DRAFT

TRANSPORTATION STUDY FOR THE 8899 BEVERLY BOULEVARD PROJECT

WEST HOLLYWOOD, CALIFORNIA

NOVEMBER 2013

PREPARED FOR

BEVERLY BOULEVARD ASSOCIATION

PREPARED BY



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Chapter 1 Introduction

The transportation analysis described in this study has been prepared for the 8899 Beverly Boulevard Project (Project) proposed by Beverly Boulevard Association. The report identifies the assumptions, describes the methodologies, and summarizes the findings of the study, which was conducted as part of the Draft Environmental Impact Report (DEIR) for the Project. The methodology and assumptions used in this analysis were established in conjunction with the City of West Hollywood.

PROJECT LOCATION

The Project Site is located at 8899 Beverly Boulevard and 8846-8908 Rosewood Avenue in the City of West Hollywood. The 1.73-acre Project Site is comprised of 17 legal lots, including five lots located on the north side of Beverly Boulevard between Almont Drive and Robertson Boulevard and 12 lots on the south side of Rosewood Avenue between Almont Drive and Robertson Boulevard. The Project Site is bound by Rosewood Avenue to the north, Beverly Boulevard to the south, and adjacent commercial properties to the east and west. Access to the existing parking facilities that serve the Project Site is provided via two driveways along Beverly Boulevard. The Project Site is provided area consisting of residential, retail, and commercial uses.

PROJECT DESCRIPTION

The Project includes an adaptive reuse of an existing 10-story retail/commercial office building (Existing Building), as well as a development of new residential uses on an existing surface parking facility fronting Rosewood Avenue, which currently serves the Existing Building. The reuse of the Existing Building would include 56 condominium units, eight affordable housing units, approximately 4,394 square feet (sf) of restaurant uses, 19,875 sf of retail uses, and 10,562 sf of office uses. The new development on the existing surface parking facility would include 13

townhomes and four affordable apartment units. Figure 1 illustrates the site plan of the proposed project.

The Existing Building currently contains 64,502 sf of office uses, 21,249 sf of retail uses, and 3,879 sf of restaurant uses. Nearly all of the current tenants of the Existing Building are subject to leases that will have expired and will likely relocate elsewhere prior to the start of construction.

Site Access and Circulation

The Project would provide primary vehicular access on Beverly Boulevard.

The Existing Building is currently served by two existing driveways on Beverly Boulevard that provide access to a basement garage on Level 1, a second level of structured parking on Level 3, and a surface parking lot fronting Rosewood Avenue that is accessed through the garage.

As part of the Project, the existing driveways will consolidate into one driveway that will provide access to the subterranean parking area. Parking would be valet-assisted and served by parking attendants who would staff the garages 24 hours a day, seven days a week, to minimize traffic queuing on Beverly Boulevard. The parking garage would have control gates and garage doors to provide extra security.

Access to the 13 townhomes would be provided via individual driveways along Rosewood Avenue, for a total of 13 curb-cuts.

STUDY SCOPE AND METHODOLOGY

This traffic study has been prepared in accordance with City of West Hollywood guidelines, adopted policies, procedures, and standards, and provides a comprehensive analysis of the potential traffic impacts associated with the Project. The scope for the traffic analysis was developed in consultation with the City, in coordination with adjacent jurisdictions, and in consideration of input received during the public scoping process. The assumptions and technical





SITE PLAN

FIGURE 1 methodologies were identified as part of the study approach, which was reviewed and approved by the City.

As described in more detail below, the study analyzed the potential Project-generated traffic impacts on the street system surrounding the Project Site as compared to Existing Conditions (Year 2013) and Future Conditions (Year 2015). Intersection traffic impacts for the Project were evaluated for typical weekday morning (7:00 AM to 9:00 AM) and afternoon (4:00 PM to 6:00 PM) peak periods. The analysis of future year traffic forecasts was conducted for full buildout of the Project and is based on projected conditions in year 2015 both with and without the addition of the Project's traffic.

Accordingly, the following traffic scenarios were developed and analyzed as part of this study:

- <u>Existing Conditions (Year 2013)</u> The analysis of existing traffic conditions provides a basis for the assessment of existing and future traffic conditions with the addition of Project traffic. The Existing Conditions analysis includes a description of key area streets and highways, traffic volumes and current operating conditions, and transit service in the Project Site vicinity. Intersection turning movement counts for typical weekday morning (7:00 AM to 9:00 AM) and afternoon (4:00 PM to 6:00 PM) peak periods were collected in September 2013. Fieldwork (lane configurations and signal phasing) for the analyzed intersections was collected in August 2013.
- <u>Existing with Project Conditions (Year 2013)</u> This scenario projects the potential intersection operating conditions that could be expected if the Project were built given the existing street system and traffic volumes. In this scenario, the Project-generated traffic is added to the Existing Conditions (Year 2013) traffic volumes.
- <u>Future without Project Conditions (Year 2015)</u> This scenario projects the potential intersection operating conditions that could be expected as a result of regional growth and related project traffic in the vicinity of the Project Site by year 2015. This analysis provides the baseline conditions by which Project impacts are evaluated in the future at full buildout.
- <u>Future with Project Conditions (Year 2015)</u> This scenario projects the potential intersection operating conditions that could be expected if the Project were built in the projected buildout year (2015) by adding the Project traffic to the Future without Project Conditions (Year 2015) traffic volumes.

Intersection Capacity Analyses

Intersection capacity has been analyzed using the methods prescribed by the City of West Hollywood. In accordance with the City of West Hollywood policy, the intersection capacity analysis was conducted using the Synchro software to implement the *2000 Highway Capacity Manual*, Transportation Research Board, 2000 (HCM) signalized and unsignalized methodologies. The HCM signalized methodology calculates the average delay, in seconds, for each vehicle passing through the intersections, while the HCM unsignalized methodology calculates the control delay, in seconds, for the movement with the worst level of service (LOS) at each intersection.

Table 1 presents a description of the LOS categories, which range from excellent, nearly freeflow traffic at LOS A, to stop-and-go conditions at LOS F, for both signalized and unsignalized intersections.

TABLE 1 LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS

Level of Service	vel of Signalized Unsignalized Intersection Intersection Delay (sec) Delay (sec)		Definition
A	0.0 - 10.0	0.0 - 10.0	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
В	10.1 - 20.0	10.1 - 15.0	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
С	20.1 - 35.0	15.1 - 25.0	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	35.1 - 55.0	25.1 - 35.0	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	55.1 - 80.0	35.1 - 50.0	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 80.0	> 50.0	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.

<u>Source</u>

Highway Capacity Manual 2000, Transportation Research Board, 2000.

Significant Impact Criteria

The City of West Hollywood has adopted a sliding scale for determining significant traffic impacts to intersections. The West Hollywood significant impact criteria are based on a minimum allowable increase in delay attributable to a project as the overall LOS of the intersection decreases:

Intersection Proje	Conditions with ect Traffic	Project-Related					
Level of Service	Intersection Delay (seconds)	(seconds)					
Signalized	Intersection of Two	Commercial Corridors					
D	35.1 - 55.0	≥ 12.0					
E or F	> 55.0	≥ 8.0					
Other Signalized Intersection							
D	35.1 - 55.0	≥ 8.0					
E or F	> 55.0	≥ 5.0					
Four-Way Stop-Controlled Intersection							
D	25.1 - 35.0	≥ 8.0					
E or F	> 35.0	≥ 5.0					
Unsignali	Unsignalized (Two-Way/One-Way Stop-Controlled) Intersection						
D, E or F	> 25.0	≥ 5.0					

The City of West Hollywood has also developed a similar sliding scale to identify significant impacts on residential street segments. The criterion is based on the allowable increase in average daily traffic (ADT):

Average Daily Traffic (ADT)	Project-Related Increase in ADT
> 2,000	12%
2,001 - 3,000	10%
3,001 - 6,749	8%
≥ 6,750	6.25%

Congestion Management Program Analysis

An analysis also was conducted according to Los Angeles County (County) Congestion Management Program (CMP) guidelines. The 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 (RTIP) and State Transportation Improvement Program (STIP) processes. The CMP requires that a Traffic Impact Analysis (TIA) be performed for all CMP arterial monitoring intersections where a project would add 50 or more trips during either the morning or afternoon weekday peak hours and all mainline freeway monitoring locations where a project would add 150 or more trips (in either direction) during the morning or afternoon weekday peak hours. Additionally, it requires a review of potential impacts to the regional transit system.

ORGANIZATION OF REPORT

This report is divided into 12 chapters, including this introduction. Chapter 2 describes the existing circulation system, traffic volumes, and traffic conditions in the Study Area. Chapter 3 forecasts and analyzes future base operating conditions without Project traffic. Chapter 4 describes the procedure used to forecast Project traffic volumes and distribution through the Study Area. Chapter 5 presents the intersection operating conditions associated with construction of the Project on top of Existing Conditions (Year 2013). Chapter 6 presents the intersection operating conditions (Year 2015). Chapter 7 assesses the significant traffic impacts associated with the Project on top of existing and future conditions before any mitigation. Chapter 8 presents the street segment analysis. Chapter 9 analyzes traffic impacts associated with Project construction. Chapter 10 presents an analysis of the Project's proposed parking. Chapter 12 summarizes the analyses and study conclusions. The aforementioned additional analyses, as well as details of the technical analyses, are included in the appendices.

Chapter 2 Existing Conditions

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions in the Project Study Area. The existing conditions analysis relevant to this study includes an assessment of the existing street system, an analysis of traffic volumes and current operating conditions, and an analysis of the existing public transit service.

STUDY AREA

The Study Area generally includes a geographic area approximately one-quarter mile (northsouth) by approximately one-quarter mile (east-west). This Study Area was established in consultation with the City of West Hollywood and by reviewing the existing intersection/corridor operations, Project peak hour vehicle trip generation, the anticipated distribution of Project vehicular trips, and the potential impacts of Project traffic.

A traffic analysis study area generally comprises those locations with the greatest potential to experience significant traffic impacts due to the Project as defined by the lead agency. In the traffic engineering practice, a study area generally includes those 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 Study Area was designed to ensure that all potentially significantly impacted intersections, prior to any mitigation, were analyzed, and the boundary of the Study Area was extended, as necessary, to confirm that there were no significant impacts at or outside the boundary of the Study Area by reviewing the Project traffic's travel patterns.

The intersections selected for analysis are consistent with the above criteria. The study locations were also selected based on the Project vehicle trip generation, the anticipated distribution of the Project trips, existing intersection/corridor operations, and travel routes/patterns to and from the Project. Several additional study locations were considered, including Doheny Drive at Maple Drive, Doheny Drive at Burton Way, Oakhurst Drive between Burton Way and Beverly Boulevard, Wetherly Drive between Wilshire Boulevard and Burton Way, among others. These intersections and street segments, among others, were not selected for analysis as they did not meet the criteria listed above. The study locations not included accommodated little, if any, Project-related traffic volumes/vehicular turning movements, were located a farther distance from the Project Site, have relatively lower traffic volumes on the side street and minor approach to the intersections, and no documented existing or projected future adverse operational issues.

A total of four intersections, one signalized and three unsignalized, and one street segment in the Study Area were identified during the scoping process for detailed analysis in the traffic study. Figure 2 illustrates the location of the Project Site in relation to the surrounding street system, the four study intersections, and one study street segment.

The four intersections selected for evaluation are:

- 1. Rosewood Avenue & Almont Drive (four-way stop-controlled)
- 2. Beverly Boulevard & Almont Drive (two-way stop-controlled)
- 3. Rosewood Avenue & Robertson Boulevard (two-way stop-controlled)
- 4. Beverly Boulevard & Robertson Boulevard (signalized)

The street segment of Rosewood Avenue between Almont Drive and Robertson Boulevard was also selected for evaluation.





EXISTING STREET SYSTEM

The existing street system in the Study Area consists of a regional roadway system including arterials, secondary/collector and local streets. The arterials, secondary/collectors, and selected local streets in the Study Area offer sub-regional and local access and circulation opportunities. These transportation facilities generally provide two to four travel lanes and generally allow parking on either side of the street. Typically, the speed limits range between 25 and 35 miles per hour (mph) on the arterials, secondary/collector, and local streets.

Roadway Descriptions

Primary regional access to the Project site is provided by the Santa Monica Freeway (I-10), which generally runs in the east-west direction south of the Study Area and the San Diego Freeway (I-405), which generally runs in the north-south direction west of the Study Area. I-10 is located approximately three miles to the south of the Site, with access provided via interchanges at Robertson Boulevard and La Cienega Boulevard. I-405 is located approximately four miles to the west of the Site, with access provided via interchanges at Santa Monica Boulevard.

The major arterials providing regional and sub-regional access to the Project Site include Beverly Boulevard and Robertson Boulevard. The street classifications were designated as defined in *West Hollywood General Plan 2035* (City of West Hollywood, 2011). The following is a brief description of the major streets in the Study Area:

- <u>Beverly Boulevard</u> Beverly Boulevard is a designated Arterial that runs in the east-west direction and is located adjacent to the south side of the Project Site. It provides four travel lanes, two in each direction, and left-turn lanes at intersections. It provides both local and regional access to the Project Site. Daytime two-hour metered parking is generally available on both sides of the street within the Study Area. The posted speed limit is 35 mph.
- <u>Robertson Boulevard</u> Robertson Boulevard is a designated Secondary/Collector Street that runs in the north-south direction and is located east of the Project Site. It provides two travel lanes, one in each direction, and left turns at signalized intersections. It provides both local and sub-regional access to the Project Site. Daytime two-hour metered parking is generally available on both sides of the street within the Study Area. The posted speed limit is 30 mph.

- <u>Rosewood Avenue</u> Rosewood Avenue is a designated Local Street that runs in the east-west direction and is located adjacent to the north side of the Project Site. It provides two travel lanes, one in each direction. It provides local access to the Project Site. Daytime two-hour curbside parking is generally permitted on weekdays and Saturdays on both sides of the street within the Study Area. Vehicles with permits are exempt from parking restrictions within the permit parking district. The posted speed limit is 25 mph with speed bumps to further control speed.
- <u>Almont Drive</u> Almont Drive is a designated Local Street that runs in the north-south direction and is located west of the Project Site. It provides two travel lanes, two in each direction. It provides limited local access to the Project Site. Daytime two-hour curbside parking is generally available on weekdays on both sides of the street within the Study Area. Vehicles with permits are exempt from parking restrictions within the permit parking district. The posted speed limit is 25 mph.

The existing lane configurations at the analyzed intersections are provided in Appendix A.

EXISTING TRANSIT SYSTEM

The Project area is served by bus lines operated by the Los Angeles County Metropolitan Transportation Authority (Metro) and the West Hollywood Cityline service.

Bus transit service in the Project vicinity is available along the following streets:

- Beverly Boulevard
- San Vicente Boulevard
- Robertson Boulevard
- Santa Monica Boulevard
- La Cienega Boulevard

Figure 3 illustrates the existing transit service in the Study Area. Table 2 summarizes the various 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. The following provides a brief description of the bus lines providing service in Project vicinity:





EXISTING TRANSIT SERVICE

FIGURE 3

TABLE 2 EXISTING TRANSIT SERVICE

	Provider Pouto and Service Area	Service	Hours of Operation	Average Headway (minutes)			
	Flovidei, Roule, and Selvice Alea	Туре	nours of Operation	AM Peak Period		PM Peak Period	
Metro				NB/EB	SB/WB	NB/EB	SB/WB
10	Downtown Los Angeles - West Hollywood via Temple St & Melrose Ave	Local	4:00 AM - 1:00 AM	22	13	20	10
14	Downtown Los Angeles - Beverly Hills via Beverly Blvd	Local	24-Hour	8	7	8	8
30	30 West Hollywood - Downtown Los Angeles - Indiana Station via San Vicente BI, Pico BI & E 1st St		9:00 AM - 4:30 AM	35	30	20	20
220	Beverly Center - Culver City via Robertson Blvd	Local	5:30 AM - 6:30 PM	60	60	60	60
330	330 West Hollywood - Downtown Los Angeles - Indiana Station via San Vicente BI, Pico BI & E 1st St		5:30 AM - 7:00 PM	24	26	40	34
West Hollywood CityLine				NB/EB	SB/WB	NB/EB	SB/WB
Orange	Robertson BI to La Brea Ave (Eastbound)	Local	9:00 AM - 6:00 PM	30	60	45	36
Blue	La Brea Ave to Robertson Blvd (Westbound)	Local	9:00 AM - 6:00 PM	30	60	45	36

Notes

Metro: Los Angeles County Metropolitan Transportation Authority West Hollywood Cityline Bus: City of West Hollywood AM Peak from 6-10 AM PM Peak from 3-7 PM

- <u>Metro Local Line 10</u> Line 10 travels north-south on San Vicente Boulevard in the vicinity of the Project Site with average headways of 18 minutes during the morning peak hours and 15 minutes during the afternoon peak hours. The line travels from downtown Los Angeles to West Hollywood and provides service to Pershing Square and Civic Center/Grand Park.
- <u>Metro Local Line 14</u> Line 14 travels east-west on Beverly Boulevard directly south of the Project Site with average headways of eight minutes during the morning and afternoon peak hours. The line travels from downtown Los Angeles to West Hollywood and provides service to Koreatown.
- <u>Metro Local Line 30</u> Line 30 travels north-south on San Vicente Boulevard in the vicinity of the Project Site with average headways of 33 minutes during the morning peak hours and 20 minutes during the afternoon peak hours. The line travels from West Hollywood to East Los Angeles and provides service to Civic Center/Grand Park and Little Tokyo/Arts District.
- <u>Metro Local Line 220</u> Line 220 travels north-south on Robertson Boulevard and San Vicente Boulevard and east-west on Beverly Boulevard in the vicinity of the Project Site with average headways of 60 minutes during the morning and afternoon peak hours. The line travels from West Hollywood to Culver City and provides service to the Cedars-Sinai Medical Center and the Beverly Center.
- <u>Metro Local Line 330</u> Line 5 travels north-south on San Vicente Boulevard in the vicinity of the Project Site with average headways of 25 minutes during the morning peak hours and 37 minutes during the afternoon peak hours. The line travels from West Hollywood to Downtown Los Angeles and provides service to Union Station.
- <u>West Hollywood Cityline Blue Route</u> Cityline Blue Route travels north-south on San Vicente Boulevard in the vicinity of the Project Site with average headways of 30 minutes during the morning and afternoon peak hours. The line serves the City of West Hollywood.
- <u>West Hollywood Cityline Orange Route</u> Cityline Orange Route travels north-south on San Vicente Boulevard in the vicinity of the Project Site with average headways of 30 minutes during the morning and afternoon peak hours. The line serves the City of West Hollywood.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

This section presents the existing peak hour turning movement traffic volumes for the intersections analyzed in the study, describes the methodology used to assess the traffic conditions at each intersection, and analyzes the resulting operating conditions at each intersection indicating delay and LOS.

Existing Traffic Volumes

Intersection turning movement counts during the typical weekday morning (7:00 AM to 9:00 AM) and afternoon (4:00 PM to 6:00 PM) commuter peak periods were conducted at the four study intersections in September 2013. Public and private schools were in session at the time the traffic counts were conducted. The existing intersection traffic volumes can be found in Figure 4. The summary data worksheets of turning movement counts at the study intersections are available in Appendix B.

The traffic volumes illustrated in Figure 4 were analyzed to determine the existing operating conditions at the analyzed intersections.

Existing Intersection Levels of Service

Table 3 summarizes the existing weekday morning and afternoon peak hour delay and the corresponding LOS for each of the study intersections. As shown in Table 3, all four study intersections operate at LOS D or better during both the morning and afternoon peak hours under Existing conditions. The LOS calculation worksheets are provided in Appendix C.





TABLE 3 EXISTING CONDITIONS (YEAR 2013) INTERSECTION PEAK HOUR LEVELS OF SERVICE

No	Intersection	Peak	Existing		
NO	intersection	Hour	Delay (sec)	LOS	
1.	Almont Drive &	A.M.	7.3	А	
[a]	Rosewood Avenue	P.M.	7.4	А	
2.	Almont Drive &	A.M.	0.7	Α	
[a]	Beverly Boulevard	P.M.	0.8	А	
3.	Robertson Boulevard &	A.M.	1.3	А	
[a]	Rosewood Avenue	P.M.	1.8	А	
4.	Robertson Boulevard &	A.M.	45.1	D	
[b]	Beverly Boulevard (signalized)	P.M.	32.2	С	

<u>Notes</u>

[a] Unsignalized location analyzed with HCM Unsignalized methodology.

[b] Signalized location analyzed with HCM Signalized methodology.

Chapter 3 Future without Project Conditions

In accordance with California Environmental Quality Act (CEQA) requirements, the Project's TIA considers the effects of the Project in relation to other developments either proposed, approved, or under construction in the Study Area. These development proposals and the methodologies used in projecting future traffic conditions without the Project are discussed in this section. The Future Year 2015 roadway network conditions are also discussed in this Chapter in terms of anticipated supply, demand, and operations (system performance). The Analyzed Year 2015 was selected to coincide with the projected full buildout of the Project.

FUTURE WITHOUT PROJECT TRAFFIC PROJECTIONS

The Future without Project traffic projections reflect growth in traffic over existing conditions from two sources. The first source is the ambient growth in traffic, which reflects increases in traffic due to regional growth and development outside the Study Area. The second source is growth due to traffic generated by projects which are proposed, approved, or under construction within and in the vicinity of the Study Area (collectively, the Related Projects), listed in Table 4.

Ambient Traffic Growth

Existing traffic is expected to increase as a result of regional growth and development. Based on historic trends, an ambient growth factor of 1.0% per year was used to adjust the existing traffic volumes to reflect the effects of regional growth and development by the year 2015. The total adjustment applied over the two-year period to full buildout of the Project (Year 2015) was therefore 2.0%.

