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APPENDICES TO THE Additional Responses to Comments Central City Community Plan Area

Wilshire Grand Redevelopment Project

Case No. ENV-2009-1577-EIR-GB

Council District No. 9

THIS DOCUMENT INCLUDES ADDITIONAL RESPONSES TO COMMENTS ON THE EIR PREPARED UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

Project Address: 930 Wilshire Boulevard, Los Angeles, California 90017

Project Description: The Wilshire Grand Redevelopment Project includes development on a 3.2-acre site located in the Central City (Downtown) area of the City of Los Angeles. The Project includes demolition of the existing Wilshire Grand Hotel and Centre, and the development of a maximum of 560 hotel rooms and/or condo-hotel units, 100 residential units, 1,500,000 square feet of office, 275,000 square feet of amenity areas including, but not limited to, project-serving retail and restaurant uses, conference and meeting rooms, ballrooms, spa, fitness center, and ancillary other hotel, residential, and office areas. The Project includes a landscaped pedestrian plaza at the corner of Figueroa Street and 7th Street, as well as a rooftop helistop. Approximately 1,900 parking spaces will be provided in eight levels of subterranean parking. The Project includes one approximately 65-story structure, no more than 1,250 feet in height, one approximately 45-story structure, no more than 750 feet in height, and an approximately six-story podium structure, no more than 168 feet in height.

APPLICANT:

Hanjin International Corporation c/o Thomas Properties Group, L.P.

PREPARED BY:

EcoTierra Consulting

February 2011

APPENDIX A

Memorandum, Response to Comments for the Wilshire Grand Redevelopment Project, Gibson Transportation Consulting, Inc., to Thomas Properties Group February 11, 2011



MEMORANDUM

TO:	Ayahlushim Hammond Thomas Properties Group	
FROM:	Patrick A. Gibson, P.E., PTOE Geetika Maheshwari, P.E., LEED AP	
DATE:	February 11, 2011	
RE:	Response to Comments for the Wilshire Grand Redevelopment Project	Ref: J1001

This memorandum provides the responses to comments related to traffic submitted to the Environmental Impact Report (EIR) for the Wilshire Grand Redevelopment Project ("Project"). The comment letters responded to in this memorandum include:

- Jeffer Mangels Butler & Mitchell LLP letter dated November 12, 2010
- Crain & Associates letter dated December 14, 2010
- Brookfield Properties Management LLC letter dated December 15, 2010
- DLA Piper appeal dated January 14, 2011

JEFFER MANGELS BUTLER & MITCHELL LLP LETTER (NOVEMBER 12, 2010)

COMMENT 1: FRANCISCO STREET OPERATIONS

<u>Response</u>: It is assumed that the commenter is referring to the 3,624 net new daily trip generation shown in Table IV.B-14 on Page IV.B-104 of the Draft EIR (DEIR) and Table 10 on Page 88 of the *Transportation Study for the Wilshire Grand Redevelopment Project*, Gibson Transportation Consulting, Inc, April 2010 ("Transportation Study"). This is expected to be the net increase in traffic across a 24-hour period for the full Project <u>before</u> accounting for trip reductions from the Transportation Demand Management (TDM) program described in Mitigation Measure MM-1 identified in Section IV.B.8 on Page IV.B-59 of the DEIR.

After the implementation of the TDM program, which is a Project requirement by the Los Angeles Department of Transportation (LADOT), the Project is expected to result in a net increase of <u>1.454</u> daily trips, including 522 morning and 552 afternoon peak hour trips, as shown in Table IV.B-25 on Page IV.B-119 of the DEIR and Table 13 on Page 133 of the Transportation Study.

As noted in Section IV.B.5.b.vi(1) on Page IV.B-49 of the DEIR, the Project would provide valet service off of 7th Street for the hotel land uses. Therefore, with the hotel traffic utilizing the 7th Street access, the remaining project trips using Francisco Street would have to be even lower

than the 1,454 daily trips, 522 new morning peak hour trips, and 552 new afternoon peak hour trips.

Additionally, as noted in Section IV.B.5.b.vi(1) on Page IV.B-49 of the DEIR and Page 185, Chapter 8 of the Transportation Study, Francisco Street would be restriped to a three-lane cross-section with one lane in each direction and a two-way left-turn lane, therefore providing more capacity than the existing two-lane configuration. A detailed analysis has been conducted for Francisco Street and is provided in Appendix L of the Transportation Study. This analysis shows that Francisco Street would operate at acceptable operating levels per LADOT standards with the Project traffic under the new configuration.

In particular, Appendix L includes an analysis of queuing for the turning movements providing access to the 1000 Wilshire building from Francisco Street. Table L-2 shows that the queues for inbound and outbound movements for the Project and the 1000 Wilshire building range from 0 to 3 vehicles. This level of queuing is considered well within acceptable operating levels per LADOT standards. The Project access analysis in Appendix L concluded that this level of queuing is considered well within acceptable operating standards. This level of queuing would not impede through traffic on Francisco Street or negatively affect circulation entering or leaving the 1000 Wilshire building.

As noted in LADOT's traffic assessment letter (*Traffic Assessment of the Proposed Wilshire-Grand Redevelopment Project*, April 20, 2010), LADOT has determined that the proposed configuration of Francisco Street:

"is not expected to result in adverse impacts to the access and circulation of other existing uses served by Francisco Street."

COMMENT 2: REDESIGN OF FRANCISCO STREET

<u>Response</u>: As shown in Appendix L of the Transportation Study, the EIR does consider an additional design option for Francisco Street which assumed a four-lane cross-section for Francisco Street with two lanes in each direction. As shown in Table L-2, this design option worked satisfactorily as well. In order to ensure that this design would not result in any issues for cars turning into the 1000 Wilshire building, a driveway template has been prepared. As shown in Figure 8, this design option would work satisfactorily with the 1000 Wilshire building driveway with a 2-foot widening of the driveway at the sidewalk curb.

COMMENT 3: 7th STREET ACCESS

<u>Response</u>: As mentioned in the comment, Project access is already anticipated from 7th Street. The hotel entrance/exit movements will be served on the 7th Street driveway. Similar to other Class A office buildings in downtown Los Angeles, office tenants and visitors would also be given the option of using the valet service at the 7th Street driveway.

The DEIR and the Transportation Study, however, present a conservative analysis in that they assume that all of the office traffic would access the Francisco Street driveway.

CRAIN & ASSOCIATES LETTER (DECEMBER 14, 2010)

COMMENT 1: IMPACT ON 601 S FIGUEROA STREET BUILDING ACCESS

The office building at 601 S. Figueroa Street is served by only one driveway, which is located approximately 200 feet west of the west curb of Figueroa Street. This driveway operates with left- and right-turn movements for both ingress and egress. Eastbound motorists on Wilshire Boulevard use the two-way left-turn lane to make left turns into the driveway. Left-turning motorists exiting the driveway also use the two-way left-turn lane to merge into the eastbound dual left-turn lanes on Wilshire Boulevard or as a refuge area before merging with eastbound through traffic on Wilshire Boulevard.

The current LADOT striping plan shows that the eastbound dual left-turn lanes on Wilshire Boulevard have approximate lengths of 107 feet and 149 feet west of Figueroa Street, for a total of 256 feet of storage length. Immediately west of the dual left-turn lanes is the two-way left-turn lane referenced above.

The traffic study shows the existing left-turn volume using the dual left-turn lanes to be 510 vehicles during the PM peak hour. This left-turn volume sometimes extends out of the dual left-turn lanes and into the two-way left-turn lane or the number one eastbound through lane on Wilshire Boulevard. Based on level of service calculation worksheets appended to the traffic study, the Project will add 237 vehicles, after TDM mitigation, to the dual left-turn lanes during the PM peak hour. This addition of Project trips is expected to result in a queue of vehicles regularly extending well beyond the 601 Figueroa Street driveway. This queuing would block and significantly impede and delay the left-turning traffic exiting this driveway during the PM peak hour.

Response: This comment deals with the need for additional turn capacity at the intersection of Figueroa Street & Wilshire Boulevard. Because the eastbound-to-northbound left turn demand often exceeds the capacity of the existing dual left-turn lanes, the exit to the Commenter's office building is often blocked.

The triple left-turn lanes at Figueroa Street & Wilshire Boulevard were rejected by LADOT because they resulted in a misalignment of the through lanes in the east-west direction and they required that the signal phasing be modified to provide split phasing for the east-west traffic.

COMMENT 2: PROJECT TRIP DISTRIBUTION

The traffic study assumed one general trip distribution pattern for the Project, even though the Project is comprised of several uses. This is contrary to recent traffic studies for large mixed-use projects approved by LADOT that have used discrete trip distribution patterns and percentages for individual uses in order to more accurately assign trips to study intersections and routes. For example, office, residential, hotel and retail uses generally have different trip distributions, as their origins and destinations are different. Utilizing one generic trip distribution for dissimilar proposed and existing uses can result in project trips and impacts being underestimated at study locations, as well as some locations not being considered for analysis because they have been assigned a low number of trips. In our opinion, a more accurate and inclusive traffic

analysis would have included discrete trip distributions for the proposed Project uses and the existing uses being removed.

<u>Response</u>: The Project trip distribution was based on the Southern California Association of Governments' (SCAG) regional transportation model distribution of trips from the downtown Los Angeles traffic analysis zone (TAZ) where the Project is located. While the zone is predominantly office use, there are other land uses in the TAZ and therefore the trip distribution pattern used in the DEIR reflects the mixture of uses proposed for the Project.

In terms of using a separate distribution for the existing trips to be removed from the street system and the new trips to be added to the street system, the land uses being demolished are the same as the land uses being added to the site (i.e., predominantly office and hotel) and therefore the separate existing vs. future distribution by land use is not necessary.

COMMENT 3: USE OF PROJECT PASS-BY TRIPS

Per LADOT traffic study policies and procedures, pass-by trip credits are "not applicable to review of impacts at project driveways and the intersection(s) immediately adjacent to the project site." Therefore, project traffic impacts at site-adjacent intersections should be determined without the application of pass-by trip credit.

In the Project trip generation analysis, adjustments were made to the proposed and existing use trips in order to account for transit/HOV, walk, Central Business District (CBD) and internal capture factors. The CBD adjustment factor was applied to the fitness facility and retail/restaurant use trips, and was described as accounting for walk-in trips, pass-by trips, and trips captured from neighboring developments. The CBD adjustment factor, which includes pass-by trip credit, was applied to all Project trip, including those assigned to site-adjacent intersections. This procedure was contrary to LADOT policy, resulting in an underestimation of levels of service, Project trips and impacts at site-adjacent intersections.

<u>Response</u>: As shown in Tables 10 and 13 in the Transportation Study, the trip generation estimates for the Project do not account for any pass-by automobile trips. The Central Business District (CBD) adjustment accounts for only pass-by pedestrian trips and trips captured from neighboring developments. Therefore, no additional automobile pass-by trips were added to the intersections adjacent to the Project Site.

COMMENT 4: ADEQUACY OF PROJECT PARKING

The Project parking analysis determined that the on-site parking supply of 1,900 spaces would be insufficient to satisfy the shared parking demand of 1,992 spaces, with a resultant deficiency of 92 spaces. With the implementation of TDM mitigation for the Project, the analysis concluded that the shared peak parking demand would be reduced to 1,868 spaces, leaving the parking supply with a surplus of 32 spaces. However, in terms of practicality and good parking structure planning, the 32-space surplus would be inadequate. As a parking structure nears it capacity, it becomes increasingly difficult and frustrating for motorists to find the few remaining spaces. To alleviate this situation, it is common practice to design parking structures with 5 to 10 percent or more capacity above the anticipated peak demand, to the extent feasible. If the minimum 5 percentage "overage" factor were applied to the shared parking demand amount of 1,868 spaces, the practical parking supply for the Project should be at least 1,961 spaces; i.e., 61 spaces more than proposed. If the parking supply remains at 1,900 spaces or less, it is anticipated that there would a "spillover" effect due to some Project users choosing to seek less constrained parking elsewhere, such as in the nearby parking structure serving the 7+Fig shopping center and the office buildings at 725 and 777 S. Figueroa Street. This spillover could then impact the supply and operation of that facility.

Response: The comment recommends that an "oversupply" of 5% spaces be added to the project parking supply to ease the search for the last few spaces in the garage. The comment fails to point out that the Shared Parking analysis included in Chapter 7 of the Transportation Study estimates the parking demand for the busiest hour of the year. Figure 46 on page 179 of the Transportation Study shows that the 1,868 occupied spaces occur only on weekdays during the busiest two months of the year and that every other month of the year will indeed have the 5% vacancy rate that the comment suggests. And Figure 48 on page 181 of the Transportation Study shows that the peak activity lasts for only a few hours in the middle of the day. Figure 47 on page 180 of the Transportation Study shows that there will be over 1,000 empty spaces on virtually every weekend day of the year.

Adding a 5% oversupply to the proposed 1,900 parking space supply would add almost 100 parking spaces that would never be occupied. The proposed parking supply is sufficient to eliminate spillover parking into neighboring project's parking supply.

COMMENT 5: RELATED PROJECTS ANALYSIS

Among the related projects listed in the traffic study was Citicorp Phase III (no. 92), a 792,000 square-foot office building at 755 S. Figueroa Street. The site for this related project is immediately west of the 7+Fig shopping center and the 725 and 777 Figueroa office buildings. The traffic study showed the Citicorp Phase III related project generating 4,677 trips per day, including 699 AM and 688 PM peak-hour trips. It is expected that a portion of these trips would use the existing driveway on the south side of 7th Street and opposite Francisco Street. This intersection, including the driveway, is signalized and used to access parking for 7+Fig and the two office buildings. As this intersection is at the southwest corner of the Project site, it was included as a study intersection. However, other than for minor ambient traffic growth, the traffic study had no increase in traffic volume entering or exiting this driveway. The Citicorp Phase III trips should have been appropriately analyzed in order to accurately show level of service conditions and impacts, particularly at this key intersection affecting both Project access and access for 7+Fig and 725 and 777 Figueroa.

<u>Response</u>: An alternate traffic impact analysis has been conducted for the Project that includes trips from the adjacent 755 S Figueroa Street related project. In summary, the results of this analysis show the addition of 755 S Figueroa Street related project's trips in the background traffic volumes do not alter the results of the significant impact analysis presented in the EIR

and the Transportation Study, i.e. the Project would not result in any additional residual impacts beyond those already identified in the EIR.

Traffic Projections

As shown in Table 8 on page 55 of the Transportation Study, this related project (#92) is expected to generate approximately 699 morning peak hour trips and 688 afternoon peak hour trips. Traffic from the 755 S Figueroa Street office building was assigned to the street system using the trip distribution and assignment procedures described in Chapter 3 for the other related projects. These trips were then added to the Future without Project conditions traffic volumes illustrated in Figure 11 on page 48 of the Transportation Study to develop the Alternate Future without Project conditions traffic volumes. These volumes have been illustrated in Figure 3.

Similarly, the Alternate Future with Project conditions and Alternate Future with Project with TDM Program conditions traffic volumes were developed by adding trips from the 755 S Figueroa Street office building to the traffic volumes illustrated in Figure 17 and 22 on pages 80 and 119, respectively, of the Transportation Study. The Alternate Future with Project conditions and Alternate Future with Project with TDM Program conditions traffic volumes have been illustrated in Figure 4 and 5, respectively.

Traffic Operations

The traffic volumes presented in Figures 3 through 5 were analyzed using the "Critical Movement Analysis (CMA) – Planning" (Transportation Research Board, 1980) methodology described in Chapter 2 of the Transportation Study. Detailed level of service (LOS) worksheets are provided in Attachment A.

<u>Alternate Future without Project Conditions</u>. The "Alternate Future without Project" intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 1.

As shown in Table 1, under the "Alternate Future without Project" conditions approximately 93% and 69% of the intersections are projected to operate at LOS D or better, and 7% and 31% are projected to operate at LOS E or F during the morning and afternoon peak hours, respectively.

<u>Alternate Future with Project Conditions</u>. The "Alternate Future with Project" intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 2.

As shown in Table 2, under the "Alternate Future with Project" conditions, approximately 90% and 69% of the intersections are projected to operate at LOS D or better, and 10% and 31% are projected to operate at LOS E or F during the morning and afternoon peak hours, respectively.

Table 2 also provides a summary of the significant impact analysis, before TDM trip reduction and before any Project-funded transportation improvements, conducted for the 42 study intersections based on the criteria established by LADOT at different levels of service. During the morning peak hour in 2020, the Project is expected to result in a significant impact at three intersections operating at LOS C or LOS D and two intersections operating at LOS E. During the afternoon peak hour in 2020, the Project is expected to result in a significant impact at five intersections operating at LOS C or LOS D, two intersections operating at LOS E, and seven intersections operating at LOS F. Intersections impacted in the morning peak hour are not necessarily the same intersections are expected to be impacted during the morning and/or afternoon peak hour, before TDM program and mitigation, under the Alternate Traffic Impact analysis. The Project is not expected to result in a significant traffic impact at 26 of the 42 study intersections and that presented in Chapter 4 of the Transportation Study:

INTERSECTION IMPACT SUMMARY BEFORE MITIGATION					
LADOT Procedures – Chapter 4 Alternate Analysis					
	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak	
LOS C or LOS D	3	3	3	5	
LOS E	2	3	2	2	
LOS F	0	6	0	7	
Total Intersections	5	12	5	14	
Total Individual Impacted Intersections 14 16					

As shown in the table above, under the "Alternate Future with Project" scenario, the Project is expected to result in two additional significant intersection impacts, before TDM program and mitigation, under the Alternate Traffic Impact analysis presented in this section.

<u>Alternate Future with Project with TDM Program Conditions</u>. The "Alternate Future with Project with TDM Program" scenario includes the TDM program presented in Chapter 5. The "Alternate Future with Project with TDM Program" intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 3.

As shown in Table 3, under the "Alternate Future with Project with TDM Program" conditions approximately 90% and 69% of the intersections are projected to operate at LOS D or better, and 10% and 31% are projected to operate at LOS E or F during the morning and afternoon peak hours, respectively.

Table 3 also provides a summary of the significant impact analysis, after TDM trip reduction and before any Project-funded transportation improvements, conducted for the 42 study intersections based on the criteria established by LADOT at different levels of service.

During the morning peak hour in 2020, the Project is expected to result in a significant impact at two intersections operating at LOS C and two intersections operating at LOS E. During the afternoon peak hour in 2020, the Project is expected to result in a significant impact at one intersection operating at LOS D, two intersections operating at LOS E, and five intersections operating at LOS F. Intersections impacted in the morning peak hour are not necessarily the same intersections impacted in the afternoon peak hour and vice-versa. A total of 10 of the 42 study intersections are expected to be impacted during the morning and/or afternoon peak hour under the Alternate Traffic Impact analysis. The Project is not expected to result in a significant

traffic impact at 32 of the 42 study intersections during either peak hour. The following table summarizes a comparison of the analysis presented in this section and that presented in Chapter 5:

INTERSECTION IMPACT SUMMARY BEFORE PROJECT-FUNDED TRANSPORTATION IMPROVEMENTS					
LADOT Procedures – Chapter 5 Alternate Analysis					
	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak	
LOS C or LOS D	1	1	2	1	
LOS E	2	2	2	2	
LOS F	0	5	0	5	
Total Intersections	3	8	4	8	
Total Individual Impacted Intersections 9 10					

As shown in the table above, under the "Alternate Future with Project with TDM Program" scenario, the Project is expected to result in a significant impact at one additional intersection under the Alternate Traffic Impact analysis presented in this section: Francisco Street & Wilshire Boulevard.

<u>Alternate Future with Project with Mitigation Conditions</u>. The "Alternate Future with Project with Mitigation" scenario includes all of the transportation improvement and mitigation measures presented in Chapter 5 of the Transportation Study. The "Alternate Future with Project with Mitigation" intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 4.

As shown in Table 4, under the "Alternate Future with Project with Mitigation" conditions approximately 90% and 69% of the intersections are projected to operate at LOS D or better, and 10% and 31% are projected to operate at LOS E or F during the morning and afternoon peak hours, respectively.

Table 4 also provides a summary of the significant impact analysis, after mitigation, conducted for the 42 study intersections based on the criteria established by LADOT at different levels of service.

INTERSECTION IMPACT SUMMARY ALTERNATE FUTURE WITH PROJECT WITH MITIGATION SCENARIO					
Before Mitigation (TDM and TSM)After TDM and Before TSMAfter Mitigation 					
A.M. Peak Hour	5	4	3		
P.M. Peak Hour	14	8	6		
Total Individual Impacted Intersections	16	10	7		

The analysis summarized above shows that the TDM program and the TSM improvements included in the Project's transportation mitigation program would mitigate two of the five morning peak hour and eight of the 14 afternoon peak hour impacted intersections. The following table

summarizes a comparison of the analysis presented in this section and that presented in Chapter 5 of the Transportation Study:

INTERSECTION IMPACT SUMMARY FUTURE WITH PROJECT WITH MITIGATION SCENARIO					
LADOT Procedures – Chapter 5 Alternate Analysis					
	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak	
LOS C or LOS D	1	0	1	0	
LOS E	2	1	2	1	
LOS F	0	5	0	5	
Total Intersections	3	6	3	6	
Total Individual Impacted Intersections77					

As shown in the table above, the Project is not expected to result in any new and/or different residual significant and unavoidable impacts under the Alternate Traffic Impact analysis as compared to the analysis presented in the EIR and Chapter 5 of the Transportation Study.

