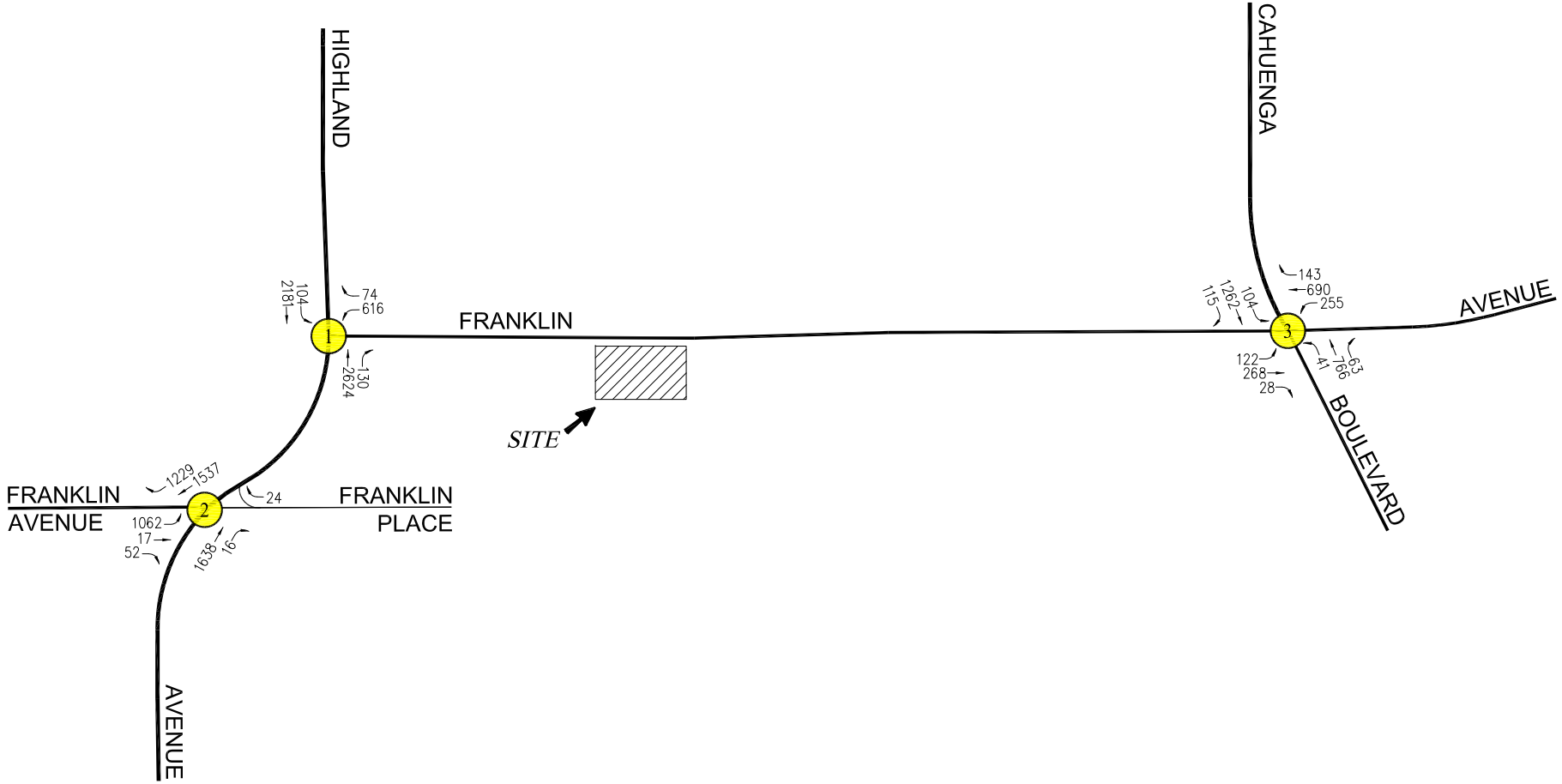
XX STUDY INTERSECTION

FIGURE 10
FUTURE PRE-PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



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PROJECT SITE

XX STUDY INTERSECTION

FIGURE 11
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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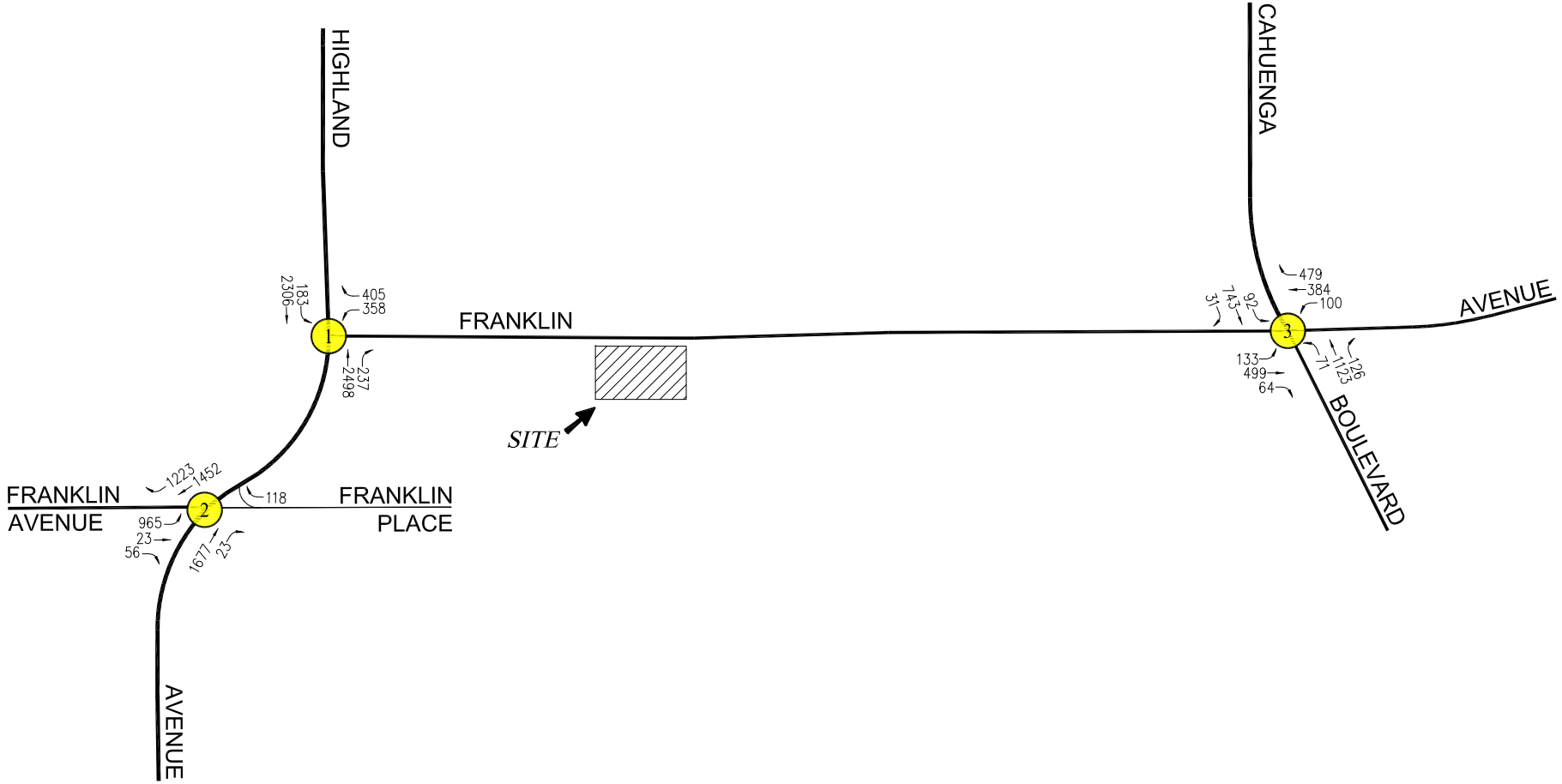