TABLE 4FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2015)INTERSECTION PEAK HOUR LEVELS OF SERVICE

No	Interception	Peak	Future withot Project		
NO	Intersection	Hour	Delay (sec)	LOS	
1.	Almont Drive &	A.M.	7.2	А	
[a]	Rosewood Avenue	P.M.	7.4	А	
2.	Almont Drive &	A.M.	0.7	А	
[a]	Beverly Boulevard	P.M.	0.8	А	
3.	Robertson Boulevard &	A.M.	1.6	А	
[a]	Rosewood Avenue	P.M.	2.2	А	
4.	Robertson Boulevard &	A.M.	62.4	E	
[b]	Beverly Boulevard (signalized)	P.M.	43.9	D	

<u>Notes</u>

[a] Unsignalized location analyzed with HCM Unsignalized methodology.

[b] Signalized location analyzed with HCM Signalized methodology.

Related Projects

In accordance with CEQA requirements, this study considered the effects of the Project in relation to other developments either proposed, approved, or under construction in the Study Area and expected to be implemented prior to the buildout date of the Project. Information about Related Projects was obtained from the City of West Hollywood, City of Beverly Hills, and City of Los Angeles in year 2013, as well as from recent published reports for other developments. A summary of the related projects information is provided in Appendix D.

The trips associated with these Related Projects have been accounted for in the future traffic forecasts through the following three-step process.

Trip Generation. Trip generation estimates for the Related Projects were either provided by the respective city or calculated using a combination of previous study findings and the trip generation rates contained in *Trip Generation*, 9th *Edition* (Institute of Transportation Engineers [ITE], 2012). These projections are conservative in that they do not in every case provide credit for either the existing uses to be removed or the likely use of non-motorized travel modes (mass transit, bicycling, walking, etc.)

Trip Distribution. The geographic distribution of the traffic generated by the Related Projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees/residents and potential patrons of the Related Projects are drawn, and the location of these projects in relation to the surrounding street system.

Trip Assignment. The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution pattern described above and illustrated in Figure 5. These volumes were then added to the existing traffic volumes after adjustment for ambient growth through the assumed buildout year of 2015. The resulting Future without Project intersection traffic volumes are illustrated in Figure 6.









INTERSECTION PEAK HOUR TRAFFIC VOLUMES

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INTERSECTION OPERATIONS

This section presents the methodology and results of the intersection operations for the Future without Project conditions that are defined by the traffic volumes, intersection lane configurations, and roadways that would exist in the year 2015.

The projected Future without Project (Year 2015) intersection operating conditions for the weekday morning and afternoon peak hours are shown in Table 4. As shown, three of the four study intersections are projected to operate at LOS A during both the morning and afternoon peak hours. The remaining intersection (Robertson Boulevard & Beverly Boulevard) is projected to operate at LOS E during the morning peak hour and LOS D during the afternoon peak hour.

Chapter 4 Project Traffic

A trip generation estimate, trip distribution pattern and trip assignment were prepared for the Project. These components form the basis of the Project's traffic impact analysis.

PROJECT TRAFFIC VOLUMES

The first step of the forecasting process is trip generation, which estimates the total arriving and departing trips generated by the Project on a peak hour and daily basis by applying the appropriate vehicle trip generation equations, or rates, to the size of Project development. For the purposes of this Project, trips were also generated for the existing facility at the Site to allow for comparison with the proposed Project.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound Project trips. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the Study Area. Localized routes of travel through the Study Area are developed based on existing traffic patterns and relative travel times on various corridors.

The third step of the forecasting process is traffic assignment. This involves applying the traffic generated by the Project (the trip generation) to the intersections and street segments in the Study Area according to the projected trip distribution patterns. These traffic volumes can then be added to existing or future background conditions to represent traffic volumes once the Project is complete.

With the forecasting process complete and Project traffic assignments developed, the impact of the proposed Project is isolated by comparing operational (i.e., LOS) conditions at the study intersections using expected future traffic volumes without and with forecast Project traffic. The

need for site-specific and/or cumulative local area traffic improvements may then be evaluated and the significance of the Project's impacts identified.

Project Trip Generation

The trip generation rates from *Trip Generation, 9th Edition* for Land Use Code 220 (Apartment), Land Use Code 230 (Residential Condominium/Town Home), Land Use Code 710 (General Office Building), Land Use Code 826 (Specialty Retail), and Land Use Code 931 (Quality Restaurant) were used to develop the Project trip generation estimates.

As described, the Project would include an adaptive reuse of the Existing Building, as well as a development of new residential uses on an existing surface parking facility fronting Rosewood Avenue, which currently serves the Existing Building. The reuse of the Existing Building would include 56 condominium units, eight affordable housing units, approximately 4,394 sf of restaurant uses, 19,875 sf of retail uses, and 10,562 sf of office uses. The new development on the existing surface parking facility would include 13 townhomes and four affordable apartment units. The trip generation forecast shown in Table 5 reflects the Project and the removal of the existing retail/commercial/office building.

As shown in Table 5, the Project is estimated to generate 1,873 daily trips, with 53 morning peak hour trips (20 inbound, 33 outbound) and 146 afternoon peak hour trips (78 inbound, 68 outbound). The existing uses of the Project Site generate approximately 2,002 daily trips, with 101 morning peak hour trips (89 inbound, 12 outbound) and 183 afternoon peak hour trips (61 inbound, 122 outbound). Therefore, the Project is anticipated to result in a net reduction of trips with a total decrease of 129 daily trips, including a net reduction of 48 trips during the morning peak hour (net reduction of 69 inbound trips, 21 outbound trips) and a net reduction of 37 trips during the afternoon peak hour (17 inbound trips, net reduction of 54 outbound trips).

TABLE 5 TRIP GENERATION

Trip Generation Rates [a]									
Land Line	Size	Daily		AM Peak Hour		PM Peak Hour			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Apartment (ITE 220)	per du	6.65	20%	80%	0.51	65%	35%	0.62	
Residential Condominium/Townhouse (ITE 230)	per du	5.81	17%	83%	0.44	67%	33%	0.52	
General Office Building (ITE 710)	per 1,000 sf	11.03	88%	12%	1.56	17%	83%	1.49	
Specialty Retail (ITE 826)	per 1,000 sf	44.32	N/A	N/A	N/A	44%	56%	2.71	
Quality Restaurant (ITE 931)	per 1,000 sf	89.95	55%	45%	0.81	67%	33%	7.49	

Trip Generation Estimates								
	Size	Daily	AM Peak Hour			PM Peak Hour		
Land Use	Size	Daily	Inbound	Outbound	Total	Inbound	Outbound	Total
Proposed Project								
Apartment	12 du	80	1	5	6	5	2	7
Condominium	56 du	325	4	21	25	19	10	29
Townhomes	13 du	76	1	5	6	5	2	7
Office	10,562 sf	116	14	2	16	3	13	16
Retail [b]	19,875 sf	881	Nom	Nom	Nom	24	30	54
Restaurant [b]	4,394 sf	395	Nom	Nom	Nom	22	11	33
Total Project Trips		1,873	20	33	53	78	68	146
Existing Use								
Office	64,502 sf	(711)	(89)	(12)	(101)	(16)	(80)	(96)
Retail	21,249 sf	(942)	Nom	Nom	Nom	(26)	(32)	(58)
Resturant	3,879 sf	(349)	Nom	Nom	Nom	(19)	(10)	(29)
Less Existing Use		(2,002)	(89)	(12)	(101)	(61)	(122)	(183)
Total Net New Trips		(129)	(69)	21	(48)	17	(54)	(37)

<u>Notes</u>

du: dwelling units

sf: square feet

Nom .: nominal amount of trips

[a] Source: Trip Generation, 9th Edition, Institute of Transportation Engineers, 2012.

[b] The Retail and Restaurant components are assumed to not operate during the commuter morning peak hours, and therefore will generate a nominal amount of trips during the morning peak hour.

Project Trip Distribution

The traffic volumes of both the existing uses and the Project entering and exiting the Project Site have been distributed and assigned to the local street system based on demographics and existing/anticipated travel patterns in the Study Area. Localized routes of travel through the Study Area were developed based on existing traffic patterns and relative travel times on various corridors and the level of accessibility of the route to and from the Project Site. The Project trip distribution was developed to reflect the primary access on Beverly Boulevard and the townhome access on Rosewood Avenue. The general distribution pattern was reviewed and approved by the City of West Hollywood.

Project Trip Assignment

Traffic volumes for both the existing uses and the Project were assigned to the surrounding street system based on the following general distribution pattern: approximately 20% of the traffic was assigned to/from the north, 15% was assigned to/from the east, 35% was assigned to/from the south, and 30% was assigned to/from the west. The trip distribution of the existing uses is illustrated in Figure 7. The trip distribution of the Project traffic that utilizes the Beverly Boulevard driveway is illustrated in Figure 8, and the trip distribution of the Project traffic that utilizes the townhome driveways on Rosewood Avenue is illustrated in Figure 9. The trip distribution patterns were applied to the trip generation estimates to develop the Project-only traffic assignments. Figure 10 illustrates the traffic volumes of the existing uses through the study intersections, and Figure 12 illustrates the Project-only volumes that utilize the Rosewood Avenue driveway through the study intersections.

As previously mentioned, the Project is expected to generate fewer trips than the existing uses; therefore, the Project results in an overall net reduction of trips. The net Project trips is illustrated in Figure 13








BEVERLY BOULEVARD ACCESS - MIXED-USE





ROSEWOOD AVENUE ACCESS - TOWNHOMES













PROJECT-ONLY INTERSECTION PEAK HOUR TRAFFIC VOLUMES ROSEWOOD AVENUE ACCESS - TOWNHOMES





Chapter 5 Existing with Project Conditions

This Chapter describes the results of the analysis of intersection operating conditions associated with the Project construction on top of Existing Conditions. The analysis year of 2013 corresponds with the Existing Conditions data and analysis presented in Chapter 2. Within this Chapter, the Existing with Project conditions are presented for the four study intersections. The results of these analyses form the basis of the intersection impact analysis presented in Chapter 7.

EXISTING WITH PROJECT INTERSECTION OPERATIONS

The Existing with Project conditions are defined by the traffic volumes, roadways, and intersection configurations that currently exist in the year 2013. The Project-only traffic volumes described in Chapter 4 and shown in Figure 13 were added to the Existing traffic volumes shown in Figure 4 to obtain the Existing with Project peak hour traffic volumes, shown in Figure 14. None of the ambient or Related Project traffic growth described in Chapter 3 was accounted for in this analysis since this analysis looks at the existing condition of the Study Area as of year 2013.

The study intersections were analyzed using the methodologies described in Chapter 2. The Existing with Project intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 6. As shown, under the Existing with Project conditions, all four study intersections are projected to operate at LOS D or better during both the morning and afternoon peak hours.

Detailed LOS worksheets are provided in Appendix C.





TABLE 6EXISTING WITH PROJECT CONDITIONS (YEAR 2013)INTERSECTION PEAK HOUR LEVELS OF SERVICE

No	Interpretion	Peak	Existing		Existing with Project		Change in	n Impact
NO	intersection	Hour	Delay (sec) LOS Delay (sec) LOS 7.3 A 7.2 A 7.4 A 7.4 A 0.7 A 0.7 A 0.8 A 0.9 A 1.3 A 1.4 A 1.8 A 1.9 A	LOS	(sec)			
1.	Almont Drive &	A.M.	7.3	А	7.2	А	-0.1	NO
[a]	Rosewood Avenue	P.M.	7.4	А	7.4	А	0.0	NO
2.	Almont Drive &	A.M.	0.7	А	0.7	А	0.0	NO
[a]	Beverly Boulevard	P.M.	0.8	А	0.9	А	0.1	NO
3.	Robertson Boulevard &	A.M.	1.3	А	1.4	А	0.1	NO
[a]	Rosewood Avenue	P.M.	1.8	А	1.9	А	0.1	NO
4.	Robertson Boulevard &	A.M.	45.1	D	42.5	D	-2.6	NO
[b]	Beverly Boulevard	P.M.	32.2	С	30.1	С	-2.1	NO

<u>Notes</u>

[a] Unsignalized location analyzed with HCM Unsignalized methodology.

[b] Signalized location analyzed with HCM Signalized methodology.

Chapter 6 Future with Project Conditions

This chapter describes the results of the analysis of intersection operating conditions associated with the Project construction on top of the future environment. The analysis year of 2015 corresponds to the projected full buildout year of the Project. All future background traffic growth and transportation system improvements described in Chapter 3 are assumed in this analysis. Within this chapter, the Future with Project conditions is presented for the four study intersections. The results of these analyses form the basis of the intersection impact analysis presented in Chapter 7.

FUTURE WITH PROJECT (YEAR 2015) INTERSECTION OPERATIONS

The Future with Project (Year 2015) conditions are defined by the traffic volumes, roadways, and intersection configurations that would exist in the year 2015 following full development of the Project. The Project-only traffic volumes described in Chapter 4 and shown in Figure 13 were added to the Future without Project (Year 2015) traffic volumes shown in Figure 6 to obtain the Future with Project (Year 2015) peak hour traffic volumes, shown in Figure 15.

The study intersections were analyzed using the methodologies described in Chapter 2. The Future with Project (Year 2015) intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 7. As shown, under the Future with Project (year 2015) conditions, three of the four study intersections are projected to operate at LOS A during both the morning and afternoon peak hours. The remaining intersection (Robertson Boulevard & Beverly Boulevard) is projected to operate at LOS E during the morning peak hour and LOS D during the afternoon peak hour.

Detailed LOS worksheets are provided in Appendix C.





INTERSECTION PEAK HOUR TRAFFIC VOLUMES

TABLE 7FUTURE WITH PROJECT CONDITIONS (YEAR 2015)INTERSECTION PEAK HOUR LEVELS OF SERVICE

No	Intersection	Peak	Future without Project		Future with Project		Change in	Impact
NO	intersection	Hour	Delay (sec)	LOS	Delay (sec)	LOS	Orange in Delay (sec) Impace 0.0 NO 0.0 NO 0.0 NO 0.1 NO 0.1 NO	impact
1.	Almont Drive &	A.M.	7.2	А	7.2	А	0.0	NO
[a]	Rosewood Avenue	P.M.	7.4	А	7.4	А	0.0	NO
2.	Almont Drive &	A.M.	0.7	Α	0.7	А	0.0	NO
[a]	Beverly Boulevard	P.M.	0.8	А	0.9	А	0.1	NO
3.	Robertson Boulevard &	A.M.	1.6	А	1.7	А	0.1	NO
[a]	Rosewood Avenue	P.M.	2.2	А	2.3	А	0.1	NO
4.	Robertson Boulevard &	A.M.	62.4	Е	59.9	Е	-2.5	NO
[b]	Beverly Boulevard	P.M.	43.9	D	41.6	D	-2.3	NO

<u>Notes</u>

[a] Unsignalized location analyzed with HCM Unsignalized methodology.

[b] Signalized location analyzed with HCM Signalized methodology.

Chapter 7 Traffic Impact Analysis

This chapter describes the results of the intersection impact analysis for the proposed Project, before any mitigation, under both Existing (Year 2013) and Future (Year 2015) conditions. The analysis under Existing conditions was conducted in response to the case *Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council* (Court of Appeals of California, 6th District, December 16, 2010). Both analyses measured significant intersection impacts according to the impact criteria specified by the City of West Hollywood.

Under both Existing and Future conditions, intersection impacts were assessed for the Project's impacts as compared to traffic conditions as they exist without the Project (Year 2013) or as they would exist in the future without the Project (Year 2015). The previously discussed significance criteria and thresholds outlined in Chapter 1 were used to determine the significance of a traffic impact caused by the Project on the study intersections.

EXISTING WITH PROJECT CONDITIONS (YEAR 2013)

The Existing with Project (Year 2013) conditions from Table 6 in Chapter 5 were compared to the Existing (Year 2013) conditions from Table 3 in Chapter 2. This analysis assesses the impacts of the Project as compared to the Existing (Year 2013) environment without development of the Project. Any significant impacts of the Project will be considered the total number of impacts identified for the Project alone on the Existing (Year 2013) environment. Based on the City's significance criteria described in Chapter 1, the Project is not anticipated to result in any significant impacts under the Existing with Project (Year 2013) conditions. Therefore, mitigation measures are not recommended or required.

FUTURE WITH PROJECT CONDITIONS (YEAR 2015)

The Future with Project (Year 2015) conditions from Table 7 in Chapter 6 were compared to the Future without Project (Year 2015) conditions from Table 4 in Chapter 3. This analysis assesses the impacts of the Project as compared to the Future (Year 2015) environment without development of the Project. Any significant impacts of the Project will be considered the total number of impacts identified for the Project alone on the Future (Year 2015) environment. Based on the City's significance criteria described in Chapter 1, the Project is not anticipated to result in any significant impacts under the Future with Project (Year 2015) conditions. Therefore, mitigation measures are not recommended or required.

Chapter 8 Street Segment Analysis

The study street segment was analyzed based on the direction of the City of West Hollywood.

STREET SEGMENT TRAFFIC VOLUMES

Street segment ADT counts during the typical weekday were conducted on Rosewood Avenue between Almont Drive and Robertson Boulevard over a 24-hour period (from midnight to midnight) on Tuesday, September 10, 2013.

Future without Project street segment volumes were estimated by applying an ambient growth factor to the anticipated year of project buildout and the addition of Related Project traffic to the Existing street segment traffic volumes.

Project traffic volumes were added to the Existing and Future without Project ADT volumes to estimate the Existing with Project and Future with Project ADT volumes. It should be noted that no reductions were considered for the existing Rosewood Avenue trips associated with the existing office tenants and commercial patrons who would be removed as part of the Project. Thus, the analysis is conservative.

ADT volumes under all conditions may be found in Figure 16. The summary data worksheets of the study street segment ADT volumes are available in Appendix B.

SUMMARY OF STREET SEGMENT ANALYSIS

The analysis of the study street segments are provided in Tables 8 and 9 for Existing with Project and Future with Project conditions, respectively. As shown, application of the City of West Hollywood significant impact criteria to the Existing with Project and Future with Project scenario

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STREET SEGMENT AVERAGE DAILY TRAFFIC VOLUMES

FIGURE 16

TABLE 8STREET SEGMENT ANALYSISEXISTING WITH PROJECT CONDITIONS (YEAR 2013)

		Average Da	ily Traffic (AD				
No.	Street Segment	Existing	Project	Existing with Project	Increase in ADT	Impact	
A	Rosewood Avenue between Almont Avenue & Robertson Boulevard	760	76	836	10%	NO	

<u>Notes</u>

The City of West Hollywood deems a transportation impact at an intersection "significant" based on the following criteria:

Projected ADT with Project (Final ADT)

0 to 1,999 2,000 to 2,999 3,000 or 6,749 6,750 or more Increase in ADT 12% or more of final ADT 10% or more of final ADT 8% or more of final ADT 6.25% or more of final ADT

TABLE 9STREET SEGMENT ANALYSISFUTURE WITH PROJECT CONDITIONS (YEAR 2015)

			Average Daily Traffic (ADT) Volumes						
No.	Street Segment	Existing	Ambient Growth	Related Projects	Future without Project	Project	Future with Project	Increase in ADT	Impact
A	Rosewood Avenue between Almont Avenue & Robertson Boulevard	760	15	0	775	76	851	10%	NO

Notes

The City of West Hollywood deems a transportation impact at an intersection "significant" based on the following criteria:

Projected ADT with Project (Final ADT) 0 to 1,999

> 2,000 to 2,999 3,000 or 6,749

6,750 or more

Increase in ADT 12% or more of final ADT 10% or more of final ADT 8% or more of final ADT 6.25% or more of final ADT indicates that the Project is not anticipated to result in any significant impacts at the study street segment. Incremental increases in traffic volume (i.e., 10% or less) that do not rise to the level of significance as defined in Chapter 2 are noted at the study street segment for each of the analysis conditions. Thus, no improvement measures are required or recommended to reduce impacts to less than significant levels.

Chapter 9 Congestion Management Program Analysis

CMP ANALYSIS

The CMP requires that, when a TIA is prepared for a project, traffic and transit impact analyses be conducted for select regional facilities based on the amount of project traffic expected to use these facilities. The operating conditions analysis at all CMP arterial and freeway monitoring stations that may be impacted by the Project was performed in accordance with the TIA guidelines referenced in the *2010 Congestion Management Program for Los Angeles County* (Metro, 2010).

CMP SIGNIFICANT TRAFFIC IMPACT CRITERIA

The CMP guidelines state that a CMP freeway analysis must be conducted if 150 or more trips attributable to the proposed development are added to a mainline freeway monitoring location in either direction during the morning or afternoon weekday peak hours. Similarly, a CMP arterial monitoring station analysis must be conducted if 50 or more peak hour project trips are added to a CMP arterial monitoring station during the morning the morning or afternoon weekday commuter peak hours.

A significant project-related CMP impact would be identified if the CMP facility is projected to operate at LOS F (V/C > 1.00) and if the project traffic causes an incremental change in the V/C ratio of 0.02 or greater. The proposed development would not be considered to have a regionally significant impact, regardless of the increase in V/C ratio, if the analyzed facility is projected to operate at LOS E or better after the addition of the project traffic.

CMP FREEWAY ANALYSIS

Based on the Project trip generation estimates shown in Table 6, the Project is expected to generate a reduction in trips of approximately -48 net new trips in the morning peak hour and -37 net new trips in the afternoon peak hour. There would be fewer than 150 afternoon peak hour trips distributed to the freeways in the Study Area; therefore, the Project's CMP freeway impacts are considered to be less than significant and no further analysis is required.

CMP ARTERIAL MONITORING STATION ANALYSIS

The CMP arterial monitoring stations closest to the Project site is the intersection of:

- Santa Monica Boulevard & Doheny Drive, approximately one-half mile northwest of the Project site.
- Santa Monica Boulevard & La Cienega Boulevard, approximately one mile northeast of the Project site.

Because the Project is estimated to generate a net reduction in trips, which is fewer than the 50 peak trips that would trigger further analysis, the Project's CMP arterial impacts are considered to be less than significant, and no further analysis is required.