COMMENT 6: PROJECT TDM TRIP REDUCTIONS

Table 12 of the traffic study, Appendix IV.B of the Draft EIR, listed the proposed TDM strategies and their expected reductions in vehicle trips during the PM peak hour for the residential, hotel/retail/restaurant and office uses. A live-work/land-use/mixed-use densification strategy was included in Table 12, but no explanation for this strategy was provided in the body of the report. A trip reduction credit of 7.5 percent was assumed for the residential, hotel/retail/restaurant and office uses based on implementation of the live-work/land-use/mixeduse densification strategy. This individual TDM strategy accounted for over one-half of the total trips reduced for the residential and hotel/retail/restaurant uses and approximately one-third of the total trips reduced for the office use. Because the mechanism behind this strategy is not clear, the associated trip-reducing benefits are difficult to confirm. If this strategy is intended to capture the trip-reducing effects of the overall "mixed-use" nature of the project, it would appear that these effects have already been accounted for in the initial project trip generation estimates via the transit/HOV, walk, CBD, and internal capture trip adjustment factors.

Additionally, the information in Table 12 refers to expected reductions in vehicle trips during the PM peak hour. These reductions were applied to all time periods (i.e., daily, AM peak hour and PM peak hour) in the Project trip generation estimates with TDM mitigation. It is not clear why the same trip-reduction rates were used for all time periods. As shown in Table 13 of the traffic study, the trip-reducing effect of flexible work schedules appears to have been applied equally to all time periods, including daily, for the office use. While flexible work schedules tend to shift travel out of the morning and afternoon peak periods, they would not be expected to change the number of daily trips.

The trip reduction estimates assumed in Table 12 were based on various TDM programs implemented for projects throughout the country. Appendix H of the traffic study provides a review of studies examining the:

- Travel behavior of residents and employees of transit-oriented developments (TODs) in the State of California; and
- Effectiveness of TDM strategies employed for various developments throughout the country.

In Appendix H, a summary of the two TOD studies showed that approximately 22 percent of residents and employees of TODs travel via transit or bicycle/walk modes. The traffic study reasoned that the 19 percent total Project trip reduction expected from the TDM strategies was conservative in light of the 22 percent alternative mode split found for the TODs. However, these two percentages describe different phenomena. The 22 percent alternative mode split describes the number of trips expected to be made via transit or bicycle/walk modes for residents and employees of TODs. The 19 percent trip reduction is the additional trip discount being applied to the Project's trip generation, following trip adjustments for transit/HOV, walk, CBD, and internal capture factors, in order to estimate the benefit of implementing the Project's TDM program. The TOD alternative mode split is not a metric for TDM program effectiveness and, therefore, should not have been used to justify the 19 percent trip reduction applied in the traffic study.

Table H-1 in Appendix H of the traffic study provided a summary of various TDM strategies for developments throughout the country and their resulting effectiveness (e.g., percent reduction in vehicle trips, percent increase in transit ridership, etc.). While the percent change in trips for a particular mode due to TDM implementation is useful, the actual trip levels and mode splits may be more informative. For example, the Rehoboth Beach, DE project in Table H-1 experienced a 13 percent increase in transit ridership following the implementation of a "better transit information" TDM strategy. It would be useful to know the baseline transit ridership level for the Rehoboth Beach, DE project (e.g., from 2 percent to 15 percent, from 20 percent to 33 percent, etc.), as it is reasonable to assume that it is harder to achieve transit ridership gains through TDM implementation if a larger percentage of the project population is already using transit. For the initial Project trip generation calculations, a 25 percent trip reduction for transit/HOV and a 5 percent trip reduction for walk were applied to the residential, hotel and office use trips. Given that the TDM trip reductions are being added to these large initial trip reductions, a survey of the effectiveness of TDM strategies for projects that exhibited a diverse mode split prior to TDM implementation would be more helpful. With the limited amount of information provided in the traffic study regarding TDM measure effectiveness, it is difficult to confirm whether the 19 percent total Project trip reduction due to TDM is justified.

<u>Response</u>: The Project's trip generation estimates were prepared in consultation with and approved by LADOT. Additionally, as noted in LADOT's traffic assessment letter, the Project would be required to comply with the trip estimates noted in the EIR as the Project's TDM Program would be required to include:

"an annual trip monitoring and reporting program that sets trip-reduction milestones and a monitoring program to ensure effective participation and compliance with the TDM goals; non-compliance to the trip-reduction goals would lead to financial penalties or may require the implementation of physical transportation improvements."

BROOKFIELD PROPERTIES MANAGEMENT LLC LETTER (DECEMBER 15, 2010)

COMMENT 1-1

Francisco Street is a vital corridor to access our properties at 7th+Fig, 725 S. Figueroa, and 615 S. Figueroa. In addition, it provides the only access to 1000 Wilshire where we possess an easement for parking spaces. Nearly all Project parking will occur via Francisco and this will unduly burden 1000 Wilshire and our three properties. There is simply too much proposed traffic to the street itself that will make access next to impossible. With the underestimation of Project traffic due to the omission of trips allocated to the outdoor dining, bars and pool bar; the amenity areas that will also generate additional trips; and the overstated credit for the underutilized onsite uses being demolished, once the Project becomes operational, Francisco will be completely overloaded. A feasible mitigation measure would be to turn this into a roadway with two lanes in each direction with a center turn lane. As there are significant impacts in the immediate vicinity of Francisco, CEQA requires more mitigation which would result in a direct and immediate improvement, such as the measure we propose.

Response: Response to Comment 7-6 of the Final EIR (FEIR) addressed impacts on Francisco Street stating, as noted in Section IV.B on Page IV.B-49 of the DEIR and Page 185, Chapter 8 of the Transportation Study, Francisco Street would be restriped to a three-lane cross-section with one lane in each direction and a two-way left-turn lane, therefore providing more capacity than the existing two-lane configuration. A detailed analysis has been conducted for Francisco Street and is provided in Appendix L of the Transportation Study. This analysis shows that Francisco Street would operate at acceptable operating levels per LADOT standards with the Project traffic under the new configuration. This analysis included traffic counts, along with an ambient growth rate of 0.75% per year, which therefore included the trips noted by the commenter as using Francisco Street to access the commenter's Figueroa properties. With regards to the five-lane cross-section on Francisco Street proposed by the commenter, the right-of-way on Francisco Street does not allow for it nor does the analysis suggest that it is needed.

As noted in LADOT's traffic assessment letter, LADOT has determined that the proposed configuration of Francisco Street:

"is not expected to result in adverse impacts to the access and circulation of other existing uses served by Francisco Street."

With regards to omitting trips, the FEIR addressed this issue in Response to Comment 7-3; traffic volumes and trip generation rates and adjustments were reviewed and approved by LADOT as noted in their memorandum dated April 20, 2010, and included in Appendix IV.B of the DEIR. As noted in Section IV.B, on page IV.B-39 of the DEIR and Page 67, Chapter 4 of the Transportation Study provided in Appendix IV.B of the Draft EIR:

"Various sources were reviewed as part of the transportation impact analysis, including recent studies conducted for the Downtown Los Angeles Cordon Count (City of Los Angeles, May 2002), the Los Angeles Sports and Entertainment District (LASED) Specific Plan (City of Los Angeles, October 2001), the L.A. Entertainment District EIR Traffic Study (The Mobility Group, December 2000), the Alameda District Specific Plan

(City of Los Angeles, June 1996), NCHRP Travel Characteristics at Large-Scale Suburban Activity Centers (Transportation Research Board, October 1989), and Trip Generation Rates for Los Angeles Central Business District (Barton-Aschman Associates, 1989).

Existing public transit ridership in the downtown core is higher than the rest of the Los Angeles metropolitan area and is much higher than what is inherently reflected in the ITE trip generation rates, which are based on free-standing, suburban sites. In consideration of the proximity of the Project to over 85 existing bus lines and three rail lines, the high level of transit usage that is expected to and from the Project Site would result in fewer vehicular trips on the roadway system than would typically be the case elsewhere in the Los Angeles metropolitan area. Data from the Downtown Los Angeles Cordon Count indicates that approximately 28% of all person trips to/from downtown over the 16-hour cordon count (6:00 a.m. to 10:00 p.m.) occur via a public transit mode, with peak hour transit mode splits as high as 34% during the morning peak hour and 32% during the afternoon peak hour. Trip generation rates in the LASED traffic study and the LASED specific plan reflect transit credits of approximately 10% for retail and residential uses and 15% to 20% for hotel and office uses (including shuttle and tour buses). These sources also indicate that ITE trip generation rates for the retail uses could be reduced by 20% to 30% to reflect pass-by trips.

In addition, "Captive Market" trips were estimated for residential-office, residential-retail, and office-retail intersections based on surveys conducted for downtown Los Angeles (Downtown Los Angeles Demographic Survey, Downtown Center Business Improvement District, 2008). For example, considering the proximity of the downtown residents and patrons to the shopping and employment opportunities in the Central Business District area, it is expected that most or all of the residents/patrons would walk or take transit. Similarly, a significant number of patrons to the office, retail, and hotel uses would use high capacity shuttles, carpools, and vanpools."

Gibson Transportation Consulting, Inc., prepared the attached Table 5 for the Final EIR, reproduced below, to provide a comparison of the trip credits taken by LASED and *Bunker Hill Design for Development Program EIR* (Kaku Associates, Inc., August 2005) with the trip credits assumed for the Project. As shown in the table, the trip generation credits assumed for the Project are typical of those allowed in downtown Los Angeles, and in some cases, such as the hotel, significantly lower (29 percent compared to the 50 percent for Bunker Hill and 61 percent for LASED). It should also be noted that while the LASED and Bunker Hill projects have good transit linkage, the Project has a much higher transit connectivity with three rail lines located directly across the street at the 7th Street/Metro Center station. Therefore, the Project would be expected to have a higher transit mode-split than both the Bunker Hill and LASED projects.

Table 5 clearly shows that the trip generation credits assumed for the Project are consistent with other approved downtown projects and, considering the Project's immediate proximity to rail and bus transit service, could have been justified at even higher levels of credit.

COMMENT 1-2

Current access in and out of 615 S. Figueroa is difficult, especially for the left-in/left-out movements which are fully permitted and necessary for reasonable access to the freeway, and the addition of the Project's 2.5 million square feet ("msf") makes intersections already with failing levels of service ("LOS") significantly worse. Substantial amounts of traffic will be added by the Project without sufficient mitigation proposed. Please see the attached Crain Letter dated December 14, 2010 to Mr. Mark Phillips, incorporated by reference, for more information on this and other traffic impacts. One potential mitigation measure would be to add a traffic signal between Francisco and Figueroa on Wilshire so that easier access can be facilitated. This traffic signal could allow access to the Project site on Wilshire Boulevard and alleviate pressure off Francisco Street. Other access into the Project is essential, such as providing a self-parking entrance/exit on 7th Street and a possible entrance/exit on Figueroa Street.

Response:

Wilshire Boulevard Access

Response to Comment 7-7 of the FEIR addressed issues concerning access on Wilshire Boulevard. As mentioned in Appendix L of the Transportation Study, a driveway on Wilshire Boulevard would:

"result in a direct access onto a Major Secondary Highway (Wilshire Boulevard) therefore violating standards set forth in *Driveway Design Guidelines* (LADOT, February 2003). This driveway would also be in violation of the recently-adopted City of Los Angeles' *Downtown Design Guide* (Los Angeles City Council, April 2009) and *Downtown Street Standards* (Los Angeles City Council, April 2009), and therefore would likely not be approved by LADOT."

Additionally, any ingress provided on Wilshire Boulevard would be restricted to permit only eastbound right-turns to enter the Project Site. Westbound traffic attempting to enter the Project Site from Wilshire Boulevard mid-block between Francisco Street and Figueroa Street would have to turn across the two eastbound left-turn lanes and two westbound through lanes. Therefore, as shown in Figure 21 on Page 115 of the Transportation Study, the ingress on Wilshire Boulevard would provide relief for only 74 net new trips traveling eastbound during the morning peak hour.

If additional inbound access from Wilshire Boulevard were provided as suggested in the comment, eastbound trips would travel through the intersection instead of turning right at the intersection of Francisco Street & Wilshire Boulevard. Since these trips would still be traversing the intersection, a new ingress on Wilshire Boulevard would not relieve traffic at the intersection of Francisco Street & Wilshire Boulevard. The driveway suggested in the comment would reduce the southbound left turn volumes entering the Project driveway on Francisco Street, but as mentioned above, the Francisco Street driveway is expected to have 3 or fewer vehicles queued in the left-turn lane and thus would not impede traffic flow on Francisco Street.

With regards to a new traffic signal on Wilshire Boulevard between Francisco Street and Figueroa Street, this would result in closely-spaced signalized intersections that would not be

permitted by LADOT. In additional, any such signal would decrease the storage spaces for eastbound vehicles on Wilshire Boulevard.

7th Street Access

Response to Comment 7-8 of the FEIR addressed issues concerning access on 7th Street. As mentioned in the response, Project access is already anticipated from 7th Street. The hotel entrance/exit movements will be served on the 7th Street driveway. Similar to other Class A office buildings in downtown Los Angeles, office tenants and visitors would also be given the option of using the valet service at the 7th Street driveway.

The DEIR and the Transportation Study, however, present a conservative analysis in that they assume that all of the office traffic would access the Francisco Street driveway.

With hotel check-in and out, hotel valet activity, and residential and office valet activity taking place in the porte-cochere area in the middle of the block and valet parking ramps to/from the lower parking level at each end of the block, there is very little room to place another driveway along the 7th Street frontage of the Project. Alternate locations for another driveway were investigated and no feasible locations were found. The only places where another driveway may be physically located are at the far east and west ends of the block. However, these locations would not comply with City of Los Angeles design standards for driveway locations (*Driveway Design, Manual of Policies and Procedures*, City of Los Angeles Department of Transportation, February 2003) relative to the intersections and the possible location at the east end of the block would interfere with the heavy pedestrian areas of the 7th Street sidewalk near Figueroa Street.

Figueroa Street Access

Appendix L of the Transportation Study addressed issues concerning access on Figueroa Street. As mentioned in Appendix L:

"The provision of an exit driveway for vehicles from the Project Site onto Figueroa Street between Wilshire Boulevard and 7th Street would violate several adopted design standards. The driveway would cause a break in the sidewalk on Figueroa Street along the Project frontage, resulting in a pedestrian-automobile conflict and potential safety hazards. Additionally, the driveway would also cut across the pedestrian plaza, a key transit-oriented development design feature, proposed on the Project Site. Similar to the driveway on Wilshire Boulevard, the driveway would also result in a direct access onto a Major Secondary Highway (Figueroa Street) therefore violating standards set forth in *Driveway Design Guidelines*. This driveway would also be in violation of the recentlyadopted City of Los Angeles' *Downtown Design Guide* (Los Angeles City Council, April 2009) and *Downtown Street Standards* (Los Angeles City Council, April 2009), and therefore would likely not be approved by LADOT."

COMMENT 1-3

Traffic impacts relating to the Citicorp Phase III project at 755 S. Figueroa Street have not been adequately modeled into the Traffic Study. This related project will utilize the existing driveway on the south side of 7th Street opposite Francisco Street. Other than for minor ambient traffic growth, the Traffic Study had no increase in traffic volume entering or exiting this driveway. The Citicorp Phase III trips should have been appropriately analyzed in order to accurately show level of service conditions and impacts, particularly at this key intersection.

<u>Response</u>: Refer to the response to Comment 5: Related Projects Analysis in Crain & Associates letter dated December 14, 2010.

COMMENT 1-4

The traffic analysis also does not allocate any trips to ancillary hotel, residential, retail and restaurant space. If this area includes any floor area for the retail, office, meeting room, restaurant space, or bars, it must be counted as space with independent trip generating characteristics. Because of the oversizing of the ancillary uses in relation to the hotel and residential components, it is likely that there are components of the Project with trip generating characteristics that have not been analyzed. Without an accurate accounting of the proposed space within the Project, there could be a sizable underestimation of the already significant traffic impacts, and there may be countless additionally impacted intersections.

<u>Response</u>: Ancillary areas support the other land uses within the proposed development, and all such active areas of the development are included in the trip generation table (retail, restaurant, fitness center, etc.). Additional ancillary uses are inherent uses and serve as back-of-house areas associated with and included in hotel, residential, and/or office uses.

COMMENT 1-5

The EIR did not adequately analyze the displacement impacts that the partial construction closure of Francisco Street will have on operations of Brookfield. There is no substantial evidence to support the EIR's conclusion that construction traffic mitigation measure MM-4 mitigates impacts to less-than-significant. In fact, the Traffic Study states that "[a]s shown in the tables, the construction lane closures will result in a temporary, significant impact at the intersection of Figueroa Street and 7th Street based on the significant impact criteria identified in Chapters 1 and 4." See Traffic Study, p. 195. There is no substantial evidence to support how this mitigation measure would reduce the impact to less-than-significant. Instead, this is a significant impact requiring more mitigation.

<u>Response</u>: This impact is a temporary significant impact that has been as identified by the EIR. As noted in the Transportation Study, there is no feasible physical and/or operational mitigation measure to further reduce this temporary construction impact.

COMMENT 1-6

Based on our experience with the 34 thousand square feet ("ksf") Gold's Gym located at 7th+Fig, the Traffic Study also underestimates the traffic impacts of the 20 to 50 ksf proposed fitness center. Because Gold's Gym validates parking in our garage, we know that Gold's Gym generates approximately 2,000 average daily trips ("ADT") for customers who park in our parking garage on a weekday, with the bulk of the fitness center trips occurring during the 6-8 AM and 5-7 PM peak hours on the adjacent roadways. The 2,000 ADTs translate into an ADT rate of approximately 58.8 ADTs per 1 ksf of fitness center. For the Project's up to 50 ksf fitness center, the Traffic Study, after taking all of its trip credits and reductions, applies a very low trip rate of 13.46 ADTs per 1 ksf of fitness center. Based on our own experience in Downtown, the Traffic Study grossly underestimates the trips expected to be generated by the fitness center.

Response: The fitness center proposed as part of the Project is different from the cited Gold's Gym in that it is intended to support on-site residential and hotel patrons rather than drawing all of its patrons from outside of the site. The rate used for the fitness center is appropriate for a fitness center within a mixed-use development in the downtown area, including trips by patrons already located in the building (office tenants, and particularly hotel patrons and residents).

COMMENT 1-7

There are a substantial number of significantly impacted intersections at the periphery of the traffic study that require analysis (i.e., the Traffic Study does not extend far enough to capture all significant Project impacts). Further, there are several heavily traveled intersections in between significantly impacted intersections that need to be examined, because there may be new significant impacts (1) beyond the periphery or (2) between the significantly impacted intersections analyzed, especially once (3) the true size of the Project is analyzed in a revised and recirculated Traffic Study.

Response: The EIR analyzed 42 intersections under the direction of LADOT, and found significant unavoidable impacts at seven of those intersections. This comment does not identify specific intersections that may be impacted, nor evidence that any intersections beyond the 42 analyzed would be affected. As noted in Figure 20 of the Transportation Study, there are only two impacted intersections that may be considered on the periphery of the study area, prior to mitigation. These intersections (#2, Hope Street/US 101 southbound ramps & Temple Street and #33, Grand Avenue & 18th Street) are either freeway ramp locations or provide access from freeway ramps. Sufficient Project traffic does not travel past these two intersections to create a significant impact at other intersections. Therefore, these intersections essentially represent the boundary intersections that the Project traffic would travel through before accessing the freeway. The study area is indeed large enough to capture all of the impacts of Project traffic.

COMMENT 1-8

Traffic mitigation measure MM-3 requires a fair-share contribution to Caltrans for the improvement of the northbound Hollywood Freeway at Grand Avenue. There is no assurance that Caltrans will actually use the money for the proposed improvement. Nor is there any indication as to when, if ever, the improvements will be made. Contributing fees without any commitment that the funds will be used and without any timing proposed does not mitigate the impact to less-than-significant. Thus, this results in a new significant impact.

Response: The EIR includes an analysis of transportation impacts conducted in accordance LADOT-approved methodology and the *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (City of Los Angeles, 2006). The analysis presented in Appendix K of the Transportation Study is a voluntary assessment conducted in consultation with the California Department of Transportation (Caltrans) with respect to Caltrans facilities. As noted on page 144 in Chapter 6 of the Transportation Study, this analysis was conducted for long range planning and informational purposes based on criteria agreed upon with Caltrans. The Caltrans assessment exceeds the requirements of the City of Los Angeles for transportation impact analysis. The assessment analyzed eight freeway segments, five off-ramps, and five on-ramps. The analysis concluded that the US 101 northbound off-ramp at Grand Avenue is expected to exceed the Caltrans standards even under Future without Project conditions, i.e. without the addition of Project traffic. As noted in Caltrans IGR/CEQA branch's assessment letter dated August 18, 2010:

"most freeway facilities (mainline & ramps) in the project vicinity which are currently running congested (LOS E thru F) during AM & PM peaks will continued to do so and worsen by the Wilshire Grand build-out in 2020. This is due to the increased traffic from the ambient growth and other 90 plus related projects."