PROJECT SITE

XX STUDY INTERSECTION

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FIGURE 12
EXISTING WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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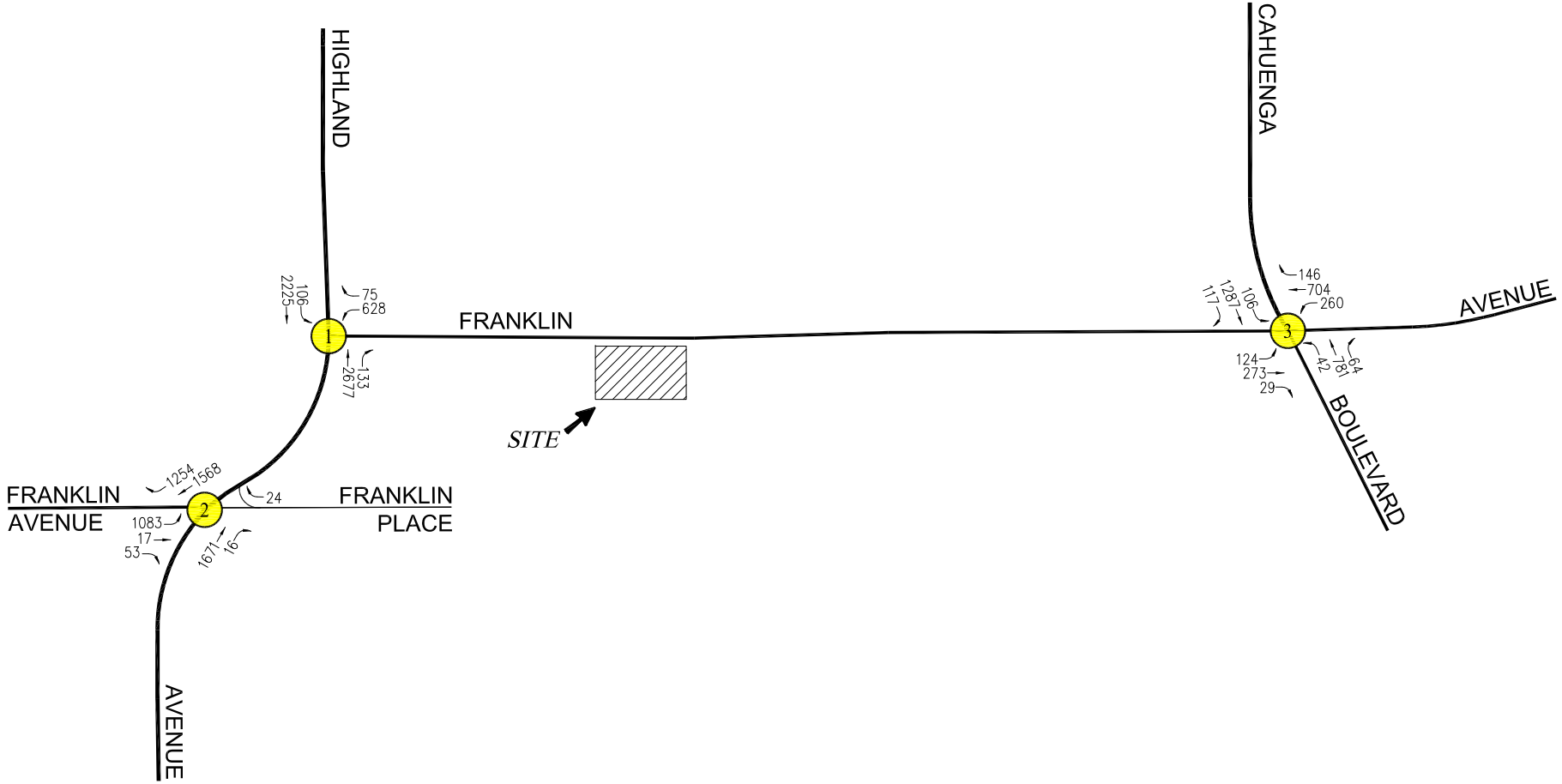

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PROJECT SITE

XX STUDY INTERSECTION

FIGURE 13
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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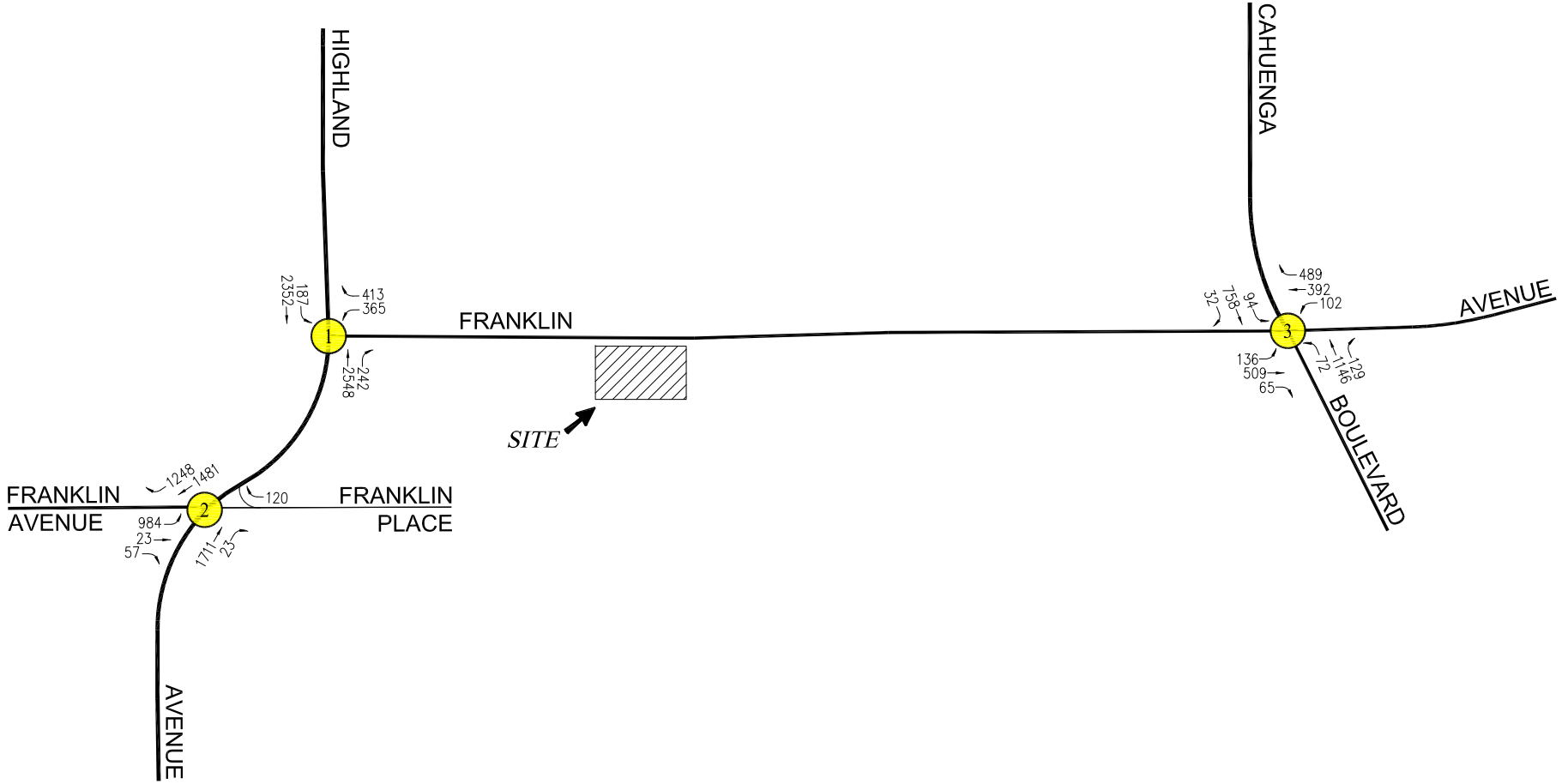

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PROJECT SITE

XX STUDY INTERSECTION

FIGURE 14
FUTURE WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

MONTECITO SENIOR HOUSING PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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Table 1
PROJECT TRIP GENERATION [1]

27-Sep-16

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project								
Senior Apartments	68 DU	234	5	9	14	9	8	17
NET INCREASE		**234**	**5**	**9**	**14**	**9**	**8**	**17**