REGIONAL TRANSIT IMPACT ANALYSIS

Section B.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 average vehicle occupancy (AVO) factor of 1.4 in order to estimate the number of person trips to and from the Project. The CMP guidelines estimate that approximately 3.5% of total Project person trips may use public transit to travel to and from the Site.

Because the Project is estimated to generate a net reduction in trips, the Project is not anticipated to have a significant impact of the regional transit system. The Project location is well served by numerous established transit routes. It is anticipated that the existing transit service in the Project vicinity will adequately accommodate the Project-generated transit trips. Impacts on existing or future transit services in the Project vicinity are not expected to be significant.

Chapter 10 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. This analysis was performed in accordance with the City of West Hollywood guidelines. Though there is a small chance that Project construction activities could coincide with construction of other projects in the vicinity, the impacts of the Project would not be affected by these activities. Further, the Project would implement a construction traffic management plan that would be coordinated with other construction projects in the vicinity as necessary to minimize conflicts. The construction for the Project is comprised of separate phases for the Existing Building and the Rosewood Avenue townhomes site.

EXISTING BUILDING

Construction Assumptions

Construction of the Existing Building is proposed to commence in year 2014 and continue through year 2016, an overall duration of 20 active construction months. During this period, the construction would occur in phases, including demolition, structural upgrades, new skin addition, exterior skin, interior rough and finish, sitework and miscellaneous tasks.

Construction activities and equipment would be staged on the Project Site building podium, which currently serves as parking. Construction workers parking would predominately be provided on-site, with overflow parking accommodated at approved off-site locations. In compliance with the *West Hollywood Municipal Code* (City of West Hollywood, June 2013), exterior construction activities would occur between 8:00 AM and 4:00 PM Monday through Friday, and interior construction activities would occur between 8:00 AM and 4:00 PM on

Saturdays, excluding federal holidays. No construction activity would occur on Sunday. Work hours may be extended to 12-hour days on limited special activities.

The construction of the Existing Building would require a maximum of 80 workers on-site at one time. The major equipment and manpower expected to be used on the construction include the following:

- One tower crane at the exterior of the Existing Building
- Multiple mobile cranes on rubber tires
- Rubber tire all terrain forklifts
- One material hoist at the exterior of the Existing Building
- 10 cubic yard (CY) dump trucks for hauling demolition debris
- 14 CY dirt trucks for exporting soil
- Small equipment for existing footings under the Existing Building including bobcats and excavators on rubber tires
- Excavator and loader for the garage excavation

Construction Trip Generation

Project construction would generate traffic from construction worker travel, as well as the arrival and departure of trucks delivering construction materials to the site and removing debris generated by the on-site demolition activities. Both the number of construction workers and trucks would vary throughout the construction process in order to maintain a reasonable schedule of completion. Construction materials and equipment would be stored on-site; therefore, equipment would not travel to and from the Project Site on a daily basis. Construction traffic would use a haul route originating from Beverly Boulevard and progress on La Cienega Boulevard southbound to the I-10 Eastbound. The Truck Haul Route program would be submitted to the City of West Hollywood for review and approval prior to the issuance of a building permit. Based on the assumptions detailed below, construction workers and truck hauls are estimated to generate a maximum of 71 morning and afternoon peak hour trips.

Construction Workers. In compliance with the City of West Hollywood permitted construction hours, construction would occur between 8:00 AM and 4:00 PM. Although in general the

majority of the construction workers is expected to arrive at or depart from the Project Site during off-peak hours (i.e., arrive prior to 7:00 AM or leave prior to 4:00 PM), for purposes of providing a conservative analysis, it was assumed that construction workers could arrive and depart the Project Site during the morning and afternoon commuter peak periods. As previously mentioned, a maximum of 80 construction workers is expected to be on-site at one time.

The number of construction worker vehicles was estimated using an average vehicle ridership of 1.135 persons per vehicle, as provided in *CEQA Air Quality Handbook* (South Coast Air Quality Management District, 1993). With no additional reductions for alternative modes of transportation, the construction workers are estimated to generate 70 inbound trips during the morning peak hour and 70 outbound trips during the afternoon peak hour. All construction worker parking would be accommodated on-site with additional parking provided at approved off-site parking facilities.

Haul Trucks. Approximately 2,940 CY of material is anticipated to be exported from the Existing Building. This would require the use of 14 CY dirt trucks to export the soil to an off-site material. Based on the construction schedule, the demolition phase is estimated to occur over a two-month duration, which equals approximately 40 work days, resulting in a total of approximately five trucks per day, or 10 daily truck trips (five inbound, five outbound). For the purposes of this analysis, it was conservatively assumed that haul truck trips would occur evenly throughout the day; therefore, the morning and afternoon peak hours would be affected by an equal number of truck trips.

Transportation Research Circular No. 212, Interim Materials on Highway Capacity, (Transportation Research Board, 1980) defines passenger car equivalency (PCE) for vehicles as the number of passenger cars to which it is equivalent based on the vehicle's headway and delay-credited effects. Table 8 of *Transportation Research Circular No. 212* and Exhibit 16.7 of the HCM suggest a PCE of 2.0 for trucks. Assuming a PCE of 2.0, is it estimated that the trucks will generate 20 daily PCE trips (10 inbound, 10 outbound), including two PCE trips (one inbound, one outbound) during the peak hours.

Construction Analysis

The construction traffic for the Existing Building was distributed based on the proposed truck route, as previously described, and was assessed for temporary construction-related traffic impacts on the street system under a worst-case scenario in which the maximum level of construction traffic were to occur. Based on the significant impact criteria used for Project traffic impacts, construction could result in a temporary traffic impact at the intersection of Robertson Boulevard & Beverly Boulevard during the morning peak hour, as summarized in Table 10. To mitigate the potential temporary traffic impact, a construction mitigation plan would be implemented. It should be noted that the traffic associated with the existing uses of the Project Site were not removed with the addition of construction-related traffic, resulting in a conservative analysis.

ROSEWOOD AVENUE TOWNHOMES

Construction Assumptions

Construction of the Rosewood Avenue townhomes is proposed to commence in year 2014 and continue through year 2015, an overall duration of 12 active construction months. During this period, the construction would occur in phases, including demolition and excavation, parking garage construction, framing, exterior skin, interior rough and finish, sitework and miscellaneous tasks.

As with the Existing Building, construction activities and equipment would be staged on the Project Site building podium, which currently serves as parking. Construction worker parking would predominately be provided on-site, with overflow parking accommodated at approved off-site locations. In compliance with the *West Hollywood Municipal Code*, exterior construction activities would occur between 8:00 AM and 4:00 PM Monday through Friday, and interior construction activities would occur between 8:00 AM and 4:00 PM on Saturdays, excluding federal holidays. No construction activity would occur on Sunday. Work hours may be extended to 12-hour days on limited special activities.

TABLE 10EXISTING WITH CONSTRUCTION CONDITIONS (YEAR 2013) - EXISTING BUILDINGINTERSECTION PEAK HOUR LEVELS OF SERVICE

No	Interception	Intersection Peak Existing		Existing with Project		Change in	Impact	
NO	intersection	Hour	Delay (sec)	LOS	Existing with Project Change Delay (sec) 7.2 A -0.1 7.4 A 0.0 0.7 A 0.0 0.8 A 0.0 1.3 A 0.0 2.1 A 0.3	(sec)	impact	
1.	Almont Drive &	A.M.	7.3	А	7.2	А	-0.1	NO
[a]	Rosewood Avenue	P.M.	7.4	А	7.4	А	0.0	NO
2.	Almont Drive &	A.M.	0.7	А	0.7	А	0.0	NO
[a]	Beverly Boulevard	P.M.	0.8	А	0.8	А	0.0	NO
3.	Robertson Boulevard &	A.M.	1.3	А	1.3	А	0.0	NO
[a]	Rosewood Avenue	P.M.	1.8	А	2.1	А	0.3	NO
4.	Robertson Boulevard &	A.M.	45.1	D	56.0	E	10.9	YES
[b]	Beverly Boulevard	P.M.	32.2	С	39.6	D	7.4	NO

<u>Notes</u>

[a] Unsignalized location analyzed with HCM Unsignalized methodology.

[b] Signalized location analyzed with HCM Signalized methodology.

The construction of the Rosewood Avenue townhomes would require a maximum of 30 workers on-site at one time. The major equipment and manpower expected to be used on the construction include the following:

- Multiple mobile cranes on rubber tires
- Rubber tire all terrain forklifts
- 10 CY dump trucks for hauling demolition debris
- 14 CY dirt trucks for exporting soil
- Excavator and loader for the garage excavation

Construction Trip Generation

Similar to the Existing Building, construction materials and equipment would be stored on-site, therefore equipment would not travel to and from the site on a daily basis. Construction traffic will use a haul route originating from Rosewood Avenue and progress on La Cienega Boulevard southbound to the I-10 Eastbound. The Truck Haul Route program would be submitted to the City for review and approval prior to the issuance of a building permit. Based on the assumptions detailed below, construction workers and truck hauls are estimated to generate a maximum of 58 morning and afternoon peak hour trips.

Construction Workers. In compliance with the City of West Hollywood permitted construction hours, construction would occur between 8:00 AM and 4:00 PM, Although in general, the majority of the construction workers is expected to arrive at or depart from the site during off-peak hours (i.e., arrive prior to 7:00 AM or leave prior to 4:00 PM), for purposes of providing a conservative analysis, it was assumed that construction workers could arrive and depart the Project Site during the morning and afternoon commuter peak periods. As previously mentioned, a maximum of 30 construction workers is expected to be on-site at one time.

As stated above, the number of construction worker vehicles was estimated using an average vehicle ridership of 1.135 persons per vehicle, as provided in *CEQA Air Quality Handbook*. With no additional reductions for alternative modes of transportation, the construction workers are estimated to generate 26 inbound trips during the morning peak hour and 26 outbound trips

during the afternoon peak hour. All construction worker parking would be accommodated on-site with additional parking provided at approved off-site parking facilities.

Haul Trucks. Approximately 18,770 CY of material is anticipated to be exported from the Existing Building. This would require the use of 14 CY dirt trucks to export the soil to an off-site material. Based on the construction schedule, the demolition phase is estimated to occur over a one-month duration, which equals approximately 20 work days, resulting in a total of approximately 67 trucks per day, or 134 daily truck trips (67 inbound, 67 outbound). For the purposes of this analysis, it was conservatively assumed that haul truck trips would occur evenly throughout the day, therefore the morning and afternoon peak hours would be affected by an equal number of truck trips.

Assuming a PCE of 2.0, is it estimated that the trucks will generate 228 daily PCE trips (134 inbound, 134 outbound), including 32 PCE trips (16 inbound, 16 outbound) in the peak hours.

Construction Analysis

The construction traffic for the Rosewood Avenue site was distributed based on the proposed truck route, as previously described, and were assessed for temporary construction-related traffic impacts on the street system under a worst-case scenario in which the maximum level of construction traffic were to occur. Based on the significant impact criteria used for Project traffic impacts, construction would not result in a temporary traffic impact at any of the study intersections, as summarized in Table 11. However, implementation of a Construction Management Plan is recommended.

CONSTRUCTION MANAGEMENT PLAN

A detailed Construction Management Plan, including street closure information, detour plans, haul routes, and staging plans would be prepared and submitted to the City. The construction traffic 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.

TABLE 11EXISTING WITH CONSTRUCTION CONDITIONS (YEAR 2013) - ROSEWOOD AVENUE TOWNHOMESINTERSECTION PEAK HOUR LEVELS OF SERVICE

No	Interception	Peak	Existing		Existing with Project		Change in	Impost
NO	Intersection	Hour	Delay (sec)	LOS	Existing with Project Change Delay (sec) LOS Delay (sec) (sec) 1 7.2 A -0.4 1 7.4 A 0.4 1 0.7 A 0.4 1 0.9 A 0.4 1 2.2 A 0.4 1 2.6 A 0.4 1 52.4 D 7.4	(sec)	inpact	
1.	Almont Drive &	A.M.	7.3	А	7.2	А	-0.1	NO
[a]	Rosewood Avenue	P.M.	7.4	А	7.4	А	0.0	NO
2.	Almont Drive &	A.M.	0.7	А	0.7	А	0.0	NO
[a]	Beverly Boulevard	P.M.	0.8	А	0.9	А	0.1	NO
3.	Robertson Boulevard &	A.M.	1.3	А	2.2	А	0.9	NO
[a]	Rosewood Avenue	P.M.	1.8	А	2.6	А	0.8	NO
4.	Robertson Boulevard &	A.M.	45.1	D	52.4	D	7.3	NO
[b]	Beverly Boulevard	P.M.	32.2	С	32.5	С	0.3	NO

<u>Notes</u>

[a] Unsignalized location analyzed with HCM Unsignalized methodology.

[b] Signalized location analyzed with HCM Signalized methodology.

The Construction Management Plan shall include the following elements as appropriate:

- Provisions for temporary traffic control during all construction activities adjacent to public right-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
- Construction-related vehicles shall not park on surrounding public streets
- Provisions of safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers
- Contractors shall be required to participate in a common carpool registry during all periods of contract performance to be monitored and maintained by the general contractor
- Scheduling of construction-related deliveries, other than concrete and earthwork-related deliveries, to reduce travel during peak travel periods as identified in this study
- Obtaining the required permits for truck haul routes from the City of West Hollywood prior to issuance of any permit for the Project

Chapter 11 Parking Analysis

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

PARKING SUPPLY

As proposed, the Project would provide approximately 194 striped parking spaces in an on-site parking structure. The parking structure can accommodate up to 50 additional vehicles when valet-assist is utilized, for a total supply of 244 spaces. Additionally, each of the 13 townhomes will have a private one-car garage capable of storing one vehicle. The townhome driveways will each accommodate parking for one additional vehicle, although these spaces are not counted in the parking supply totals. In total, the Project will provide 257 parking spaces including valet assist and townhome parking spaces. If valet assist is not utilized, the Project will provide a total of 207 parking spaces.

CODE REQUIREMENTS

The *West Hollywood Municipal Code* has identified the off-street parking requirements of various land uses; in particular, Section 19.28.040 details the required off-street parking ratio for all developments proposed within the City. The following parking rates are indicated in Table 3 to 6 of the *West Hollywood Municipal Code*:

- <u>Duplexes, multi-family dwellings, condominiums, townhouses</u>
 - One bedroom or studio greater than 500 sf 1.5 spaces per unit
 - Two to Three bedrooms 2 spaces per unit
 - Four or more bedrooms 3 spaces per unit
 - Guests 1 space per 4 units

- Non-Residential Land Uses
 - General Retail Stores 3.5 spaces per 1,000 sf
 - Office 3.5 spaces per 1,000 sf for the first 25,000 sf
 - Restaurant 9 spaces per 1,000 sf

These parking rates were applied to the proposed floor area of the Project to determine the required amount of off-street parking stalls.

Code Required Project Parking

The Project consists of the following components:

- <u>Residential</u>
 - Studio/1-bedroom dwelling unit 26 units
 - 2-3 bedroom dwelling unit 55 units
- <u>Commercial</u>
 - o General Retail 19,875 sf
 - o Office 10,562 sf
 - Restaurant 4,394 sf

The aforementioned off-street parking ratios were applied to these components in order to determine the *West Hollywood Municipal Code* off-street parking requirement for the Project. As detailed in Table 12, the residential portion of the Project is required to provide a total of 169 spaces, including 149 residential spaces and 20 guest parking spaces, and the commercial component is required to provide 147 spaces, including 70 retail spaces, 37 office spaces, and 40 restaurant spaces.

The total off-street parking requirement for the Project, as determined by the *West Hollywood Municipal Code*, is 316 parking spaces. This parking requirement, when compared to the proposed parking supply of 257 on-site parking spaces with a valet assist program, would not be satisfied by the proposed parking supply. As detailed in Table 12, a deficit of 59 spaces is indicated.

TABLE 12
PARKING CODE ANALYSIS

Land Use		Off-street Parking Require	rements
		Parking Code	Spaces
Residential - Multifam			
26	1 Bedroom Units	1.5 space/unit	39
55	2-3 Bedroom Units	2 spaces/unit	110
81	Guest	0.25 space/unit	<u>20</u>
		Subtotal - Residential	169
Commercial			
19,875	sf General Retail	3.5 spaces/ 1,000 sf	70
10,562	sf Office	3.5 spaces/ 1,000 sf	37
4,394	sf Restaurant	9 spaces/ 1,000 sf	40
,		Subtotal - Commercial	147
		Total Required Spaces	316
		Provided Spaces ¹	257
		Surplus/(Deficiency)	(59)

Source:

Table 3-6 of the West Hollywood Municipal Code, City of West Hollywood, June 2013.

¹Includes 50 additional spaces in garage gained with valet assist

Code Parking Summary

As detailed in the analyses above, the analysis indicates a parking deficit of 59 spaces and the Project would not be able to satisfy the *West Hollywood Municipal Code* off-street parking requirements as currently proposed.

It should be noted that the parking requirements are not necessarily reflective of the parking demands experienced with a development as a whole. Code parking requirements represent the sum of the peak parking requirements for each individual land use and do not take into account the shared parking concept (i.e., the hourly and/or day of the week variations in parking demand generated by individual land uses), nor for the synergy between uses. The code analysis assumes that the demand for each land use peaks at the same time, which may lead to the provision of more parking than is needed at any given time (i.e., overestimation of required parking). Accordingly, a shared parking analysis was performed to determine the appropriate number of parking spaces to support the Project.

SHARED PARKING DEMAND ANALYSIS

A shared parking demand analysis of the Project was performed to help determine the appropriate amount of parking needed to adequately serve the peak parking demand generated by the multiple proposed land uses of the Project. The Project Applicant is seeking the approval of a shared parking agreement as the development is made up of a number of different land uses on the Site that will share the parking supply.

The parking analysis was performed using the model in *Shared Parking, 2nd Edition* (Urban Land Institute [ULI] and the International Council of Shopping Centers [ICSC], 2005), which describes shared parking as follows:

Shared parking is defined as parking space that can be used to serve two or more individual land uses without conflict or encroachment. The opportunity to implement shared parking is the result of two conditions:

• Variations in the peak accumulation of parked vehicles as the result of different activity patterns of adjacent or nearby land uses (by hour, by day, by season)

• Relationships among land use activities that result in people's attraction to two or more land uses on a single auto trip to a given area or development

Most zoning codes provide peak parking ratios for individual land uses. While this appropriately recognizes that separate land uses generate different parking demands on an individual basis, it does not reflect the fact that the combined peak parking demand, when a mixture of land uses shares the same parking supply, can be substantially less than the sum of the individual demands. For example, retail uses peak in the early to mid-afternoon while restaurant uses peak in the lunchtime and/or evening hours (depending on the type of restaurant).

Shared Parking Assumptions

The shared parking model utilizes a series of assumptions, in addition to the base ULI/ICSC data, to develop the parking demand model.

Parking Ratio. The ULI/ICSC methodology requires that each land use select parking ratios; that is, the parking ratio for each land use if used independently. The base parking demand ratios were developed through an extensive research and documentation effort by ULI/ICSC; these base rates reflect a national average. For the purposes of this analysis, the base rates were modified based on the amount of code-required parking for each land use with the exception of weekend rates for the office portion of the development. The standard ULI/ICSC rate of 0.38 spaces per 1,000 sf of development was utilized to more accurately predict weekend office parking demand.

Time of Day. The time of day factor is one of the key assumptions of the shared parking model. This factor reveals the hourly parking pattern of the analyzed land use; essentially, the peak demands are indicated by this factor. The research efforts of ULI/ICSC have yielded a comprehensive data set time of day factors for multiple land uses. As the demand for each land use fluctuates over the course of the day, the ability to implement shared parking emerges. Minor adjustments were made to the base time of day factors for the restaurant and yoga studio. These adjustments were made based on a survey of local characteristics for similar land uses.
<u>Weekday vs. Weekend</u>. Each shared parking analysis measured the parking demand on a weekday as well as on a Saturday. Research has indicated that a source for variation in parking demand can be traced to the difference between weekday and weekend demand.

<u>Seasonal Variation</u>. The shared parking analysis in this report was based on the peak month of the year. The total parking demand of the Project was compared over the course of the year; the peak month's demand is reported.

<u>Mode Split and Captive Market</u>. One factor that affects the overall parking demand at a particular development is the number of visitors and employees that arrive by automobile. It is common that mixed-use projects and districts have patrons/visitors captured within the site itself based on the mixed-use nature of the Project. The mode split accounts for the number of visitors and employees that do not arrive by automobile (that use transit, walk, and other means) or are internally captured. The Project is located in proximity to an existing and future transit corridor; existing express and local bus service is available at the intersection of Beverly Boulevard & Robertson Boulevard, approximately one-quarter mile walking distance to the east. In addition, the Project is surrounded by residential and office developments that are not part of the Project. Due to these factors, the Project may experience higher volumes of walk-in traffic and public transit usage than the base model assumes; therefore, adjustments were made to the mode split for each land use.

Approximately 10% of retail and restaurant customers were assumed to arrive by a means other than a single occupant vehicle (transit, walk, bike, etc.), while an additional 10% were assumed to be internally captured within the development. This represents 20% for transit usage, internal capture and walk-in. The remaining 80% of customers to the retail and restaurant portion were assumed to arrive by single passenger vehicle. Approximately 20% of retail and restaurant employees were assumed to arrive by a means other than a single occupant vehicle; the remaining 80% were assumed to arrive by single passenger vehicle. The retail and restaurant portions of this development are small community-serving facilities as opposed to destinations that will draw consumers from a wide area of the region.

The mode split for employees of the office was reduced to 90%, or 10% transit usage.

<u>Auto Occupancy</u>. The Project's shared parking analysis used the national averages for auto occupancy, i.e., the typical number of passengers in each vehicle parking at the site, for all land uses. No changes were made to the ULI/ICSC average rates.