The identified northbound off-ramp at Grand Avenue is therefore projected to exceed the Caltrans standards on a cumulative basis. Failing regional transportation facilities such as freeways and ramps are the result of contributions of traffic from many sources to such facilities that are operating under undesirably congested conditions. The Caltrans assessment letter identified two "feasible physical improvements (one being I-110 freeway segment in the immediate vicinity of the proposed project and the other a Grand Avenue Off-ramp at NB US 101) that would help relieve some of the congestion." It is neither feasible nor practical for any single project to bear the burden of implementing improvements designed to improve these conditions. As such, fair-share contributions represent the only equitable and feasible improvement measure for addressing such conditions. Caltrans has identified a feasible improvement project that will alleviate the congestion due to future traffic at this off-ramp. The Project's fair-share contribution to the cost of this improvement was determined by Caltrans based on the proportion of project-related traffic at this location. Based on the best information available to Caltrans, this improvement is expected to be constructed prior to the horizon year utilized in the Project's Transportation Study (2020).

COMMENT 1-9

The Traffic Study does not take into account the lower occupancy of 7th+Fig. When counts were done, the shopping center occupancy was very low. By the buildout year, the shopping center should be leased in excess of 90 percent. Therefore, the Traffic Study and the Alternative Analysis included as Appendix G to the Traffic Study underestimate existing and proposed conditions and there may be worse impacts to area roadways than examined in the EIR.

Response: As discussed in the EIR, existing traffic is expected to increase as a result of regional growth and development. Based on historical trends and standard LADOT procedures, an ambient growth factor of 0.75% per year, above and beyond the traffic expected from the 90 identified related projects, was used to adjust the existing traffic volumes to reflect the effects of regional growth and development by the year 2020. The total adjustment applied over the 11-year period for full buildout of the Project (year 2020) was therefore 8.25% and over the 26-year period for the year 2035 was 19.5%. This growth rate accounts for anticipated changes such as that referenced in the comment, particularly because ambient growth in the downtown area has been negative in many recent years, and this ambient growth rate of 0.75% per year more than accounts for any potential development. Analyzing specific traffic growth scenarios for related projects would be speculative and not based on evidence.

COMMENT 1-10

A substantial number of trips will be coming on foot and crossing Figueroa, Wilshire, 7th and Francisco. The impact of the increased pedestrian flow as a result of the Project has not been analyzed. There may be increased traffic delay as a result of heavy pedestrian traffic in the area, and this will likely slow down vehicular movements. The EIR needs to analyze this issue.

<u>Response</u>: Pedestrian impacts were considered in the analysis of the Project. There was substantial analysis of the pedestrian flows at the intersections of Figueroa Street & 7th Street and Figueroa Street & Wilshire Boulevard including even the consideration of a pedestrian grade separation at Figueroa Street & 7th Street. Sidewalk widths and pedestrian plaza areas were studied and reviewed with staff from the City of Los Angeles' Planning Department.

The City's requirement for pedestrian counts as part of the traffic count was instituted on June 7, 2010 after the Project's Notice of Preparations (July 9, 2009 and November 5, 2009) had been issued and the Project's data collection and the Memorandum of Understanding with LADOT had already been completed and LADOT determined that re-counting the intersections to get pedestrian information was not necessary. Pedestrian counts were conducted at the intersections of Figueroa Street & 7th Street as part of the pedestrian grade separation study and at Figueroa Street & Wilshire Boulevard as part of the analysis of the triple left-turn lanes. Pedestrian observations were conducted at the intersections of Francisco Street & Wilshire Boulevard as part of the evaluation of Francisco Street corridor alternatives.

Bicycle counts were not conducted, but observations were made on the four streets surrounding the project site. Bicycle activity in the vicinity of the Project is light today. Bicycle parking will be

provided in the Project's parking garage and bicycle rental will be part of the Mobility Hub included in the Project.

COMMENT 1-11

Mitigation measures are necessary to facilitate and ensure safe pedestrian and vehicular traffic flow. The Project design feature of designing and constructing "... all sidewalks and pedestrian access ways to allow for easy pedestrian flow," is extremely vague and does not take any meaningful steps to ensure the safety of pedestrians.

<u>Response</u>: As stated above in response to Comment 1-10, the Project provides improved sidewalks on all sides of the Project Site as well as a large pedestrian plaza. These features and improvements will provide more than adequate space to accommodate pedestrians who are walking to and from the site. All features will be provided according to LADOT standards and guidelines.

COMMENT 2-1

Only 1,900 parking spaces are proposed for more than 2.5 msf of floor area. The required parking is underestimated since it does not take into account any of the parking demand generated by any of the 25 ksf outdoor dining spaces above the ground floor requested in the outdoor dining zone variance, including the rooftop bars and pool bar.

Response: The 25,000 square feet (sf) of outdoor dining space is part of the 50,000 sf of retail/restaurant analyzed throughout the EIR and therefore included in the parking demand analysis presented in the EIR. The variance requested 25,000 sf of outdoor dining because a specific amount of space needed to be provided in the application. This space is included in the total 50,000 sf of retail and restaurant space and is not an additional, overlooked number.

The comment suggests that the proposed 1,900 parking spaces do not represent an adequate parking supply for the project. The 1,900-space parking supply was determined through a Shared Parking analysis that was based on the nationally accepted Urban Land Institute model and methodology. The Shared Parking study was reviewed and approved by the City of Los Angeles. It has always been the intent of the Project to provide the correct amount of parking that meets the Project needs but still supports and utilizes the transit system serving the Project and the Project's TDM program.

COMMENT 2-2

Because of the vast amount of unallocated ancillary space, we suspect that there will be a greater parking demand. The impacts of inadequate parking will lead to other environmental impacts. Motorists, including busses and limousines, who cannot find parking in the parking garage will search for parking outside the Project site, leading to increased traffic congestion on area roadways. This is an environmental impact that has not been analyzed or mitigated.

Response: Ancillary areas support the other land uses within the proposed development, and all such active areas of the development (retail, restaurant, fitness center, etc.) are included in the parking analysis presented in Chapter 7 of the Transportation Study. Additional ancillary uses are inherent uses which serve as back-of-house areas associated with and included in hotel, residential, and/or office uses.

COMMENT 2-3

7th+Fig will be adversely affected by the Project since we are required to provide low-cost retail parking. Project patrons will park in our parking garage, displacing spaces for shoppers and restaurant patrons. This will also cause new significant impacts to parking, traffic and access as motorists will circle around Downtown streets in order to find cheaper parking. The Project proposes, at a minimum, 50 ksf of retail and restaurants and 20 ksf of fitness center, and with the Land Use Equivalency Program up to 200 ksf of retail, 50 ksf of restaurant and 50 ksf of fitness center. The Project must be conditioned to provide parking at a ratio no less than we are required to provide at 7th+Fig, with the cost not to exceed market rate for retail uses in the Figueroa Street Corridor. The up to 50 ksf fitness center will be a destination gym drawing in customers from many neighborhoods that may not have state-of-the-art fitness facilities. Our experience is that most customers of Gold's Gym park in our garage and do not use the available mass transit alternatives. Adequate parking must be provided for all of these anticipated customers, otherwise the effects of inadequate parking will spill over onto the surrounding streets and roadways. The EIR does not analyze these impacts or mitigate them.

Response: The EIR analyzes the impacts of the Project on parking supply and demand (see page IV.B-50 of the Draft EIR). Additionally, as noted above, the fitness center proposed as part of the Project is intended to support on-site patrons rather than drawing patrons from outside of the site. The rate used for the fitness center is appropriate for a fitness center within a mixed-use development in the downtown area, including trips by patrons already located in the building (office tenants, hotel patrons, residents).

COMMENT 2-4

The parking study is also deficient because it does not take into account any parking contingency to find a parking space with reasonable ease. It is appropriate to provide a circulation contingency of at least five percent for employees who will be routinely present onsite and would be quite familiar with where to find parking. For hotel guests and visitors, it is appropriate to provide a larger parking contingency, as these users are not present on-site every day and may not be as familiar with the facilities as employees. Because there is a shortage based on standard contingency rates, there will be a parking shortage at the Project site.

<u>Response</u>: The parking analysis presented in the EIR is based on LADOT-approved and nationally recognized Urban Land Institute's shared parking model. The Shared Parking analysis shows that only 2-3 hours per day during the 2-3 busiest months of the year will reach the occupancy levels described in the comment. Since the garage will be fully staffed and

include extensive valet operations, the projected occupancy levels are appropriate for this project. Excess parking would undermine the transit service and the TDM program proposed by the Project.

COMMENT 2-5

The shared parking analysis also does not provide sufficient parking because it assumes that the residential and commercial uses will share the same parking spaces, even though there will likely be segregation of these spaces, and therefore, no shared use of these spaces.

Response: Parking for residential uses will be reserved and designated for such uses at a rate of one spaces per residential unit. The only spaces shared between residential and commercial spaces would be guest spaces for the residential uses and parking demand greater than one space per unit. This type of residential sharing has been successful in residential developments in downtown Long Beach and Pasadena. The sharing of residential guest parking has been in effect successfully in Bunker Hill residential projects for decades.

COMMENT 5-8

The Land Use Equivalency Program allows uses to be exchanged on-site depending on PM traffic and VOC emissions, but it may result in new significant impacts that have not been disclosed. AM peak hour traffic impacts must also be examined in the Land Use Equivalency program since AM peak hour traffic patterns and demands are different from PM peak hour traffic and changing the proposed uses may have new significant environmental impacts that have not been analyzed or mitigated. Converting square footage to office uses for example, or to fitness center uses, may create very different impacts on the surrounding roadways during the AM peak hour compared to, for instance, residential and hotel uses. Consequently, the Equivalency Program may under- or over-estimate traffic impacts because the uses being exchanged may have very different impacts in the AM peak hour compared to the evening peak hour.

<u>Response</u>: The predominant impact of Project traffic is on the transportation impact in the afternoon peak hour. Table 14 on page 134 of the Transportation Study shows that the Project (with TDM trip credits) has significant impacts on a total of nine intersections – five in the afternoon peak hour and three in the morning and afternoon peak hour, and only one intersection in the morning peak hour only. Thus, eight of the nine intersections impacted would be covered by the afternoon peak hour trip generation equivalency test.

DLA PIPER APPEAL (JANUARY 14, 2011)

COMMENT II. A. 1.

Protect and preserve 601 S. Figueroa's eastbound egress access to Wilshire Boulevard by the following measures:

a. Create a third shared through/left turn lane on eastbound Wilshire to northbound Figueroa Street;

b. Construct an egress ramp to Figueroa Street directly from the parking garage crossing underneath the Figueroa Street sidewalk;

c. Restrict cars from turning right on northbound Francisco during the evening peak hour at Wilshire Boulevard; and/or

d. Preserve primary southbound access to 725 S. Figueroa and 1000 Wilshire by constructing two southbound lanes and one northbound lane on Francisco Street adjacent to the Project site.

Response: During the analysis of the Project alternate access, improvements a. and b. were tested and evaluated. The triple left-turn lanes at Figueroa Street & Wilshire Boulevard were rejected by LADOT because they resulted in a misalignment of the through lanes in the east-west direction and they required that the signal phasing be modified to provide split phasing for the east-west traffic. The Figueroa Street direct exit from the Project was rejected by City of Los Angeles' Planning Department because of the effects it had on the sidewalk along Figueroa Street because it would be in conflict with the City of Los Angeles' *Downtown Design Guide* and *Downtown Street Standards*.

The Commenter has requested that these two improvements be revisited with slight modifications. In the triple left-turn lane improvement, the third lane would be a shared through/left lane which could help resolve the alignment of the east-west through lanes. The issue of split phasing in the east-west direction would remain.

The direct exit to Figueroa Street even if configured so that it comes onto Figueroa Street parallel to the west curb rather than perpendicular to it would also be in conflict with the City of Los Angeles' *Downtown Design Guide* and *Downtown Street Standards*.

Items c. and d. restrict the capacity of the Francisco Street corridor and create capacity impacts on the 7th Street corridor.

COMMENT II. A. 2.

Add a condition requiring a mezzanine level in the parking garage to accommodate busses, taxis, limos, vanpools, valet, and self-parkers so that there will not be an impact on the surrounding roadways.

Response: Figure 1 illustrates the proposed valet drop-off area on the Project's 7th Street driveway. As shown in the figure, the driveway can accommodate 13 taxis/cars and one bus or 15 taxis/cars without resulting in a spillover queue onto 7th Street or other adjacent roadways. This level of storage available within the Project Site would be more than sufficient to accommodate the Project's valet trips. However, in the event that the valet trips are higher than

what can be accommodated in the driveway, the patrons would be directed to queue on the valet ramps within the parking garage to avoid any queues on 7th Street.

COMMENT II. A. 3.

Add a condition requiring the dedication of a bus drop off on Wilshire Boulevard with no other loading/unloading or parking allowed in this area.

<u>Response</u>: As noted on page 185, Chapter 8 of the Transportation Study, the proposed driveway on Wilshire Boulevard would be used as a drop-off area for shuttles and tour buses. This driveway would not be used for valet operation which would occur on the 7th Street driveway.

As shown in the attached Figure 2, the bus drop-off area on Wilshire Boulevard can accommodate approximately two 40-foot buses or one 40-foot bus and two shuttle vans at once.

COMMENT II. A. 4.

Require a revised Site Plan with a reconfigured hotel loading dock so as to preclude any backing of trucks onto Francisco Street. The proposed hotel loading dock configuration requires trucks to back out onto Francisco Street.

<u>Response</u>: The EIR commits to design the hotel loading dock so as to preclude any backing onto Francisco Street. Additionally, as noted in the LADOT's traffic assessment letter, LADOT has conditioned the Project to ensure that the final site plan takes this into account:

"All delivery truck loading and unloading will take place on site with no vehicles backing into or out of the project site from any adjacent street."

Final implementation of this condition will be to the satisfaction of LADOT.

COMMENT II. A. 5.

Provide a more detailed Site Plan for the 7th Street entrance/exit to show access for busses, multiple lanes for valet, a self-parking lane for the hotel, and adequate space for passenger loading and unloading.

Response: Refer to response to Comment II. A. 2 under the DLA Piper appeal.

COMMENT II. A. 6.

The Project developer and its representatives have stated several times that the Project's gym is intended to support on-site patrons rather than drawing patrons from outside the Project site, but there is no condition or mitigation measure to ensure this. If the gym is truly to support onsite patrons to the exclusion of others, then the Project must be conditioned as such with a corresponding condition/MM. If such a condition/MM is not imposed, the EIR traffic analysis is inadequate.

<u>Response</u>: It is the intent of the Project that the proposed fitness facility/health spa primarily serve the patrons and residents of the Project. Additionally, the rate used for the fitness center is appropriate for a fitness center within a mixed-use development in the downtown area, including trips by patrons already located in the building (office tenants, and particularly hotel patrons and residents).

COMMENT II. B. 1.

Require parking validation for retail/restaurant/fitness center uses at a cost/rate equivalent to 7th and Figueroa so as to preclude Project patrons from parking in Brookfield's retail parking structure at 7th and Figueroa. The rates are as follows: \$1,00 for the first hour or portion thereof, \$1,50 for the second hour or portion thereof and \$1,50 for the third hour or a portion thereof. Prevailing market parking rates for similar Central Business District urban shopping centers served by a parking structure shall be charged for any period that the vehicle is parked beyond such three (3) hour period. See attached Retail Rate Survey. These parking rates shall be required for the first twenty years of operation of the retail/restaurant/fitness center uses.

Response: The visitor parking for the Project will conform to short-term parking rates as dictated by the market. It is very common that visitor parking in the Project area is governed by parking validations that offer parking at a reduced rate for customers of the Project. Since specific retail/restaurant/fitness center tenants are not known at this time, it is impossible for the Applicant to commit to a specific parking fee schedule.

COMMENT II. B. 2.

Provide adequate valet staffing for large conference room events/multiple events so as to mitigate queuing and back up on surrounding roadways that will adversely impact the level of service in the Project area. Require the submission and Department of Planning and Department of Transportation ("DOT") approval of a valet operations parking plan that provides valet services 24 hours per day, seven days per week with adequate staffing during anticipated peak periods.

<u>Response</u>: The hotel operator will provide adequate valet staff and implement a valet operations plan that satisfactorily accommodates large events and simultaneous events. Like most downtown hotel events, the valet parking plan would charge for valet parking on the way

out of the event when "pay on foot" and validations can most easily be implemented, thus speeding up the inbound and outbound traffic flows.

The hotel will provide valet parking service seven days per week, 24 hours per day as requested by the Commenter and it is clearly in the best interest of guest relations that the staffing for that valet service be adequate to accommodate the peak parking demand. The hotel will use industry standard best practices to manage valet services.

COMMENT II. B. 3.

Require the installation of "Park Assist" in the Project's parking garage prior to the issuance of the Certificate of Occupancy for Phase 2. This is necessary to prevent spillover impacts on surrounding roadways and parking lot.

<u>Response</u>: The implementation of a "Park Assist" parking program is most appropriate for a visitor garage where the patrons of the garage are infrequent users of the garage and therefore are not familiar with the operations of the garage or the likely locations of available spaces.

In the case of the project garage, however, the breakdown of the parking users (during the busiest hour of the year) will be:

Visitors	198 spaces
Hotel Guests	141 spaces
Banquet Guests	413 spaces
Project Employees	1,016 spaces
Project Residents	100 spaces
	1,868 spaces

Since most of the hotel and banquet guests will use the valet service, and the residents would have reserved spaces, there are relatively few spaces that would be part of a visitor search patterns. This garage's operating plan would likely have the first parking level dedicated to visitor parking so the need for visitors to search through the entire garage would not be the case and the "Park Assist" system would not be beneficial to them. Repeat customers, like office employees, would quickly learn the garage and would know where the available spaces were located based on the time they enter the garage every day.

In short, the "Park Assist" system is not appropriate for a predominantly employee garage.

COMMENT II. E. 2.

Provide a construction staging plan for Phase 2 that prohibits encroachment into the Wilshire Boulevard right-of-way and other surrounding roadways. The EIR does not analyze any Phase 2 construction staging area and it should be located on-site.

Response: As noted on page 195, Chapter 9 of the Transportation Study, a construction impact analysis that accounts for partial lane closures on Francisco Street has been conducted for the Project. The results of this analysis that have been noted in the EIR and the Transportation Study indicated that the Project would result in a temporary, significant impact at the intersection of Figueroa Street & 7th Street (intersection 19) resulting from the partial lane closures on Francisco Street. The lane closures during construction would not result in a significant impact at any of the other analyzed intersections.

Lane closures during Phase II of the Project would be the same as those noted in Chapter 9 of the Transportation Study. Phase II construction could also potentially result in a temporary, significant impact at the intersection of Figueroa Street & 7th Street. As noted above, this impact has been identified in both the EIR and the Transportation Study.

As noted on page 194, Chapter 9 of the Transportation Study, lane closures on Wilshire Boulevard and Figueroa Street would be limited to:

- The parking lane on the west side of Figueroa Street, along the Project Site, from Wilshire Boulevard to 7th Street during the entire construction period to allow for construction and protected pedestrian access. This would result in a loss of on-street parking on the west side of this section of Figueroa Street. The remaining four travel lanes would remain operational.
- The parking lane on the south side of Wilshire Boulevard, between Figueroa Street and Francisco Street, during the entire construction period. The four travel lanes would remain operational.

While the Transportation Study does include the statement that a lane closure of the parking lane on the south side of Wilshire Boulevard would occur, this should be corrected to state that the existing drop-off area on the south side of Wilshire Boulevard would be utilized for construction staging. The four existing travel lanes on Wilshire Boulevard will remain operational. Therefore, the construction activities would result in the loss of on-street parking but would not result in any traffic lane closures on both Figueroa Street and Wilshire Boulevard.

COMMENT II. E. 7.

Add a mitigation measure requiring that haul trucks avoid Figueroa Street between 7th Street and Wilshire Boulevard and Wilshire Boulevard east of Francisco Street in order to reduce construction related noise at the offices located at 601 and 725 S. Figueroa Street.

Response: As noted on page 192, Chapter 9 of the Transportation Study, haul trucks exiting the Project Site would head northeast on Figueroa Street and take the northbound on-ramp at 5th Street to the SR 110 North, take the I-10 exit toward I-5/Santa Ana/San Bernardino, continue on to US 101 South to SR 60 East, and exit the freeway at Crossroads Parkway (South) to Puente Hills Landfill in Whittier, California. On the return route to the Project Site, the trucks would head toward Crossroads Parkway (South), turn right at Crossroads Parkway (North), take the ramp onto SR 60 West, continue on I-10 West, take the exit for SR 110 North, and exit the

freeway at 9th Street/James M. Wood Boulevard. The trucks would then turn left at Figueroa Street followed by another left at 7th Street and then a right at Francisco Street.