[1] Source: ITE "Trip Generation", 9th Edition, 2012.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 252 (Senior Adult Housing - Attached) trip generation average rates.
- Daily Trip Rate: 3.44 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.20 trips/dwelling unit; 34% inbound/66% outbound
- PM Peak Hour Trip Rate: 0.25 trips/dwelling unit; 54% inbound/46% outbound

Table 2
CITY OF LOS ANGELES LEVELS OF SERVICE SUMMARY
AND VOLUME TO CAPACITY RATIOS
AM AND PM PEAK HOURS

NO.	INTERSECTION	PEAK HOUR	[1] EXISTING V/C	[1] EXISTING LOS	[2] EXISTING W/ PROJECT V/C	[2] EXISTING W/ PROJECT LOS	[2] CHANGE V/C [(2)-(1)]	[2] SIGNIF. IMPACT [a]	[3] FUTURE PRE-PROJECT V/C	[3] FUTURE PRE-PROJECT LOS	[4] FUTURE WITH PROJECT V/C	[4] FUTURE WITH PROJECT LOS	[4] CHANGE V/C [(4)-(3)]	[4] SIGNIF. IMPACT [a]
1	Highland Avenue / Franklin Avenue	AM	0.824	D	0.825	D	0.001	NO	0.841	D	0.842	D	0.001	NO
		PM	0.768	C	0.769	C	0.001	NO	0.785	C	0.786	C	0.001	NO
2	Highland Avenue / Franklin Avenue-Franklin Place	AM	0.719	C	0.719	C	0.000	NO	0.736	C	0.736	C	0.000	NO
		PM	0.715	C	0.715	C	0.000	NO	0.732	C	0.732	C	0.000	NO
3	Cahuenga Boulevard / Franklin Avenue	AM	0.888	D	0.889	D	0.001	NO	0.908	E	0.909	E	0.001	NO
		PM	0.713	C	0.713	C	0.000	NO	0.730	C	0.730	C	0.000	NO

[a] According to LADOT's "Traffic Study Policies and Procedures", August 2014, a transportation impact on an intersection shall be deemed significant in accordance with the following table:

Final v/c	LOS	Project Related Increase in v/c
> 0.701 - 0.800	C	equal to or greater than 0.040
> 0.801 - 0.900	D	equal to or greater than 0.020
> 0.901	E, F	equal to or greater than 0.010

APPENDIX A

MANUAL TRAFFIC COUNT DATA

City Of Los Angeles

Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:

North/South Highland Ave

East/West Franklin Ave

Day: Thursday Date: May 12, 2016 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	300	284	0	45
BIKES	10	15	0	1
BUSES	22	11	0	11

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	698	8.30	737	7.00	1	7.00	200	7.45
PM PK 15 MIN	719	17.15	639	17.30	3	16.30	196	17.00
AM PK HOUR	2752	8.15	2520	7.00	2	8.00	737	7.45
PM PK HOUR	2795	16.30	2488	17.00	8	16.30	760	17.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	2009	101	2110
8-9	0	2570	125	2695
9-10	0	2384	166	2550
15-16	0	2295	229	2524
16-17	1	2509	204	2714
17-18	0	2498	234	2732
TOTAL	1	14265	1059	15325

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	38	2482	0	2520
8-9	84	2183	1	2268
9-10	111	2184	0	2295
15-16	183	2125	0	2308
16-17	162	2091	1	2254
17-18	182	2306	0	2488
TOTAL	760	13371	2	14133

TOTAL	**XING S/L**		**XING N/L**	
N-S	Ped	Sch	Ped	Sch
4630	0	0	24	0
4963	0	0	26	0
4845	0	0	35	0
4832	0	0	37	2
4968	0	0	20	0
5220	0	0	30	0
29458	0	0	172	2

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	1	0	0	1
8-9	1	1	0	2
9-10	0	0	0	0
15-16	0	1	0	1
16-17	0	2	2	4
17-18	1	1	4	6
TOTAL	3	5	6	14

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	566	0	42	608
8-9	638	0	64	702
9-10	588	0	78	666
15-16	401	0	243	644
16-17	338	2	346	686
17-18	356	0	404	760
TOTAL	2887	2	1177	4066

TOTAL	**XING W/L**		**XING E/L**	
E-W	Ped	Sch	Ped	Sch
609	25	0	27	0
704	42	0	53	0
666	47	0	59	0
645	43	0	58	1
690	52	0	39	0
766	43	0	38	2
4080	252	0	274	3

ITM Peak Hour Summary

Prepared by:

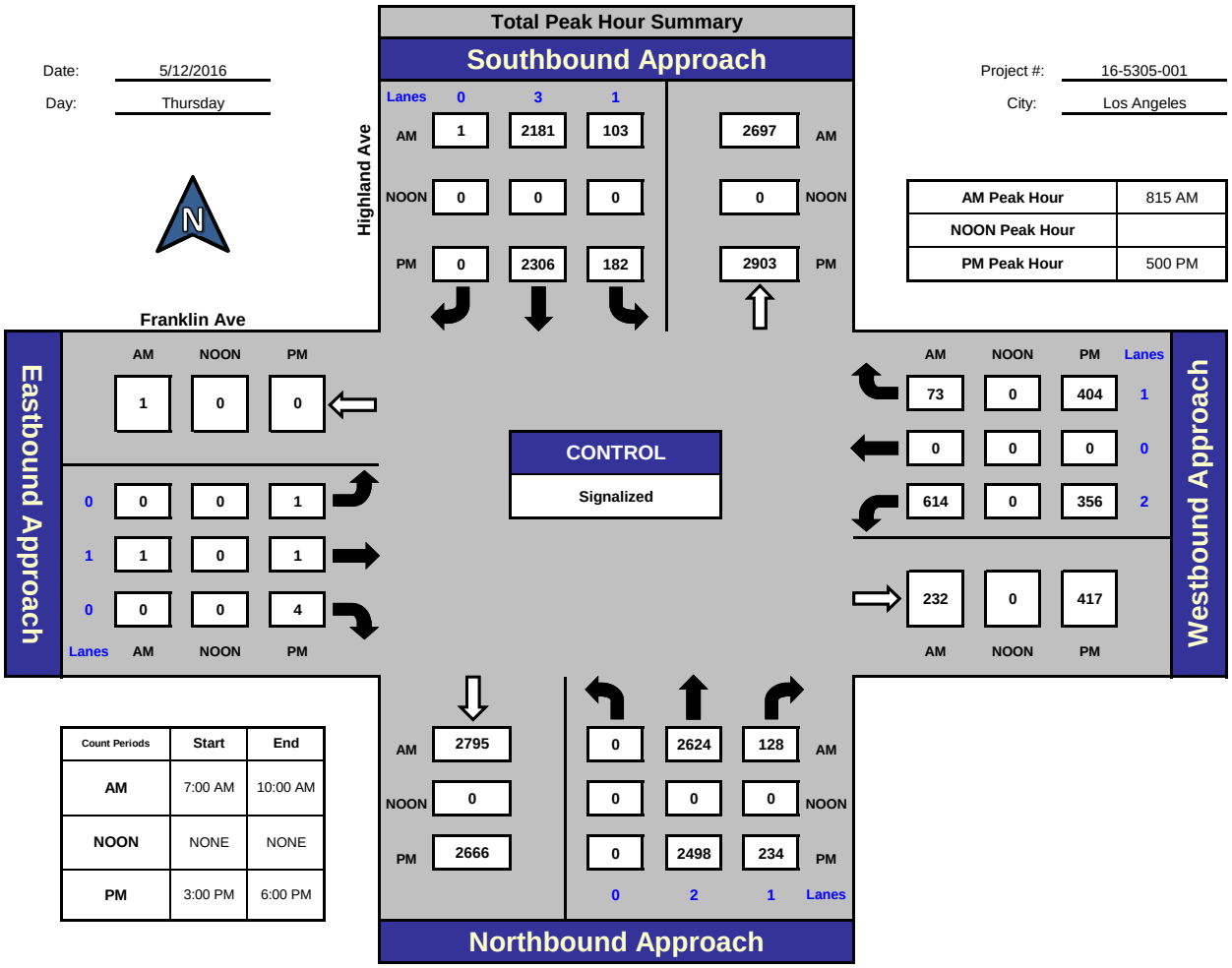
National Data & Surveying Services

Highland Ave and Franklin Ave , Los Angeles

Date: 5/12/2016
Day: Thursday

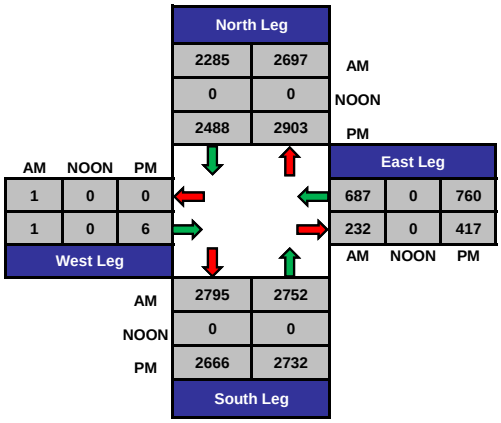
Project #: 16-5305-001
City: Los Angeles

AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	500 PM

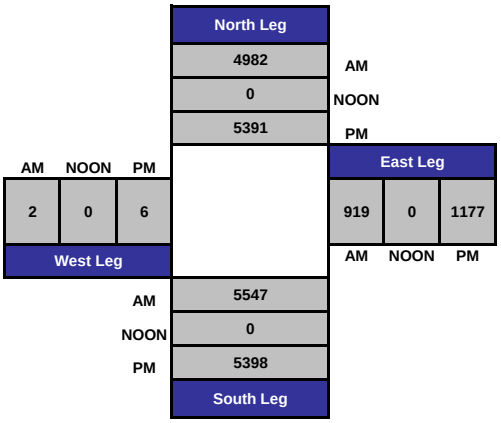


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5305-001

Day: Thursday

TOTALS

City: Los Angeles

Date: 5/12/2016

AM

NS/EW Streets:	Highland Ave			Highland Ave			Franklin Ave			Franklin Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	3	0	0	1	0	2	0	1	
7:00 AM	0	419	15	11	726	0	1	0	0	93	0	9	1274
7:15 AM	0	470	33	10	630	0	0	0	0	136	0	15	1294
7:30 AM	0	510	31	11	588	0	0	0	0	147	0	8	1295
7:45 AM	0	610	22	6	538	0	0	0	0	190	0	10	1376
8:00 AM	0	594	36	10	570	0	1	0	0	161	0	11	1383
8:15 AM	0	655	29	22	575	0	0	0	0	158	0	16	1455
8:30 AM	0	670	28	25	528	0	0	0	0	173	0	18	1442
8:45 AM	0	651	32	27	510	1	0	1	0	146	0	19	1387
9:00 AM	0	648	39	29	568	0	0	0	0	137	0	20	1441
9:15 AM	0	607	35	21	537	0	0	0	0	158	0	21	1379
9:30 AM	0	538	45	28	528	0	0	0	0	153	0	18	1310
9:45 AM	0	591	47	33	551	0	0	0	0	140	0	19	1381
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	6963	392	233	6849	1	2	1	0	1792	0	184	16417
APPROACH %'s :	0.00%	94.67%	5.33%	3.29%	96.70%	0.01%	66.67%	33.33%	0.00%	90.69%	0.00%	9.31%	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	0	2624	128	103	2181	1	0	1	0	614	0	73	5725
PEAK HR FACTOR :		0.986			0.957			0.250			0.899		0.984

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5305-001 **Day:** Thursday

City: Los Angeles **Date:** 5/12/2016

TOTALS

PM

NS/EW Streets:	Highland Ave			Highland Ave			Franklin Ave			Franklin Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	1	1	3	0	0	1	0	2	0	1	
3:00 PM	0	614	54	29	518	0	0	0	0	103	0	36	1354
3:15 PM	0	557	66	35	557	0	0	0	0	118	0	44	1377
3:30 PM	0	567	56	40	521	0	0	0	0	92	0	82	1358
3:45 PM	0	557	53	79	529	0	0	1	0	88	0	81	1388
4:00 PM	0	603	43	37	522	0	0	0	0	92	0	97	1394
4:15 PM	0	646	39	29	494	1	0	1	0	84	1	96	1391
4:30 PM	0	631	61	53	512	0	0	1	2	65	1	76	1402
4:45 PM	1	629	61	43	563	0	0	0	0	97	0	77	1471
5:00 PM	0	638	55	32	576	0	0	0	3	87	0	109	1500
5:15 PM	0	657	62	40	575	0	1	0	1	79	0	111	1526
5:30 PM	0	581	56	57	582	0	0	0	0	84	0	109	1469
5:45 PM	0	622	61	53	573	0	0	1	0	106	0	75	1491
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	7302	667	527	6522	1	1	4	6	1095	2	993	17121
APPROACH %'s :	0.01%	91.62%	8.37%	7.48%	92.51%	0.01%	9.09%	36.36%	54.55%	52.39%	0.10%	47.51%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	2498	234	182	2306	0	1	1	4	356	0	404	5986
PEAK HR FACTOR :		0.950			0.973			0.500			0.969		0.981

CONTROL : Signalized

City Of Los Angeles

Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:

North/South Highland Ave

East/West Franklin Ave-Franklin Pl

Day: Thursday Date: May 12, 2016 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	207	297	102	5
BIKES	4	8	2	0
BUSES	22	21	0	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	429	8.45	822	7.00	305	8.30	11	9.00
PM PK 15 MIN	449	17.15	692	15.15	311	15.00	37	16.15
AM PK HOUR	1653	8.15	3000	7.00	1167	7.45	28	8.45
PM PK HOUR	1698	17.00	2673	17.00	1083	15.00	123	16.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	1268	9	1277
8-9	0	1605	18	1623
9-10	1	1469	26	1496
15-16	0	1467	20	1487
16-17	0	1639	19	1658
17-18	1	1674	23	1698
TOTAL	2	9122	115	9239

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	1487	1513	3000
8-9	0	1497	1264	2761
9-10	0	1528	1305	2833
15-16	0	1342	1158	2500
16-17	0	1278	1143	2421
17-18	0	1450	1223	2673
TOTAL	0	8582	7606	16188

TOTAL	**XING S/L**		**XING N/L**	
N-S	Ped	Sch	Ped	Sch
4277	4	0	0	0
4384	20	0	0	0
4329	25	0	0	0
3987	29	0	0	0
4079	27	1	0	0
4371	35	1	0	0
25427	140	2	0	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	863	9	40	912
8-9	1050	21	50	1121
9-10	1085	19	46	1150
15-16	1008	16	59	1083
16-17	947	16	55	1018
17-18	965	23	56	1044
TOTAL	5918	104	306	6328

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	0	9	9
8-9	0	0	14	14
9-10	0	0	27	27
15-16	0	0	70	70
16-17	0	0	123	123
17-18	0	0	118	118
TOTAL	0	0	361	361

TOTAL	**XING W/L**		**XING E/L**	
E-W	Ped	Sch	Ped	Sch
921	16	0	39	0
1135	36	0	70	0
1177	46	0	63	0
1153	65	0	56	2
1141	84	0	50	1
1162	81	1	69	3
6689	328	1	347	6

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Highland Ave and Franklin Ave-Franklin Pl , Los Angeles