<u>Reserved Parking</u>. Typically, the residential portions of mixed-use projects offer at least one reserved space per dwelling unit. The remaining spaces are generally shared within the pool of unreserved parking for the rest of the project; guest parking spaces are commonly included within this shared pool of residential parking. For the purposes of this analysis, one parking space is assumed to be reserved per residential unit.

The shared parking model applies these assumptions/inputs and considers each land use separately, in order to identify the peak parking demands of each project component (i.e., restaurant was separated from retail). A shared parking model was prepared for the two proposed land use variations.

Project Shared Parking Demand

Tables 13 and 14 detail the input assumptions and summary of the Project's shared parking analysis. For each land use, the tables show the base parking demand ratio for a weekday and a Saturday, the mode adjustment (mode split), the non-captive ratio (internal capture), and the peak hour and peak month adjustment ratios (the shared parking model calculates the peak demand to occur at 7:00 PM on a December weekday, the busiest hour of the year for parking demand).

Figures 17 and 18 illustrate the peak hour parking demand occurring during each month of the year for the weekday and weekend, respectively. Figure 19 illustrates the hourly parking demand pattern during the peak month of December.

By component, the model estimates that the busiest hour of the year would experience a combined residential parking demand of 168 spaces, retail parking demand of 45 spaces, office parking demand of three spaces, and a restaurant parking demand of 31 spaces. The peak parking demand totals 247 spaces. Compared to the proposed parking supply of 257 parking





WEEKDAY MONTH-BY-MONTH ESTIMATED PARKING DEMAND

FIGURE 17





WEEKEND MONTH-BY-MONTH ESTIMATED PARKING DEMAND

FIGURE 18





PEAK MONTH DAILY PARKING DEMAND BY HOUR

FIGURE 19

TABLE 13 SHARED PARKING DEMAND SUMMARY

PEAK MONTH: DECEMBER -- PEAK PERIOD: 7 PM, WEEKDAY

Projected Parking Supply:	257 Stalls				Weekday	/				Weekend	ł			Weekday			Weekend	
					Non-					Non-			Peak Hr	Peak Mo	Estimated	Peak Hr	Peak Mo	Estimated
	Pre	oject Data	Base	Mode	Captive	Project		Base	Mode	Captive	Project		Adj	Adj	Parking	Adj	Adj	Parking
Land Use	Quantity	Unit	Rate	Adj	Ratio	Rate	Unit	Rate	Adj	Ratio	Rate	Unit	7 PM	December	Demand	7 PM	December	Demand
Community Shopping Center (<400 ksf)	19,875	sf GLA	2.85	0.90	0.90	2.31	/ksf GLA	2.85	0.90	0.90	2.31	/ksf GLA	0.75	1.00	35	0.75	1.00	35
Employee			0.65	0.80	1.00	0.52	/ksf GLA	0.65	0.80	1.00	0.52	/ksf GLA	0.95	1.00	10	0.80	1.00	8
Fine/Casual Dining Restaurant	4,394	sf GLA	8.00	0.90	0.90	6.48	/ksf GLA	8.00	0.90	0.90	6.48	/ksf GLA	1.00	1.00	28	0.95	1.00	27
Employee			1.00	0.80	1.00	0.80	/ksf GLA	1.00	0.80	1.00	0.80	/ksf GLA	1.00	1.00	3	1.00	1.00	3
Residential, 1 Bedroom Units	26	units	0.50	1.00	1.00	0.50	/unit	0.50	1.00	1.00	0.50	/unit	0.97	1.00	13	0.97	1.00	13
Reserved	1	sp/unit	1	1.00	1.00	1	/unit	1	1.00	1.00	1	/unit	1.00	1.00	26	1.00	1.00	26
Guest	26	units	0.25	1.00	1.00	0.25	/unit	0	1.00	1.00	0	/unit	1.00	1.00	7	1.00	1.00	7
Residential, 2-3 Bedroom Units	55	units	1.00	1.00	1.00	1.00	/unit	1.00	1.00	1.00	1.00	/unit	0.97	1.00	53	0.97	1.00	53
Reserved	1	sp/unit	1.00	1.00	1.00	1.00	/unit	1.00	1.00	1.00	1.00	/unit	1.00	1.00	55	1.00	1.00	55
Guest	55	units	0.25	1.00	1.00	0.25	/unit	0.25	1.00	1.00	0.00	/unit	1.00	1.00	14	1.00	1.00	14
Office <25 ksf	10,562	sf GLA	0.20	1.00	1.00	0.20	/ksf GLA	0.03	1.00	1.00	0.03	/unit	0.02	1.00	0	0.00	1.00	0
Employee			3.30	0.90	1.00	2.97	/ksf GLA	0.35	0.90	1.00	0.32	/unit	0.10	1.00	3	0.00	1.00	0
ULI base data have been modified from o	lefault value	es.											Cus	tomer	84	Cus	tomer	83
													Em	ployee	82	Em	oloyee	77
													Res	served	81	Res	erved	81
													Т	otal	247	Т	otal	241

TABLE 14	
PEAK MONTH SHARED PARKING SUMMARY	

										Decen	nber														
							N	/eekday	Estimat	ed Peak	k-Hour P	arking [Demand												
Projected Parking Supply	: 257 Stalls																-				Overall Pk	AM Peak Hr	PM Peak Hr	Eve Peak Hr	
	Monthly Adj.	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM	7 PM	11 AM	2 PM	7 PM	Footnote
Community Shopping Center (<400 ksf)	100%	-	2	7	14	25	35	42	46	46	46	44	39	37	35	30	23	14	5	-	35	35	46	35	1
Employee	100%	1	2	4	8	9	10	10	10	10	10	10	10	10	10	9	8	4	2	-	10	10	10	10	2
Fine/Casual Dining Restaurant	100%	-	-	-	-	4	11	21	21	18	11	14	21	27	28	28	28	27	21	7	28	11	18	28	3
Employee	100%	-	1	2	2	3	3	3	3	3	2	2	3	3	3	3	3	3	3	1	3	3	3	3	4
Residential, 1 Bedroom Units	100%	13	12	11	10	10	9	8	9	9	9	10	11	12	13	13	13	13	13	13	13	9	9	13	-
Reserved	100%	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	-
Guest	100%	-	1	1	1	1	1	1	1	1	1	1	3	4	7	7	7	7	6	4	7	1	1	7	5
Residential, 2-3 Bedroom Units	100%	55	50	47	44	41	39	36	39	39	39	41	47	50	53	54	54	55	55	55	53	39	39	53	6
Reserved	100%	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	-
Guest	100%	-	1	3	3	3	3	3	3	3	3	3	6	8	14	14	14	14	11	7	14	3	3	14	7
Office <25 ksf	100%	-	-	-	1	2	1	-	1	2	1	-	-	-	-	-	-	-	-	-	-	1	2	-	8
Employee	100%	1	9	24	30	32	32	28	28	32	32	28	16	8	3	2	1	-	-	1	3	32	32	3	9
	Customer	-	4	11	19	35	51	67	72	70	62	62	69	76	84	79	72	62	43	18	84	51	70	84	
Subtotal Demand by User Type	Employee	70	74	88	94	95	93	85	89	93	92	91	87	83	82	81	79	75	73	69	82	93	93	82	
	Reserved	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	
GRAND TOTAL DEMAND)	151	159	180	194	211	225	233	242	244	235	234	237	240	247	241	232	218	197	168	247	225	244	247	
ULI base data have been modified from default value	es.																				247	225	244	247	

Footnote(s):

										-															
										Decer	nber														
							v	leekend	Estimat	ted Pea	k-Hour F	arking [Demand												
																					Overall Pk	AM Peak Hr	PM Peak Hr	Eve Peak Hr	
	Monthly Adj.	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM	7 PM	11 AM	5 PM	7 PM	Footnote
Community Shopping Center (<400 ksf)	100%	-	2	5	16	28	32	39	44	46	46	44	42	37	35	30	23	16	7	-	35	32	42	35	1
Employee	100%	1	2	4	8	9	10	10	10	10	10	10	10	9	8	8	7	5	2	1	8	10	10	8	2
Fine/Casual Dining Restaurant	100%	-	-	-	-	-	4	14	16	13	13	13	17	26	27	28	26	26	26	14	27	4	17	27	3
Employee	100%	-	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	2	3	2	3	3	4
Reserved	100%	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	-
Guest	100%	-	1	1	1	1	1	1	1	1	1	1	3	4	7	7	7	7	6	4	7	1	3	7	5
Residential, 2-3 Bedroom Units	100%	55	50	47	44	41	39	36	39	39	39	41	47	50	53	54	54	55	55	55	53	39	47	53	6
Reserved	100%	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	-
Guest	100%	1	3	3	3	3	3	3	3	3	3	3	6	8	14	14	14	14	11	7	14	3	6	14	7
Employee	100%	1	1	2	3	3	4	3	3	2	1	1	-	-	-	-	-	-	-	1	-	4	-	-	-
	Customer	-	6	9	20	32	40	57	64	63	63	61	68	75	83	79	70	63	50	25	83	40	68	83	
Subtotal Demand by User Type	Employee	69	66	65	67	65	64	59	63	62	61	64	71	74	77	78	77	76	73	70	77	64	71	77	
	Reserved	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	
GRAND TOTAL DEMAND)	150	153	155	168	178	185	197	208	206	205	206	220	230	241	238	228	220	204	176	241	185	220	241	
ULI base data have been modified from default valu	es.																				241	185	220	241	

spaces with a valet assist program, the projected demand can be accommodated and there is a surplus of 10 parking spaces.

Figure 19 illustrates the hourly parking demand pattern for weekdays and weekends during the peak month of December for the Project. As shown in Figure 19, on weekdays in December, parking demand will exceed the on-site without valet assist supply of 207 parking spaces from approximately 9:00 AM to 11:00 PM. On weekends in December parking demand will exceed the on-site without valet assist supply of 207 parking spaces from 1:00 PM to 2:00 PM and again from approximately 5:00 PM to 11:00 PM. During these hours, the Project must operate a valet assist stack parking program to provide at least 247 spaces on weekdays and 241 on weekends in December.

Table 15 provides a summary of when the valet assist program will be needed throughout the year based on peak parking demands. As shown in Table 15, some form of valet assist program that provides additional parking spaces will be required every day of the year, but will generally be required from 11:00 AM to 11:00 PM on weekdays and from 6:00 PM to 11:00 PM on weekends.

Shared Parking Summary

As illustrated by the shared parking analysis, with a valet assist program in place, the projected peak parking demand for the Project (247 spaces) results in a surplus of 10 parking spaces when compared to the projected parking supply of 257 parking spaces.

TABLE 15 SUMMARY OF VALET ASSIST NEEDS

		Weekday			Weekend	
Month	Time Period When Demand Exceeds Supply ¹	Peak Period Parking Demand	Additional Spaces Required ²	Time Period When Demand Exceeds Supply ¹	Peak Period Parking Demand	Additional Spaces Required ²
January	11:00 a.m 10:00 p.m.	231	24	6:00 p.m 11:00 p.m.	220	13
February	11:00 a.m 10:00 p.m.	231	24	6:00 p.m 11:00 p.m.	221	14
March	11:00 a.m 11:00 p.m.	237	30	6:00 p.m 11:00 p.m.	225	18
April	11:00 a.m 11:00 p.m.	236	29	6:00 p.m 11:00 p.m.	225	18
May	11:00 a.m 11:00 p.m.	238	31	6:00 p.m 11:00 p.m.	227	20
June	11:00 a.m 11:00 p.m.	239	32	6:00 p.m 11:00 p.m.	227	20
July	11:00 a.m 11:00 p.m.	238	31	6:00 p.m 11:00 p.m.	226	19
August	11:00 a.m 11:00 p.m.	240	33	6:00 p.m 11:00 p.m.	229	22
September	11:00 a.m 11:00 p.m.	236	29	6:00 p.m 11:00 p.m.	224	17
October	11:00 a.m 11:00 p.m.	238	31	6:00 p.m 11:00 p.m.	227	20
November	11:00 a.m 11:00 p.m.	241	34	6:00 p.m 11:00 p.m.	228	21
December	10:00 a.m 11:00 p.m.	247	40	1:00 p.m 2:00 p.m. & 5:00 p.m 11:00 p.m.	208 241	1 34

Notes:

¹Supply of 207 permanent spaces

²Above and beyond the 207 permanent spaces

Chapter 12 Summary and Conclusions

This study was undertaken to analyze the potential traffic impacts of the Project on the local street system. The following summarizes the results of this analysis:

- The Project is proposing the adaptive reuse of an existing 10-story retail/commercial office building, as well as a development of new residential uses on an existing surface parking facility. The reuse of the Existing Building would include 56 condominium units, eight affordable housing units, approximately 4,394 sf of restaurant uses, 19,875 sf of retail uses, and 10,562 sf of office uses. The new development on the existing surface parking facility would include 13 townhomes and four affordable apartment units.
- The Project is anticipated to result in a net reduction of trips with a total decrease of 129 daily trips, including a net reduction of 48 trips during the morning peak hour and a net reduction of 37 trips during the afternoon peak hour.
- The traffic impact analysis includes four study intersections. All four study intersections under Existing (Year 2013) and three of the four study intersections under Future without Project (Year 2015) conditions operate at LOS D or better during both the morning and afternoon peak hours. The intersection of Robertson Boulevard & Beverly Boulevard operates at LOS E during the morning peak hours under Future without Project (Year 2015) conditions.
- The Project traffic was added to the existing circulation system to develop the Existing with Project traffic condition. Based on the City of West Hollywood significance criteria, impacts were determined to be less than significant under Existing with Project (Year 2013) conditions. Therefore, no mitigation measures are required or recommended.
- Future traffic conditions in the Study Area were forecast for the Project buildout year of 2015. Based on the City of West Hollywood significance criteria, impacts were determined to be less than significant under Future with Project (Year 2015) conditions. Therefore, no mitigation measures are required or recommended.
- Street segment analysis was conducted at Rosewood Avenue between Almont Drive and Robertson Boulevard. The Project is not anticipated to result in a significant impact at the study street segment under either Existing (Year 2013) or Future (Year 2015) conditions.
- Analysis of potential impacts on the regional transportation system conducted in accordance with CMP guidelines determined that the Project would not have a significant impact on the regional arterial system or transit system.

• Construction of the Project may result in a temporary impact at the intersection of Robertson Boulevard & Beverly Boulevard; however, the impact would be mitigated with the implementation of a Construction Management Plan.

References

2000 Highway Capacity Manual, Transportation Research Board, 2000.

2010 Congestion Management Program for Los Angeles County, Los Angeles County Metropolitan Transportation Authority, 2010.

CEQA Air Quality Handbook, South Coast Air Quality Management District, 1993.

Shared Parking, 2nd Edition, Urban Land Institute and the International Council of Shopping Centers, 2005.

Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council, Court of Appeals of California, 6th District, December 16, 2010.

Transportation Research Circular No. 212, Interim Materials on Highway Capacity, Transportation Research Board, 1980.

Trip Generation, 9th Edition, Institute of Transportation Engineers, 2012.

West Hollywood General Plan 2035, City of West Hollywood, 2011.

West Hollywood Municipal Code, City of West Hollywood, June 2013.

Appendix A

Intersection Lane Configurations





INTERSECTION LANE CONFIGURATIONS

Appendix B Traffic Counts

Project ID:	13-5423-0	001									Day:	Tuesday	
City:	West Holl	ywood									Date:	9/10/2013	3
NS/EW Streets:		Almont Dr			Almont Dr	A	M Ro	sewood Av	ve	Ro	sewood A	ve	
	N	ORTHBOU	ND	S	OUTHBOUN	١D	E	ASTBOUN	D	v	VESTBOUN	ND.	1
	NI	NT	NR	SI	ST	SR	FI	FT	FR	WI	wт	WR	τοται
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	101712
7:00 AM	1	0	0	1	2	0	0	0	1	2	1	0	0
7:15 AM	2	2	0		1	0	0	0		2		0	7
7.13 AW	6	5	2	0	0	0	0	2	0	2	2	0	22
7:45 AM	2	1	2	0	6	0	1	3	0	2	6	1	18
8:00 AM	õ		6	0	ő	ő	2	0	1	1	1		14
8-15 AM	õ	2	2	ő	é	1	õ	1		i i i	- i -	1	22
8:30 AM	1	5	3	ő	14	2	ő	ò	3	6	2	ò	36
8:45 AM	4	5	4	2	14	0	1	ă.	1	5	3	ő	42
9:00 AM	1	2	5	ĩ	13	1	1	3	1	3	1	3	35
9:15 AM	1	2	4	Ó	10	2	1	2	Ó	2	Ó	3	27
9:30 AM	1	5	0	0	5	0	0	2	0	3	3	0	19
9:45 AM	Ó	5	7	ō	6	1	2	1	ō	7	2	2	33
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	13	35	29	4	98	7	8	18	7	40	16	10	285
APPROACH %'s :	16.88%	45.45%	37.66%	3.67%	89.91%	6.42%	24.24%	54.55%	21.21%	60.61%	24.24%	15.15%	1
	000												TOTAL
PEAK HR START (IME :	830	AIVI											TOTAL
PEAK HR VOL :	7	14	16	3	51	5	3	8	5	16	6	6	140
PEAK HR FACTOR :		0.712			0.922			0.800			0.875		0.833



CONTROL: 4-Way Stop (NB/SB/EB/WB)

Project ID:	13-5423-0	001									Day:	Tuesday	
City:	West Holl	ywood				-					Date:	9/10/201	3
						Р	М						
NS/EW Streets:		Almont Dr		,	Almont Dr		Ro	sewood Av	/e	Ro	sewood Av	ve	1
	N	ORTHBOU	ND	SC	DUTHBOUM	١D	E	ASTBOUN	D	V	/ESTBOUN	ID	
	NI	NT	NP	SI	ST	SP	FI	FT	FR	\A/I	WT	WP	τοται
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	TOTAL
3:00 PM	5	5	11	0	11	0	0	2	3	1	0	2	40
3:15 PM	7	6	7	1	5	1	1	3	5	3	0	0	39
3:30 PM	6	2	5	0	1	0	2	4	0	4	2	0	26
3:45 PM	8	8	6	0	9	0	2	3	0	5	1	3	45
4:00 PM	3	12	6	2	6	0	0	2	2	3	1	1	38
4:15 PM	1	3	9	0	7	0	1	2	0	1	5	1	30
4:30 PM	3	11	3	1	6	1	1	2	3	0	0	4	35
4:45 PM	3	16	5	0	1	0	2	4	2	4	1	1	39
5:00 PM	5	12	5	1	10	0	6	7	3	1	1	0	51
5:15 PM	3	8	3	0	6	0	7	10	1	0	2	1	41
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	9	1	2	5	0	1	2	1	3	0	0	25
	NI	NT	ND	CI.	CT.	CD	51	CT.	50	14/1	MT	W/D	TOTAL
TOTAL VOLUMES		02	41	5L 7	21	SK 2	22 22	E I 41	20 20	VVL 2E	12	12	101AL
IUTAL VOLUMES :	45	92	01	0 010/	0/	2	23	41	20	20	13	13	409
APPRUACH %'S :	22.13%	40.40%	30.81%	9.21%	88.10%	2.03%	27.38%	48.81%	23.81%	49.02%	25.49%	25.49%	
PEAK HR START TIME :	430	PM											TOTAL
PEAK HR VOL :	14	47	16	2	23	1	16	23	9	5	4	6	166
PEAK HR FACTOR :		0.802			0.591			0.667			0.625		0.814



CONTROL: 4-Way Stop (NB/SB/EB/WB)

ITM Peak Hour Summary

National Data & Surveying Services

Almont Dr and Rosewood Ave , West Hollywood







Total Volume Per Leg



Project ID:	13-5423-0	002									Day: 1	Tuesday	
City:	West Holly	ywood				A					Date: 9	9/10/2013	3
NS/EW Streets:		Almont Dr		P	Imont Dr		В	everly Blvd		B	everly Blvd	I	
	N	ORTHBOU	ND	SC	UTHBOU	ND	E	ASTBOUN	D	W	/ESTBOUN	D	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	1	1	1	1	0	5	0	102	2	3	182	2	300
7:15 AM	0	0	2	0	0	4	3	163	0	6	206	3	387
7:30 AM	1	1	3	2	1	8	3	165	0	3	251	5	443
7:45 AM	0	0	3	0	0	7	3	198	1	12	265	2	491
8:00 AM	0	0	0	0	1	11	0	189	0	12	269	1	483
8:15 AM	0	1	2	0	1	12	1	194	2	11	297	4	525
8:30 AM	0	0	3	2	1	19	3	201	3	9	303	9	553
8:45 AM	0	2	0	0	0	17	7	222	2	14	325	12	601
9:00 AM	2	0	7	0	2	12	4	206	2	8	314	7	564
9:15 AM	1	0	3	2	0	9	6	185	7	18	309	3	543
9:30 AM	0	0	1	2	0	6	3	193	4	11	285	1	506
9:45 AM	1	0	2	1	1	10	7	215	3	12	268	6	526
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	6	5	27	10	7	120	40	2233	26	119	3274	55	5922
APPROACH %'s :	15.79%	13.16%	71.05%	7.30%	5.11%	87.59%	1.74%	97.13%	1.13%	3.45%	94.95%	1.60%	ı I
EAK HR START TIME :	830	AM											TOTAL
PEAK HR VOL :	3	2	13	4	3	57	20	814	14	49	1251	31	2261
PEAK HR FACTOR :		0.500			0.727			0.918			0.948		0.941

NB SB EB WB NB SB EB V 0 0 0 WB 0

UTURNS

CONTROL : 2-Way Stop (NB/SB)