While the trucks are not expected to travel along Wilshire Boulevard, east of Francisco Street, it would not be possible to restrict travel along Figueroa Street between 7th Street and Wilshire Boulevard as Figueroa Street provides access to the freeway ramps. It should be noted that the Applicant would be required to submit a construction management plan to LADOT for approval.

COMMENT II. F. 2.

The City must require the traffic signal contributions prior to the completion of Phase 1 and not defer them to the completion of Phase 2.

<u>Response</u>: Similar to the other elements of the transportation improvement and mitigation program, the phasing of the traffic signal improvements has been approved by LADOT. As noted in LADOT's traffic assessment letter:

"The phasing plan attempts to maintain an appropriate balance between development and corresponding transportation improvements. This phasing plan may be modified in the future to adjust the mitigation sequencing. Any changes to the mitigation phasing plan shall be subject to further review and approval by DOT. All proposed transportation improvements must be funded/completed prior to the issuance of any certificate of occupancy in accordance with the project's phasing plan."

As shown in Table 36 in Chapter 12, page 225 of the Transportation Study, the financial contributions towards the signal improvements would be phased based on the proportionate trip generation of each phase.

COMMENT III. A.

There are potentially significantly impacted intersections in between significantly impacted intersections both within and outside the Traffic Study area that have not been examined and will be exacerbated by double counting of the TDM credit.

Response: The EIR analyzed 42 intersections under the direction of LADOT, and found significant unavoidable impacts at seven of those. This comment does not identify specific intersections that may be impacted, nor evidence that any intersections beyond the 42 analyzed would be affected. As noted in Figure 20 of the Transportation Study, there are only two impacted intersections that may be considered on the periphery of the Study Area, prior to mitigation. These intersections (#2, Hope Street/US 101 southbound ramps & Temple Street and #33, Grand Avenue & 18th Street) are either freeway ramp locations or provide access from freeway ramps. Sufficient Project traffic does not travel past these two intersections to create a significant impact at other intersections. Therefore, these intersections essentially represent the boundary intersections that the Project traffic would travel through before accessing the freeway. The Study Area is large enough to capture all of the impact of Project traffic.

COMMENT III. J.

There is missing analysis of an important Related Project (755 S. Figueroa Street).

<u>Response</u>: Refer to the response to Comment 5: Related Projects Analysis under the Crain & Associates letter.

COMMENT III. K.

There is inadequate parking provided (i.e., gym parking insufficiency, poaching of nearby spaces, and spillover onto surrounding streets).

Response: The Commenter presents no evidence that the Project's parking supply of 1,900 spaces is inadequate. The City of Los Angeles' staff have reviewed and approved the Shared Parking analysis presented in Chapter 7 of the Transportation Study which demonstrates that the proposed 1,900 spaces would indeed be adequate to meet the Project's parking demand. The size of the health club has been reduced in response to the Commenter's concern and there is no evidence presented that the project would result in "poaching" of adjacent parking supplies or spillover onto adjacent streets.

Evenings and weekends will have over 1,000 empty spaces in the Project garage to accommodate banquets, meetings, retail, health club, and restaurant parking demand.

COMMENT III. M.

There are fundamental flaws with the Land Use Equivalency Program (failure to take into account AM peak hour traffic and parking).

Response: The predominant impact of Project traffic is on the transportation impact in the afternoon peak hour. Both background traffic and peak hour traffic generation are higher during the afternoon peak hour than during the morning peak hour. Therefore a land use exchange that would not result in additional traffic impacts during the afternoon peak hour would not result in additional traffic impacts during peak hour.

COMMENT III. P.

There are flaws with the Shared Parking Study.

Response: No specific flaws in the Shared Parking analysis are cited; however, please refer to the responses to comments III. K under the DLA Piper appeal, 4 under the Crain & Associates letter, and 2-1 and 2-4 under the Brookfield Properties Management LLC letter regarding the Project's Shared Parking analysis. Again, the Shared Parking analysis presented in Chapter 7 of the Transportation Study has been reviewed and approved by City of Los Angeles' staff.

COMMENT IV. A. 3.

There was no analysis of the parking, traffic, or public safety impacts associated with the construction (and deconstruction) of a park/plaza, or potential three-story hole in the ground, that would be located in the area of Phase 2.

<u>Response</u>: The construction of the park/plaza was included in the traffic and parking analysis of the project. The park/plaza would be constructed as part of the Phase I Project development and is therefore included in the construction analysis of Phase I. If the construction of Phase II is delayed, the Phase II construction analysis covers that possibility.

COMMENT IV. A. 5.

The Project build-out year is inaccurate. According to the proposed entitlements, the build out year may not occur until after 2030 and this means that 0.75 percent annual growth in regional traffic has not been taken into account in the traffic impacts analysis for the years between 2020 (the year analyzed in the EIR) and the potential full build out year. Further, there has been no interim analysis of impacts with only the completion of Phase 1. It is unclear when MMs would be timed and completed since the MMRP did not contemplate phasing of the Project. If Phase 2 is never built, and mitigation of impacts would occur only upon occupancy of Phase 2, then mitigation of impacts for Phase 1 and many asserted Project benefits would not occur.

<u>Response</u>: As required by LADOT, the Project's traffic impact analysis assumes a buildout year that coincides with the full buildout of the Project, year 2020.

As part of the Project alternatives analysis conducted to comply with CEQA requirements, the EIR does include a Phased Construction Alternative (Alternative 3). The analysis for this alternative essentially presents the interim impact analysis requested by the Commenter. As noted on Page 208, Chapter 12 of the Transportation Study, under this alternative, Phase I of the Project would include the hotel building, followed by the office building in Phase II. As shown in Tables 33 and 34 on pages 222 and 223 of the Transportation Study, Phase I would generate fewer trips than the existing land uses both without and with the TDM credits. Hence, Phase I of the Project would generate no net new trips and therefore, would not result in any significant impacts on both intersections and freeway segments. The mitigation phasing plan presented in Table 36 on page 225 of the Transportation Study, accounts for the potential phasing of the Project.

In the event that Phase II of the Project is never built, no significant unmitigated impacts would occur since Phase I of the Project generates fewer trips than the existing, entitled land uses.

COMMENT IV. B. 1.

Response: Refer to the response to Comment III. J under the DLA Piper appeal.

COMMENT IV. C. 3.

<u>Response</u>: Condition 75 is not a mitigation measure and hence would not result in any new significant impacts. Additionally, condition 75 is duplicative of Mitigation Measure-23.

COMMENT IV. F. 3.

Response: The analysis presented in this section is in response to the recent case *Sunnyvale West Neighborhood Associate v. City of Sunnyvale City Council* (6th App. Dist., December 16, 2010). This analysis measures the Project's traffic impacts on the existing environment. In summary, the results of this analysis show that measuring the Project's traffic impacts on the existing environment does not alter the results of the significant impact analysis presented in the EIR and the Transportation Study, i.e. the Project would not result in any additional residual impacts beyond those already identified in the EIR.

Traffic Projections

The Project-only traffic volumes, without and with the TDM program, illustrated in Figures 16 and 21 on pages 75 and 114 of the Transportation Study, were added to the Existing conditions traffic volumes illustrated in Figure 4 on page 23 of the Transportation Study. The Existing plus Project and Existing plus Project with TDM Program traffic volumes have been illustrated in Figures 6 and 7, respectively.

Traffic Operations

The traffic volumes presented in Figures 6 and 7 were analyzed using the CMA – Planning methodology described in Chapter 2 of the Transportation Study. Detailed LOS worksheets are provided in Attachment A. Since this analysis presents the traffic impacts on the existing environment, none of the future base improvements noted in Chapter 3 of the Transportation Study were taken into account in the analysis.

Existing plus Project Conditions. The Existing plus Project intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 6.

As shown in Table 6, under the Existing plus Project conditions approximately 98% and 88% of the intersections are projected to operate at LOS D or better, and 2% and 12% are projected to operate at LOS E or F during the morning and afternoon peak hours, respectively.

Table 6 also provides a summary of the significant impact analysis, before TDM trip reduction and before any Project-funded transportation improvements, conducted for the 42 study intersections based on the criteria established by LADOT at different levels of service.

During the morning peak hour, the Project is expected to result in a significant impact at two intersections operating at LOS C or LOS D. During the afternoon peak hour, the Project is expected to result in a significant impact at two intersections operating at LOS D, three intersections operating at LOS E, and one intersection operating at LOS F. A total of six of the 42 study intersections are expected to be impacted during the morning and/or afternoon peak

hour, before TDM program and mitigation, under the Existing plus Project conditions. The Project is not expected to result in a significant traffic impact at 36 of the 42 study intersections during either peak hour. The following table summarizes a comparison of the analysis presented in this section and that presented in Chapter 4 for the Future with Project conditions:

INTERSECTION IMPACT SUMMARY BEFORE MITIGATION					
Future with Project – Chapter 4 Existing plus Project					
	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak	
LOS C or LOS D	3	3	2	2	
LOS E	2	3	0	3	
LOS F	0	6	0	1	
Total Intersections	5	12	2	6	
Total Individual Impacted Intersections 14 6					

As shown in the table above, under the Existing plus Project scenario, the Project is not expected to result in any additional and/or different significant intersection impacts, before TDM program and mitigation.

Existing plus Project with TDM Program Conditions. The Existing plus Project with TDM Program scenario includes the TDM program presented in Chapter 5. The Existing plus Project with TDM Program intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 7.

As shown in Table 7, under the Existing plus Project with TDM Program conditions approximately 98% and 88% of the intersections are projected to operate at LOS D or better, and 2% and 12% are projected to operate at LOS E or F during the morning and afternoon peak hours, respectively.

Table 7 also provides a summary of the significant impact analysis, after TDM trip reduction and before any Project-funded transportation improvements, conducted for the 42 study intersections based on the criteria established by LADOT at different levels of service.

During the morning peak hour, the Project is expected to result in a significant impact at one intersection operating at LOS C. During the afternoon peak hour, the Project is expected to result in a significant impact at one intersection operating at LOS D, three intersections operating at LOS E, and one intersection operating at LOS F. A total of 5 of the 42 study intersections are expected to be impacted during the morning and/or afternoon peak hour under the Existing plus Project with TDM Program analysis. The Project is not expected to result in a significant traffic impact at 37 of the 42 study intersections during either peak hour. The following table summarizes a comparison of the analysis presented in this section and that presented in Chapter 5:

INTERSECTION IMPACT SUMMARY BEFORE PROJECT-FUNDED TRANSPORTATION IMPROVEMENTS					
	Future with Project with TDM Program – Chapter 5Existing plus Project with TDM Program				
	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak	
LOS C or LOS D	1	1	1	1	
LOS E	2	2	0	3	
LOS F	0	5	0	1	
Total Intersections	3	8	1	5	
Total Individual Impacted Intersections 9 5					

As shown in the table above, under the Existing plus Project with TDM Program scenario, the Project is not expected to result in any additional and/or different significant intersection impacts, before mitigation.

Existing plus Project with Mitigation Conditions. The Existing plus Project with Mitigation scenario includes all of the transportation improvement and mitigation measures presented in Chapter 5. The Existing plus Project with Mitigation intersection operating conditions for typical weekday morning and afternoon peak hours are shown in Table 8.

As shown in Table 8, under the Existing plus Project with Mitigation conditions approximately 98% and 90% of the intersections are projected to operate at LOS D or better, and 2% and 10% are projected to operate at LOS E or F during the morning and afternoon peak hours, respectively.

Table 8 also provides a summary of the significant impact analysis, after mitigation, conducted for the 42 study intersections based on the criteria established by LADOT at different levels of service.

INTERSECTION IMPACT SUMMARY EXISTING PLUS PROJECT WITH MITIGATION SCENARIO					
Before After TDM and After Mitigation Mitigation (TDM Before TSM (TDM and TSM)					
A.M. Peak Hour	2	1	1		
P.M. Peak Hour	6	5	5		
Total Individual Impacted Intersections 6 5 5					

The analysis summarized above shows that the TDM program and the TSM improvements included in the Project's transportation mitigation program would mitigate one of the two morning peak hour and one of the six afternoon peak hour impacted intersections. The following table summarizes a comparison of the analysis presented in this section and that presented in Chapter 5:

INTERSECTION IMPACT SUMMARY FUTURE WITH PROJECT WITH MITIGATION SCENARIO					
	Future with Project with Mitigation – Chapter 5 Existing plus Project with Mitigation				
	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak	
LOS C or LOS D	1	0	1	2	
LOS E	2	1	0	2	
LOS F	0	5	0	1	
Total Intersections	3	6	1	5	
Total Individual Impacted Intersections 7 5					

As shown in the table above, the Project is not expected to result in any new and/or different residual significant and unavoidable impacts at the analyzed intersections under the Sunnyvale analysis.

COMMENT IV. G.

Response: Refer to the response to Comment III. M under the DLA Piper appeal.

COMMENT IV. K. 1. (a)

Response: Refer to the response to Comment II. A. 1 under the DLA Piper appeal.

COMMENT IV. K. 1. (b)

Response: Refer to the response to Comment II. A. 2 under the DLA Piper appeal.

COMMENT IV. K. 1. (c)

Response: Refer to the response to Comment II. A. 3 under the DLA Piper appeal.

COMMENT IV. K. 1. (d)

Response: Refer to the response to Comment II. A. 4 under the DLA Piper appeal.

COMMENT IV. K. 1. (e)

Response: Refer to the response to Comment II. A. 2 under the DLA Piper appeal.

COMMENT IV. K. 1. (f)

Response: Refer to the response to Comment II. B. 1 under the DLA Piper appeal.

COMMENT IV. K. 1. (g)

Response: Refer to the response to Comment II. B. 2 under the DLA Piper appeal.

COMMENT IV. K. 1. (h)

Response: Refer to the response to Comment II. B. 3 under the DLA Piper appeal.

COMMENT IV. K. 2.

Response: Ancillary areas support the other active land uses within the proposed development, and all such active areas of the development (retail, restaurant, fitness center, etc.) are included in the trip generation analysis presented in Tables 10 and 13 on pages 88 and 133, respectively, of the Transportation Study. Additional ancillary uses are inherent uses and serve as back-of-house areas associated with and included in hotel, residential, and/or office uses. It should be noted that the ancillary areas do not include the meeting room and ballroom areas.

The trip generation estimates for the Project were developed using the trip generation rates identified in the *Trip Generation*, 8th Edition (Institute of Transportation Engineers [ITE], 2008), a national standard. The trip generation rates identified for hotel land uses in the *Trip Generation* handbook include trips generated by meeting and banquet rooms or convention facilities. Therefore, no separate trip estimates were included for the meeting room and ballroom areas within the Project as these trips were already accounted for in the trip generation estimates for the hotel.

The parking demand analysis conducted for the Project is based on typical weekday and weekend rates identified in the *Shared Parking* (Urban Land Institute, 1993). Since the *Shared Parking*, unlike the *Trip Generation* handbook, identifies separate rates for meeting rooms and convention facilities, the parking demand for the meeting room and ballroom areas within the Project were calculated separate from those for the hotel.

COMMENT IV. K. 3.

Response: As noted on page 195, Chapter 9 of the Transportation Study, a construction impact analysis that accounts for partial lane closures on Francisco Street has been conducted for the Project. The results of this analysis that have been noted in the EIR and the Transportation Study indicated that the Project would result in a temporary, significant impact at the intersection of Figueroa Street & 7th Street (intersection 19) resulting from the partial lane closures on Francisco Street. The lane closures during construction would not result in a significant impact at any of the other analyzed intersections.
Lane closures during Phase II of the Project would be the same as those noted in Chapter 9 of the Transportation Study. Phase II construction could also potentially result in a temporary, significant impact at the intersection of Figueroa Street & 7th Street. As noted above, this impact has been identified in both the EIR and the Transportation Study.

As noted on page 194, Chapter 9 of the Transportation Study, lane closures on Wilshire Boulevard and Figueroa Street would be limited to:

- The parking lane on the west side of Figueroa Street, along the Project Site, from Wilshire Boulevard to 7th Street during the entire construction period to allow for construction and protected pedestrian access. This would result in a loss of on-street parking on the west side of this section of Figueroa Street. The remaining four travel lanes would remain operational.
- The parking lane on the south side of Wilshire Boulevard, between Figueroa Street and Francisco Street, during the entire construction period. The four travel lanes would remain operational.

While the Transportation Study does include the statement that a lane closure of the parking lane on the south side of Wilshire Boulevard would occur, this should be corrected to state that the existing drop-off area on the south side of Wilshire Boulevard would be utilized for construction staging. The four existing travel lanes on Wilshire Boulevard will remain operational. Therefore, the construction activities would result in the loss of on-street parking but would not result in any traffic lane closures on both Figueroa Street and Wilshire Boulevard.

COMMENT IV. K. 4.

Response:

Union Avenue & 7th Street – As shown in Figure 15 on page 74 of the Transportation Study, the Project's trip distribution does not assign any traffic on Union Avenue. Therefore, the Project-only trips assigned through the intersection of Union Avenue & 7th Street can be estimated based on the Project-only trips assigned through the intersection of Alvarado Street & 7th Street (#16). As shown in Figure 21 on page 114 of the Transportation Study, a maximum of 24 Project-only trips (through and right-turn movements) are added to one approach in the east-west direction at Alvarado Street & 7th Street during either peak hour. The Project does not add any trips to the north-south direction.

7th Street has two through lanes at its intersection with Union Avenue. Additionally, since this intersection has permitted phasing in all directions, it has a capacity of 1,500 vehicles per hour per lane (vphpl) per CMA methodology. The Project's incremental impact at this intersection would therefore translate into a maximum increase of 0.008 in volume-to-capacity (V/C) ratio. Per LADOT's significant impact criteria, this level of increase would not result in a significant impact even if the intersection was operating at LOS F.

<u>James M. Wood Boulevard west of Downtown</u> – The Project-only trips assigned through the James M. Wood Boulevard corridor west of Downtown can be estimated based on the Project-only trips assigned through the intersection of Francisco Street & James M. Wood

Boulevard/SR 110 northbound off-ramp (#27). As shown in Figure 21 on page 114 of the Transportation Study, the Project does not add any trips to James M. Wood Boulevard. Therefore, the Project would not result in a significant impact at any intersections along the James M. Wood Boulevard corridor west of Downtown.

<u>Union Avenue & Wilshire Boulevard</u> – Recent traffic counts (year 2006) for the intersection of Union Avenue & Wilshire Boulevard were obtained from LADOT. The Future without Project (year 2020) traffic volumes were developed by growing the year 2006 traffic counts at this intersection by an ambient growth rate of 0.75% per year followed by the addition of Related Projects' traffic. The Future with Project with TDM Program (year 2020) traffic volumes were next generated by adding the Project-only traffic volumes, after the TDM Program, to the Future without Project traffic volumes. These traffic volumes were then analyzed using the CMA methodology. Table 9 summarizes the LOS and the significant impact analysis for the intersection for the weekday morning and afternoon peak hours. As shown in the table, the Project does not result in a significant impact at this intersection during either peak hour. Detailed traffic counts and LOS worksheets are provided in Attachment B.

Olympic Boulevard west of Figueroa Street – The Project-only trips assigned through the Olympic Boulevard corridor west of Figueroa Street can be estimated based on the Project-only trips assigned through the intersection of Figueroa Street & Olympic Boulevard (#37). As shown in Figure 21 on page 114 of the Transportation Study, the Project does not add any trips to Olympic Boulevard. Therefore, the Project would not result in a significant impact at any intersections along the Olympic Boulevard corridor west of Figueroa Street.

Olympic Boulevard east of Figueroa Street -

Recent traffic counts (year 2008) were obtained from LADOT for the intersections of:

- Grand Avenue & Olympic Boulevard
- Olive Street & Olympic Boulevard
- Flower Street & Olympic Boulevard

The Future without Project (year 2020) traffic volumes were developed by growing the year 2008 traffic counts at these intersections by an ambient growth rate of 0.75% per year followed by the addition of Related Projects' traffic. The Future with Project with TDM Program (year 2020) traffic volumes were next generated by adding the Project-only traffic volumes, after the TDM Program, to the Future without Project traffic volumes. These traffic volumes were then analyzed using the CMA methodology. Table 9 summarizes the LOS and the significant impact analysis for the above-noted intersections for the weekday morning and afternoon peak hours. As shown in the table, the Project does not result in a significant impact at these intersections during either peak hour. Detailed traffic counts and LOS worksheets are provided in Attachment B.

Hope Street & 1st Street – Recent traffic counts (year 2005) for the intersection of Hope Street & 1st Street were obtained from LADOT. The Future without Project (year 2020) traffic volumes were developed by growing the year 2005 traffic counts at this intersection by an ambient growth rate of 0.75% per year followed by the addition of Related Projects' traffic. The Future with Project with TDM Program (year 2020) traffic volumes were next generated by adding the Project-only traffic volumes, after the TDM Program, to the Future without Project traffic volumes. These traffic volumes were then analyzed using the CMA methodology. In order to

alleviate any potential impact at this intersection, the Applicant or its successor shall install or pay LADOT to provide for design and installation of system loops at this intersection. Therefore, a 1% (a 0.01 improvement in V/C ratio) increase in intersection capacity has been accounted for at this intersection. Table 9 summarizes the LOS and the significant impact analysis for the intersection for the weekday morning and afternoon peak hours. As shown in the table, with the proposed system loops in place, the Project is not expected to result in a significant impact at this intersection during either peak hour. Detailed traffic counts and LOS worksheets are provided in Attachment B.