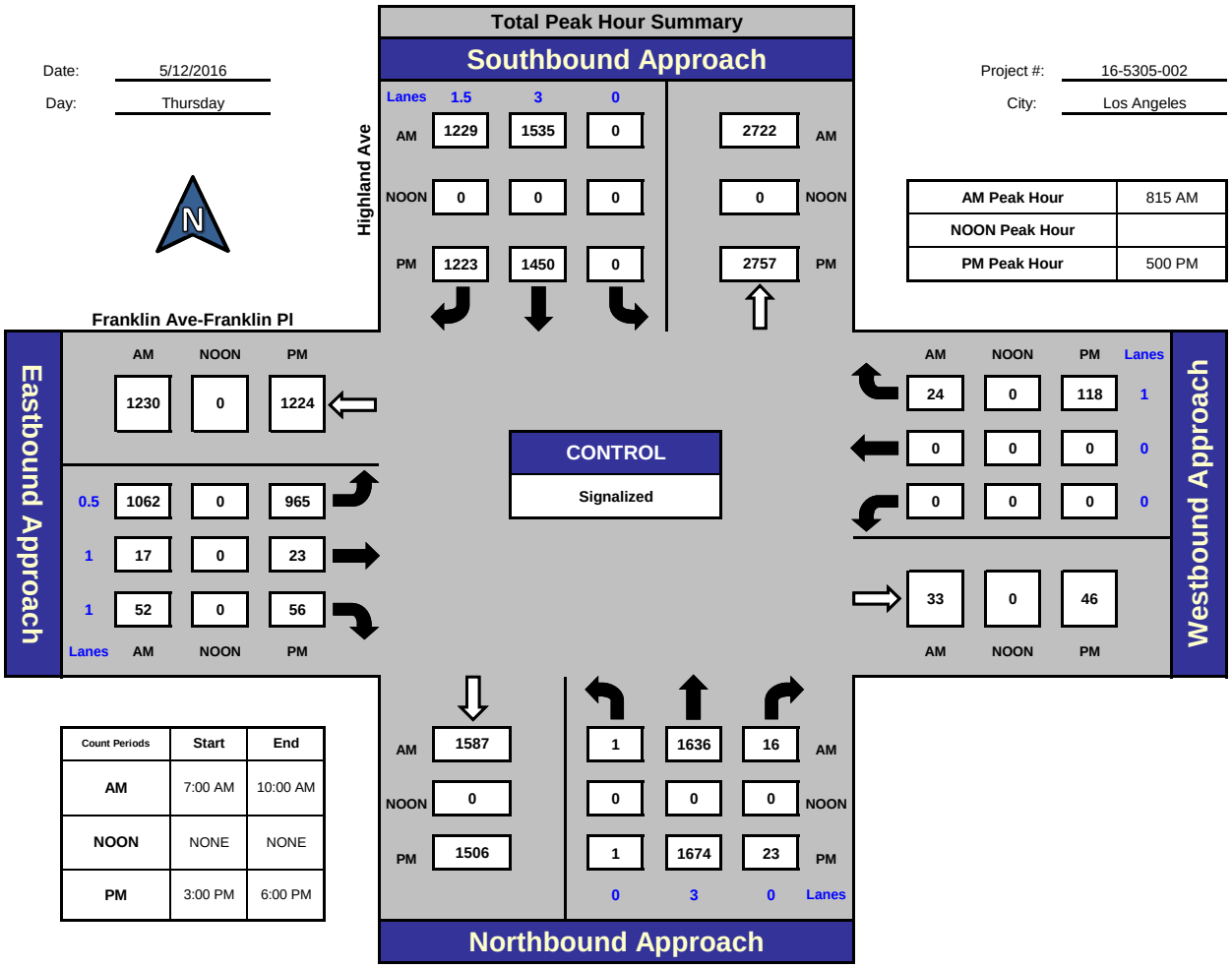
Date: 5/12/2016

Day: Thursday

Project #: 16-5305-002

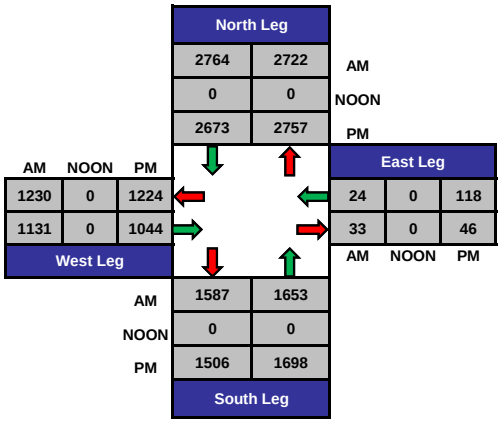
City: Los Angeles

AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	500 PM

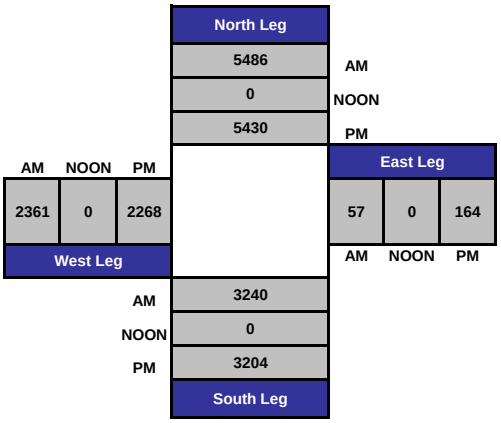


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5305-002

Day: Thursday

TOTALS

City: Los Angeles

Date: 5/12/2016

AM

NS/EW Streets:	Highland Ave			Highland Ave			Franklin Ave-Franklin Pl			Franklin Ave-Franklin Pl			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	0	3	1.5	0.5	1	1	0	0	1	
7:00 AM	0	272	2	0	427	395	163	1	6	0	0	2	1268
7:15 AM	0	328	0	0	366	394	184	1	10	0	0	2	1285
7:30 AM	0	312	2	0	344	377	238	3	8	0	0	3	1287
7:45 AM	0	356	5	0	350	347	278	4	16	0	0	2	1358
8:00 AM	0	360	5	0	366	341	267	8	10	0	0	1	1358
8:15 AM	0	412	6	0	383	327	267	3	9	0	0	4	1411
8:30 AM	0	409	2	0	342	313	279	5	21	0	0	3	1374
8:45 AM	0	424	5	0	406	283	237	5	10	0	0	6	1376
9:00 AM	1	391	3	0	404	306	279	4	12	0	0	11	1411
9:15 AM	0	387	10	0	353	357	264	6	11	0	0	7	1395
9:30 AM	0	345	8	0	385	348	260	3	12	0	0	4	1365
9:45 AM	0	346	5	0	386	294	282	6	11	0	0	5	1335
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	4342	53	0	4512	4082	2998	49	136	0	0	50	16223
APPROACH %'s :	0.02%	98.77%	1.21%	0.00%	52.50%	47.50%	94.19%	1.54%	4.27%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	1	1636	16	0	1535	1229	1062	17	52	0	0	24	5572
PEAK HR FACTOR :		0.963			0.973			0.927			0.545		0.987

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5305-002

Day: Thursday

City: Los Angeles

TOTALS

Date: 5/12/2016

PM

NS/EW Streets:	Highland Ave			Highland Ave			Franklin Ave-Franklin Pl			Franklin Ave-Franklin Pl			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	3	0	0	3	1.5	0.5	1	1	0	0	1	
3:00 PM	0	374	3	0	306	291	288	7	16	0	0	14	1299
3:15 PM	0	350	4	0	377	315	257	1	20	0	0	15	1339
3:30 PM	0	373	5	0	315	302	236	5	13	0	0	23	1272
3:45 PM	0	370	8	0	344	250	227	3	10	0	0	18	1230
4:00 PM	0	381	8	0	315	293	248	3	15	0	0	26	1289
4:15 PM	0	440	6	0	298	268	216	3	7	0	0	37	1275
4:30 PM	0	401	0	0	295	275	235	9	16	0	0	32	1263
4:45 PM	0	417	5	0	370	307	248	1	17	0	0	28	1393
5:00 PM	0	414	8	0	354	314	261	6	5	0	0	23	1385
5:15 PM	0	445	4	0	365	283	241	4	25	0	0	35	1402
5:30 PM	1	379	9	0	358	312	221	6	16	0	0	36	1338
5:45 PM	0	436	2	0	373	314	242	7	10	0	0	24	1408
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	4780	62	0	4070	3524	2920	55	170	0	0	311	15893
APPROACH %'s :	0.02%	98.70%	1.28%	0.00%	53.59%	46.41%	92.85%	1.75%	5.41%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	1	1674	23	0	1450	1223	965	23	56	0	0	118	5533
PEAK HR FACTOR :		0.945			0.973			0.960			0.819		0.982

CONTROL : Signalized

City Of Los Angeles

Department Of Transportation

MANUAL TRAFFIC COUNT SUMMARY

STREET:

North/South Cahuenga Blvd

East/West Franklin Ave

Day: Thursday Date: May 12, 2016 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	143	107	33	67
BIKES	12	6	3	8
BUSES	10	6	0	26