	Project ID:	13-5423-0	002									Day: 1	Гuesday	
	City:	West Holly	ywood				-					Date: 9	¥/10/2013	3
	NS/EW Streets:	L	Almont Dr		ŀ	Almont Dr	P	VI B	everly Blvd	l	B	everly Blvd		
		N	ORTHBOU	ND	SC	UTHBOU	ND	E	ASTBOUN	D	V	/ESTBOUN	D	
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
	3:00 PM	1	0	9	0	3	18	6	253	4	7	224	9	534
	3:15 PM	1	2	2	1	0	16	11	225	0	6	232	9	505
	3:30 PM	1	0	3	5	1	8	5	246	3	4	228	9	513
	3:45 PM	0	0	3	4	1	14	8	235	1	6	236	14	522
	4:00 PM	0	0	1	3	2	6	9	251	1	12	238	11	534
	4:15 PM	0	0	0	6	1	8	8	255	3	2	236	6	525
	4:30 PM	0	0	4	2	0	8	13	252	2	4	232	9	526
	4:45 PM	1	1	4	1	0	5	10	267	3	7	233	11	543
	5:00 PM	0	0	5	3	0	15	15	262	2	7	241	11	561
	5:15 PM	0	0	7	0	0	12	13	272	1	5	233	7	550
	5:30 PM	0	3	2	2	0	12	10	255	1	5	230	8	528
	5:45 PM	0	2	1	6	4	8	5	265	3	5	201	7	507
ł		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	TOTAL VOLUMES :	4	8	41	33	12	130	113	3038	24	70	2764	111	6348
	APPROACH %'s :	7.55%	15.09%	77.36%	18.86%	6.86%	74.29%	3.56%	95.69%	0.76%	2.38%	93.85%	3.77%	
1	PEAK HR START TIME :	445	PM											TOTAL
	PEAK HR VOL :	1	4	18	6	0	44	48	1056	7	24	937	37	2182
	PEAK HR FACTOR :		0.821			0.694			0.971			0.963		0.972



CONTROL: 2-Way Stop (NB/SB)

ITM Peak Hour Summary

ND5

National Data & Surveying Services

Almont Dr and Beverly Blvd , West Hollywood







Total Volume Per Leg



Project ID:	13-5423-0	003									Day:	Tuesday	
City:	West Holl	ywood									Date:	9/10/2013	3
NS/EW Streets:	Ro	bertson Blv	/d	Ro	bertson Blv	rd A	Ros	sewood Av	ve	Ro	sewood Av	/e	
	N	ORTHBOU	ND	S	DUTHBOUN	ID	E	ASTBOUN	D	v	/ESTBOUN	ID	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	0	45	0	5	95	2	0	0	1	1	0	0	149
7:15 AM	1	49	2	0	110	0	0	0	1	4	0	2	169
7:30 AM	4	54	2	1	145	3	2	0	0	1	0	1	213
7:45 AIVI	0	/8	- 4	2	157		1	0	3	3	0	1	240
8:00 AM	4	90	2	5	107	5	1	0	1		1		2/8
8.13 AW	6	101	4	2	107	5		1	2	1	2	2	290
9:45 AM	5	111	4	2	176	5	0	1	2		5	2	215
9:00 AM	5	124	5	2	156	6	4	0	6	5	2	2	313
9:15 AM	3	106	ğ	ő	159	2	1	ő	4	1	1	4	290
9:30 AM	2	98	3	2	146	8	2	ő	2	4	1	3	271
9:45 AM	2	105	14	3	146	6	1	1	4	3	0	3	288
TOTAL VOLUMES : APPROACH %'s :	NL 27 2.39%	NT 1048 92.91%	NR 53 4.70%	SL 24 1.27%	ST 1827 96.46%	SR 43 2.27%	EL 12 26.09%	ET 3 6.52%	ER 31 67.39%	WL 29 47.54%	WT 12 19.67%	WR 20 32.79%	TOTAL 3129
PEAK HR START TIME :	830	AM											TOTAL
PEAK HR VOL :	13	442	24	6	671	18	5	2	15	11	10	8	1225
PEAK HR FACTOR :		0.894			0.929			0.550			0.806		0.966



CONTROL : 2-Way Stop (EB/WB)

Project ID:	13-5423-0	003									Day:	Tuesday	
City:	West Holly	ywood									Date:	9/10/201	3
-						Р	М						
NS/EW Streets:	Ro	bertson Blv	/d	Ro	bertson Blv	/d	Ro	sewood A	ve	Ros	sewood Av	ve	
	N	ORTHBOU	ND	S	OUTHBOUN	ID	E	ASTBOUN	ID	W	ESTBOUN	ID	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
3:00 PM	2	123	2	1	117	2	6	1	7	0	0	3	264
3:15 PM	3	111	4	0	135	2	2	0	7	1	1	0	266
3:30 PM	5	109	9	0	126	3	1	0	9	2	1	1	266
3:45 PM	1	142	7	2	101	7	3	2	4	1	0	5	275
4:00 PM	3	144	6	0	126	2	2	1	7	0	0	3	294
4:15 PM	6	143	7	6	112	5	4	1	11	2	1	2	300
4:30 PM	7	144	8	3	123	2	0	2	7	2	0	7	305
4:45 PM	3	143	5	2	120	3	4	1	7	2	0	1	291
5:00 PM	4	149	3	2	125	4	4	2	11	2	0	3	309
5:15 PM	3	161	4	0	103	2	4	6	4	1	1	0	289
5:30 PM	3	145	3	4	107	2	4	3	3	1	0	2	277
5:45 PM	2	129	5	4	111	1	3	3	7	0	0	3	268
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	42	1643	63	24	1406	35	37	22	84	14	4	30	3404
APPROACH %'s :	2.40%	93.99%	3.60%	1.64%	95.97%	2.39%	25.87%	15.38%	58.74%	29.17%	8.33%	62.50%	I
PEAK HR START TIME :	415	PM											TOTAL
PEAK HR VOL :	20	579	23	13	480	14	12	6	36	8	1	13	1205
PEAK HR FACTOR :		0.978			0.968			0.794			0.611		0.975



CONTROL : 2-Way Stop (EB/WB)

ITM Peak Hour Summary Prepared by:

National Data & Surveying Services

Robertson Blvd and Rosewood Ave , West Hollywood







Total Volume Per Leg



Project ID:	13-5423-0	04									Day:	Fuesday	
City:	West Holly	wood									Date:	9/10/2013	3
						A	M						1
NS/EW Streets:	Rol	pertson Bl	vd	Ro	bertson Bl	vd	В	everly Blvd	i i	В	everly Blvd	I	
	NC	DRTHBOU	ND	S	DUTHBOU	ND	E	ASTBOUN	D	V	VESTBOUN	D	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	0	1	2	0	1	2	0	
7:00 AM	9	36	17	6	76	21	5	89	21	19	190	6	495
7:15 AM	14	43	22	5	78	24	7	130	27	18	195	3	566
7:30 AM	13	49	16	4	107	33	6	157	18	23	228	6	660
7:45 AM	13	68	27	6	116	50	9	193	26	20	240	7	775
8:00 AM	11	79	33	10	112	56	9	182	16	28	229	12	777
8:15 AM	16	57	22	6	122	60	18	170	7	34	258	14	784
8:30 AM	11	73	15	9	112	58	20	159	12	31	286	11	797
8:45 AM	12	85	22	9	101	68	19	176	10	30	289	14	835
9:00 AM	17	103	21	7	97	63	13	174	11	23	274	19	822
9:15 AM	14	82	24	10	94	66	18	164	11	31	254	19	787
9:30 AM	22	71	34	6	103	39	15	157	23	26	247	12	755
9:45 AM	10	85	29	11	86	51	24	163	20	32	215	17	743
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	162	831	282	89	1204	589	163	1914	202	315	2905	140	8796
APPROACH %'s :	12.71%	65.18%	22.12%	4.73%	63.97%	31.30%	7.15%	83.98%	8.86%	9.38%	86.46%	4.17%	. I
PEAK HR START TIME :	830	AM											TOTAL
PEAK HR VOL :	54	343	82	35	404	255	70	673	44	115	1103	63	3241
PEAK HR FACTOR :		0.849			0.969			0.960			0.962		0.970



CONTROL : Signalized (NB/SB/EB/WB)

Project ID:	13-5423-0	104									Day: 1	luesday	
City:	West Holly	/wood								Date: 9	0/10/201	3	
					PM								
NS/EW Streets:	Rol	pertson Bl	vd	Robertson Blvd Beverly Blvd			Beverly Blvd						
	NO	ORTHBOU	ND	SC	OUTHBOU	ND	E	ASTBOUN)	V	/ESTBOUN	D	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	0	1	2	0	1	2	0	
3:00 PM	29	84	42	17	81	33	22	238	26	30	194	30	826
3:15 PM	19	83	35	21	96	30	15	227	14	28	217	23	808
3:30 PM	23	89	51	12	87	41	25	226	30	25	213	18	840
3:45 PM	15	111	53	12	66	30	24	230	24	18	249	20	852
4:00 PM	14	115	54	11	85	39	17	205	13	31	226	24	834
4:15 PM	12	111	46	18	82	23	27	250	15	23	222	25	854
4:30 PM	19	109	50	18	90	29	28	247	20	23	222	21	876
4:45 PM	27	117	36	17	79	33	19	245	20	23	213	21	850
5:00 PM	28	113	53	24	83	43	29	230	27	21	209	20	880
5:15 PM	25	117	40	14	78	25	42	237	14	27	212	17	848
5:30 PM	14	111	47	13	67	30	31	223	24	16	228	16	820
5:45 PM	4	103	45	8	87	23	23	242	14	18	201	13	781
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	229	1263	552	185	981	379	302	2800	241	283	2606	248	10069
APPROACH %'s :	11.20%	61.79%	27.01%	11.97%	63.50%	24.53%	9.03%	83.76%	7.21%	9.02%	83.07%	7.91%	
PEAK HR START TIME :	415	PM											TOTAL
PEAK HR VOL :	86	450	185	77	334	128	103	972	82	90	866	87	3460
PEAK HR FACTOR :		0.929			0.898			0.981			0.966		0.983



CONTROL : Signalized (NB/SB/EB/WB)

ITM Peak Hour Summary

National Data & Surveying Services

Robertson Blvd and Beverly Blvd , West Hollywood







Total Volume Per Leg



Prepared by NDS/ATD VOLUME

Rosewood Ave between Almont Dr & Robertson Blvd

Day: Tuesday Date: 9/10/2013

City: Hollywood Project #: CA13_5424_001

		TALC		NB		SB		EB		WB						Тс	otal
	DAILT IC	TALS		0		0		441		319						7	60
AM Period	NB	SB EB		WB		то	TAL	PM Period	NB		SB	EB		WB		то	TAL
00:00		1		1		2		12:00				8		8		16	
00:15		0		1		1		12:15				8		10		18	
00:30		0		0		0		12:30				6		6		12	
00:45		0	1	0	2	0	3	12:45				11	33	12	36	23	69
01:00		1		0		1		13:00				10		9		19	
01:15		0		0		0		13:15				15		4		19	
01:30		0		0		0		13:30				8		7		15	
01:45		0	1	0		0	1	13:45				7	40	5	25	12	65
02:00		0		0		0		14:00				13		10		23	
02:15		0		1		1		14:15				9		010		19	
02:30		0		0	1	0	1	14.50				12	/11	0 7	35	20	76
02:45		1		0	1	1		15:00				15	41	2	55	18	/0
03:15		0		Ő		Ō		15:15				8		3		11	
03:30		0		Ő		ő		15:30				9		6		15	
03:45		0	1	õ		Ő	1	15:45				11	43	7	19	18	62
04:00		0		0		0		16:00				6		3	-	9	
04:15		0		0		0		16:15				9		8		17	
04:30		0		0		0		16:30				10		7		17	
04:45		1	1	0		1	1	16:45				10	35	2	20	12	55
05:00		0		0		0		17:00				13		4		17	
05:15		3		2		5		17:15				13		3		16	
05:30		0		1		1		17:30				8		3	10	11	
05:45		1	4	1	4	2	8	17:45				9	43	3	13	12	56
06:00		0		0		0		18:00				18		5		23	
06:15		1		0		1		18:15				16		9		25	
06:30		1	л	5	4	4	0	18.30				0 1/1	56	2	22	13	79
00.45		1	4	3	4	 	0	19.00				<u>14</u> 0	30	5	22	1/	70
07:15		0		1		1		19:15				6		3		9	
07:30		3		3		6		19:30				4		5		9	
07:45		4	8	4	11	8	19	19:45				3	22	2	15	5	37
08:00		2		1		3		20:00				3		3		6	
08:15		3		8		11		20:15				4		4		8	
08:30		3		7		10		20:30				1		1		2	
08:45		4	12	10	26	14	38	20:45				2	10	0	8	2	18
09:00		9		7		16		21:00				1		2		3	
09:15		6		4		10		21:15				3		2		5	
09:30		3	25	/	25	10	50	21:30				2	0	1	C	3	45
09:45		/	25	/	25	14	50	21:45				3	9	1	6	4	15
10:00		4		2		15		22.00				1		1		2	
10.15		5		5		10		22:13				1		2		2	
10:30		5	21	4	23	10	44	22:45				0	2	0	5	0	7
11:00		5		5	23	10		23:00				1	-	1	5	2	
11:15		0		3		3		23:15				3		1		4	
11:30		10		4		14		23:30				2		1		3	
11:45		8	23	4	16	12	39	23:45				0	6	0	3	0	9
TOTALS			101		112		213	TOTALS					340		207		547
SPLIT %			47.4%		52.6%		28.0%	SPLIT %					62.2%		37.8%		72.0%
				NB		SB		EB	_	WB						To	otal
	DAILY TO	TALS		0_		0		441		210						7	60

	DAILY TOTA	ALS		0	0	441	319				760
AM Peak Hour			11.30	08.15	11:30	PM Peak Hour			18.00	12.15	18:00
AM Pk Volume			34	32	60	PM Pk Volume			56	37	78
Pk Hr Factor			0.850	0.800	0.833	Pk Hr Factor			0.778	0.771	0.780
7 - 9 Volume	0	0	20	37	57	4 - 6 Volume	0	0	78	33	111
7 - 9 Peak Hour			07:30	08:00	08:00	4 - 6 Peak Hour			16:30	16:15	16:15
7 - 9 Pk Volume			12	26	38	4 - 6 Pk Volume			46	21	63
Pk Hr Factor	0.000	0.000	0.750	0.650	0.679	Pk Hr Factor	0.000	0.000	0.885	0.656	0.926

Appendix C

Intersection Level of Service Worksheets

HCM Signalized Intersection Capacity Analysis 63: Beverly Blvd & Robertson Blvd

9/1	3	/20	1	3
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	A		۲	A		ኘ	†	1	ኘ	ef 👘	
Volume (vph)	70	673	44	115	1103	63	54	343	82	35	404	255
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	2500	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3138		1583	3141		1583	2451	1417	1583	1570	
Flt Permitted	0.20	1.00		0.24	1.00		0.23	1.00	1.00	0.49	1.00	
Satd. Flow (perm)	327	3138		394	3141		377	2451	1417	820	1570	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	708	46	121	1161	66	57	361	86	37	425	268
RTOR Reduction (vph)	0	8	0	0	7	0	0	0	28	0	5	0
Lane Group Flow (vph)	74	746	0	121	1220	0	57	361	58	37	688	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1067		134	1068		199	1291	746	432	827	
v/s Ratio Prot		0.24			c0.39			0.15			c0.44	
v/s Ratio Perm	0.23			0.31			0.15		0.04	0.05		
v/c Ratio	0.67	0.70		0.90	1.14		0.29	0.28	0.08	0.09	0.83	
Uniform Delay, d1	16.9	17.1		18.9	19.8		7.9	7.9	7.0	7.0	12.0	
Progression Factor	1.00	1.00		0.70	0.78		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	27.4	3.8		44.4	72.7		3.6	0.5	0.2	0.4	9.6	
Delay (s)	44.3	21.0		57.6	88.2		11.5	8.4	7.2	7.4	21.5	
Level of Service	D	С		E	F		В	А	А	А	С	
Approach Delay (s)		23.0			85.4			8.6			20.8	
Approach LOS		С			F			А			С	
Intersection Summary												
HCM Average Control Delay			45.1	Н	CM Level	of Servic	е		D			
HCM Volume to Capacity rat	io		0.95									
Actuated Cycle Length (s)			60.0	S	um of lost	time (s)			8.0			
Intersection Capacity Utilizat	ion		104.8%	IC	CU Level o	of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			\$			\$	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	8	5	16	6	6	7	14	16	3	51	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	8	5	17	6	6	7	15	17	3	54	5
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	17	29	39	62								
Volume Left (vph)	3	17	7	3								
Volume Right (vph)	5	6	17	5								
Hadj (s)	-0.12	0.02	-0.19	-0.01								
Departure Headway (s)	4.0	4.1	3.9	4.0								
Degree Utilization, x	0.02	0.03	0.04	0.07								
Capacity (veh/h)	866	843	904	878								
Control Delay (s)	7.1	7.3	7.0	7.3								
Approach Delay (s)	7.1	7.3	7.0	7.3								
Approach LOS	А	А	А	А								
Intersection Summary												
Delay			7.2									
HCM Level of Service			А									
Intersection Capacity Utilization	n		16.5%	IC	CU Level o	of Service			А			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 1085: Beverly Blvd & Almont Drive

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ľ	∱î ≽		٦	A			\$			¢	
Volume (veh/h)	20	814	14	49	1251	31	3	2	13	4	3	52
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	22	885	15	53	1360	34	3	2	14	4	3	57
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		310			1244							
pX, platoon unblocked	0.78			0.75			0.86	0.86	0.75	0.86	0.86	0.78
vC, conflicting volume	1393			900			1780	2436	450	1984	2427	697
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	928			207			420	1178	0	656	1167	30
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			95			99	99	98	98	98	93
cM capacity (veh/h)	568			1024			382	149	815	275	151	805
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	22	590	310	53	907	487	20	64				
Volume Left	22	0	0	53	0	0	3	4				
Volume Right	0	0	15	0	0	34	14	57				
cSH	568	1700	1700	1024	1700	1700	484	596				
Volume to Capacity	0.04	0.35	0.18	0.05	0.53	0.29	0.04	0.11				
Queue Length 95th (ft)	3	0	0	4	0	0	3	9				
Control Delay (s)	11.6	0.0	0.0	8.7	0.0	0.0	12.8	11.8				
Lane LOS	В			А			В	В				
Approach Delay (s)	0.3			0.3			12.8	11.8				
Approach LOS							В	В				
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilizati	ion		59.1%	IC	CU Level	of Service			В			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 1086: Rosewood Ave & Robertson Blvd

9/13/2013	/13/201	3
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			\$			\$			\$	
Volume (veh/h)	5	2	15	11	10	8	13	442	24	6	671	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	2	16	12	11	8	14	465	25	6	706	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								291				
pX, platoon unblocked	0.90	0.90		0.90	0.90	0.90				0.90		
vC, conflicting volume	1247	1246	716	1251	1243	478	725			491		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1219	1218	716	1222	1214	362	725			376		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	99	96	91	93	99	98			99		
cM capacity (veh/h)	130	159	430	132	160	613	878			1062		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	23	31	504	732								
Volume Left	5	12	14	6								
Volume Right	16	8	25	19								
cSH	256	182	878	1062								
Volume to Capacity	0.09	0.17	0.02	0.01								
Queue Length 95th (ft)	7	15	1	0								
Control Delay (s)	20.4	28.7	0.4	0.2								
Lane LOS	С	D	А	А								
Approach Delay (s)	20.4	28.7	0.4	0.2								
Approach LOS	С	D										
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilizatio	n		55.8%	IC	CU Level o	of Service			В			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis 63: Beverly Blvd & Robertson Blvd

9/1	3	/20	1	3
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኘ	A		۲	A		ኘ	†	1	ኘ	eî 👘	
Volume (vph)	103	972	82	90	866	87	86	450	185	77	334	128
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	2500	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3130		1583	3123		1583	2451	1417	1583	1597	
Flt Permitted	0.20	1.00		0.20	1.00		0.39	1.00	1.00	0.40	1.00	
Satd. Flow (perm)	327	3130		327	3123		642	2451	1417	660	1597	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	108	1023	86	95	912	92	91	474	195	81	352	135
RTOR Reduction (vph)	0	11	0	0	13	0	0	0	9	0	14	0
Lane Group Flow (vph)	108	1098	0	95	991	0	91	474	186	81	473	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1064		111	1062		338	1291	746	348	841	
v/s Ratio Prot		c0.35			0.32			0.19			c0.30	
v/s Ratio Perm	0.33			0.29			0.14		0.13	0.12		
v/c Ratio	0.97	1.03		0.86	0.93		0.27	0.37	0.25	0.23	0.56	
Uniform Delay, d1	19.5	19.8		18.4	19.1		7.8	8.3	7.7	7.7	9.6	
Progression Factor	1.00	1.00		0.69	0.71		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	78.4	36.2		41.9	12.1		2.0	0.8	0.8	1.6	2.7	
Delay (s)	97.9	56.0		54.7	25.8		9.8	9.1	8.5	9.2	12.3	
Level of Service	F	E		D	С		А	А	А	А	В	
Approach Delay (s)		59.8			28.3			9.1			11.8	
Approach LOS		E			С			А			В	
Intersection Summary												
HCM Average Control Delay			32.2	Н	CM Level	of Servic	е		С			
HCM Volume to Capacity rati	0		0.75									
Actuated Cycle Length (s)			60.0	Si	um of lost	time (s)			8.0			
Intersection Capacity Utilizati	on		91.3%	IC	CU Level o	of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			\$			\$			\$	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	23	9	5	4	6	14	47	16	2	23	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	17	24	9	5	4	6	15	49	17	2	24	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	51	16	81	27								
Volume Left (vph)	17	5	15	2								
Volume Right (vph)	9	6	17	1								
Hadj (s)	-0.01	-0.14	-0.05	0.03								
Departure Headway (s)	4.1	4.0	4.0	4.1								
Degree Utilization, x	0.06	0.02	0.09	0.03								
Capacity (veh/h)	844	861	871	847								
Control Delay (s)	7.4	7.1	7.4	7.3								
Approach Delay (s)	7.4	7.1	7.4	7.3								
Approach LOS	А	А	А	А								
Intersection Summary												
Delay			7.4									
HCM Level of Service			А									
Intersection Capacity Utilization 19.7%		19.7%	IC	CU Level o	of Service			А				
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis 1085: Beverly Blvd & Almont Drive