<u>Hope Street & 2nd Street</u> – The intersection of Hope Street & 2nd Street is a T-intersection with only northbound and westbound movements. Northbound Project-only traffic travels either on Figueroa Street or on Grand Avenue and no Project trips are expected to use northbound Hope Street. Similarly, Project-only trips from the east travel on other major corridors such as 1st Street, Temple Street, and/or 3rd Street instead of traveling on 2nd Street. Therefore, no Project traffic has been assigned to the intersection of Hope Street & 2nd Street and therefore the Project is not expected to result in a significant impact at this intersection during either peak hour.

Figueroa Street & 11th Street – The Project-only trips assigned through the intersection of Figueroa Street & 11th Street can be estimated based on the Project-only trips assigned through the intersection of Figueroa Street & Olympic Boulevard (#37). As shown in Figure 21 on page 114 of the Transportation Study, a maximum of 39 Project-only trips (through and right-turn movements) are added to the northbound approach at Figueroa Street & Olympic Boulevard during either peak hour.

Figueroa Street has three northbound through lanes at its intersection with 11th Street. Additionally, since this intersection has protected phasing in three directions, it has a capacity of 1,375 vphpl per CMA methodology. The Project's incremental impact at this intersection would therefore translate into a maximum increase of 0.009 in V/C ratio. Per LADOT's significant impact criteria, this level of increase would not result in a significant impact even if the intersection was operating at LOS F.

COMMENT IV. K. 5.

<u>Response</u>: The Project's trip generation estimates were prepared in consultation with and approved by LADOT. Additionally, as noted in LADOT's traffic assessment letter, the Project would be required to comply with the trip estimates noted in the EIR as the Project's TDM Program would be required to include:

"an annual trip monitoring and reporting program that sets trip-reduction milestones and a monitoring program to ensure effective participation and compliance with the TDM goals; non-compliance to the trip-reduction goals would lead to financial penalties or may require the implementation of physical transportation improvements."

COMMENT IV. K. 6.

Response: As shown in Tables 10 and 13 in the Transportation Study, the trip generation estimates for the hotel do not include any trip credits due to internal capture with the office land uses. In addition, the internal capture credits assumed for the retail, restaurant, and fitness facility uses are the same as those assumed for the existing land uses and do not account for a higher internal trip capture as a result of the office land use.

As noted in the response to Comment IV. A. 5, an interim traffic impact analysis for Phase I of the Project has been provided as part of the Project alternatives analysis conducted to comply with CEQA requirements, the EIR does include a Phased Construction Alternative (Alternative 3). The analysis for this alternative presents the interim impact analysis requested by the Commenter. As noted on Page 208, Chapter 12 of the Transportation Study, under this alternative, Phase I of the Project would include the hotel building, followed by the office building in Phase II. As shown in Tables 33 and 34 on pages 222 and 223 of the Transportation Study, Phase I would generate fewer trips than the existing land uses both without and with the Transportation Demand Management (TDM) credits. Hence, Phase I of the Project would generate no net new trips and therefore, would not result in any significant impacts on both intersections and freeway segments. The mitigation phasing plan presented in Table 36 on page 225 of the Transportation Study, accounts for the potential phasing of the Project.

COMMENT IV. K. 7.

<u>Response</u>: Pedestrian impacts were considered in the analysis of the Project. There was substantial analysis of the pedestrian flows at the intersections of Figueroa Street & 7th Street and Figueroa Street & Wilshire Boulevard including even the consideration of a pedestrian grade separation at Figueroa Street & 7th Street. Sidewalk widths and pedestrian plaza areas were studied and reviewed with staff from the City of Los Angeles' Planning Department.

The City's requirement for pedestrian counts as part of the traffic count was instituted on June 7, 2010 after the Project's Notice of Preparations (July 9, 2009 and November 5, 2009) had been issued and the Project's data collection and the Memorandum of Understanding with LADOT had already been completed. Therefore, LADOT determined that re-counting the intersections to get pedestrian information was not necessary. Pedestrian counts were conducted at the intersections of Figueroa Street & 7th Street as part of the pedestrian grade separation study and at Figueroa Street & Wilshire Boulevard as part of the analysis of the triple left-turn lanes. Pedestrian observations were conducted at the intersections of Francisco Street & 7th Street and Francisco Street & Wilshire Boulevard as part of the evaluation of Francisco Street corridor alternatives.

Bicycle counts were not conducted, but observations were made on the four streets surrounding the project site. Bicycle activity in the vicinity of the Project is light today. Bicycle parking will be provided in the Project's parking garage and bicycle rental will be part of the Mobility Hub included in the Project.

COMMENT IV. K. 8.

<u>Response</u>: The trip generation and parking demand for the proposed fitness center are appropriate for a downtown project in a mixed-use development setting and therefore the traffic and parking impacts of the land uses within this Project have been adequately addressed.

Code Requirements

As noted on page 171, Chapter 7 of the Transportation Study, the Project's code requirements analysis has been conducted using *Los Angeles Municipal Code* (LAMC) (City of Los Angeles, July 2000 edition, revised February 4, 2010) and *Residential Parking Policy for Division of Land* – *AA 2000-1* (Advisory Agency Policy 2000-1) (Advisory Agency, Los Angeles Planning Department, May 2000). The code requirements used in the analysis are those permitted by Section 12.21A.4(i) of the LAMC which provides parking ratios for land uses within the Downtown Business District:

"For business, commercial or industrial buildings, having a gross floor area of 7,500 square feet or more, at least one parking space for each 1,000 square feet of floor area in said building, exclusive of floor areas used for automobile parking space, for basement storage, or for rooms housing mechanical equipment incidental to the operation of buildings"

The Downtown Business District as identified by Section 12.21A.4(i) of the LAMC includes:

"property located within the area bounded by Pico Boulevard from the Harbor Freeway to Figueroa Street; Figueroa Street from Pico Boulevard to Venice Boulevard; Venice Boulevard from Figueroa Street to Main Street; Sixteenth Street from Main Street to Maple Avenue; Maple Avenue from Sixteenth Street to Olympic Boulevard; Olympic Boulevard from Maple Avenue to San Julian Street; San Julian Street from Olympic Boulevard to Ninth Street; Ninth Street from San Julian Street to Gladys Avenue; Olympic Boulevard from Gladys Avenue to Central Avenue; Central Avenue from Olympic Boulevard to Third Street; Third Street from Central Avenue to Alameda Street; Alameda Street from Third Street to Sunset Boulevard; Sunset Boulevard from Alameda Street to North Broadway; North Broadway from Sunset Boulevard to Temple Street; Temple Street from North Broadway to Hill Street; Hill Street from Temple Street to First Street; First Street from Hill Street to the Harbor Freeway; the Harbor Freeway from First Street to Pico Boulevard."

Demand Requirements

As noted on page 172, Chapter 7 of the Transportation Study, the Project's demand analysis has been conducted using:

"the parking requirements and the adjustment ratios set forth in *Shared Parking*, *Second Edition*."

As shown in Table 27 and 28, on pages 183 and 184, respectively, of the Transportation Study, for the fitness center, the parking demand analysis assumes parking demand ratios of 2.15 spaces per 1,000 sf and 1.25 spaces per 1,000 sf for the weekday and weekend peak times, respectively. Therefore, the demand analysis assumed an even higher ratio than that required by the LAMC.

In summary, the parking analysis conducted for the fitness facility land uses are based on adopted City of Los Angeles and national standards for projects within the downtown area.

COMMENT IV. K. 9.

Response: The EIR includes an analysis of transportation impacts conducted in accordance LADOT-approved methodology and the *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles.* The analysis presented in Appendix K of the Transportation Study is a voluntary assessment conducted in consultation with Caltrans with respect to Caltrans facilities. As noted on page 144 in Chapter 6 of the Transportation Study, this analysis was conducted for long range planning and informational purposes based on criteria agreed upon with Caltrans. The Caltrans assessment exceeds the requirements of the City of Los Angeles for transportation impact analysis. The analysis concluded that the US 101 northbound off-ramp at Grand Avenue is expected to exceed the Caltrans standards even under Future without Project conditions, i.e. without the addition of Project traffic. As noted in Caltrans IGR/CEQA branch's assessment letter dated August 18, 2010:

"most freeway facilities (mainline & ramps) in the project vicinity which are currently running congested (LOS E thru F) during AM & PM peaks will continued to do so and worsen by the Wilshire Grand build-out in 2020. This is due to the increased traffic from the ambient growth and other 90 plus related projects."

The identified northbound off-ramp at Grand Avenue is therefore projected to exceed the Caltrans standards on a cumulative basis. Failing regional transportation facilities such as freeways and ramps are the result of contributions of traffic from many sources to such facilities that are operating under undesirably congested conditions. The Caltrans assessment letter identified two "feasible physical improvements (one being I-110 freeway segment in the immediate vicinity of the proposed project and the other a Grand Avenue Off-ramp at NB US 101) that would help relieve some of the congestion." It is neither feasible nor practical for any single project to bear the burden of implementing improvements designed to improve these conditions. As such, fair-share contributions represent the only equitable and feasible improvement measure for addressing such conditions. Caltrans has identified a feasible improvement project that will alleviate the congestion due to future traffic at this off-ramp. The Project's fair-share contribution to the cost of this improvement was determined by Caltrans based on the proportion of project-related traffic at this location. Based on the best information available to Caltrans, this improvement is expected to be constructed prior to the horizon year utilized in the Project's Transportation Study (2020).

As noted in Appendix K of the Transportation Study, even though the Project does not result in any impacts on the freeway system, the Project is contributing \$1,950,100 towards Caltrans'

Harbor Freeway improvement project. This contribution includes the Project's fair-share contribution towards improvements to the Grand Avenue & US 101 northbound off-ramp.

COMMENT V. B. 3.

<u>Response</u>: The Parking Analysis chapter, Chapter 7 of the Transportation Study contains a discussion of the peripheral parking requirements for the project, citing the reasons why peripheral parking does not apply to the project.

COMMENT V. E. 1.

<u>Response</u>: The Shared Parking analysis included in Chapter 7 of the Transportation Study clearly shows that the 100 spaces for the residential uses are reserved for residents and are not included in the "pool" of shared spaces. The Urban Land Institute's Shared Parking methodology allows consideration of reserved spaces in a shared parking analysis and the evaluation of the Project's parking demand was completed consistent with the Urban Land Institute methodology. The remaining 1,800 spaces however are unreserved.

COMMENT V. E. 2.

Response: Refer to the response to Comment II. B. 3 under the DLA Piper appeal.

COMMENT V. E. 3.

Response: The provision of parking supply to meet the Project's shared parking demand, either under the Project or under a land use exchange permitted under the Land Use Equivalency Program, would be addressed by City approvals related to shared parking, which are based on a shared parking analysis approved by the City. Condition of Approval 12 included in the City Planning Commission's Determination Letter clarifies that this requirement would also be applicable to any changes to the Project of 5% or more. The Condition includes in part:

"In the event the Applicant proposes a build-out project that is at least 5% less floor area than that permitted (5% less than 2,397,304 square feet), then the actual amount of shared parking spaces required shall be proportionately reduced based on square footage and building uses as outlined in Section 12.24 X 20 of the Zoning Code."

This condition would ensure that the Project's parking demand would be accommodated under any potential scenario and impacts would be less than significant. To provide further clarity, an additional condition is recommended as follows:

In the event the Applicant proposes changes to the Project under the Land Use Equivalency Program, a shared parking calculation utilizing the shared parking factors proportionally for each use included in the Project's Transportation Study must be prepared and provided to the Director for approval.

COMMENT V. E. 4.

<u>Response</u>: The requested analysis of parking "poaching" is not a typical element of the DEIR considerations. The Commenter is concerned that his parking supply will be used by Project visitors and tenants because the parking fees at the 7th Street Marketplace will be less than the fees charged at the Project's parking garage.

The EIR analyzes the impacts of the Project on parking supply and demand. In terms of spillover parking, the parking analysis clearly shows that the Project has enough parking to meet its peak parking demand, and therefore there is no reason to believe that spillover parking will be an issue. Visitor parking for the Project will conform to short-term parking rates as dictated by the market. It is very common that visitor parking in the Project area is governed by parking validations that offer parking at a reduced rate for the specific site visited.

TABLE 1 ALTERNATE FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2020) INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.		Intersection	Peak Hour	V/C	LOS
1.	[a]	Grand Avenue & US 101 NB Ramps	A.M. P.M.	0.844 1.025	D F
2.	[a]	Hope Street/US 101 SB Ramps & Temple Street	A.M. P.M.	0.746 0.985	C E
3.	[b]	Figueroa Street & 3rd Street/SR 110 Ramps	A.M. P.M.	0.642 0.978	B E
4.	[a]	Flower Street & 3rd Street	A.M. P.M.	0.595 0.571	A A
5.	[a]	Grand Avenue & 3rd Street	A.M. P.M.	0.387 0.369	A A
6.	[a]	Figueroa Street & 5th Street/SR 110 On-Ramps	A.M. P.M.	0.793 1.084	C F
7.	[a]	Flower Street & 5th Street	A.M. P.M.	0.296 0.369	A A
8.	[a]	Figueroa Street & 6th Street/SR 110 Off-Ramps	A.M. P.M.	0.713 0.940	C E
9.	[a]	Flower Street & 6th Street	A.M. P.M.	0.381 0.403	A A
10.	[a]	Alvarado Street & Wilshire Boulevard	A.M. P.M.	0.645 0.693	B B
11.	[a]	Beaudry Avenue & Wilshire Boulevard	A.M. P.M.	0.660 0.530	B A
12.	[a]	Francisco Street & Wilshire Boulevard	A.M. P.M.	0.597 0.509	A A
13.	[a]	Figueroa Street & Wilshire Boulevard	A.M. P.M.	0.909 1.191	ЕF
14.	[a]	Flower Street & Wilshire Boulevard	A.M. P.M.	0.693 0.729	B C
15.	[a]	Grand Avenue & Wilshire Boulevard	A.M. P.M.	0.260 0.376	A A
16.	[a]	Alvarado Street & 7th Street	A.M. P.M.	0.383 0.459	A A
17.	[a]	Bixel Street & 7th Street	A.M. P.M.	0.751 1.043	C F
18.	[a]	Francisco Street & 7th Street	A.M. P.M.	0.488 0.550	A A
19.	[a]	Figueroa Street & 7th Street	A.M. P.M.	0.847 1.096	D F
20.	[a]	Flower Street & 7th Street	A.M. P.M.	0.373 0.759	A C
21.	[a]	Olive Street & 7th Street	A.M. P.M.	0.335 0.506	A A

Note:

[[]a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 1 (continued)ALTERNATE FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2020)INTERSECTION PEAK HOUR LEVELS OF SERVICE

No.		Intersection	Peak Hour	V/C	LOS
22.	[a]	Alameda Street & 7th Street	A.M. P.M.	0.746 0.784	C C
23.	[a]	Soto Street & 7th Street	A.M. P.M.	0.722 0.736	C C
24.	[a]	Bixel Street/SR 110 SB On-Ramp & 8th Street	A.M. P.M.	0.864 1.084	D F
25.	[a]	Figueroa Street & 8th Street	A.M. P.M.	0.956 0.930	E E
26.	[a]	Flower Street & 8th Street	A.M. P.M.	0.390 0.579	A A
27.	[a]	Francisco Street & James M. Wood Boulevard/SR 110 NB Off-Ramp	A.M. P.M.	0.593 0.559	A A
28.	[a]	Figueroa Street & James M. Wood Boulevard/9th Street	A.M. P.M.	0.643 0.537	B A
29.	[a]	Cherry Street & Pico Boulevard	A.M. P.M.	0.584 0.716	A C
30.	[a]	Figueroa Street & Pico Boulevard	A.M. P.M.	0.598 0.673	A B
31.	[a]	Hoover Street & Alvarado Street/Alvarado Terrace	A.M. P.M.	0.439 0.575	A A
32.	[a]	Flower Street & Venice Boulevard	A.M. P.M.	0.216 0.452	A A
33.	[a]	Grand Avenue & 18th Street	A.M. P.M.	0.476 0.678	A B
34.	[a]	Olive Street & 6th Street	A.M. P.M.	0.259 0.399	A A
35.	[a]	Hope Street & 7th Street	A.M. P.M.	0.359 0.478	A A
36.	[a]	Grand Avenue & 7th Street	A.M. P.M.	0.390 0.475	A A
37.	[a]	Figueroa Street & Olympic Boulevard	A.M. P.M.	0.825 0.984	D E
38.	[a]	Glendale Boulevard & Temple Street	A.M. P.M.	1.063 1.283	FF
39.	[a]	Glendale Boulevard/Lucas Avenue & Beverly Boulevard/1st Street/2nd Street	A.M. P.M.	0.667 0.766	B C
40.	[a]	Lucas Avenue & 3rd Street	A.M. P.M.	0.701 0.573	C A
41.	[a]	Lucas Avenue & 6th Street	A.M. P.M.	0.841 0.711	D C
42.	[a]	Lucas Avenue & Wilshire Boulevard	A.M. P.M.	0.707 0.944	C E

Note:

[[]a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 1 (continued)ALTERNATE FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2020)INTERSECTION PEAK HOUR LEVELS OF SERVICE SUMMARY

	Interse	ections
Level of Service	A.M. Peak Hour	P.M. Peak Hour
A	20	19
В	6	3
С	8	7
D	5	0
E	2	6
F	1	7
Total	42	42

TABLE 2 ALTERNATE FUTURE WITH PROJECT CONDITIONS - BEFORE MITIGATION (YEAR 2020) INTERSECTION PEAK HOUR LEVELS OF SERVICE

N		hatara di se	Deskiller	Future with	out Project		Future with Proje	ct, Before Mitigati	on
NO.		Intersection	Peak Hour	v/c	LOS	V/C	LOS	Change in V/C	Significant Impact?
1.	[a]	Grand Avenue & US 101 NB Ramps	A.M. P.M.	0.844 1.025	D F	0.854 1.026	D F	0.010 0.001	NO NO
2.	[a]	Hope Street/US 101 SB Ramps & Temple Street	A.M. P.M.	0.746 0.985	C E	0.746 1.009	C F	0.000 0.024	NO YES
3.	[a]	Figueroa Street & 3rd Street/SR 110 Ramps	A.M. P.M.	0.642 0.978	B E	0.643 0.990	B E	0.001 0.012	NO YES
4.	[a]	Flower Street & 3rd Street	A.M. P.M.	0.595 0.571	A A	0.636 0.571	B A	0.041 0.000	NO NO
5.	[a]	Grand Avenue & 3rd Street	A.M. P.M.	0.387 0.369	A A	0.409 0.372	A A	0.022 0.003	NO NO
6.	[a]	Figueroa Street & 5th Street/SR 110 On-Ramps	A.M. P.M.	0.793 1.084	C F	0.799 1.134	C F	0.006 0.050	NO YES
7.	[a]	Flower Street & 5th Street	A.M. P.M.	0.296 0.369	A A	0.318 0.371	A A	0.022 0.002	NO NO
8.	[a]	Figueroa Street & 6th Street/SR 110 Off-Ramps	A.M. P.M.	0.713 0.940	C E	0.723 1.005	C F	0.010 0.065	NO YES
9.	[a]	Flower Street & 6th Street	A.M. P.M.	0.381 0.403	A A	0.405 0.412	A A	0.024 0.009	NO NO
10.	[a]	Alvarado Street & Wilshire Boulevard	A.M. P.M.	0.645 0.693	B B	0.655 0.711	B C	0.010 0.018	NO NO
11.	[a]	Beaudry Avenue & Wilshire Boulevard	A.M. P.M.	0.660 0.530	B A	0.696 0.532	B A	0.036 0.002	NO NO
12.	[a]	Francisco Street & Wilshire Boulevard	A.M. P.M.	0.597 0.509	A A	0.774 0.728	СС	0.177 0.219	YES YES
13.	[a]	Figueroa Street & Wilshire Boulevard	A.M. P.M.	0.909 1.191	E F	0.975 1.372	E F	0.066 0.181	YES YES
14.	[a]	Flower Street & Wilshire Boulevard	A.M. P.M.	0.693 0.729	B C	0.807 0.729	D C	0.114 0.000	YES NO
15.	[a]	Grand Avenue & Wilshire Boulevard	A.M. P.M.	0.260 0.376	A A	0.275 0.395	A A	0.015 0.019	NO NO
16.	[a]	Alvarado Street & 7th Street	A.M. P.M.	0.383 0.459	A A	0.393 0.470	A A	0.010 0.011	NO NO
17.	[a]	Bixel Street & 7th Street	A.M. P.M.	0.751 1.043	C F	0.775 1.105	C F	0.024 0.062	NO YES
18.	[a]	Francisco Street & 7th Street	A.M. P.M.	0.488 0.550	A A	0.561 0.712	A C	0.073 0.162	NO YES
19.	[a]	Figueroa Street & 7th Street	A.M. P.M.	0.847 1.096	D F	0.993 1.152	E F	0.146 0.056	YES YES
20.	[a]	Flower Street & 7th Street	A.M. P.M.	0.373 0.759	A C	0.387 0.830	A D	0.014 0.071	NO YES
21.	[a]	Olive Street & 7th Street	A.M. P.M.	0.335 0.506	A A	0.378 0.534	A A	0.043 0.028	NO NO