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	232	8.30	390	8.15	119	9.45	289	8.30
PM PK 15 MIN	360	16.00	223	16.45	192	15.45	248	17.45
AM PK HOUR	869	8.15	1517	7.30	417	9.00	1095	8.30
PM PK HOUR	1407	15.30	870	16.45	698	15.00	962	16.30

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	17	369	44	430
8-9	34	712	71	817
9-10	33	620	55	708
15-16	44	1256	79	1379
16-17	52	1193	109	1354
17-18	66	1134	130	1330
TOTAL	246	5284	488	6018

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	65	1168	103	1336
8-9	95	1300	98	1493
9-10	85	1249	96	1430
15-16	72	566	32	670
16-17	85	678	36	799
17-18	105	725	25	855
TOTAL	507	5686	390	6583

TOTAL	**XING S/L**		**XING N/L**	
N-S	Ped	Sch	Ped	Sch
1766	19	1	12	0
2310	38	0	21	0
2138	11	1	14	0
2049	37	0	12	0
2153	40	2	15	0
2185	34	0	20	0
12601	179	4	94	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	127	161	29	317
8-9	122	251	35	408
9-10	131	238	48	417
15-16	180	469	49	698
16-17	154	445	71	670
17-18	132	506	48	686
TOTAL	846	2070	280	3196

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	251	593	78	922
8-9	261	667	139	1067
9-10	231	656	148	1035
15-16	109	415	394	918
16-17	91	381	467	939
17-18	99	391	450	940
TOTAL	1042	3103	1676	5821

TOTAL	**XING W/L**		**XING E/L**	
E-W	Ped	Sch	Ped	Sch
1239	10	0	21	0
1475	9	0	25	0
1452	9	0	25	1
1616	17	0	51	0
1609	22	0	47	5
1626	28	0	40	0
9017	95	0	209	6

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Cahuenga Blvd and Franklin Ave , Los Angeles

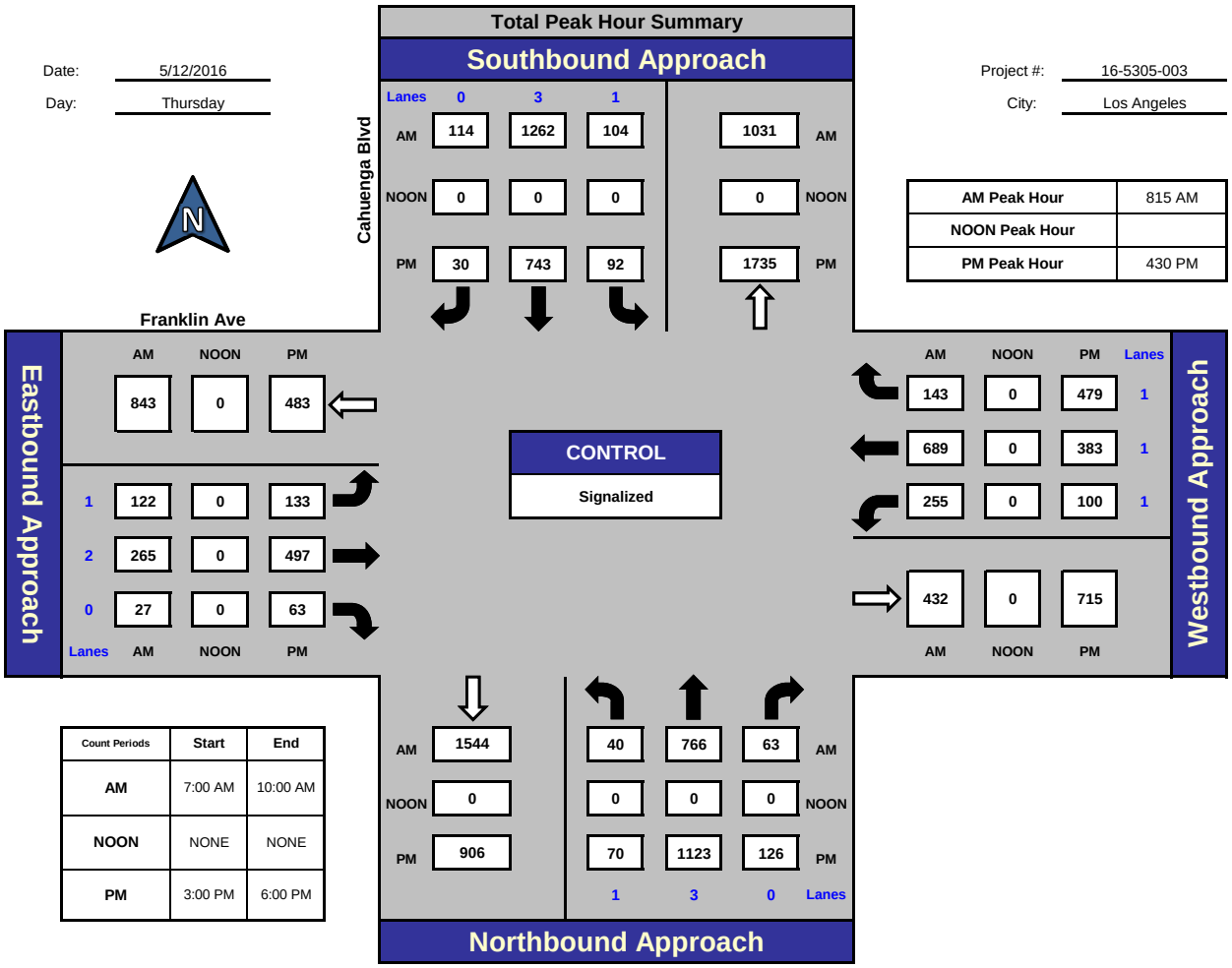
Date: 5/12/2016

Day: Thursday

Project #: 16-5305-003

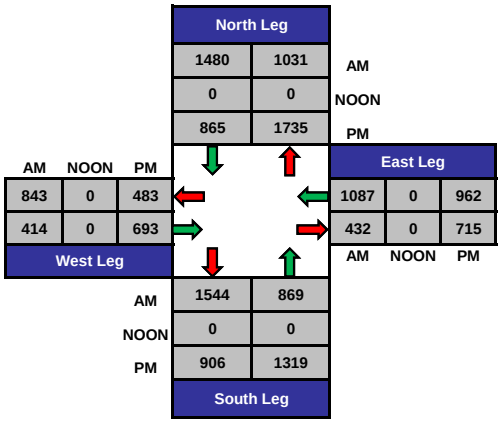
City: Los Angeles

AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	430 PM

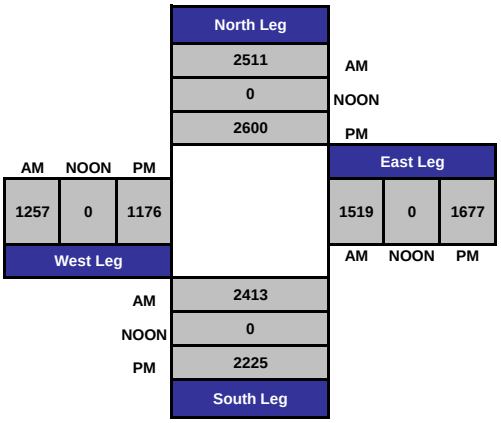


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5305-003

Day: Thursday

City: Los Angeles

TOTALS

Date: 5/12/2016

AM

NS/EW Streets:	Cahuenga Blvd			Cahuenga Blvd			Franklin Ave			Franklin Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	1	1	
7:00 AM	2	72	12	15	239	11	25	29	5	51	99	18	578
7:15 AM	4	84	9	15	287	24	33	33	7	53	166	21	736
7:30 AM	6	101	14	19	328	31	31	52	10	76	164	23	855
7:45 AM	5	112	9	16	314	37	38	47	7	71	164	16	836
8:00 AM	5	137	24	12	351	19	33	51	15	68	156	28	899
8:15 AM	12	181	23	21	350	19	24	52	6	52	164	33	937
8:30 AM	9	207	16	35	270	33	31	72	9	63	180	46	971
8:45 AM	8	187	8	27	329	27	34	76	5	78	167	32	978
9:00 AM	11	191	16	21	313	35	33	65	7	62	178	32	964
9:15 AM	6	163	17	23	311	20	33	35	7	64	165	28	872
9:30 AM	7	138	15	18	323	18	34	74	10	51	145	41	874
9:45 AM	9	128	7	23	302	23	31	64	24	54	168	47	880
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	84	1701	170	245	3717	297	380	650	112	743	1916	365	10380
APPROACH %'s :	4.30%	87.01%	8.70%	5.75%	87.27%	6.97%	33.27%	56.92%	9.81%	24.57%	63.36%	12.07%	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	40	766	63	104	1262	114	122	265	27	255	689	143	3850
PEAK HR FACTOR :		0.936			0.949			0.900			0.940		0.984