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ľ	∱ĵ ≽		ľ	∱1 ≱			\$			\$	
Volume (veh/h)	48	1056	7	24	937	37	1	4	18	6	0	44
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	52	1148	8	26	1018	40	1	4	20	7	0	48
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		310			1244							
pX, platoon unblocked	0.89			0.75			0.80	0.80	0.75	0.80	0.80	0.89
vC, conflicting volume	1059			1155			1865	2367	578	1791	2351	529
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	826			525			976	1603	0	882	1583	233
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			97			99	94	98	96	100	93
cM capacity (veh/h)	715			773			141	75	808	165	77	687
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	52	765	390	26	679	380	25	54				
Volume Left	52	0	0	26	0	0	1	7				
Volume Right	0	0	8	0	0	40	20	48				
cSH	715	1700	1700	773	1700	1700	278	498				
Volume to Capacity	0.07	0.45	0.23	0.03	0.40	0.22	0.09	0.11				
Queue Length 95th (ft)	6	0	0	3	0	0	7	9				
Control Delay (s)	10.4	0.0	0.0	9.8	0.0	0.0	19.2	13.1				
Lane LOS	В			А			С	В				
Approach Delay (s)	0.5			0.2			19.2	13.1				
Approach LOS							С	В				
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization	n		54.1%	IC	CU Level	of Service			А			
Analysis Period (min)			15									
9/13/2013

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			4			\$	
Volume (veh/h)	12	6	36	8	1	13	20	579	23	13	480	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	13	6	38	8	1	14	21	609	24	14	505	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								291				
pX, platoon unblocked	0.86	0.86		0.86	0.86	0.86				0.86		
vC, conflicting volume	1218	1216	513	1245	1211	622	520			634		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1171	1169	513	1203	1163	476	520			490		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	96	93	93	99	97	98			99		
cM capacity (veh/h)	137	160	561	122	161	505	1046			921		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	57	23	655	534								
Volume Left	13	8	21	14								
Volume Right	38	14	24	15								
cSH	285	225	1046	921								
Volume to Capacity	0.20	0.10	0.02	0.01								
Queue Length 95th (ft)	18	8	2	1								
Control Delay (s)	20.7	22.8	0.5	0.4								
Lane LOS	С	С	А	А								
Approach Delay (s)	20.7	22.8	0.5	0.4								
Approach LOS	С	С										
Intersection Summary												
Average Delay			1.8									
Intersection Capacity Utilizati	on		59.3%	IC	CU Level o	of Service			В			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲	A		۲	A		ኘ	†	1	ኘ	eî 👘	
Volume (vph)	71	677	46	115	1086	63	44	343	82	36	405	252
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	2500	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3137		1583	3141		1583	2451	1417	1583	1571	
Flt Permitted	0.20	1.00		0.23	1.00		0.23	1.00	1.00	0.49	1.00	
Satd. Flow (perm)	327	3137		388	3141		380	2451	1417	820	1571	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	713	48	121	1143	66	46	361	86	38	426	265
RTOR Reduction (vph)	0	8	0	0	7	0	0	0	28	0	5	0
Lane Group Flow (vph)	75	753	0	121	1202	0	46	361	58	38	686	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1067		132	1068		200	1291	746	432	827	
v/s Ratio Prot		0.24			c0.38			0.15			c0.44	
v/s Ratio Perm	0.23			0.31			0.12		0.04	0.05		
v/c Ratio	0.68	0.71		0.92	1.13		0.23	0.28	0.08	0.09	0.83	
Uniform Delay, d1	17.0	17.2		19.0	19.8		7.6	7.9	7.0	7.0	11.9	
Progression Factor	1.00	1.00		0.70	0.78		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	28.3	3.9		47.4	65.7		2.7	0.5	0.2	0.4	9.4	
Delay (s)	45.3	21.1		60.7	81.1		10.3	8.4	7.2	7.4	21.3	
Level of Service	D	С		E	F		В	А	А	А	С	
Approach Delay (s)		23.3			79.2			8.4			20.6	
Approach LOS		С			E			А			С	
Intersection Summary												
HCM Average Control Delay			42.5	Н	CM Level	of Servic	е		D			
HCM Volume to Capacity rati	io		0.95									
Actuated Cycle Length (s)			60.0	S	um of lost	time (s)			8.0			
Intersection Capacity Utilizati	on		95.1%	IC	CU Level o	of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			\$			\$	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	8	5	18	7	6	7	14	16	3	51	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	8	5	19	7	6	7	15	17	3	54	5
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	17	33	39	62								
Volume Left (vph)	3	19	7	3								
Volume Right (vph)	5	6	17	5								
Hadj (s)	-0.12	0.03	-0.19	-0.01								
Departure Headway (s)	4.0	4.2	3.9	4.0								
Degree Utilization, x	0.02	0.04	0.04	0.07								
Capacity (veh/h)	865	840	902	875								
Control Delay (s)	7.1	7.3	7.0	7.3								
Approach Delay (s)	7.1	7.3	7.0	7.3								
Approach LOS	А	А	А	А								
Intersection Summary												
Delay			7.2									
HCM Level of Service			А									
Intersection Capacity Utilization			17.1%	IC	CU Level o	of Service			А			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	A1⊅		ľ	A			\$			\$	
Volume (veh/h)	20	779	14	50	1259	31	3	2	10	4	3	59
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	22	847	15	54	1368	34	3	2	11	4	3	64
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		310			1244							
pX, platoon unblocked	0.78			0.76			0.87	0.87	0.76	0.87	0.87	0.78
vC, conflicting volume	1402			862			1757	2409	431	1973	2399	701
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	940			187			416	1164	0	664	1153	36
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			95			99	99	99	98	98	92
cM capacity (veh/h)	562			1053			383	154	824	275	156	798
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	22	564	297	54	912	490	16	72				
Volume Left	22	0	0	54	0	0	3	4				
Volume Right	0	0	15	0	0	34	11	64				
cSH	562	1700	1700	1053	1700	1700	455	613				
Volume to Capacity	0.04	0.33	0.17	0.05	0.54	0.29	0.04	0.12				
Queue Length 95th (ft)	3	0	0	4	0	0	3	10				
Control Delay (s)	11.7	0.0	0.0	8.6	0.0	0.0	13.2	11.7				
Lane LOS	В			А			В	В				
Approach Delay (s)	0.3			0.3			13.2	11.7				
Approach LOS							В	В				
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utiliza	tion		60.4%	IC	CU Level	of Service			В			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (veh/h)	6	2	18	11	10	8	14	443	24	6	668	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	2	19	12	11	8	15	466	25	6	703	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								291				
pX, platoon unblocked	0.90	0.90		0.90	0.90	0.90				0.90		
vC, conflicting volume	1247	1246	713	1254	1243	479	722			492		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1219	1218	713	1226	1214	363	722			377		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	99	96	91	93	99	98			99		
cM capacity (veh/h)	130	159	432	130	159	612	880			1061		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	27	31	506	728								
Volume Left	6	12	15	6								
Volume Right	19	8	25	19								
cSH	259	181	880	1061								
Volume to Capacity	0.11	0.17	0.02	0.01								
Queue Length 95th (ft)	9	15	1	0								
Control Delay (s)	20.5	28.9	0.5	0.2								
Lane LOS	С	D	А	А								
Approach Delay (s)	20.5	28.9	0.5	0.2								
Approach LOS	С	D										
Intersection Summary												
Average Delay			1.4									
Intersection Capacity Utilization	n		55.5%	IC	CU Level o	of Service			В			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ľ	∱1 ≱		1	A⊅		1	•	1	ľ	el el	
Volume (vph)	100	958	74	90	869	88	88	451	185	78	335	129
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	2500	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3133		1583	3123		1583	2451	1417	1583	1597	
Flt Permitted	0.20	1.00		0.20	1.00		0.38	1.00	1.00	0.40	1.00	
Satd. Flow (perm)	327	3133		327	3123		640	2451	1417	659	1597	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	1008	78	95	915	93	93	475	195	82	353	136
RTOR Reduction (vph)	0	9	0	0	13	0	0	0	9	0	14	0
Lane Group Flow (vph)	105	1077	0	95	995	0	93	475	186	82	475	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1065		111	1062		337	1291	746	347	841	
v/s Ratio Prot		c0.34			0.32			0.19			c0.30	
v/s Ratio Perm	0.32			0.29			0.15		0.13	0.12		
v/c Ratio	0.95	1.01		0.86	0.94		0.28	0.37	0.25	0.24	0.57	
Uniform Delay, d1	19.3	19.8		18.4	19.2		7.9	8.3	7.7	7.7	9.6	
Progression Factor	1.00	1.00		0.69	0.71		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	71.8	30.3		41.9	12.6		2.0	0.8	0.8	1.6	2.7	
Delay (s)	91.1	50.1		54.7	26.3		9.9	9.1	8.5	9.3	12.3	
Level of Service	F	D		D	С		А	А	А	А	В	
Approach Delay (s)		53.7			28.7			9.1			11.9	
Approach LOS		D			С			А			В	
Intersection Summary												
HCM Average Control Delay			30.1	H	CM Level	of Servic	e		С			
HCM Volume to Capacity rati	0		0.74									
Actuated Cycle Length (s)			60.0	Si	um of lost	time (s)			8.0			
Intersection Capacity Utilizati	on		90.7%	IC	U Level o	of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			\$			\$	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	24	9	6	4	6	14	47	18	2	23	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	17	25	9	6	4	6	15	49	19	2	24	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	52	17	83	27								
Volume Left (vph)	17	6	15	2								
Volume Right (vph)	9	6	19	1								
Hadj (s)	-0.01	-0.12	-0.07	0.03								
Departure Headway (s)	4.1	4.1	4.0	4.2								
Degree Utilization, x	0.06	0.02	0.09	0.03								
Capacity (veh/h)	842	854	872	845								
Control Delay (s)	7.4	7.2	7.4	7.3								
Approach Delay (s)	7.4	7.2	7.4	7.3								
Approach LOS	А	А	А	А								
Intersection Summary												
Delay			7.4									
HCM Level of Service			А									
Intersection Capacity Utilization			19.7%	IC	CU Level o	of Service			А			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲.	≜ †₽		٦	A1⊅			\$			\$	
Volume (veh/h)	50	1062	7	21	909	37	1	4	19	6	0	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	54	1154	8	23	988	40	1	4	21	7	0	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		310			1244							
pX, platoon unblocked	0.92			0.75			0.79	0.79	0.75	0.79	0.79	0.92
vC, conflicting volume	1028			1162			1855	2341	581	1762	2324	514
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	852			535			1076	1693	0	957	1672	292
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			97			99	93	97	95	100	92
cM capacity (veh/h)	718			767			116	65	808	142	67	647
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	54	770	392	23	659	370	26	55				
Volume Left	54	0	0	23	0	0	1	7				
Volume Right	0	0	8	0	0	40	21	49				
cSH	718	1700	1700	767	1700	1700	256	456				
Volume to Capacity	0.08	0.45	0.23	0.03	0.39	0.22	0.10	0.12				
Queue Length 95th (ft)	6	0	0	2	0	0	8	10				
Control Delay (s)	10.4	0.0	0.0	9.8	0.0	0.0	20.6	14.0				
Lane LOS	В			А			С	В				
Approach Delay (s)	0.5			0.2			20.6	14.0				
Approach LOS							С	В				
Intersection Summary												
Average Delay			0.9									_
Intersection Capacity Utilization			54.5%	IC	CU Level	of Service			А			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			\$			\$	
Volume (veh/h)	12	6	37	8	1	13	23	576	23	13	481	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	13	6	39	8	1	14	24	606	24	14	506	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								291				
pX, platoon unblocked	0.86	0.86		0.86	0.86	0.86				0.86		
vC, conflicting volume	1223	1221	514	1251	1216	618	522			631		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1177	1174	514	1209	1169	472	522			486		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	96	93	93	99	97	98			99		
cM capacity (veh/h)	136	158	560	120	159	508	1044			923		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	58	23	655	536								
Volume Left	13	8	24	14								
Volume Right	39	14	24	16								
cSH	286	223	1044	923								
Volume to Capacity	0.20	0.10	0.02	0.01								
Queue Length 95th (ft)	19	9	2	1								
Control Delay (s)	20.8	23.0	0.6	0.4								
Lane LOS	С	С	А	А								
Approach Delay (s)	20.8	23.0	0.6	0.4								
Approach LOS	С	С										
Intersection Summary												
Average Delay			1.9									
Intersection Capacity Utilizati	on		60.9%	IC	CU Level o	of Service			В			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲	A		۲	A		ኘ	†	1	٦	¢Î,	
Volume (vph)	133	727	46	117	1143	88	55	404	84	44	426	273
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	2500	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3139		1583	3133		1583	2451	1417	1583	1569	
Flt Permitted	0.20	1.00		0.20	1.00		0.20	1.00	1.00	0.44	1.00	
Satd. Flow (perm)	327	3139		340	3133		326	2451	1417	728	1569	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	140	765	48	123	1203	93	58	425	88	46	448	287
RTOR Reduction (vph)	0	7	0	0	9	0	0	0	25	0	4	0
Lane Group Flow (vph)	140	806	0	123	1287	0	58	425	63	46	731	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1067		116	1065		172	1291	746	383	826	
v/s Ratio Prot		0.26			0.41			0.17			c0.47	
v/s Ratio Perm	c0.43			0.36			0.18		0.04	0.06		
v/c Ratio	1.26	0.76		1.06	1.21		0.34	0.33	0.08	0.12	0.89	
Uniform Delay, d1	19.8	17.6		19.8	19.8		8.2	8.1	7.0	7.2	12.6	
Progression Factor	1.00	1.00		0.72	0.79		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	171.3	5.0		87.7	100.3		5.2	0.7	0.2	0.6	13.4	
Delay (s)	191.1	22.6		101.9	115.9		13.4	8.8	7.3	7.8	25.9	
Level of Service	F	С		F	F		В	А	А	А	С	
Approach Delay (s)		47.3			114.7			9.0			24.9	
Approach LOS		D			F			А			С	
Intersection Summary												
HCM Average Control Delay	y		62.4	H	CM Level	of Servic	e		E			
HCM Volume to Capacity ra	itio		1.03									
Actuated Cycle Length (s)			60.0	S	um of lost	time (s)			8.0			
Intersection Capacity Utiliza	tion		107.9%	IC	CU Level o	of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			\$			\$	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	8	5	16	6	6	7	14	16	3	52	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	8	5	17	6	6	7	15	17	3	55	5
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	17	29	39	63								
Volume Left (vph)	3	17	7	3								
Volume Right (vph)	5	6	17	5								
Hadj (s)	-0.12	0.02	-0.19	-0.01								
Departure Headway (s)	4.0	4.2	3.9	4.0								
Degree Utilization, x	0.02	0.03	0.04	0.07								
Capacity (veh/h)	865	842	904	877								
Control Delay (s)	7.1	7.3	7.0	7.3								
Approach Delay (s)	7.1	7.3	7.0	7.3								
Approach LOS	А	А	А	А								
Intersection Summary												
Delay			7.2									
HCM Level of Service			А									
Intersection Capacity Utilization			16.5%	IC	CU Level o	of Service			А			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲.	∱ î≽		٦	∱1 ≱			4			\$	
Volume (veh/h)	20	934	14	50	1308	32	3	2	13	4	3	58
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	22	1015	15	54	1422	35	3	2	14	4	3	63
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		310			1244							
pX, platoon unblocked	0.78			0.74			0.85	0.85	0.74	0.85	0.85	0.78
vC, conflicting volume	1457			1030			1951	2632	515	2114	2622	728
vC1, stage 1 conf vol												
vC2, stage 2 conf vol							=		-		10.50	
vCu, unblocked vol	1013			344			593	1391	0	784	1379	76
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			94			99	98	98	98	9/	92
cM capacity (veh/h)	528			899			275	108	804	216	110	/54
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	22	677	354	54	948	509	20	71				
Volume Left	22	0	0	54	0	0	3	4				
Volume Right	0	0	15	0	0	35	14	63				
cSH	528	1700	1700	899	1700	1700	395	530				
Volume to Capacity	0.04	0.40	0.21	0.06	0.56	0.30	0.05	0.13				
Queue Length 95th (ft)	3	0	0	5	0	0	4	11				
Control Delay (s)	12.1	0.0	0.0	9.3	0.0	0.0	14.6	12.8				
Lane LOS	В			А			В	В				
Approach Delay (s)	0.3			0.3			14.6	12.8				
Approach LOS							В	В				
Intersection Summary												
Average Delay			0.7									
Intersection Capacity Utilization	1		60.5%	IC	CU Level	of Service			В			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			4			\$	
Volume (veh/h)	5	2	15	11	10	8	13	591	24	6	720	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	2	16	12	11	8	14	622	25	6	758	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								291				
pX, platoon unblocked	0.85	0.85		0.85	0.85	0.85				0.85		
vC, conflicting volume	1456	1455	767	1459	1452	635	777			647		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1448	1447	767	1452	1443	479	777			494		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	98	96	86	90	98	98			99		
cM capacity (veh/h)	83	109	402	86	109	497	840			907		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	23	31	661	783								
Volume Left	5	12	14	6								
Volume Right	16	8	25	19								
cSH	190	123	840	907								
Volume to Capacity	0.12	0.25	0.02	0.01								
Queue Length 95th (ft)	10	23	1	1								
Control Delay (s)	26.6	43.7	0.4	0.2								
Lane LOS	D	E	А	А								
Approach Delay (s)	26.6	43.7	0.4	0.2								
Approach LOS	D	E										
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilizati	on		59.2%	IC	CU Level o	of Service			В			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲	A		۲	A		ኘ	†	1	ኘ	eî 👘	
Volume (vph)	129	1016	85	92	926	108	89	489	189	102	392	190
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	2500	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3130		1583	3117		1583	2451	1417	1583	1585	
Flt Permitted	0.20	1.00		0.20	1.00		0.29	1.00	1.00	0.36	1.00	
Satd. Flow (perm)	327	3130		327	3117		478	2451	1417	605	1585	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	1069	89	97	975	114	94	515	199	107	413	200
RTOR Reduction (vph)	0	11	0	0	15	0	0	0	7	0	10	0
Lane Group Flow (vph)	136	1147	0	97	1074	0	94	515	192	107	603	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1064		111	1060		252	1291	746	319	835	
v/s Ratio Prot		0.37			0.34			0.21			c0.38	
v/s Ratio Perm	c0.42			0.30			0.20		0.14	0.18		
v/c Ratio	1.23	1.08		0.87	1.01		0.37	0.40	0.26	0.34	0.72	
Uniform Delay, d1	19.8	19.8		18.6	19.8		8.4	8.5	7.8	8.2	10.8	
Progression Factor	1.00	1.00		0.69	0.74		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	158.0	51.3		44.9	26.7		4.2	0.9	0.8	2.8	5.4	
Delay (s)	177.8	71.1		57.8	41.4		12.6	9.4	8.6	11.0	16.2	
Level of Service	F	E		E	D		В	А	А	В	В	
Approach Delay (s)		82.3			42.7			9.6			15.4	
Approach LOS		F			D			А			В	
Intersection Summary												
HCM Average Control Delay	у		43.9	Н	CM Level	of Servic	е		D			
HCM Volume to Capacity ra	itio		0.92									
Actuated Cycle Length (s)			60.0	S	um of lost	time (s)			8.0			
Intersection Capacity Utiliza	tion		100.4%	IC	CU Level o	of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			\$			\$			\$	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	23	9	5	4	6	14	48	16	2	23	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	17	24	9	5	4	6	15	51	17	2	24	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	51	16	82	27								
Volume Left (vph)	17	5	15	2								
Volume Right (vph)	9	6	17	1								
Hadj (s)	-0.01	-0.14	-0.05	0.03								
Departure Headway (s)	4.1	4.0	4.0	4.1								
Degree Utilization, x	0.06	0.02	0.09	0.03								
Capacity (veh/h)	843	860	870	846								
Control Delay (s)	7.4	7.1	7.4	7.3								
Approach Delay (s)	7.4	7.1	7.4	7.3								
Approach LOS	А	А	А	А								
Intersection Summary												
Delay			7.4									
HCM Level of Service			А									
Intersection Capacity Utilization			19.8%	IC	CU Level o	of Service			А			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲.	∱î ≽		۲	A1⊅			\$			\$	
Volume (veh/h)	49	1126	7	24	1059	38	1	4	18	6	0	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	53	1224	8	26	1151	41	1	4	20	7	0	49
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		310			1244							
pX, platoon unblocked	0.86			0.75			0.82	0.82	0.75	0.82	0.82	0.86
vC, conflicting volume	1192			1232			2011	2579	616	1964	2562	596
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	893			626			1004	1700	0	947	1679	198
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			96			99	93	98	96	100	93
cM capacity (veh/h)	648			709			135	66	808	149	68	695
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	53	816	416	26	767	425	25	55				
Volume Left	53	0	0	26	0	0	1	7				
Volume Right	0	0	8	0	0	41	20	49				
cSH	648	1700	1700	709	1700	1700	254	485				
Volume to Capacity	0.08	0.48	0.24	0.04	0.45	0.25	0.10	0.11				
Queue Length 95th (ft)	7	0	0	3	0	0	8	10				
Control Delay (s)	11.1	0.0	0.0	10.3	0.0	0.0	20.7	13.4				
Lane LOS	В			В			С	В				
Approach Delay (s)	0.5			0.2			20.7	13.4				
Approach LOS							С	В				
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization	1		56.5%	IC	CU Level	of Service			В			
Analysis Period (min)			15									