[a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 2 (continued) ALTERNATE FUTURE WITH PROJECT CONDITIONS - BEFORE MITIGATION (YEAR 2020) INTERSECTION PEAK HOUR LEVELS OF SERVICE

N.		ladare d'an	Dealetterr	Future with	nout Project		Future with Proje	ct, Before Mitigati	on
NO.		Intersection	Peak Hour	v/c	LOS	V/C LOS		Change in V/C	Significant Impact?
22.	[a]	Alameda Street & 7th Street	A.M. P.M.	0.746 0.784	C C	0.776 0.805	C D	0.030 0.021	NO YES
23.	[a]	Soto Street & 7th Street	A.M. P.M.	0.722 0.736	C C	0.733 0.738	C C	0.011 0.002	NO NO
24.	[a]	Bixel Street/SR 110 SB On-Ramp & 8th Street	A.M. P.M.	0.864 1.084	D F	0.867 1.119	D F	0.003 0.035	NO YES
25.	[a]	Figueroa Street & 8th Street	A.M. P.M.	0.956 0.930	E	0.956 0.934	E	0.000 0.004	NO NO
26.	[a]	Flower Street & 8th Street	A.M. P.M.	0.390 0.579	A A	0.390 0.579	A A	0.000 0.000	NO NO
27.	[a]	Francisco Street & James M. Wood Boulevard/SR 110 NB Off-Ramp	A.M. P.M.	0.593 0.559	A A	0.630 0.563	B A	0.037 0.004	NO NO
28.	[a]	Figueroa Street & James M. Wood Boulevard/9th Street	A.M. P.M.	0.643 0.537	B A	0.670 0.541	B A	0.027 0.004	NO NO
29.	[a]	Cherry Street & Pico Boulevard	A.M. P.M.	0.584 0.716	A C	0.584 0.716	A C	0.000 0.000	NO NO
30.	[a]	Figueroa Street & Pico Boulevard	A.M. P.M.	0.598 0.673	A B	0.605 0.677	B B	0.007 0.004	NO NO
31.	[a]	Hoover Street & Alvarado Street/Alvarado Terrace	A.M. P.M.	0.439 0.575	A A	0.439 0.575	A A	0.000 0.000	NO NO
32.	[a]	Flower Street & Venice Boulevard	A.M. P.M.	0.216 0.452	A A	0.217 0.466	A A	0.001 0.014	NO NO
33.	[a]	Grand Avenue & 18th Street	A.M. P.M.	0.476 0.678	A B	0.486 0.722	A C	0.010 0.044	NO YES
34.	[a]	Olive Street & 6th Street	A.M. P.M.	0.259 0.399	A A	0.259 0.439	A A	0.000 0.040	NO NO
35.	[a]	Hope Street & 7th Street	A.M. P.M.	0.359 0.478	A A	0.425 0.490	A A	0.066 0.012	NO NO
36.	[a]	Grand Avenue & 7th Street	A.M. P.M.	0.390 0.475	A A	0.455 0.491	A A	0.065 0.016	NO NO
37.	[a]	Figueroa Street & Olympic Boulevard	A.M. P.M.	0.825 0.984	D E	0.847 0.987	D E	0.022 0.003	YES NO
38.	[a]	Glendale Boulevard & Temple Street	A.M. P.M.	1.063 1.283	F F	1.063 1.288	F	0.000 0.005	NO NO
39.	[a]	Glendale Boulevard/Lucas Avenue & Beverly Boulevard/1st Street/2nd Street	A.M. P.M.	0.667 0.766	B C	0.667 0.771	B C	0.000 0.005	NO NO
40.	[a]	Lucas Avenue & 3rd Street	A.M. P.M.	0.701 0.573	C A	0.737 0.578	C A	0.036 0.005	NO NO
41.	[a]	Lucas Avenue & 6th Street	A.M. P.M.	0.841 0.711	D C	0.785 0.742	C C	-0.056 0.031	NO NO
42.	[a]	Lucas Avenue & Wilshire Boulevard	A.M. P.M.	0.707 0.944	C E	0.732 0.960	C E	0.025 0.016	NO YES

Note: [a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 2 (continued)ALTERNATE FUTURE WITH PROJECT CONDITIONS - BEFORE MITIGATION (YEAR 2020)

INTERSEC	TION IMPACT SUMMARY	
Level of Service	A.M. Peak Hour	P.M. Peak Hour
C	1	3
D	2	2
E	2	2
F	0	7
Total Peak Hour Impacts	5	14
Total Individual Intersections Impacted	1	6

TABLE 3ALTERNATE FUTURE WITH PROJECT WITH TDM PROGRAM CONDITIONS (YEAR 2020)INTERSECTION PEAK HOUR LEVELS OF SERVICE

	No. Intersection		Future with	nout Project	I	Future with Proje	ect, Before Mitigati	on	F	Future with Proje	ect with TDM Progr	am
NO.	Intersection	Peak Hour	V/C	LOS	V/C	LOS	Change in V/C	Significant Impact?	v/c	LOS	Change in V/C	Significant Impact?
1. [a]	Grand Avenue &	A.M.	0.844	D	0.854	D	0.010	NO	0.851	D	0.007	NO
	US 101 NB Ramps	P.M.	1.025	F	1.026	F	0.001	NO	1.025	F	0.000	NO
2. [a]	Hope Street/US 101 SB Ramps &	A.M.	0.746	C	0.746	C	0.000	NO	0.746	C	0.000	NO
	Temple Street	P.M.	0.985	E	1.009	F	0.024	YES	1.000	E	0.015	YES
3. [a]	Figueroa Street &	A.M.	0.642	B	0.643	B	0.001	NO	0.642	B	0.000	NO
	3rd Street/SR 110 Ramps	P.M.	0.978	E	0.990	E	0.012	YES	0.986	E	0.008	NO
4. [a]	Flower Street &	A.M.	0.595	A	0.636	B	0.041	NO	0.623	B	0.028	NO
	3rd Street	P.M.	0.571	A	0.571	A	0.000	NO	0.571	A	0.000	NO
5. [a]	Grand Avenue &	A.M.	0.387	A	0.409	A	0.022	NO	0.402	A	0.015	NO
	3rd Street	P.M.	0.369	A	0.372	A	0.003	NO	0.370	A	0.001	NO
6. [a]	Figueroa Street &	A.M.	0.793	C	0.799	C	0.006	NO	0.796	C	0.003	NO
	5th Street/SR 110 On-Ramps	P.M.	1.084	F	1.134	F	0.050	YES	1.119	F	0.035	YES
7. [a]	Flower Street &	A.M.	0.296	A	0.318	A	0.022	NO	0.311	A	0.015	NO
	5th Street	P.M.	0.369	A	0.371	A	0.002	NO	0.369	A	0.000	NO
8. [a]	Figueroa Street &	A.M.	0.713	C	0.723	C	0.010	NO	0.719	C	0.006	NO
	6th Street/SR 110 Off-Ramps	P.M.	0.940	E	1.005	F	0.065	YES	0.985	E	0.045	YES
9. [a]	Flower Street &	A.M.	0.381	A	0.405	A	0.024	NO	0.397	A	0.016	NO
	6th Street	P.M.	0.403	A	0.412	A	0.009	NO	0.408	A	0.005	NO
10. [a]	Alvarado Street &	A.M.	0.645	B	0.655	B	0.010	NO	0.651	B	0.006	NO
	Wilshire Boulevard	P.M.	0.693	B	0.711	C	0.018	NO	0.705	C	0.012	NO
11. [a]	Beaudry Avenue &	A.M.	0.660	B	0.696	B	0.036	NO	0.683	B	0.023	NO
	Wilshire Boulevard	P.M.	0.530	A	0.532	A	0.002	NO	0.529	A	-0.001	NO
12. [a]	Francisco Street &	A.M.	0.597	A	0.774	C	0.177	YES	0.709	C	0.112	YES
	Wilshire Boulevard	P.M.	0.509	A	0.728	C	0.219	YES	0.639	B	0.130	NO
13. [a]	Figueroa Street &	A.M.	0.909	E	0.975	E	0.066	YES	0.946	E	0.037	YES
	Wilshire Boulevard	P.M.	1.191	F	1.372	F	0.181	YES	1.312	F	0.121	YES
14. [a]	Flower Street &	A.M.	0.693	B	0.807	D	0.114	YES	0.768	C	0.075	YES
	Wilshire Boulevard	P.M.	0.729	C	0.729	C	0.000	NO	0.713	C	-0.016	NO
15. [a]	Grand Avenue &	A.M.	0.260	A	0.275	A	0.015	NO	0.271	A	0.011	NO
	Wilshire Boulevard	P.M.	0.376	A	0.395	A	0.019	NO	0.389	A	0.013	NO
16. [a]	Alvarado Street &	A.M.	0.383	A	0.393	A	0.010	NO	0.389	A	0.006	NO
	7th Street	P.M.	0.459	A	0.470	A	0.011	NO	0.467	A	0.008	NO
17. [a]	Bixel Street &	A.M.	0.751	C	0.775	C	0.024	NO	0.766	C	0.015	NO
	7th Street	P.M.	1.043	F	1.105	F	0.062	YES	1.085	F	0.042	YES
18. [a]	Francisco Street &	A.M.	0.488	A	0.561	A	0.073	NO	0.513	A	0.025	NO
	7th Street	P.M.	0.550	A	0.712	C	0.162	YES	0.653	B	0.103	NO
19. [a]	Figueroa Street &	A.M.	0.847	D	0.993	E	0.146	YES	0.950	E	0.103	YES
	7th Street	P.M.	1.096	F	1.152	F	0.056	YES	1.132	F	0.036	YES
20. [a]	Flower Street &	A.M.	0.373	A	0.387	A	0.014	NO	0.381	A	0.008	NO
	7th Street	P.M.	0.759	C	0.830	D	0.071	YES	0.807	D	0.048	YES
21. [a]	Olive Street &	A.M.	0.335	A	0.378	A	0.043	NO	0.364	A	0.029	NO
	7th Street	P.M.	0.506	A	0.534	A	0.028	NO	0.524	A	0.018	NO

Note:

[[]a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 3 (continued)ALTERNATE FUTURE WITH PROJECT WITH TDM PROGRAM CONDITIONS (YEAR 2020)INTERSECTION PEAK HOUR LEVELS OF SERVICE

			Future with	nout Project		Future with Proje	ect, Before Mitigati	on	Future with Project with TDM Program			
NO.	Intersection	Peak Hour	V/C	LOS	v/c	LOS	Change in V/C	Significant Impact?	V/C	LOS	Change in V/C	Significant Impact?
22. [a]	Alameda Street &	A.M.	0.746	C	0.776	C	0.030	NO	0.767	C	0.021	NO
	7th Street	P.M.	0.784	C	0.805	D	0.021	YES	0.797	C	0.013	NO
23. [a]	Soto Street &	A.M.	0.722	C	0.733	C	0.011	NO	0.729	C	0.007	NO
	7th Street	P.M.	0.736	C	0.738	C	0.002	NO	0.737	C	0.001	NO
24. [a	Bixel Street/SR 110 SB On-Ramp &	A.M.	0.864	D	0.867	D	0.003	NO	0.865	D	0.001	NO
	8th Street	P.M.	1.084	F	1.119	F	0.035	YES	1.108	F	0.024	YES
25. [a	Figueroa Street & 8th Street	A.M. P.M.	0.956 0.930	E	0.956 0.934	E	0.000 0.004	NO NO	0.956 0.931	E	0.000 0.001	NO NO
26. [a	Flower Street &	A.M.	0.390	A	0.390	A	0.000	NO	0.390	A	0.000	NO
	8th Street	P.M.	0.579	A	0.579	A	0.000	NO	0.579	A	0.000	NO
27. [a]	Francisco Street &	A.M.	0.593	A	0.630	B	0.037	NO	0.618	B	0.025	NO
	James M. Wood Boulevard/SR 110 NB Off-Ramp	P.M.	0.559	A	0.563	A	0.004	NO	0.560	A	0.001	NO
28. [a	Figueroa Street &	A.M.	0.643	B	0.670	B	0.027	NO	0.661	B	0.018	NO
	James M. Wood Boulevard/9th Street	P.M.	0.537	A	0.541	A	0.004	NO	0.539	A	0.002	NO
29. [a	Cherry Street &	A.M.	0.584	A	0.584	A	0.000	NO	0.584	A	0.000	NO
	Pico Boulevard	P.M.	0.716	C	0.716	C	0.000	NO	0.716	C	0.000	NO
30. [a	Figueroa Street &	A.M.	0.598	A	0.605	B	0.007	NO	0.603	B	0.005	NO
	Pico Boulevard	P.M.	0.673	B	0.677	B	0.004	NO	0.675	B	0.002	NO
31. [a]	Hoover Street &	A.M.	0.439	A	0.439	A	0.000	NO	0.439	A	0.000	NO
	Alvarado Street/Alvarado Terrace	P.M.	0.575	A	0.575	A	0.000	NO	0.575	A	0.000	NO
32. [a]	Flower Street &	A.M.	0.216	A	0.217	A	0.001	NO	0.217	A	0.001	NO
	Venice Boulevard	P.M.	0.452	A	0.466	A	0.014	NO	0.461	A	0.009	NO
33. [a]	Grand Avenue &	A.M.	0.476	A	0.486	A	0.010	NO	0.482	A	0.006	NO
	18th Street	P.M.	0.678	B	0.722	C	0.044	YES	0.708	C	0.030	NO
34. [a]	Olive Street &	A.M.	0.259	A	0.259	A	0.000	NO	0.259	A	0.000	NO
	6th Street	P.M.	0.399	A	0.439	A	0.040	NO	0.435	A	0.036	NO
35. [a]	Hope Street &	A.M.	0.359	A	0.425	A	0.066	NO	0.405	A	0.046	NO
	7th Street	P.M.	0.478	A	0.490	A	0.012	NO	0.483	A	0.005	NO
36. [a	Grand Avenue &	A.M.	0.390	A	0.455	A	0.065	NO	0.434	A	0.044	NO
	7th Street	P.M.	0.475	A	0.491	A	0.016	NO	0.483	A	0.008	NO
37. [a]	Figueroa Street &	A.M.	0.825	D	0.847	D	0.022	YES	0.840	D	0.015	NO
	Olympic Boulevard	P.M.	0.984	E	0.987	E	0.003	NO	0.985	E	0.001	NO
38. [a]	Glendale Boulevard &	A.M.	1.063	F	1.063	F	0.000	NO	1.063	F	0.000	NO
	Temple Street	P.M.	1.283	F	1.288	F	0.005	NO	1.287	F	0.004	NO
39. [a]	Glendale Boulevard/Lucas Avenue &	A.M.	0.667	B	0.667	B	0.000	NO	0.667	B	0.000	NO
	Beverly Boulevard/1st Street/2nd Street	P.M.	0.766	C	0.771	C	0.005	NO	0.770	C	0.004	NO
40. [a]	Lucas Avenue &	A.M.	0.701	C	0.737	C	0.036	NO	0.701	C	0.000	NO
	3rd Street	P.M.	0.573	A	0.578	A	0.005	NO	0.577	A	0.004	NO
41. [a]	Lucas Avenue &	A.M.	0.841	D	0.785	C	-0.056	NO	0.848	D	0.007	NO
	6th Street	P.M.	0.711	C	0.742	C	0.031	NO	0.733	C	0.022	NO
42. [a]	Lucas Avenue &	A.M.	0.707	C	0.732	C	0.025	NO	0.723	C	0.016	NO
	Wilshire Boulevard	P.M.	0.944	E	0.960	E	0.016	YES	0.953	E	0.009	NO

Note:

[[]a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 3 (continued) ALTERNATE FUTURE WITH PROJECT WITH TDM PROGRAM CONDITIONS (YEAR 2020)

	INTERSECTION IMPACT SUMMARY										
Lovel of Service	Before N	litigation	With TDM								
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour							
С	1	3	2	0							
D	2	2	0	1							
E	2	2	2	2							
F	0	7	0	5							
Total Peak Hour Impacts	5	14	4	8							
Total Individual Intersections Impacted	1	6	10								

TABLE 4ALTERNATE FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2020)INTERSECTION PEAK HOUR LEVELS OF SERVICE

		Dest Harr	Future with	nout Project	Future wit	h Project with TI	OM Program, Befo	re Mitigation	Future with Project with Mitigati		ject with Mitigation	n
NO.	Intersection	Peak Hour	V/C	LOS	V/C	LOS	Change in V/C	Significant Impact?	V/C	LOS	Change in V/C	Significant Impact?
1. [a]	Grand Avenue &	A.M.	0.844	D	0.851	D	0.007	NO	0.851	D	0.007	NO
	US 101 NB Ramps	P.M.	1.025	F	1.025	F	0.000	NO	1.025	F	0.000	NO
2. [a]	Hope Street/US 101 SB Ramps &	A.M.	0.746	C	0.746	C	0.000	NO	0.736	C	-0.010	NO
	Temple Street	P.M.	0.985	E	1.000	E	0.015	YES	0.990	E	0.005	NO
3. [a]	Figueroa Street &	A.M.	0.642	B	0.642	B	0.000	NO	0.642	B	0.000	NO
	3rd Street/SR 110 Ramps	P.M.	0.978	E	0.986	E	0.008	NO	0.986	E	0.008	NO
4. [a]	Flower Street &	A.M.	0.595	A	0.623	B	0.028	NO	0.613	B	0.018	NO
	3rd Street	P.M.	0.571	A	0.571	A	0.000	NO	0.561	A	-0.010	NO
5. [a]	Grand Avenue &	A.M.	0.387	A	0.402	A	0.015	NO	0.402	A	0.015	NO
	3rd Street	P.M.	0.369	A	0.370	A	0.001	NO	0.370	A	0.001	NO
6. [a]	Figueroa Street &	A.M.	0.793	C	0.796	C	0.003	NO	0.786	C	-0.007	NO
	5th Street/SR 110 On-Ramps	P.M.	1.084	F	1.119	F	0.035	YES	1.109	F	0.025	YES
7. [a]	Flower Street &	A.M.	0.296	A	0.311	A	0.015	NO	0.301	A	0.005	NO
	5th Street	P.M.	0.369	A	0.369	A	0.000	NO	0.359	A	-0.010	NO
8. [a]	Figueroa Street &	A.M.	0.713	C	0.719	C	0.006	NO	0.709	C	-0.004	NO
	6th Street/SR 110 Off-Ramps	P.M.	0.940	E	0.985	E	0.045	YES	0.975	E	0.035	YES
9. [a]	Flower Street &	A.M.	0.381	A	0.397	A	0.016	NO	0.387	A	0.006	NO
	6th Street	P.M.	0.403	A	0.408	A	0.005	NO	0.398	A	-0.005	NO
10. [a]	Alvarado Street &	A.M.	0.645	B	0.651	B	0.006	NO	0.651	B	0.006	NO
	Wilshire Boulevard	P.M.	0.693	B	0.705	C	0.012	NO	0.705	C	0.012	NO
11. [a]	Beaudry Avenue &	A.M.	0.660	B	0.683	B	0.023	NO	0.673	B	0.013	NO
	Wilshire Boulevard	P.M.	0.530	A	0.529	A	-0.001	NO	0.519	A	-0.011	NO
12. [a]	Francisco Street &	A.M.	0.597	A	0.709	C	0.112	YES	0.699	B	0.102	NO
	Wilshire Boulevard	P.M.	0.509	A	0.639	B	0.130	NO	0.629	B	0.120	NO
13. [a]	Figueroa Street &	A.M.	0.909	E	0.946	E	0.037	YES	0.936	E	0.027	YES
	Wilshire Boulevard	P.M.	1.191	F	1.312	F	0.121	YES	1.302	F	0.111	YES
14. [a]	Flower Street &	A.M.	0.693	B	0.768	C	0.075	YES	0.758	C	0.065	YES
	Wilshire Boulevard	P.M.	0.729	C	0.713	C	-0.016	NO	0.703	C	-0.026	NO
15. [a]	Grand Avenue &	A.M.	0.260	A	0.271	A	0.011	NO	0.261	A	0.001	NO
	Wilshire Boulevard	P.M.	0.376	A	0.389	A	0.013	NO	0.379	A	0.003	NO
16. [a]	Alvarado Street &	A.M.	0.383	A	0.389	A	0.006	NO	0.389	A	0.006	NO
	7th Street	P.M.	0.459	A	0.467	A	0.008	NO	0.467	A	0.008	NO
17. [a]	Bixel Street &	A.M.	0.751	C	0.766	C	0.015	NO	0.756	C	0.005	NO
	7th Street	P.M.	1.043	F	1.085	F	0.042	YES	1.075	F	0.032	YES
18. [a]	Francisco Street &	A.M.	0.488	A	0.513	A	0.025	NO	0.503	A	0.015	NO
	7th Street	P.M.	0.550	A	0.653	B	0.103	NO	0.643	B	0.093	NO
19. [a]	Figueroa Street &	A.M.	0.847	D	0.950	E	0.103	YES	0.940	E	0.093	YES
	7th Street	P.M.	1.096	F	1.132	F	0.036	YES	1.122	F	0.026	YES
20. [a]	Flower Street &	A.M.	0.373	A	0.381	A	0.008	NO	0.371	A	-0.002	NO
	7th Street	P.M.	0.759	C	0.807	D	0.048	YES	0.797	C	0.038	NO
21. [a]	Olive Street &	A.M.	0.335	A	0.364	A	0.029	NO	0.354	A	0.019	NO
	7th Street	P.M.	0.506	A	0.524	A	0.018	NO	0.514	A	0.008	NO