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5305-003

Day: Thursday

TOTALS

City: Los Angeles

Date: 5/12/2016

PM

NS/EW Streets:	Cahuenga Blvd			Cahuenga Blvd			Franklin Ave			Franklin Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	1	1	
3:00 PM	10	318	22	15	155	7	44	96	15	18	110	72	882
3:15 PM	11	317	9	16	155	13	49	111	8	30	105	97	921
3:30 PM	7	312	24	23	133	3	46	128	9	39	101	106	931
3:45 PM	16	309	24	18	123	9	41	134	17	22	99	119	931
4:00 PM	10	318	32	19	167	10	35	102	18	21	91	109	932
4:15 PM	16	315	24	23	150	9	44	96	14	18	102	113	924
4:30 PM	15	299	27	21	170	7	37	131	16	23	94	127	967
4:45 PM	11	261	26	22	191	10	38	116	23	29	94	118	939
5:00 PM	22	263	39	29	186	7	34	125	7	21	94	125	952
5:15 PM	22	300	34	20	196	6	24	125	17	27	101	109	981
5:30 PM	6	295	28	27	166	10	37	136	10	22	92	101	930
5:45 PM	16	276	29	29	177	2	37	120	14	29	104	115	948
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	162	3583	318	262	1969	93	466	1420	168	299	1187	1311	11238
APPROACH %'s :	3.99%	88.19%	7.83%	11.27%	84.72%	4.00%	22.69%	69.13%	8.18%	10.69%	42.44%	46.87%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	70	1123	126	92	743	30	133	497	63	100	383	479	3839
PEAK HR FACTOR :		0.926			0.970			0.942			0.986		0.978

CONTROL : Signalized

APPENDIX B

CMA AND LEVELS OF SERVICE EXPLANATION
CMA DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS

CRITICAL MOVEMENT ANALYSIS (CMA) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Level of Service concept denotes any one of a number of differing combinations of operating conditions which may take place as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

Critical Movement Analysis (CMA) is a procedure which provides a capacity and level of service geometry and traffic signal operation and results in a level of service determination for the intersection as a whole operating unit.

The per lane volume for each movement in the intersection is determined and the per lane intersection capacity based on the Transportation Research Board (TRB) Report 212 (*Interim Materials on Highway Capacity*). The resulting CMA represents the ratio of the intersection's cumulative volume over its respective capacity (V/C ratio). Critical Movement Analysis takes into account lane widths, bus and truck operations, pedestrian activity and parking activity, as well as number of lanes and geometrics.

The Level of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding CMA and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Critical Movement Analysis Characteristics

Level of Service	Load Factor	Equivalent CMA
A (free flow)	0.0	0.00 - 0.60
B (rural design)	0.0 - 0.1	0.61 - 0.70
C (urban design)	0.1 - 0.3	0.71 - 0.80
D (maximum urban design)	0.3 - 0.7	0.81 - 0.90
E (capacity)	0.7 - 1.0	0.91 - 1.00
F (force flow)	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (CMA = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Highland Avenue	Year of Count:	2016	Ambient Growth: (%):	1.0	Conducted by:	NDS	Date:	9/27/2016
CMA01	East-West Street:	Franklin Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	KB	Project:	5-16-0264-1 Project

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB--	0
	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB--	3
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			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	2624	3	**875**	0	2624	**875**	0	2677	3	**892**	0	2677	3	**892**	0	2677	3	**892**
	Through-Right		0							0				0				0	
	Right	128	1	0	2	130	0	0	131	1	0	2	133	1	0	0	133	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	103	1	**103**	1	104	**104**	0	105	1	**105**	1	106	1	**106**	0	106	1	**106**
	Left-Through		0							0				0				0	
	Through	2181	3	727	0	2181	727	0	2225	3	742	0	2225	3	742	0	2225	3	742
	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		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	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	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	614	2	**338**	2	616	**339**	0	626	2	**344**	2	628	2	**345**	0	628	2	**345**
	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	73	1	0	1	74	0	0	74	1	0	1	75	1	0	0	75	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		978	*North-South:*		979	*North-South:*			997	*North-South:*			998	*North-South:*			998
		East-West:		338	*East-West:*		339	*East-West:*			344	*East-West:*			345	*East-West:*			345
		SUM:		1316	*SUM:*		1318	*SUM:*			1341	*SUM:*			1343	*SUM:*			1343
VOLUME/CAPACITY *(V/C)* RATIO:				0.924			0.925				0.941				0.942				0.942
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.824**			**0.825**				**0.841**				**0.842**				**0.842**
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:	0.001	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:	Highland Avenue	Year of Count:	2016	Ambient Growth: (%):	1.0	Conducted by:	NDS	Date:	9/27/2016
CMA01	East-West Street:	Franklin Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	KB	Project:	5-16-0264-1 Project

		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
	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-- 3 SB-- 0 EB-- 0 WB-- 3			NB-- 3 SB-- 0 EB-- 0 WB-- 3			NB-- 3 SB-- 0 EB-- 0 WB-- 3				NB-- 3 SB-- 0 EB-- 0 WB-- 3				NB-- 3 SB-- 0 EB-- 0 WB-- 3			
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
	Override Capacity			0			0			0				0				0	
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	2498	3	**833**	0	2498	**833**	0	2548	3	**849**	0	2548	3	**849**	0	2548	3	**849**
	Through-Right		0							0				0				0	
	Right	234	1	38	3	237	40	0	239	1	39	3	242	1	41	0	242	1	41
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	182	1	**182**	1	183	**183**	0	186	1	**186**	1	187	1	**187**	0	187	1	**187**
	Left-Through		0							0				0				0	
	Through	2306	3	769	0	2306	769	0	2352	3	784	0	2352	3	784	0	2352	3	784
	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	1	0	**0**	0	1	**0**	0	1	0	**0**	0	1	0	**0**	0	1	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	4	0	0	0	4	0	0	4	0	0	0	4	0	0	0	4	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	356	2	196	2	358	197	0	363	2	200	2	365	2	201	0	365	2	201
	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	404	1	**222**	1	405	**222**	0	412	1	**226**	1	413	1	**226**	0	413	1	**226**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		1015	*North-South:*		1016	*North-South:*			1035	*North-South:*			1036	*North-South:*			1036
		East-West:		222	*East-West:*		222	*East-West:*			226	*East-West:*			226	*East-West:*			226
		SUM:		1237	*SUM:*		1238	*SUM:*			1261	*SUM:*			1262	*SUM:*			1262
	VOLUME/CAPACITY *(V/C)* RATIO:			0.868			0.869				0.885				0.886				0.886
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.768**			**0.769**				**0.785**				**0.786**				**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: 0.001 — 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:	Highland Avenue	Year of Count:	2016	Ambient Growth: (%):	1.0	Conducted by:	NDS	Date:	9/27/2016
CMA02	East-West Street:	Franklin Avenue-Franklin Place	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	KB	Project:	5-16-0264-1 Project