9/13/2013

	CDD
Movement ERL FRL FRL MRL MRL MRL NRL NRL NBL SBL SBL	SDK
Lane Configurations 🚯 🚯	
Volume (veh/h) 12 6 37 8 1 13 20 664 23 13 623	14
Sign Control Stop Stop Free Free	
Grade 0% 0% 0% 0%	
Peak Hour Factor 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95	0.95
Hourly flow rate (vph) 13 6 39 8 1 14 21 699 24 14 656	15
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type None None	
Median storage veh)	
Upstream signal (ft) 291	
pX, platoon unblocked 0.82 0.82 0.82 0.82 0.82 0.82 0.82	
vC, conflicting volume 1458 1456 663 1486 1451 711 671 723	
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol 1449 1446 663 1483 1440 540 671 555	
tC, single (s) 7.1 6.5 6.2 7.1 6.5 6.2 4.1 4.1	
tC, 2 stage (s)	
tF (s) 3.5 4.0 3.3 3.5 4.0 3.3 2.2 2.2	
p0 queue free % 85 94 92 88 99 97 98 98	
cM capacity (veh/h) 84 104 461 72 105 445 920 835	
Direction, Lane # EB 1 WB 1 NB 1 SB 1	
Volume Total 58 23 744 684	
Volume Left 13 8 21 14	
Volume Right 39 14 24 15	
cSH 195 147 920 835	
Volume to Capacity 0.30 0.16 0.02 0.02	
Queue Length 95th (ft) 30 14 2 1	
Control Delay (s) 31.0 34.1 0.6 0.4	
Lane LOS D D A A	
Approach Delay (s) 31.0 34.1 0.6 0.4	
Approach LOS D D	
Intersection Summary	
Average Delay 2.2	
Intersection Capacity Utilization 65.6% ICU Level of Service C	
Analysis Period (min) 15	

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ľ	A		ľ	∱ î≽		ľ	•	1	1	el el	
Volume (vph)	134	731	48	117	1125	88	44	404	84	45	427	270
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	2500	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3137		1583	3132		1583	2451	1417	1583	1570	
Flt Permitted	0.20	1.00		0.20	1.00		0.20	1.00	1.00	0.44	1.00	
Satd. Flow (perm)	327	3137		333	3132		328	2451	1417	728	1570	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	141	769	51	123	1184	93	46	425	88	47	449	284
RTOR Reduction (vph)	0	8	0	0	10	0	0	0	25	0	4	0
Lane Group Flow (vph)	141	812	0	123	1267	0	46	425	63	47	729	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1067		113	1065		173	1291	746	383	827	
v/s Ratio Prot		0.26			0.40			0.17			c0.46	
v/s Ratio Perm	c0.43			0.37			0.14		0.04	0.06		
v/c Ratio	1.27	0.76		1.09	1.19		0.27	0.33	0.08	0.12	0.88	
Uniform Delay, d1	19.8	17.6		19.8	19.8		7.8	8.1	7.0	7.2	12.5	
Progression Factor	1.00	1.00		0.72	0.79		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	174.7	5.1		97.3	92.4		3.7	0.7	0.2	0.7	13.0	
Delay (s)	194.5	22.8		111.5	108.0		11.5	8.8	7.3	7.8	25.5	
Level of Service	F	С		F	F		В	А	А	А	С	
Approach Delay (s)		48.0			108.3			8.8			24.5	
Approach LOS		D			F			А			С	
Intersection Summary												
HCM Average Control Dela	у		59.9	Н	CM Level	of Service	е		E			
HCM Volume to Capacity ra	atio		1.03									
Actuated Cycle Length (s)			60.0	S	um of lost	time (s)			8.0			
Intersection Capacity Utiliza	ition		99.8%	IC	CU Level o	of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			\$			\$	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	8	5	18	7	6	7	14	16	3	52	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	8	5	19	7	6	7	15	17	3	55	5
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	17	33	39	63								
Volume Left (vph)	3	19	7	3								
Volume Right (vph)	5	6	17	5								
Hadj (s)	-0.12	0.03	-0.19	-0.01								
Departure Headway (s)	4.0	4.2	3.9	4.0								
Degree Utilization, x	0.02	0.04	0.04	0.07								
Capacity (veh/h)	864	839	901	875								
Control Delay (s)	7.1	7.3	7.0	7.3								
Approach Delay (s)	7.1	7.3	7.0	7.3								
Approach LOS	А	А	А	А								
Intersection Summary												
Delay			7.2									
HCM Level of Service			А									
Intersection Capacity Utilization	1		17.1%	IC	U Level c	of Service			А			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲	A		۲	A			\$			\$	
Volume (veh/h)	20	899	14	51	1316	32	3	2	10	4	3	60
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	22	977	15	55	1430	35	3	2	11	4	3	65
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		310			1244							
pX, platoon unblocked	0.78			0.74			0.85	0.85	0.74	0.85	0.85	0.78
vC, conflicting volume	1465			992			1921	2604	496	2103	2595	733
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1024			293			559	1359	0	771	1348	81
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			94			99	98	99	98	97	91
cM capacity (veh/h)	523			938			290	113	804	222	115	748
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	22	651	341	55	954	512	16	73				
Volume Left	22	0	0	55	0	0	3	4				
Volume Right	0	0	15	0	0	35	11	65				
cSH	523	1700	1700	938	1700	1700	371	539				
Volume to Capacity	0.04	0.38	0.20	0.06	0.56	0.30	0.04	0.14				
Queue Length 95th (ft)	3	0	0	5	0	0	3	12				
Control Delay (s)	12.2	0.0	0.0	9.1	0.0	0.0	15.1	12.7				
Lane LOS	В			А			С	В				
Approach Delay (s)	0.3			0.3			15.1	12.7				
Approach LOS							С	В				
Intersection Summary												
Average Delay			0.7									_
Intersection Capacity Utiliz	zation		61.5%	IC	CU Level	of Service			В			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			\$			4			4	
Volume (veh/h)	6	2	18	11	10	8	14	592	24	6	717	18
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	2	19	12	11	8	15	623	25	6	755	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								291				
pX, platoon unblocked	0.85	0.85		0.85	0.85	0.85				0.85		
vC, conflicting volume	1456	1455	764	1462	1452	636	774			648		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1448	1447	764	1455	1443	479	774			494		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	98	95	86	90	98	98			99		
cM capacity (veh/h)	83	109	404	84	109	496	842			905		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	27	31	663	780								
Volume Left	6	12	15	6								
Volume Right	19	8	25	19								
cSH	192	122	842	905								
Volume to Capacity	0.14	0.25	0.02	0.01								
Queue Length 95th (ft)	12	23	1	1								
Control Delay (s)	26.9	44.2	0.5	0.2								
Lane LOS	D	E	А	А								
Approach Delay (s)	26.9	44.2	0.5	0.2								
Approach LOS	D	E										
Intersection Summary												
Average Delay			1.7									
Intersection Capacity Utilization	n		59.0%	IC	CU Level o	of Service			В			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	∱ }		1	A⊅		1	•	1	ľ	el el	
Volume (vph)	126	1002	77	92	929	109	91	490	189	103	393	191
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	2500	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1583	3133		1583	3117		1583	2451	1417	1583	1585	
Flt Permitted	0.20	1.00		0.20	1.00		0.28	1.00	1.00	0.36	1.00	
Satd. Flow (perm)	327	3133		327	3117		475	2451	1417	604	1585	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	133	1055	81	97	978	115	96	516	199	108	414	201
RTOR Reduction (vph)	0	9	0	0	15	0	0	0	8	0	10	0
Lane Group Flow (vph)	133	1127	0	97	1078	0	96	516	191	108	605	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8		8	4		
Actuated Green, G (s)	20.1	20.1		20.1	20.1		31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	20.4	20.4		20.4	20.4		31.6	31.6	31.6	31.6	31.6	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.53	0.53	0.53	0.53	0.53	
Clearance Time (s)	4.3	4.3		4.3	4.3		4.6	4.6	4.6	4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	111	1065		111	1060		250	1291	746	318	835	
v/s Ratio Prot		0.36			0.35			0.21			c0.38	
v/s Ratio Perm	c0.41			0.30			0.20		0.14	0.18		
v/c Ratio	1.20	1.06		0.87	1.02		0.38	0.40	0.26	0.34	0.72	
Uniform Delay, d1	19.8	19.8		18.6	19.8		8.4	8.5	7.8	8.2	10.9	
Progression Factor	1.00	1.00		0.69	0.75		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	148.2	44.3		44.9	27.7		4.4	0.9	0.8	2.9	5.4	
Delay (s)	168.0	64.1		57.8	42.4		12.8	9.4	8.6	11.1	16.3	
Level of Service	F	E		E	D		В	А	А	В	В	
Approach Delay (s)		75.0			43.7			9.6			15.5	
Approach LOS		E			D			А			В	
Intersection Summary												
HCM Average Control Delay	у		41.6	H	CM Level	of Servic	е		D			
HCM Volume to Capacity ra	ntio		0.91									
Actuated Cycle Length (s)			60.0	S	um of lost	time (s)			8.0			
Intersection Capacity Utiliza	ition		99.8%	IC	CU Level of	of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		\$			\$			\$			÷	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	24	9	6	4	6	14	48	18	2	23	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	17	25	9	6	4	6	15	51	19	2	24	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	52	17	84	27								
Volume Left (vph)	17	6	15	2								
Volume Right (vph)	9	6	19	1								
Hadj (s)	-0.01	-0.12	-0.07	0.03								
Departure Headway (s)	4.1	4.1	4.0	4.2								
Degree Utilization, x	0.06	0.02	0.09	0.03								
Capacity (veh/h)	841	854	872	845								
Control Delay (s)	7.4	7.2	7.4	7.3								
Approach Delay (s)	7.4	7.2	7.4	7.3								
Approach LOS	А	А	А	А								
Intersection Summary												
Delay			7.4									
HCM Level of Service			А									
Intersection Capacity Utilization	n		19.7%	IC	CU Level o	of Service			А			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲	A1⊅		۲	A1⊅			\$			\$	
Volume (veh/h)	51	1132	7	21	1031	38	1	4	19	6	0	46
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	55	1230	8	23	1121	41	1	4	21	7	0	50
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		310			1244							
pX, platoon unblocked	0.88			0.75			0.81	0.81	0.75	0.81	0.81	0.88
vC, conflicting volume	1162			1238			2001	2553	619	1936	2536	581
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	902			636			1071	1754	0	990	1734	238
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			97			99	93	97	95	100	93
cM capacity (veh/h)	657			703			119	60	808	136	62	668
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1				
Volume Total	55	820	418	23	747	415	26	57				
Volume Left	55	0	0	23	0	0	1	7				
Volume Right	0	0	8	0	0	41	21	50				
cSH	657	1700	1700	703	1700	1700	244	461				
Volume to Capacity	0.08	0.48	0.25	0.03	0.44	0.24	0.11	0.12				
Queue Length 95th (ft)	7	0	0	3	0	0	9	10				
Control Delay (s)	11.0	0.0	0.0	10.3	0.0	0.0	21.5	13.9				
Lane LOS	В			В			С	В				
Approach Delay (s)	0.5			0.2			21.5	13.9				
Approach LOS							С	В				
Intersection Summary												
Average Delay			0.9									_
Intersection Capacity Utilizati	ion		56.8%	ICU Level of Service					В			
Analysis Period (min)			15									

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			\$			4			4	
Volume (veh/h)	12	6	38	8	1	13	23	661	23	13	624	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	13	6	40	8	1	14	24	696	24	14	657	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								291				
pX, platoon unblocked	0.82	0.82		0.82	0.82	0.82				0.82		
vC, conflicting volume	1463	1461	665	1492	1456	708	673			720		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1455	1452	665	1490	1447	538	673			553		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	94	91	88	99	97	97			98		
cM capacity (veh/h)	83	103	460	71	104	447	918			838		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	59	23	744	686								
Volume Left	13	8	24	14								
Volume Right	40	14	24	16								
cSH	196	145	918	838								
Volume to Capacity	0.30	0.16	0.03	0.02								
Queue Length 95th (ft)	30	14	2	1								
Control Delay (s)	31.1	34.5	0.7	0.4								
Lane LOS	D	D	А	А								
Approach Delay (s)	31.1	34.5	0.7	0.4								
Approach LOS	D	D										
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			67.4%	IC	CU Level o	of Service			С			
Analysis Period (min)			15									

Appendix D

Related Projects





RELATED PROJECT LOCATIONS

FIGURE D-1

TABLE D-1	
RELATED PROJECTS	

							rip Generation						
No	Address	Description	Size	Deily		AM Peak Hour			PM Peak Hour	-			
				Daily	Inbound	Outbound	Total	Inbound	Outbound	Total			
City of	West Hollywood [a]												
1	612 Croft Ave	Condominiums	11 du	64	1	4	5	4	2	6			
2	920 Fairfax Ave	Retail/Office		86	1	9	8	7	9	2			
3	937 Fairfax Ave	Condominiums	17 du	100	1	6	7	6	3	9			
4	1240 Fairfax Ave	Condominiums	23 du	135	2	8	10	8	4	12			
5	1216 Flores St	Condominiums	14 du	82	1	5	6	5	2	7			
6	1041 Formosa Ave (The Lot)	Office/Media Support		4.450	389	49	438	113	332	445			
7	8210 Eountain Ave	Condominiums	9 du	53	1	3	4	3	2	5			
8	1264 Harper Ave	Condominiums	16 du	94	1	6	7	5	3	8			
9	1345 Havenburst Dr	Condominiums	16 du	94	1	6	7	5	3	8			
10	1342 Hayworth Ave	Condominiums	16 du	94	1	6	7	5	3	8			
11	1211 Horn Ave	Condominiums	16 du	94	1	6	7	6	3	8			
12	1217 Horn Ave	Condominiums	7 du	41	1	3	3	2	1	4			
13	1125 Kngs Rd	Condominiums	10 du	59	1	4	4	3	2	5			
14	1232 Kings Rd	Apartments	25 du	168	3	10	13	10	5	16			
15	1145 La Brea Ave	Apartments/office	20 00	222	6	14	60	14	10	24			
16	1222 La Brea Ave (Monarch)	Apartments	187 du	1 257	19	76	95	75	41	116			
		Convenience Store	5 664 sf	251	5	3	8	7	8	15			
		Restaurant	7 089 ef	901	43	39	82	30	38	77			
		Coffee Shop	2 300 sf	202	14	12	26	13	12	25			
·		Rook	2,300 Si	200	2	2	- 20	21	21	42			
		Subtotal	4,500 Si	2 001		122	216	155	120	275			
17	1201 La Broa Ava	Bostaurant	4 575 cf	2,901	2	3	210	21	120	213			
10	622 La Boar Dr	La Poor Hotal	4,575 51	976	20	24	4 52	21	22	69			
10	1222 La Feel Di	Candaminiuma	0.4.	47	20	24	JZ	30	32	08			
20	1223 Lallabee St	Condominiums	6 500 af	47	5	3	4	3	10	4			
20	8551 Melrose Ave	Retail	0,500 Si	200	5	4	3	0 22	27	10			
21	8592 Molroso Ave	Retail/Commorcial	0.545 cf	703	14	12	23	22	27	49			
22	9642 Melrose Ave	Retai/Commercial	9,545 Si	301	16	12	20	22	22	44			
23	REED Melrose Ave	Restaurant	5,550 Si	646	4	4	10	17	20	75			
24	S050 Mellose Ave	Apartmonto	7 du	47	1	3	19	2	1	35			
		Apartments	7 du	47	12		4		22	4			
25	0007 Malzaca Ave	Subiolal	400.000 of	693	12	74	23	20	23	43			
25	9711 Melrose Ave	Commorpiel	400,000 Si	4,404	546	74	620	93	455	340			
20	8711 Mellose Ave	Condeminiume	21,303 SI	507	1	2	17	0	9	17			
21	500 Orlanda Ava	Condominiums	6 du	47	0	3	4	3	1	4			
20	500 Orlando Ave	Apartments	4 du	21	0	2	2	4	2	2			
29	611 Orlando Ave	Apartments	9 du	00	0	4	5	4	2	0			
30	611 Onando Ave	Condominiums	5 du	29	0	2	2	2	1	3			
	7113 Santa Monica Bivo (Monarch)	Apartments	184 du	1,236	19	/5	94	/4	40	114			
		Convenience Store	3,300 St	146	2	2	4	4	5	9			
		Restaurant	4,000 SI	010	29	20	55	20	20	52			
 		Priaimacy	3,230 SI	28/	5	4	3	14	14	28			
 		Dank Subtatal	2,000 ST	09	1 FC	109	2	10	9	19			
22	7144 Santa Manica Plud	Mixed use Project (Faith Diation)		2,308	00	108	104	128	54	140			
32	7 144 Santa Monica DIVO	Mixed use Project (Faith Plating)		1,030	24	122	90	68 155	52	140			
33	1302 Santa Monica DIVO	Mixed use Project (Movietown)		1,017	41	122	103	100	54	249			
34	0120 Santa Monica Bivo	wixed-use Project (waigreens)		1,018	8	11	15	15	5/	118			
35	0000 Santa Monica Bivo	Rings Road Mixed-use		432	/	11	18	15	14	29			
30	9555 Canta Monica Bivd	Retail/Restaurant		497	8	12	20	18	102	34			
3/	0001 Canta Monica Bivd	Mixed-use Project		2,914	50	/9	135	131	102	233			
38	9001 Santa MONICa BIVO	Mixed-use Project		829	10	-8	8	31	10	4/			
39	9040,9060,9080, 9098 Santa Monica Bivo	Meirose Triangle		3,578	193	67	260	123	180	303			
40	044 Staplov Ave	Condominiums	5 0U 5 du	29	0	2	2	2	1	3			
41	9240 Support Plud	Condominiums	یں در	159	0	10	10	2	F	3			
42	9205 Support Plud	Botoil/Besteurent	21 uu	1 4 9 7	2	10	12	9	24	14			
43	0000 DUISET BIVO	Retail/Restaurant		1,137	0	0	U 100	04	31	95			
44	0410 Support Blvd	Sunset Nillenium		2,220	6/	55	122	114	/0	190			
45	0490 SUIISEE BIVO	Sunset Millenium		5,490	160	1/3	333	214	198	412			
40	9972 Support Plvd	Mixed-use Project	0.005 ~f	898	8	8 F	10	39	10	27			
4/	8873 Sunset Blvd Retail		9,990 51	443	0	5	104	67	10	107			
48			190 01	1,/48	/6	35	131	1	10	13/			
		Subtotal		2,218	84	62	146	80	86	166			
		00010101	1	-,									

TABLE D-1 (CONTINUED) RELATED PROJECTS

				1			rip Generation					
No	Address	Description	Size	Daily		AM Peak Hour			PM Peak Hour			
		-		Dally	Inbound	Outbound	Total	Inbound	Outbound	Total		
49	9040 Sunset Blvd	Hotel		2,986	71	55	126	126	108	234		
50	1253 Sweetzer Ave	Condominiums	8 du	47	1	3	4	3	1	4		
51	8565 West Knoll Dr	Condominiums	6 du	35	0	2	3	2	1	3		
52	916 Westbourne Dr	Condominiums	8 du	47	1	3	4	3	1	4		
City of	Beverly Hills [b]			1	1 -							
4	221 N. Beyerky Dr.	Shapping Contar	45 500 of	4.070	60	20	00	170	104	272		
	231 N. Beverly DI.	Shopping Center	45,500 SI	4,070	60	30	90	179	194	372		
		Snopping Center	22,875 ST	2,603	39	25	65		123	236		
2	257 267 N Cares Dr	Quality Restaurant	0,000 SI	120	5	3	62	40	20	60		
Z	257, 267 N. Carlon DI.	Novie Theater With Mathee	300 seals	440	54	0	62	10	50	60		
		Shopping Center	14,000 st	602	. 8	6	14	25	27	52		
		Snopping Center	10,000 sr	436		4	10		20			
0	405 O. Osmilas Dr	General Office Building	4,000 SI	44	5	1	6	1	5	6		
3	125 S. Camden Dr.	Condominiums	44 du	256	3	16	19	15	8	23		
4	9898 Charleville Bivd.	Single-Tenant Office Building	20,000 SF	220	32	4	36	6	29	35		
	469 N. Crescent Dr.	Live Theater	500 seats	11,200	0	0	0	50	50	100		
		Private School (K-12)	150 students	3/2	12	47	119		15	26		
		Private School (K-12)	60 students	149	29	19	4/	4	6	10		
		United States Post Office	34,000 st	3,678	142	131	2/3	189	182	370		
6	9936 durant Dr.	Condominiums	13 du	76	2	4	6	5	2	/		
7	309-325 S. Elm Dr.	Condominiums	7 du	41	0	3	3	2	1	4		
8	156-168 N. La Peer Dr.	Condominiums	10 du	59	1	4	4	4	2	5		
9	450-60 N.Palm Dr.	Condominiums	35 du	205	3	12	15	12	6	18		
10	432 N. Oakhurst Dr.	Condominiums	34 du	200	3	12	15	12	6	18		
11	320 N. Rodeo Dr.	Shopping Center	15,000 sf	645	9	6	15	27	29	56		
12	9400 S. Santa Monica Blvd.	Single-Tenant Office Building	14,000 sf	162	22	3	25	4	20	24		
13	9900 Santa Monica Blvd.	General Office Building	119,000 sf	1,309	162	22	184	30	147	177		
14	121 San Vicente Blvd.	Medical- Dental Office Building	35,000 st	1,265	68	18	88	35	95	130		
15	401 S. Robertson Blvd.	Convenience Store (Open 24 Hours)	2,496 sf	738	34	33	67	27	26	53		
16	207 S. Robertson Blvd.	General Office Building	2,100 sf	23	3	0	3	0	3	3		
17	121 Spalding Dr.	General Office Building	18,800 sf	207	25	4	29	5	23	28		
18	8600 Wilshire Blvd.	Condominiums	21 du	123	1	8	9	7	4	11		
		Shopping Center	4,800 sf	944	15	10	25	41	44	84		
		Shopping Center	2,500 sf	-107	-2	-1	-3	-5	-5	-9		
19	8767 Wilshire Blvd.	General Office Building	60,856 sf	670	83	12	94	15	75	91		
		Shopping Center	11,260 sf	1,642	26	16	42	71	77	148		
		High-Turnover Restaurant	3,000 sf	381	18	17	35	20	13	33		
20	9200 Wilshire Blvd.	Condominiums	53 du	311	4	20	23	19	9	28		
		Shopping Center	8,400 sf	1,357	22	14	35	59	63	122		
		Qualilty Restaurant	5,600 sf	504	2	2	5	28	14	42		
21	9230 Wilshire Blvd.	Automobile Sales	150,300 sf	3,000	64	44	108	41	76	117		
22	9378 Wilshire Blvd.	General Office Building	14,996 sf	165	20	3	23	4	19	22		
		Shopping Center	14,996 sf	644	9	6	15	27	29	56		
23	9817 Wilshire Blvd.	General Office Building	73,300 sf	806	100	13	113	50	50	100		
24	9844 Wilshire Blvd.	Qualilty Restaurant	5,043 sf	454	2	2	4	25	12	38		
		Shopping Center	95,000 st	6,568	93	59	152	290	315	605		
25	9876 Wilshire Blvd.	Hotel	-46 rooms	376	16	10	26	14	13	27		
		Condominiums	110 du	645	8	41	48	39	19	57		
		Qualilty Restaurant	5,000 sf	450	2	2	4	25	12	37		
		Shopping Center	5,000 sf	969	16	10	26	42	45	87		
. 26	9900 Wilshire Blvd.	Shopping Center	220,000 sf	2,495	-9	0	-9		106	218		
		High-Rise Condominiums	235 du	834	21	45	66	42	35	78		
		Shopping Center	11,656 sf	501	7	5	12	21	23	44		
		High-Turnover Restaurant	4,200 sf	534	25	23	48	28	18	46		
City of	Los Angeles [c]				1							
1	6411 W Wilshire Boulevard	Apartment	130 du	1,730	27	109	136	89	48	137		
		Retail	32,000 sf		10	54		64		70		
2	5500 W Wilshire Boulevard	Apartment		820	13	51	64	51	28	79		
3	7600 W Beverly Boulevard	Museum	8,375 sf	142	5	4	9	5	6	11		
4	101 S La Brea Avenue	Condominium	118 du	4 500		50	~~~					
		Retail	26,400 sf	1,503	11	52	63	62	30	92		
		Restaurant	3,000 sf									
5	5863 W 3rd Street	Apartment	60 du	492	5	22	27	31	16	47		
		Retail	5,250 sf									
6	725 S Curson Avenue	Office	28,800 sf	419	48	6	54	9	43	52		
		Restaurant	800 sf		-				-			