Note:

[[]a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 4 (continued)ALTERNATE FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2020)INTERSECTION PEAK HOUR LEVELS OF SERVICE

			Future with	nout Project	Future wit	h Project with TI	OM Program, Befo	re Mitigation		Future with Pro	ject with Mitigatio	n
NO.	Intersection	Peak Hour	V/C	LOS	V/C	LOS	Change in V/C	Significant Impact?	V/C	LOS	Change in V/C	Significant Impact?
22. [a]	Alameda Street & 7th Street	A.M. P.M.	0.746 0.784	C C	0.767 0.797	СС	0.021 0.013	NO NO	0.767 0.797	C C	0.021 0.013	NO NO
23. [a]	Soto Street & 7th Street	A.M. P.M.	0.722 0.736	C C	0.729 0.737	СС	0.007 0.001	NO NO	0.729 0.737	C C	0.007 0.001	NO NO
24. [a]	Bixel Street/SR 110 SB On-Ramp &	A.M.	0.864	D	0.865	D	0.001	NO	0.855	D	-0.009	NO
	8th Street	P.M.	1.084	F	1.108	F	0.024	YES	1.098	F	0.014	YES
25. [a]	Figueroa Street & 8th Street	A.M. P.M.	0.956 0.930	E E	0.956 0.931	E	0.000 0.001	NO NO	0.946 0.921	E	-0.010 -0.009	NO NO
26. [a]	Flower Street &	A.M.	0.390	A	0.390	A	0.000	NO	0.380	A	-0.010	NO
	8th Street	P.M.	0.579	A	0.579	A	0.000	NO	0.569	A	-0.010	NO
27. [a]	Francisco Street &	A.M.	0.593	A	0.618	B	0.025	NO	0.608	B	0.015	NO
	James M. Wood Boulevard/SR 110 NB Off-Ramp	P.M.	0.559	A	0.560	A	0.001	NO	0.550	A	-0.009	NO
28. [a]	Figueroa Street &	A.M.	0.643	B	0.661	B	0.018	NO	0.651	B	0.008	NO
	James M. Wood Boulevard/9th Street	P.M.	0.537	A	0.539	A	0.002	NO	0.529	A	-0.008	NO
29. [a]	Cherry Street &	A.M.	0.584	A	0.584	A	0.000	NO	0.574	A	-0.010	NO
	Pico Boulevard	P.M.	0.716	C	0.716	C	0.000	NO	0.706	C	-0.010	NO
30. [a]	Figueroa Street &	A.M.	0.598	A	0.603	B	0.005	NO	0.603	B	0.005	NO
	Pico Boulevard	P.M.	0.673	B	0.675	B	0.002	NO	0.675	B	0.002	NO
31. [a]	Hoover Street &	A.M.	0.439	A	0.439	A	0.000	NO	0.429	A	-0.010	NO
	Alvarado Street/Alvarado Terrace	P.M.	0.575	A	0.575	A	0.000	NO	0.565	A	-0.010	NO
32. [a]	Flower Street &	A.M.	0.216	A	0.217	A	0.001	NO	0.217	A	0.001	NO
	Venice Boulevard	P.M.	0.452	A	0.461	A	0.009	NO	0.461	A	0.009	NO
33. [a]	Grand Avenue &	A.M.	0.476	A	0.482	A	0.006	NO	0.482	A	0.006	NO
	18th Street	P.M.	0.678	B	0.708	C	0.030	NO	0.708	C	0.030	NO
34. [a]	Olive Street &	A.M.	0.259	A	0.259	A	0.000	NO	0.259	A	0.000	NO
	6th Street	P.M.	0.399	A	0.435	A	0.036	NO	0.435	A	0.036	NO
35. [a]	Hope Street &	A.M.	0.359	A	0.405	A	0.046	NO	0.395	A	0.036	NO
	7th Street	P.M.	0.478	A	0.483	A	0.005	NO	0.473	A	-0.005	NO
36. [a]	Grand Avenue &	A.M.	0.390	A	0.434	A	0.044	NO	0.424	A	0.034	NO
	7th Street	P.M.	0.475	A	0.483	A	0.008	NO	0.473	A	-0.002	NO
37. [a]	Figueroa Street &	A.M.	0.825	D	0.840	D	0.015	NO	0.840	D	0.015	NO
	Olympic Boulevard	P.M.	0.984	E	0.985	E	0.001	NO	0.985	E	0.001	NO
38. [a]	Glendale Boulevard &	A.M.	1.063	F	1.063	F	0.000	NO	1.063	F	0.000	NO
	Temple Street	P.M.	1.283	F	1.287	F	0.004	NO	1.287	F	0.004	NO
39. [a]	Glendale Boulevard/Lucas Avenue &	A.M.	0.667	B	0.667	B	0.000	NO	0.667	B	0.000	NO
	Beverly Boulevard/1st Street/2nd Street	P.M.	0.766	C	0.770	C	0.004	NO	0.770	C	0.004	NO
40. [a]	Lucas Avenue &	A.M.	0.701	C	0.701	C	0.000	NO	0.691	B	-0.010	NO
	3rd Street	P.M.	0.573	A	0.577	A	0.004	NO	0.567	A	-0.006	NO
41. [a]	Lucas Avenue &	A.M.	0.841	D	0.848	D	0.007	NO	0.838	D	-0.003	NO
	6th Street	P.M.	0.711	C	0.733	C	0.022	NO	0.723	C	0.012	NO
42. [a]	Lucas Avenue &	A.M.	0.707	C	0.723	C	0.016	NO	0.713	C	0.006	NO
	Wilshire Boulevard	P.M.	0.944	E	0.953	E	0.009	NO	0.943	E	-0.001	NO

Note:

[[]a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 4 (continued) ALTERNATE FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2020)

	INTERSECTION IMPACT SUMMARY											
Lovel of Service	Before N	litigation	With	TDM	With Mitigation							
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour						
С	1	3	2	0	1	0						
D	2	2	0	1	0	0						
E	2	2	2	2	2	1						
F	0	7	0	5	0	5						
Total Peak Hour Impacts	5	14	4	8	3	6						
Total Individual Intersections Impacted	1	6	1	0	7							

TABLE 5COMPARISON OF TRIP GENERATION CREDITS

Land Use	LASED - LA Live (Area A)	Bunker Hill [b]	Project
	and Area B [a]		
Office			
Internal Capture	5%	-	0%
Transit	20%	-	25%
Walk	5%	-	5%
TOTAL	28%	30%	29%
Retail/Restaurant			
Internal Capture	20%	-	20%
Central Business District Adjustment	32%	-	20%
Transit	5%	-	15%
Walk	5%	-	0%
Pass-By [c]	10%	-	0%
TOTAL	56%	55%	46%
Fitness Facility/Spa			
Internal Capture	10%	-	20%
Central Business District Adjustment	0%	-	20%
Transit	5%	-	15%
Walk	5%	-	0%
Pass-By [c]	20%	-	0%
TOTAL	35%	-	46%
Hotel			
Internal Capture	15%	-	0%
Central Business District Adjustment	40%	-	0%
Transit	20%	-	25%
Walk	5%	-	5%
TOTAL	61%	50%	29%
Residential			
Internal Capture	10%	-	0%
Transit	10%	-	25%
Walk	10%	-	5%
TOTAL	27%	30%	29%

Notes:

[a] Los Angeles Sports and Entertainment District (LASED) Specific Plan, City of Los Angeles, October 2001[b] Bunker Hill Design for Development Program EIR, Kaku Associates, Inc., August 2005.

[c] Pass-by trips are defined as intermediate stops on the way from an origin to a primary trip destination without a route diversion. These trips are attracted from traffic passing the site on an adjacent street that offers direct access to a site.

TABLE 6 EXISTING PLUS PROJECT CONDITIONS - BEFORE MITIGATION INTERSECTION PEAK HOUR LEVELS OF SERVICE

N		hatara di se	Deskiller	Exis	sting	E	Existing plus Proj	ect, Before Mitigat	ion
NO.		Intersection	Peak Hour	v/c	LOS	V/C	LOS	Change in V/C	Significant Impact?
1.	[a]	Grand Avenue & US 101 NB Ramps	A.M. P.M.	0.556 0.628	A B	0.576 0.640	A B	0.020 0.012	NO NO
2.	[a]	Hope Street/US 101 SB Ramps & Temple Street	A.M. P.M.	0.607 0.703	B C	0.611 0.724	B C	0.004 0.021	NO NO
3.	[b]	Figueroa Street & 3rd Street/SR 110 Ramps	A.M. P.M.	0.578 0.902	A E	0.549 0.885	A D	-0.029 -0.017	NO NO
4.	[a]	Flower Street & 3rd Street	A.M. P.M.	0.551 0.539	A A	0.592 0.539	A A	0.041 0.000	NO NO
5.	[a]	Grand Avenue & 3rd Street	A.M. P.M.	0.339 0.333	A A	0.361 0.335	A A	0.022 0.002	NO NO
6.	[a]	Figueroa Street & 5th Street/SR 110 On-Ramps	A.M. P.M.	0.641 0.940	B E	0.648 0.990	B E	0.007 0.050	NO YES
7.	[a]	Flower Street & 5th Street	A.M. P.M.	0.247 0.297	A A	0.261 0.299	A A	0.014 0.002	NO NO
8.	[a]	Figueroa Street & 6th Street/SR 110 Off-Ramps	A.M. P.M.	0.570 0.785	A C	0.579 0.849	A D	0.009 0.064	NO YES
9.	[a]	Flower Street & 6th Street	A.M. P.M.	0.344 0.325	A A	0.368 0.334	A A	0.024 0.009	NO NO
10.	[a]	Alvarado Street & Wilshire Boulevard	A.M. P.M.	0.570 0.602	A B	0.579 0.620	A B	0.009 0.018	NO NO
11.	[a]	Beaudry Avenue & Wilshire Boulevard	A.M. P.M.	0.569 0.418	A A	0.605 0.419	B A	0.036 0.001	NO NO
12.	[a]	Francisco Street & Wilshire Boulevard	A.M. P.M.	0.513 0.444	A A	0.690 0.665	B B	0.177 0.221	NO NO
13.	[a]	Figueroa Street & Wilshire Boulevard	A.M. P.M.	0.673 0.952	B E	0.740 1.133	C F	0.067 0.181	YES YES
14.	[a]	Flower Street & Wilshire Boulevard	A.M. P.M.	0.556 0.603	A B	0.670 0.604	B B	0.114 0.001	NO NO
15.	[a]	Grand Avenue & Wilshire Boulevard	A.M. P.M.	0.237 0.338	A A	0.253 0.357	A A	0.016 0.019	NO NO
16.	[a]	Alvarado Street & 7th Street	A.M. P.M.	0.340 0.401	A A	0.349 0.413	A A	0.009 0.012	NO NO
17.	[a]	Bixel Street & 7th Street	A.M. P.M.	0.528 0.859	A D	0.552 0.921	A E	0.024 0.062	NO YES
18.	[a]	Francisco Street & 7th Street	A.M. P.M.	0.350 0.351	A A	0.489 0.513	A A	0.139 0.162	NO NO
19.	[a]	Figueroa Street & 7th Street	A.M. P.M.	0.666 0.891	B D	0.812 0.947	D E	0.146 0.056	YES YES
20.	[a]	Flower Street & 7th Street	A.M. P.M.	0.317 0.609	A B	0.330 0.680	A B	0.013 0.071	NO NO
21.	[a]	Olive Street & 7th Street	A.M. P.M.	0.279 0.383	A A	0.323 0.411	A A	0.044 0.028	NO NO

Notes:

[a] Intersection is operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) System. A credit of 0.07 in V/C ratio was included in the analysis.

[b] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 6 (continued) EXISTING PLUS PROJECT CONDITIONS - BEFORE MITIGATION INTERSECTION PEAK HOUR LEVELS OF SERVICE

No		Internetion	Back Hour	Exis	sting	E	existing plus Proj	ect, Before Mitigat	tion
NO.		Intersection	Peak Hour	v/c	LOS	v/c	LOS	Change in V/C	Significant Impact?
22.	[a]	Alameda Street & 7th Street	A.M. P.M.	0.680 0.673	B B	0.710 0.695	C B	0.030 0.022	NO NO
23.	[b]	Soto Street & 7th Street	A.M. P.M.	0.656 0.656	B B	0.667 0.657	B B	0.011 0.001	NO NO
24.	[b]	Bixel Street/SR 110 SB On-Ramp & 8th Street	A.M. P.M.	0.659 0.768	B C	0.662 0.804	B D	0.003 0.036	NO YES
25.	[b]	Figueroa Street & 8th Street	A.M. P.M.	0.587 0.752	A C	0.595 0.726	A C	0.008 -0.026	NO NO
26.	[b]	Flower Street & 8th Street	A.M. P.M.	0.269 0.451	A A	0.269 0.461	A A	0.000 0.010	NO NO
27.	[b]	Francisco Street & James M. Wood Boulevard/SR 110 NB Off-Ramp	A.M. P.M.	0.426 0.355	A A	0.462 0.359	A A	0.036 0.004	NO NO
28.	[b]	Figueroa Street & James M. Wood Boulevard/9th Street	A.M. P.M.	0.506 0.369	A A	0.533 0.372	A A	0.027 0.003	NO NO
29.	[b]	Cherry Street & Pico Boulevard	A.M. P.M.	0.506 0.619	A B	0.506 0.619	A B	0.000 0.000	NO NO
30.	[b]	Figueroa Street & Pico Boulevard	A.M. P.M.	0.506 0.573	A A	0.512 0.576	A A	0.006 0.003	NO NO
31.	[b]	Hoover Street & Alvarado Street/Alvarado Terrace	A.M. P.M.	0.381 0.499	A A	0.381 0.499	A A	0.000 0.000	NO NO
32.	[a]	Flower Street & Venice Boulevard	A.M. P.M.	0.181 0.395	A A	0.183 0.408	A A	0.002 0.013	NO NO
33.	[a]	Grand Avenue & 18th Street	A.M. P.M.	0.283 0.403	A A	0.292 0.446	A A	0.009 0.043	NO NO
34.	[b]	Olive Street & 6th Street	A.M. P.M.	0.214 0.301	A A	0.215 0.307	A A	0.001 0.006	NO NO
35.	[b]	Hope Street & 7th Street	A.M. P.M.	0.251 0.367	A A	0.319 0.379	A A	0.068 0.012	NO NO
36.	[b]	Grand Avenue & 7th Street	A.M. P.M.	0.290 0.371	A A	0.355 0.387	A A	0.065 0.016	NO NO
37.	[b]	Figueroa Street & Olympic Boulevard	A.M. P.M.	0.691 0.813	B D	0.712 0.816	C D	0.021 0.003	NO NO
38.	[a]	Glendale Boulevard & Temple Street	A.M. P.M.	0.920 1.075	E F	0.920 1.080	E F	0.000 0.005	NO NO
39.	[a]	Glendale Boulevard/Lucas Avenue & Beverly Boulevard/1st Street/2nd Street	A.M. P.M.	0.567 0.669	A B	0.597 0.705	A C	0.030 0.036	NO NO
40.	[a]	Lucas Avenue & 3rd Street	A.M. P.M.	0.597 0.507	A A	0.597 0.512	A A	0.000 0.005	NO NO
41.	[a]	Lucas Avenue & 6th Street	A.M. P.M.	0.711 0.607	C B	0.723 0.638	C B	0.012 0.031	NO NO
42.	[a]	Lucas Avenue & Wilshire Boulevard	A.M. P.M.	0.539 0.650	A B	0.565 0.666	A B	0.026 0.016	NO NO

Notes:

[a] Intersection is operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) System. A credit of 0.07 in V/C ratio was included in the analysis.

[b] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 6 (continued) EXISTING PLUS PROJECT CONDITIONS - BEFORE MITIGATION

INTERSEC	TION IMPACT SUMMARY	
Level of Service	A.M. Peak Hour	P.M. Peak Hour
C	1	0
D	1	2
E	0	3
F	0	1
Total Peak Hour Impacts	2	6
Total Individual Intersections Impacted	6	

TABLE 7 EXISTING PLUS PROJECT WITH TDM PROGRAM CONDITIONS INTERSECTION PEAK HOUR LEVELS OF SERVICE

Na	Internetion	Deck Hour	Exis	sting	E	xisting plus Proj	ect, Before Mitigat	ion	E	Existing plus Project with TDM Program		
NO.	Intersection	Peak Hour	V/C	LOS	V/C	LOS	Change in V/C	Significant Impact?	V/C	LOS	Change in V/C	Significant Impact?
1. [a]	Grand Avenue &	A.M.	0.556	A	0.576	A	0.020	NO	0.570	A	0.014	NO
	US 101 NB Ramps	P.M.	0.628	B	0.640	B	0.012	NO	0.632	B	0.004	NO
2. [a]	Hope Street/US 101 SB Ramps &	A.M.	0.607	B	0.611	B	0.004	NO	0.607	B	0.000	NO
	Temple Street	P.M.	0.703	C	0.724	C	0.021	NO	0.717	C	0.014	NO
3. [b]	Figueroa Street &	A.M.	0.578	A	0.549	A	-0.029	NO	0.549	A	-0.029	NO
	3rd Street/SR 110 Ramps	P.M.	0.902	E	0.885	D	-0.017	NO	0.880	D	-0.022	NO
4. [a]	Flower Street &	A.M.	0.551	A	0.592	A	0.041	NO	0.579	A	0.028	NO
	3rd Street	P.M.	0.539	A	0.539	A	0.000	NO	0.539	A	0.000	NO
5. [a]	Grand Avenue &	A.M.	0.339	A	0.361	A	0.022	NO	0.354	A	0.015	NO
	3rd Street	P.M.	0.333	A	0.335	A	0.002	NO	0.333	A	0.000	NO
6. [a]	Figueroa Street &	A.M.	0.641	B	0.648	B	0.007	NO	0.644	B	0.003	NO
	5th Street/SR 110 On-Ramps	P.M.	0.940	E	0.990	E	0.050	YES	0.975	E	0.035	YES
7. [a]	Flower Street &	A.M.	0.247	A	0.261	A	0.014	NO	0.257	A	0.010	NO
	5th Street	P.M.	0.297	A	0.299	A	0.002	NO	0.297	A	0.000	NO
8. [a]	Figueroa Street &	A.M.	0.570	A	0.579	A	0.009	NO	0.576	A	0.006	NO
	6th Street/SR 110 Off-Ramps	P.M.	0.785	C	0.849	D	0.064	YES	0.830	D	0.045	YES
9. [a]	Flower Street &	A.M.	0.344	A	0.368	A	0.024	NO	0.361	A	0.017	NO
	6th Street	P.M.	0.325	A	0.334	A	0.009	NO	0.330	A	0.005	NO
10. [a]	Alvarado Street &	A.M.	0.570	A	0.579	A	0.009	NO	0.577	A	0.007	NO
	Wilshire Boulevard	P.M.	0.602	B	0.620	B	0.018	NO	0.614	B	0.012	NO
11. [a]	Beaudry Avenue &	A.M.	0.569	A	0.605	B	0.036	NO	0.592	A	0.023	NO
	Wilshire Boulevard	P.M.	0.418	A	0.419	A	0.001	NO	0.418	A	0.000	NO
12. [a]	Francisco Street &	A.M.	0.513	A	0.690	B	0.177	NO	0.625	B	0.112	NO
	Wilshire Boulevard	P.M.	0.444	A	0.665	B	0.221	NO	0.577	A	0.133	NO
13. [a]	Figueroa Street &	A.M.	0.673	B	0.740	C	0.067	YES	0.710	C	0.037	NO
	Wilshire Boulevard	P.M.	0.952	E	1.133	F	0.181	YES	1.073	F	0.121	YES
14. [a]	Flower Street &	A.M.	0.556	A	0.670	B	0.114	NO	0.631	B	0.075	NO
	Wilshire Boulevard	P.M.	0.603	B	0.604	B	0.001	NO	0.587	A	-0.016	NO
15. [a]	Grand Avenue &	A.M.	0.237	A	0.253	A	0.016	NO	0.248	A	0.011	NO
	Wilshire Boulevard	P.M.	0.338	A	0.357	A	0.019	NO	0.351	A	0.013	NO
16. [a]	Alvarado Street &	A.M.	0.340	A	0.349	A	0.009	NO	0.347	A	0.007	NO
	7th Street	P.M.	0.401	A	0.413	A	0.012	NO	0.409	A	0.008	NO
17. [a]	Bixel Street &	A.M.	0.528	A	0.552	A	0.024	NO	0.543	A	0.015	NO
	7th Street	P.M.	0.859	D	0.921	E	0.062	YES	0.902	E	0.043	YES
18. [a]	Francisco Street &	A.M.	0.350	A	0.489	A	0.139	NO	0.442	A	0.092	NO
	7th Street	P.M.	0.351	A	0.513	A	0.162	NO	0.453	A	0.102	NO
19. [a]	Figueroa Street &	A.M.	0.666	B	0.812	D	0.146	YES	0.770	C	0.104	YES
	7th Street	P.M.	0.891	D	0.947	E	0.056	YES	0.927	E	0.036	YES
20. [a]	Flower Street &	A.M.	0.317	A	0.330	A	0.013	NO	0.325	A	0.008	NO
	7th Street	P.M.	0.609	B	0.680	B	0.071	NO	0.658	B	0.049	NO
21. [a]	Olive Street & 7th Street	A.M. P.M.	0.279 0.383	A A	0.323 0.411	A A	0.044 0.028	NO NO	0.309 0.401	A A	0.030 0.018	NO NO

Notes:

[a] Intersection is operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) System. A credit of 0.07 in V/C ratio was included in the analysis.