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			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	NB--	0	SB--	3
	EB--	0	WB-- 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				2
Override Capacity			0			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	1	0	**0**	0	1	**0**	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
Left-Through		0							0				0				0	
Through	1636	2	551	2	1638	551	0	1669	2	562	2	1671	2	562	0	1671	2	562
Through-Right		1							1				1				1	
Right	16	0	16	0	16	16	0	16	0	16	0	16	0	16	0	16	0	16
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	1535	3	512	2	1537	512	0	1566	3	522	2	1568	3	523	0	1568	3	523
Through-Right		0							0				0				0	
Right	1229	1	**689**	0	1229	**689**	0	1254	1	**704**	0	1254	1	**704**	0	1254	1	**704**
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	1062	1	540	0	1062	540	0	1083	1	550	0	1083	1	550	0	1083	1	550
Left-Through		1							1				1				1	
Through	17	0	**540**	0	17	**540**	0	17	0	**550**	0	17	0	**550**	0	17	0	**550**
Through-Right		0							0				0				0	
Right	52	1	52	0	52	52	0	53	1	53	0	53	1	53	0	53	1	53
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	24	0	0	0	24	0	0	24	0	0	0	24	0	0	0	24	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		689	*North-South:*		689	*North-South:*			704	*North-South:*			704	*North-South:*			704
	East-West:		540	*East-West:*		540	*East-West:*			550	*East-West:*			550	*East-West:*			550
	SUM:		1229	*SUM:*		1229	*SUM:*			1254	*SUM:*			1254	*SUM:*			1254
VOLUME/CAPACITY *(V/C)* RATIO:			0.819			0.819				0.836				0.836				0.836
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.719**			**0.719**				**0.736**				**0.736**				**0.736**
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: 0.000 — 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:	Highland Avenue	Year of Count:	2016	Ambient Growth: (%):	1.0	Conducted by:	NDS	Date:	9/27/2016
CMA02	East-West Street:	Franklin Avenue-Franklin Place	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	KB	Project:	5-16-0264-1 Project

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			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	NB--	0	SB--	3
	EB--	0	WB-- 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				2
Override Capacity			0			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	1	0	**0**	0	1	**0**	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
Left-Through		0							0				0				0	
Through	1674	2	566	3	1677	567	0	1708	2	577	3	1711	2	578	0	1711	2	578
Through-Right		1							1				1				1	
Right	23	0	23	0	23	23	0	23	0	23	0	23	0	23	0	23	0	23
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	1450	3	483	2	1452	484	0	1479	3	493	2	1481	3	494	0	1481	3	494
Through-Right		0							0				0				0	
Right	1223	1	**729**	0	1223	**729**	0	1248	1	**744**	0	1248	1	**744**	0	1248	1	**744**
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	965	1	494	0	965	494	0	984	1	504	0	984	1	504	0	984	1	504
Left-Through		1							1				1				1	
Through	23	0	**494**	0	23	**494**	0	23	0	**504**	0	23	0	**504**	0	23	0	**504**
Through-Right		0							0				0				0	
Right	56	1	56	0	56	56	0	57	1	57	0	57	1	57	0	57	1	57
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	118	0	0	0	118	0	0	120	0	0	0	120	0	0	0	120	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		729	*North-South:*		729	*North-South:*			744	*North-South:*			744	*North-South:*			744
	East-West:		494	*East-West:*		494	*East-West:*			504	*East-West:*			504	*East-West:*			504
	SUM:		1223	*SUM:*		1223	*SUM:*			1248	*SUM:*			1248	*SUM:*			1248
VOLUME/CAPACITY (*V/C*) RATIO:			0.815			0.815				0.832				0.832				0.832
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.715**			**0.715**				**0.732**				**0.732**				**0.732**
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:	0.000	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:	Cahuenga Boulevard	Year of Count:	2016	Ambient Growth: (%):	1.0	Conducted by:	NDS	Date:	9/27/2016
CMA03	East-West Street:	Franklin Avenue	Projection Year:	2018	Peak Hour:	AM	Reviewed by:	KB	Project:	5-16-0264-1 Project

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			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	NB--	0	SB-- 0	
	EB--	0	WB-- 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			2	
Override Capacity			0			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	40	1	**40**	1	41	**41**	0	41	1	**41**	1	42	1	**42**	0	42	1	**42**
Left-Through		0							0				0				0	
Through	766	2	383	0	766	383	0	781	2	391	0	781	2	391	0	781	2	391
Through-Right		0							0				0				0	
Right	63	1	0	0	63	0	0	64	1	0	0	64	1	0	0	64	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	104	1	104	0	104	104	0	106	1	106	0	106	1	106	0	106	1	106
Left-Through		0							0				0				0	
Through	1262	2	**631**	0	1262	**631**	0	1287	2	**644**	0	1287	2	**644**	0	1287	2	**644**
Through-Right		0							0				0				0	
Right	114	1	53	1	115	54	0	116	1	54	1	117	1	55	0	117	1	55
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	122	1	**122**	0	122	**122**	0	124	1	**124**	0	124	1	**124**	0	124	1	**124**
Left-Through		0							0				0				0	
Through	265	1	146	3	268	148	0	270	1	149	3	273	1	151	0	273	1	151
Through-Right		1							1				1				1	
Right	27	0	27	1	28	28	0	28	0	28	1	29	0	29	0	29	0	29
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	255	1	255	0	255	255	0	260	1	260	0	260	1	260	0	260	1	260
Left-Through		0							0				0				0	
Through	689	1	**689**	1	690	**690**	0	703	1	**703**	1	704	1	**704**	0	704	1	**704**
Through-Right		0							0				0				0	
Right	143	1	91	0	143	91	0	146	1	93	0	146	1	93	0	146	1	93
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		671	*North-South:*		672	*North-South:*			685	*North-South:*			686	*North-South:*			686
	East-West:		811	*East-West:*		812	*East-West:*			827	*East-West:*			828	*East-West:*			828
	SUM:		1482	*SUM:*		1484	*SUM:*			1512	*SUM:*			1514	*SUM:*			1514
VOLUME/CAPACITY *(V/C)* RATIO:			0.988			0.989				1.008				1.009				1.009
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.888**			**0.889**				**0.908**				**0.909**				**0.909**
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:	0.001	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:	Cahuenga Boulevard	Year of Count:	2016	Ambient Growth (%):	1.0	Conducted by:	NDS	Date:	9/27/2016
CMA03	East-West Street:	Franklin Avenue	Projection Year:	2018	Peak Hour:	PM	Reviewed by:	KB	Project:	5-16-0264-1 Project

		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
	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	
NORTHBOUND	Left	70	1	70	1	71	71	0	71	1	71	1	72	1	72	0	72	1	72
	Left-Through		0							0				0				0	
	Through	1123	2	**562**	0	1123	**562**	0	1146	2	**573**	0	1146	2	**573**	0	1146	2	**573**
	Through-Right		0							0				0				0	
	Right	126	1	76	0	126	76	0	129	1	78	0	129	1	78	0	129	1	78
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	92	1	**92**	0	92	**92**	0	94	1	**94**	0	94	1	**94**	0	94	1	**94**
	Left-Through		0							0				0				0	
	Through	743	2	372	0	743	372	0	758	2	379	0	758	2	379	0	758	2	379
	Through-Right		0							0				0				0	
	Right	30	1	0	1	31	0	0	31	1	0	1	32	1	0	0	32	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	133	1	**133**	0	133	**133**	0	136	1	**136**	0	136	1	**136**	0	136	1	**136**
	Left-Through		0							0				0				0	
	Through	497	1	280	2	499	282	0	507	1	286	2	509	1	287	0	509	1	287
	Through-Right		1							1				1				1	
	Right	63	0	63	1	64	64	0	64	0	64	1	65	0	65	0	65	0	65
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	100	1	100	0	100	100	0	102	1	102	0	102	1	102	0	102	1	102
	Left-Through		0							0				0				0	
	Through	383	1	383	1	384	384	0	391	1	391	1	392	1	392	0	392	1	392
	Through-Right		0							0				0				0	
	Right	479	1	**433**	0	479	**433**	0	489	1	**442**	0	489	1	**442**	0	489	1	**442**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		654	*North-South:*		654	*North-South:*			667	*North-South:*			667	*North-South:*			667
		East-West:		566	*East-West:*		566	*East-West:*			578	*East-West:*			578	*East-West:*			578
		SUM:		1220	*SUM:*		1220	*SUM:*			1245	*SUM:*			1245	*SUM:*			1245
	VOLUME/CAPACITY (*V/C*) RATIO:			0.813			0.813				0.830				0.830				0.830
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.713**			**0.713**				**0.730**				**0.730**				**0.730**
	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: 0.000 | Δ*v/c* after mitigation: 0.000

Significant impacted? NO | Fully mitigated? N/A