TABLE D-1 (CONTINUED) RELATED PROJECTS

				Trip Generation										
No	Address	Description	Size	Daily		AM Peak Hour			PM Peak Hour					
		-		Daily	Inbound	Outbound	Total	Inbound	Outbound	Total				
7	5900 Wilshire Boulevard	Office	7,000 sf											
		Restaurant	15,613 sf	1,120	28	4	32	16	81	97				
		High-Turnover Restaurant	3,500 sf											
8	300 S Wetherly Drive	Condominium	140 du	270	3	17	20	15	7	22				
9	915 La Brea Avenue	Apartment	219 du											
		Market	35,000 sf	0.750		70	00		20	100				
		Office	14.530 sf	2,750	20	79	99	00	36	102				
		Studio	42.136 sf											
10	8723 W Alden Drive	Hospital	100 beds	1,181	80	33	113	47	83	130				
11	6245 W Wilshire Boulevard	Bank	4.200 sf				-							
	de lo tri tribini o Boalotara	Apartment	133 du	133 du										
		Condominium	4 du	1,054	18	73	91	12	7	19				
		Coffee Shop	1 570 sf											
12	936 N La Brea Avenue	Office	88 750 sf											
	obo in Ea Biod Mondo	Retail	12 000 sf	1,130	85	12	97	18	87	105				
13	6535 Wilshire Boulevard	Apartment	21 du											
15	0000 Wildhire Boulevard	Office	57 000 ef	881	17	68	85	60	33	93				
		Potoil	6,000 st	001		00	00	00	00	00				
14	5200 W Wilchiro Boulovard	Condominium	492 du											
14	5200 W WISHING Doulevald	Botail	482 du											
			30,000 Si	2,188	22	110	132	135	67	202				
		High-Turnover Restaurant	3,500 ST											
45	C440 WINDER Device and	Quality Restaurant	6,500 st											
15	5410 W Wilshire Boulevard	Restaurant	6,760 ST	346	(2)	(2)	(4)	16	11	27				
10		Retail	590 st	240	20	14	24	45	45	00				
16	303 S La Brea Avenue	Drugstore	10,729 st	(249)	17	96	102	43	45	(25)				
17	6298 W 3rd Street	Condominium	300 du	(240)	17	65	102	(17)	(0)	(23)				
18	7901 W Beverly Boulevard	Apartment	71 du	493	7	29	36	30	16	46				
10		Retail	11,454 st											
19	915 N La Brea Avenue	Supermarket	33,500 st	2,615	18	73	91	161	87	248				
		Apartment	1/9 du											
20	375 S La Cienega Boulevard	Apartment	125 du	168	1	3	4	10	5	15				
		Retail	7,900 st											
21	316 N La Cienega Boulevard	Apartment	39 du	403	6	26	32	25	14	39				
		Retail	5,100 sf											
22	5757 Wilshire Boulevard	Office	265,000 sf	1,798	251	34	285	47	228	275				
23	6060 Wilshire Boulevard	Museum	15,000 sf	-	3	1	4	0	3	3				
24	900-950 Fairfax Avenue, 901-941 Orange	High School	36,863 sf											
	Avenue, 6059 San Vicente Boulevard	Apartment	149 du	1,057	45	73	118	58	35	93				
		Retail	4,280 sf											
25	801 N Fairfax Avenue	Apartment	93 du	1.592	9	37	46	86	46	132				
		Retail	15,826 sf	.,	-									
26	6911 W Santa Monica Boulevard	Condominium	374 du	2.279	18	90	108	125	61	186				
		Retail	15,000 sf	2,210	10	00	100	120	01	100				
27	6677 W Santa Monica Boulevard	Apartment	787 du											
		Restaurant	9,500 sf	1,944	62	247	309	190	103	293				
		Retail	12,700 sf											
28	956 N Seward Street	Office	130,000 sf	1,240	164	22	186	31	149	180				
29	6311 N Romaine Street	Gym/Dance Studio		463	-	-	-	21	16	37				
30	712 N Wilcox Avenue	Apartment	100 du	535	8	32	40	33	17	50				
31	6067 Wilshire Boulevard [d]	Museum	5,000 visitors											
		Store	5,000 sf	2,831	0	0	0	56	261	317				
		Café	4,000 sf					1						

 Notes

 [a]
 Related projects located in the City of West Hollywood were provided by the City of West Hollywood staff in August 2013.

 [b]
 Related projects located in the City of Beverly Hills were provided by the City of Beverly Hills staff in September 2013.

 [c]
 Related projects located in the City of Los Angeles were provided by the LADOT staff in October 2012.

 [c]
 Trip generation information provided by the Academy Museum of Motion Pictures MOU (June 2013).

Updated: Sept 2012

					Weekday									Weekend			
Location	Project Description - Land	Intensity	Units	Daily	AM	Peak H	our	Mid-d	ay Peak	Hour	PN	1 Peak H	our	Weekend	Night-Time Peak Hou		
	Use			Total	Total	In	Out	Total	In	Out	Total	In	Out	Daily	Total	In	Out
612 Croft Ave	Condominiums	11	du	64	5	I	4	5	I	4	6	4	2	62	5	3	2
1257 Detroit St	Condominiums	7	du	41	3	I	3	3	I	3	4	2	I	40	3	2	2
920 Fairfax Ave	Retail/Office	1		86	8	I	9	8	I	9	2	7	9	26	5	3	2
937 Fairfax Ave	Condominiums	17	du	100	7	I	6	7	I	6	9	6	3	96	8	4	4
1240 Fairfax Ave	Condominiums	23	du	135	10	2	8	10	2	8	12	8	4	130	- 11	6	5
1216 Flores St	Condominiums	14	du	82	6	I	5	6	I	5	7	5	2	79	7	4	3
1041 Formosa Ave (The Lot)	Office/Media Sup	port		4,450	438	389	49	438	389	49	445	113	332	450	45	Ш	34
8210 Fountain Ave	Condominiums	9	du	53	4	I	3	4	I	3	5	3	2	51	4	2	2
1264 Harper Ave	Condominiums	16	du	94	7	I	6	7	I	6	8	5	3	91	8	4	4
1345 Havenhurst Dr	Condominiums	16	du	94	7	I	6	7	I	6	8	5	3	91	8	4	4
1342 Hayworth Ave	Condominiums	16	du	94	7	Ι	6	7	Ι	6	8	5	3	91	8	4	4
1211 Horn Ave	Condominiums	16	du	94	7	I	6	7	I	6	8	6	3	91	8	4	3
1217 Horn Ave	Condominiums	7	du	41	3	I	3	3	I	3	4	2	I	40	3	2	2
1125 Kngs Rd	Condominiums	10	du	59	4	I	4	4	I	4	5	3	2	57	5	3	2
1232 Kings Rd	Apartments	25	du	168	13	3	10	14	4	10	16	10	5	160	13	7	6
1145 La Brea Ave	Apartments/of	fice		222	60	6	14	21	8	13	24	14	10	204	19	10	9
	Apartments	187	du	1,257	95	19	76	103	30	73	116	75	41	1,195	97	49	48
	Convenience Store	5,664	sf	251	8	5	3	39	19	20	15	7	8	238	28	16	12
	Restaurant	7,089	sf	901	82	43	39	96	48	48	77	39	38	1,123	142	71	71
1222 La Brea Ave (Monarch)	Coffee Shop	2,300	sf	292	26	14	12	31	16	15	25	13	12	364	46	23	23
	Bank	4,506	sf	200	5	3	2	39	20	19	42	21	21	18	6	3	3
	Subtotal			2,901	216	84	132	308	133	175	275	155	120	2,938	319	162	157
1201 La Brea Ave	Restaurant	4,575	sf	412	4	2	2	34	23	11	25	21	4	432	40	30	20
623 La Peer Dr	La Peer Hote			876	52	28	24	68	36	32	68	36	32	876	68	36	32
1223 Larrabee St	Condominiums	8	du	47	4	I	3	4	I	3	4	3	1	45	4	2	2
8551 Melrose Ave	Retail	6,500	sf	288	9	5	4	44	21	23	18	8	10	273	33	18	15
8564 Melrose Ave	Retail/Commercial	28,474	sf	765	23	14	9	114	55	59	49	22	27	765	-	-	-
8583 Melrose Ave	Retail/Commercial	9,545	sf	561	28	16	12	74	38	36	44	22	22	579	58	29	29
8612 Melrose Ave	Restaurant	9,998	sf	899	8	4	4	56	35	21	75	50	25	943	108	64	44
	Retail	14,571	sf	646	19	П	8	100	48	52	39	17	22	613	73	41	32
8650 Melrose Ave	Apartments	7	du	47	4	I	3	4	I	3	4	3	I	45	4	2	2
	Subtotal			693	23	12	11	104	49	55	43	20	23	658	77	43	34
8687 Melrose Ave	Office	400,000	sf	4,404	620	546	74	620	310	310	548	93	455	948	-	-	-
8711 Melrose Ave	Commercial	21,565	sf	567	17	10	7	80	39	41	17	8	9	567	-	-	-
8008 Norton Ave	Condominiums	8	du	47	4	I	3	4	I	3	4	3	1	45	4	2	2
500 Orlando Ave	Apartments	4	du	27	2	0	2	2	Ι	Ι	2	I	I	26	2	Ι	I
507 Orlando Ave	Apartments	9	du	60	5	I	4	5	I	4	6	4	2	58	5	3	2
611 Orlando Ave	Condominiums	5	du	29	2	0	2	2	0	2	3	2	I	28	2	I	I
	Apartments	184	du	1,236	94	19	75	101	29	72	114	74	40	1,176	96	48	48
	Convenience Store	3,300	sf	146	4	2	2	23	П	12	9	4	5	139	17	10	7
7112 Santa Manias Blud (Mananak)	Restaurant	4,800	sf	610	55	29	26	65	33	32	52	26	26	760	96	48	48

7113 Santa Fionica Divid (Fioniai Cit)	Pharmacy	3,250	sf	287	9	5	4	26	13	13	28	14	14	287	26	13	13
	Bank	2,000	sf	89	2	I	Ι	17	9	8	19	10	9	8	3	2	I
	Subtotal			2,368	164	56	108	232	95	137	222	128	94	2,370	238	121	117
7144 Santa Monica Blvd	Mixed-use Project (Fa	ith Plating)		1,630	96	24	72	152	60	92	140	88	52	1,583	147	81	66
7302 Santa Monica Blvd	Mixed-use Project (M	lovietown)		1,617	163	41	122	75	0	75	249	155	94	678	389	211	178
8120 Santa Monica Blvd	Mixed-use Project (Walgreens)				15	8	7	48	21	27	118	61	57	1,015	87	41	46
8350 Santa Monica Blvd	Kings Road Mixed-use				18	7	11	58	26	32	29	15	14	432	15	8	7
8550 Santa Monica Blvd	Retail/Restaurant				20	8	12	68	30	38	34	18	16	474	53	30	13
8555 Santa Monica Blvd	Mixed-use Project				135	56	79	322	153	168	233	131	102	3,019	141	75	66
9001 Santa Monica Blvd	Mixed-use Pro	ject		829	8	16	-8	58	49	9	47	31	16	829	51	29	22
9040,9060,9080, 9098 Santa Monica Blvd	Melrose Trian	ıgle		3,578	260	193	67	431	218	212	303	123	180	3,426	262	181	81
1040 Spaulding Ave	Condominiums	5	du	29	2	0	2	2	0	2	3	2	1	28	2	I	I
944 Stanley Ave	Condominiums	5	du	29	2	0	2	2	0	2	3	2	1	28	2	I	I
8240 Sunset Blvd	Condominiums	27	du	158	12	2	10	12	2	10	14	9	5	153	13	7	6
8305 Sunset Blvd	Retail/Restaur	ant		1,137	0	0	0	70	57	13	95	64	31	1,193	137	81	56
8418 Sunset Blvd	Sunset Time	е		2,226	122	67	55	150	82	68	190	114	76	1,471	178	128	50
8490 Sunset Blvd	Sunset Milleni	um		5,496	333	160	173	542	249	293	412	214	198	5,838	545	288	257
8497 Sunset Blvd	Mixed-use Pro	ject		898	16	8	8	86	50	36	55	39	16	885	101	59	42
8873 Sunset Blvd	Retail	9,995	sf	443	13	8	5	68	33	35	27	12	15	420	50	28	22
	Hotel	196	or	1,748	131	76	55	125	69	56	137	67	70	2,058	171	86	85
8950 Sunset Blvd	Apartments	4	du	27	2	0	2	2	I	I	2	I	I	26	2	Ι	I
	Subtotal			2,218	146	84	62	195	103	92	166	80	86	2,504	223	115	108
9040 Sunset Blvd	Hotel			2,986	126	71	55	112	63	49	234	126	108	3,462	307	169	138
1253 Sweetzer Ave	Condominiums	8	du	47	4	I	3	4	I	3	4	3	1	45	4	2	2
8565 West Knoll Dr	Condominiums	6	du	35	3	0	2	3	0	2	3	2	I	34	3	2	I
916 Westbourne Dr	Condominiums 8 du		47	4	I	3	4	I	3	4	3	I	45	4	2	2	

City of Beverly Hills Cumulative Projects list

Updated Jan 2 -2013

DROI	ADDRESS			CI7E	LINUTS				DM IN		PM	WKEND	WKEND	WKEND	ADT
PROJ	ADDRESS	ACTIVE	TTE CODE	SIZE	UNITS		AIVI UUT		PIVI IN	PIVIOUI	TOTAL	IN	OUT	TOTAL	TOTAL
1	231 N. Beverly Dr.		820E	45.500	TSF	60	38	98	179	194	372	70	249	519	4,070
	231 N. Beverly Dr.		820E	22.875	TSF	39	25	65	114	123	236	173	159	332	2603
	231 N. Beverly Dr.		931	8.000	TSF	3	3	6	40	20	60	51	36	87	720
2	257 N. Canon Dr.	1	444	388.000	SEATS	54	8	62	10	50	60	9	8	16	440
	257 N. Canon Dr.	\checkmark	✓ 820	14.000	TSF	8	6	14	25	27	52	35	33	68	602
	267N.Canon dr.	\checkmark	✓ 820	10.000	TSF	6	4	10	18	20	38	20	20	40	436
	267 N. Canon Dr.	\checkmark	√710R	4.000	TSF	5	1	6	1	5	6	2	2	4	44
3	125 S. Camden Dr.		230	44.000	DU	3	16	19	15	8	23	11	10	21	256
4	9898 Charleville Blvd.		715	20.000	TSF	32	4	36	6	29	35	12	12	24	220
5	469 N. Crescent Dr.	\checkmark	441	500.000	SEATS	0	0	0	50	50	100	50	50	100	11200
	469 N. Crescent Dr.	\checkmark	536	150.000	STU	72	47	119	11	15	26	0	0	0	372
	469 N. Crescent Dr.	\checkmark	536	60.000	STU	29	19	47	4	6	10	0	0	0	149
	469 N. Crescent Dr.	\checkmark	✓ 732	34.000	TSF	142	131	273	189	182	370	110	90	200	3678
6	9936 Durant Dr.	\checkmark	✓ 230	13.000	DU	2	4	6	5	2	7	3	3	6	76
7	309-325 S. Elm Dr.	\checkmark	✓ 230	7.000	DU	0	3	3	2	1	4	2	2	3	41
8	156-168 N. La Peer Dr.	\checkmark	✓ 230	10.000	DU	1	4	4	4	2	5	3	2	5	59
9	450-60 N.Palm Dr.	\checkmark	J 230	35.000	DU	3	12	15	12	6	18	9	7	16	205
10	432 N. Oakhurst Dr.	\checkmark	✓ 230	34.000	DU	3	12	15	12	6	18	9	7	16	200
11	320 N. Rodeo Dr.		820E	15.000	TSF	9	6	15	27	29	56	38	37	75	645
12	9400 S. Santa Monica Blvd.		715	14.000	TSF	22	3	25	4	20	24	14	14	28	162
13	9900 Santa Monica Blvd.	1	710E	119.000	TSF	162	22	184	30	147	177	89	78	168	1309
14	121 San Vicente Blvd.	\checkmark	720	35.000	TSF	68	18	88	35	95	130	72	55	127	1265
15	401 S. Robertson Blvd.		851	2.496	TSF	34	33	67	27	26	53	39	38	77	738
16	207 S. Robertson Blvd.	\checkmark	√710E	2.100	TSF	3	0	3	0	3	3	0	0	0	23
17	121 Spalding Dr.	1	710E	18.800	TSF	25	4	29	5	23	28	3	4	7	207
18	8600 Wilshire Blvd.		230	21.000	DU	1	8	9	7	4	11	5	5	10	123
	8600 Wilshire Blvd.		820E	4.800	TSF	15	10	25	41	44	84	63	58	120	944
	8600 Wilshire Blvd.		✓820R	2.500	TSF	-2	-1	-3	-5	-5	-9	-6	-6	-12	-107
19	8767 Wilshire Blvd.	\checkmark	710R	60.856	TSF	83	12	94	15	75	91	13	12	25	670
	8767 Wilshire Blvd.	\checkmark	820E	11.260	TSF	26	16	42	71	77	148	109	100	209	1642
	8767 Wilshire Blvd.	\checkmark	932	3.000	TSF	18	17	35	20	13	33	38	22	60	381
20	9200 Wilshire Blvd.	\checkmark	230	53.000	DU	4	20	23	19	9	28	13	12	25	311
	9200 Wilshire Blvd.	\checkmark	820E	8.400	TSF	22	14	35	59	63	122	90	83	173	1357
	9200 Wilshire Blvd.	~	931	5.600	TSF	2	2	5	28	14	42	36	25	61	504
21	9230 Wilshire Blvd.	\checkmark	841	150.300	TSF	64	44	108	41	76	117	41	41	82	3000
22	9378 Wilshire Blvd.		710R	14.996	TSF	20	3	23	4	19	22	3	3	6	165
	9378 Wilshire Blvd.		820R	14.996	TSF	9	6	15	27	29	56	39	36	75	644
23	9817 Wilshire Blvd.	\checkmark	710E	73.300	TSF	100	13	113	50	50	100	15	15	30	806
24	9844 Wilshire Blvd.	\checkmark	√ 931	5.043	TSF	2	2	4	25	12	38	32	22	55	454
	9844 Wilshire Blvd.	\checkmark	□820E	95.000	TSF	93	59	152	290	315	605	435	402	837	6568
25	9876 Wilshire Blvd.	\checkmark	310	-46.000	RMS	16	10	26	14	13	27	14	13	27	376
	9876 Wilshire Blvd.	~	□ 230	110.000	DU	8	41	48	39	19	57	28	24	52	645
	9876 Wilshire Blvd.	\checkmark	931	5.000	TSF	2	2	4	25	12	37	32	22	54	450
	9876 Wilshire Blvd.		820E	5.000	TSF	16	10	26	42	45	87	64	59	123	969
26	9900 Wilshire Blvd.	~	}820R-2	220.000	TSF	-9	0	-9	112	106	218	187	167	352	2495
	9900 Wilshire Blvd.	4	232-1	235.000	DU	21	45	66	42	35	78	26	45	68	834
	9900 Wilshire Blvd.	4	₿20R-1	11.656	TSF	7	5	12	21	23	44	30	28	58	501
	9900 Wilshire Blvd.	~	932-1	4.200	TSF	25	23	48	28	18	46	53	31	84	534