[b] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 7 (continued) EXISTING PLUS PROJECT WITH TDM PROGRAM CONDITIONS INTERSECTION PEAK HOUR LEVELS OF SERVICE

N		De al Usar	Exis	ting	E	xisting plus Proj	ect, Before Mitigat	ion	E	Existing plus Project with TDM Program		
NO.	Intersection	Peak Hour	V/C	LOS	V/C	LOS	Change in V/C	Significant Impact?	V/C	LOS	Change in V/C	Significant Impact?
22. [a]	Alameda Street &	A.M.	0.680	B	0.710	C	0.030	NO	0.701	C	0.021	NO
	7th Street	P.M.	0.673	B	0.695	B	0.022	NO	0.686	B	0.013	NO
23. [b]	Soto Street &	A.M.	0.656	B	0.667	B	0.011	NO	0.664	B	0.008	NO
	7th Street	P.M.	0.656	B	0.657	B	0.001	NO	0.656	B	0.000	NO
24. [b]	Bixel Street/SR 110 SB On-Ramp &	A.M.	0.659	B	0.662	B	0.003	NO	0.660	B	0.001	NO
	8th Street	P.M.	0.768	C	0.804	D	0.036	YES	0.793	C	0.025	NO
25. [b]	Figueroa Street &	A.M.	0.587	A	0.595	A	0.008	NO	0.583	A	-0.004	NO
	8th Street	P.M.	0.752	C	0.726	C	-0.026	NO	0.723	C	-0.029	NO
26. [b]	Flower Street &	A.M.	0.269	A	0.269	A	0.000	NO	0.269	A	0.000	NO
	8th Street	P.M.	0.451	A	0.461	A	0.010	NO	0.459	A	0.008	NO
27. [b]	Francisco Street &	A.M.	0.426	A	0.462	A	0.036	NO	0.451	A	0.025	NO
	James M. Wood Boulevard/SR 110 NB Off-Ramp	P.M.	0.355	A	0.359	A	0.004	NO	0.356	A	0.001	NO
28. [b]	Figueroa Street &	A.M.	0.506	A	0.533	A	0.027	NO	0.524	A	0.018	NO
	James M. Wood Boulevard/9th Street	P.M.	0.369	A	0.372	A	0.003	NO	0.369	A	0.000	NO
29. [b]	Cherry Street &	A.M.	0.506	A	0.506	A	0.000	NO	0.506	A	0.000	NO
	Pico Boulevard	P.M.	0.619	B	0.619	B	0.000	NO	0.619	B	0.000	NO
30. [b]	Figueroa Street &	A.M.	0.506	A	0.512	A	0.006	NO	0.511	A	0.005	NO
	Pico Boulevard	P.M.	0.573	A	0.576	A	0.003	NO	0.574	A	0.001	NO
31. [b]	Hoover Street &	A.M.	0.381	A	0.381	A	0.000	NO	0.381	A	0.000	NO
	Alvarado Street/Alvarado Terrace	P.M.	0.499	A	0.499	A	0.000	NO	0.499	A	0.000	NO
32. [a]	Flower Street &	A.M.	0.181	A	0.183	A	0.002	NO	0.182	A	0.001	NO
	Venice Boulevard	P.M.	0.395	A	0.408	A	0.013	NO	0.404	A	0.009	NO
33. [a]	Grand Avenue &	A.M.	0.283	A	0.292	A	0.009	NO	0.289	A	0.006	NO
	18th Street	P.M.	0.403	A	0.446	A	0.043	NO	0.433	A	0.030	NO
34. [b]	Olive Street &	A.M.	0.214	A	0.215	A	0.001	NO	0.215	A	0.001	NO
	6th Street	P.M.	0.301	A	0.307	A	0.006	NO	0.305	A	0.004	NO
35. [b]	Hope Street &	A.M.	0.251	A	0.319	A	0.068	NO	0.298	A	0.047	NO
	7th Street	P.M.	0.367	A	0.379	A	0.012	NO	0.372	A	0.005	NO
36. [b]	Grand Avenue &	A.M.	0.290	A	0.355	A	0.065	NO	0.334	A	0.044	NO
	7th Street	P.M.	0.371	A	0.387	A	0.016	NO	0.380	A	0.009	NO
37. [b]	Figueroa Street &	A.M.	0.691	B	0.712	C	0.021	NO	0.705	C	0.014	NO
	Olympic Boulevard	P.M.	0.813	D	0.816	D	0.003	NO	0.814	D	0.001	NO
38. [a]	Glendale Boulevard &	A.M.	0.920	E	0.920	E	0.000	NO	0.920	E	0.000	NO
	Temple Street	P.M.	1.075	F	1.080	F	0.005	NO	1.079	F	0.004	NO
39. [a]	Glendale Boulevard/Lucas Avenue &	A.M.	0.567	A	0.597	A	0.030	NO	0.597	A	0.030	NO
	Beverly Boulevard/1st Street/2nd Street	P.M.	0.669	B	0.705	C	0.036	NO	0.699	B	0.030	NO
40. [a]	Lucas Avenue &	A.M.	0.597	A	0.597	A	0.000	NO	0.597	A	0.000	NO
	3rd Street	P.M.	0.507	A	0.512	A	0.005	NO	0.511	A	0.004	NO
41. [a]	Lucas Avenue &	A.M.	0.711	C	0.723	C	0.012	NO	0.719	C	0.008	NO
	6th Street	P.M.	0.607	B	0.638	B	0.031	NO	0.629	B	0.022	NO
42. [a]	Lucas Avenue & Wilshire Boulevard	A.M. P.M.	0.539 0.650	A B	0.565 0.666	A B	0.026 0.016	NO NO	0.555 0.659	A B	0.016 0.009	NO NO

Notes:

[a] Intersection is operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) System. A credit of 0.07 in V/C ratio was included in the analysis.

[b] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 7 (continued)EXISTING PLUS PROJECT WITH TDM PROGRAM CONDITIONS

	INTERSECTION IMP	ACT SUMMARY				
Lovel of Service	Before N	litigation	With TDM			
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour		
С	1	0	1	0		
D	1	2	0	1		
E	0	3	0	3		
F	0	1	0	1		
Total Peak Hour Impacts	2 6		1	5		
Total Individual Intersections Impacted		6	5			

TABLE 8 EXISTING PLUS PROJECT WITH MITIGATION CONDITIONS INTERSECTION PEAK HOUR LEVELS OF SERVICE

No	Interception	Deck Hour	Exis	sting	E	xisting plus Pro	ject, Before Mitigat	ion		Existing plus Pr	oject with Mitigatic	'n
NO.	Intersection	Peak Hour	V/C	LOS	V/C	LOS	Change in V/C	Significant Impact?	V/C	LOS	Change in V/C	Significant Impact?
1. [a]	Grand Avenue &	A.M.	0.556	A	0.570	A	0.014	NO	0.570	A	0.014	NO
	US 101 NB Ramps	P.M.	0.628	B	0.632	B	0.004	NO	0.632	B	0.004	NO
2. [a]	Hope Street/US 101 SB Ramps &	A.M.	0.607	B	0.607	B	0.000	NO	0.597	A	-0.010	NO
	Temple Street	P.M.	0.703	C	0.717	C	0.014	NO	0.707	C	0.004	NO
3. [b]	Figueroa Street &	A.M.	0.578	A	0.549	A	-0.029	NO	0.549	A	-0.029	NO
	3rd Street/SR 110 Ramps	P.M.	0.902	E	0.880	D	-0.022	NO	0.880	D	-0.022	NO
4. [a]	Flower Street &	A.M.	0.551	A	0.579	A	0.028	NO	0.569	A	0.018	NO
	3rd Street	P.M.	0.539	A	0.539	A	0.000	NO	0.529	A	-0.010	NO
5. [a]	Grand Avenue &	A.M.	0.339	A	0.354	A	0.015	NO	0.354	A	0.015	NO
	3rd Street	P.M.	0.333	A	0.333	A	0.000	NO	0.333	A	0.000	NO
6. [a]	Figueroa Street &	A.M.	0.641	B	0.644	B	0.003	NO	0.634	B	-0.007	NO
	5th Street/SR 110 On-Ramps	P.M.	0.940	E	0.975	E	0.035	YES	0.965	E	0.025	YES
7. [a]	Flower Street &	A.M.	0.247	A	0.257	A	0.010	NO	0.247	A	0.000	NO
	5th Street	P.M.	0.297	A	0.297	A	0.000	NO	0.287	A	-0.010	NO
8. [a]	Figueroa Street &	A.M.	0.570	A	0.576	A	0.006	NO	0.566	A	-0.004	NO
	6th Street/SR 110 Off-Ramps	P.M.	0.785	C	0.830	D	0.045	YES	0.820	D	0.035	YES
9. [a]	Flower Street &	A.M.	0.344	A	0.361	A	0.017	NO	0.351	A	0.007	NO
	6th Street	P.M.	0.325	A	0.330	A	0.005	NO	0.320	A	-0.005	NO
10. [a]	Alvarado Street &	A.M.	0.570	A	0.577	A	0.007	NO	0.577	A	0.007	NO
	Wilshire Boulevard	P.M.	0.602	B	0.614	B	0.012	NO	0.614	B	0.012	NO
11. [a]	Beaudry Avenue &	A.M.	0.569	A	0.592	A	0.023	NO	0.582	A	0.013	NO
	Wilshire Boulevard	P.M.	0.418	A	0.418	A	0.000	NO	0.408	A	-0.010	NO
12. [a]	Francisco Street &	A.M.	0.513	A	0.625	B	0.112	NO	0.615	B	0.102	NO
	Wilshire Boulevard	P.M.	0.444	A	0.577	A	0.133	NO	0.567	A	0.123	NO
13. [a]	Figueroa Street &	A.M.	0.673	B	0.710	C	0.037	NO	0.700	B	0.027	NO
	Wilshire Boulevard	P.M.	0.952	E	1.073	F	0.121	YES	1.063	F	0.111	YES
14. [a]	Flower Street &	A.M.	0.556	A	0.631	B	0.075	NO	0.621	B	0.065	NO
	Wilshire Boulevard	P.M.	0.603	B	0.587	A	-0.016	NO	0.577	A	-0.026	NO
15. [a]	Grand Avenue &	A.M.	0.237	A	0.248	A	0.011	NO	0.238	A	0.001	NO
	Wilshire Boulevard	P.M.	0.338	A	0.351	A	0.013	NO	0.341	A	0.003	NO
16. [a]	Alvarado Street &	A.M.	0.340	A	0.347	A	0.007	NO	0.347	A	0.007	NO
	7th Street	P.M.	0.401	A	0.409	A	0.008	NO	0.409	A	0.008	NO
17. [a]	Bixel Street &	A.M.	0.528	A	0.543	A	0.015	NO	0.533	A	0.005	NO
	7th Street	P.M.	0.859	D	0.902	E	0.043	YES	0.892	D	0.033	YES
18. [a]	Francisco Street &	A.M.	0.350	A	0.442	A	0.092	NO	0.432	A	0.082	NO
	7th Street	P.M.	0.351	A	0.453	A	0.102	NO	0.443	A	0.092	NO
19. [a]	Figueroa Street &	A.M.	0.666	B	0.770	C	0.104	YES	0.760	C	0.094	YES
	7th Street	P.M.	0.891	D	0.927	E	0.036	YES	0.917	E	0.026	YES
20. [a]	Flower Street &	A.M.	0.317	A	0.325	A	0.008	NO	0.315	A	-0.002	NO
	7th Street	P.M.	0.609	B	0.658	B	0.049	NO	0.648	B	0.039	NO
21. [a]	Olive Street &	A.M.	0.279	A	0.309	A	0.030	NO	0.299	A	0.020	NO
	7th Street	P.M.	0.383	A	0.401	A	0.018	NO	0.391	A	0.008	NO

Notes:

[a] Intersection is operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) System. A credit of 0.07 in V/C ratio was included in the analysis.

[b] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 8 (continued) EXISTING PLUS PROJECT WITH MITIGATION CONDITIONS INTERSECTION PEAK HOUR LEVELS OF SERVICE

No		Deck Hour	Exis	sting	E	xisting plus Proj	ect, Before Mitigat	ion		Existing plus Pr	oject with Mitigation	ı
NO.	Intersection	Peak Hour	V/C	LOS	V/C	LOS	Change in V/C	Significant Impact?	V/C	LOS	Change in V/C	Significant Impact?
22. [a]	Alameda Street &	A.M.	0.680	B	0.701	C	0.021	NO	0.701	C	0.021	NO
	7th Street	P.M.	0.673	B	0.686	B	0.013	NO	0.686	B	0.013	NO
23. [b]	Soto Street &	A.M.	0.656	B	0.664	B	0.008	NO	0.664	B	0.008	NO
	7th Street	P.M.	0.656	B	0.656	B	0.000	NO	0.656	B	0.000	NO
24. [b]	Bixel Street/SR 110 SB On-Ramp & 8th Street	A.M. P.M.	0.659 0.768	B C	0.660 0.793	BC	0.001 0.025	NO NO	0.650 0.783	В С	-0.009 0.015	NO NO
25. [b]	Figueroa Street &	A.M.	0.587	A	0.583	A	-0.004	NO	0.573	A	-0.014	NO
	8th Street	P.M.	0.752	C	0.723	C	-0.029	NO	0.713	C	-0.039	NO
26. [b]	Flower Street &	A.M.	0.269	A	0.269	A	0.000	NO	0.259	A	-0.010	NO
	8th Street	P.M.	0.451	A	0.459	A	0.008	NO	0.449	A	-0.002	NO
27. [b]	Francisco Street &	A.M.	0.426	A	0.451	A	0.025	NO	0.441	A	0.015	NO
	James M. Wood Boulevard/SR 110 NB Off-Ramp	P.M.	0.355	A	0.356	A	0.001	NO	0.346	A	-0.009	NO
28. [b]	Figueroa Street &	A.M.	0.506	A	0.524	A	0.018	NO	0.514	A	0.008	NO
	James M. Wood Boulevard/9th Street	P.M.	0.369	A	0.369	A	0.000	NO	0.359	A	-0.010	NO
29. [b]	Cherry Street &	A.M.	0.506	A	0.506	A	0.000	NO	0.496	A	-0.010	NO
	Pico Boulevard	P.M.	0.619	B	0.619	B	0.000	NO	0.609	B	-0.010	NO
30. [b]	Figueroa Street &	A.M.	0.506	A	0.511	A	0.005	NO	0.511	A	0.005	NO
	Pico Boulevard	P.M.	0.573	A	0.574	A	0.001	NO	0.574	A	0.001	NO
31. [b]	Hoover Street &	A.M.	0.381	A	0.381	A	0.000	NO	0.371	A	-0.010	NO
	Alvarado Street/Alvarado Terrace	P.M.	0.499	A	0.499	A	0.000	NO	0.489	A	-0.010	NO
32. [a]	Flower Street &	A.M.	0.181	A	0.182	A	0.001	NO	0.182	A	0.001	NO
	Venice Boulevard	P.M.	0.395	A	0.404	A	0.009	NO	0.404	A	0.009	NO
33. [a]	Grand Avenue &	A.M.	0.283	A	0.289	A	0.006	NO	0.289	A	0.006	NO
	18th Street	P.M.	0.403	A	0.433	A	0.030	NO	0.433	A	0.030	NO
34. [b]	Olive Street &	A.M.	0.214	A	0.215	A	0.001	NO	0.215	A	0.001	NO
	6th Street	P.M.	0.301	A	0.305	A	0.004	NO	0.305	A	0.004	NO
35. [b]	Hope Street &	A.M.	0.251	A	0.298	A	0.047	NO	0.288	A	0.037	NO
	7th Street	P.M.	0.367	A	0.372	A	0.005	NO	0.362	A	-0.005	NO
36. [b]	Grand Avenue &	A.M.	0.290	A	0.334	A	0.044	NO	0.324	A	0.034	NO
	7th Street	P.M.	0.371	A	0.380	A	0.009	NO	0.370	A	-0.001	NO
37. [b]	Figueroa Street &	A.M.	0.691	B	0.705	C	0.014	NO	0.705	C	0.014	NO
	Olympic Boulevard	P.M.	0.813	D	0.814	D	0.001	NO	0.814	D	0.001	NO
38. [a]	Glendale Boulevard &	A.M.	0.920	E	0.920	E	0.000	NO	0.920	E	0.000	NO
	Temple Street	P.M.	1.075	F	1.079	F	0.004	NO	1.079	F	0.004	NO
39. [a]	Glendale Boulevard/Lucas Avenue &	A.M.	0.567	A	0.597	A	0.030	NO	0.597	A	0.030	NO
	Beverly Boulevard/1st Street/2nd Street	P.M.	0.669	B	0.699	B	0.030	NO	0.699	B	0.030	NO
40. [a]	Lucas Avenue &	A.M.	0.597	A	0.597	A	0.000	NO	0.587	A	-0.010	NO
	3rd Street	P.M.	0.507	A	0.511	A	0.004	NO	0.501	A	-0.006	NO
41. [a]	Lucas Avenue &	A.M.	0.711	C	0.719	C	0.008	NO	0.709	C	-0.002	NO
	6th Street	P.M.	0.607	B	0.629	B	0.022	NO	0.619	B	0.012	NO
42. [a]	Lucas Avenue &	A.M.	0.539	A	0.555	A	0.016	NO	0.545	A	0.006	NO
	Wilshire Boulevard	P.M.	0.650	B	0.659	B	0.009	NO	0.649	B	-0.001	NO

Notes:

[a] Intersection is operating under the LADOT Automated Traffic Surveillance and Control (ATSAC) System. A credit of 0.07 in V/C ratio was included in the analysis.

[b] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

TABLE 8 (continued) EXISTING PLUS PROJECT WITH MITIGATION CONDITIONS

	INTERSECTION IMPACT SUMMARY										
Lovel of Service	Before N	litigation	With	TDM	With Mitigation						
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour					
С	1	0	1	0	1	0					
D	1	2	0	1	0	2					
E	0	3	0	3	0	2					
F	0	1	0	1	0	1					
Total Peak Hour Impacts	2	6	1	5	1	5					
Total Individual Intersections Impacted		6		5	5						

TABLE 9FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2020)INTERSECTION PEAK HOUR LEVELS OF SERVICE

No		Intersection	Peak	Future with	out Project	Future with Project with Mitigation				
NO.		Intersection	Hour	V/C	LOS	V/C	LOS	Change in V/C	Significant Impact?	
1.	[a]	Hope Street & 1st Street	A.M. P.M.	0.923 1.125	E F	0.931 1.121	E F	0.008 -0.004	NO NO	
2.	[a]	Grand Avenue & Olympic Boulevard	A.M. P.M.	0.439 0.527	A A	0.441 0.541	A A	0.002 0.014	NO NO	
3.	[a]	Olive Street & Olympic Boulevard	A.M. P.M.	0.445 0.691	A B	0.459 0.692	A B	0.014 0.001	NO NO	
4.	[a]	Flower Street & Olympic Boulevard	A.M. P.M.	0.339 0.719	A C	0.339 0.727	A C	0.000 0.008	NO NO	
5.	[a]	Union Avenue & Wilshire Boulevard	A.M. P.M.	0.692 0.807	B D	0.699 0.807	B D	0.007 0.000	NO NO	

Note:

[a] Intersection is operating under the LADOT Adaptive Traffic Control System (ATCS). A credit of 0.10 in V/C ratio was included in the analysis.

ATTACHMENT A

INTERSECTION LEVEL OF SERVICE WORKSHEETS

EXISTING PLUS PROJECT CONDITIONS

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S:		Grand A	ve		W/E:		US 101 N	IB Ramp)S	I/S No:	1	
AM/PM:	AM		Comn	nents: E	XISTING	PLUS PR	OJECT					
COUNT D	ATE:			STL	IDY DATE				GROWTH	FACTOR:		
Volume	e/Lane/Sig	Inal Conf	iguration	s —								
	NO	RTHBOU	ND	SC	UTHBOU	ND	W	FSTBOU	ND	FAS	TBOUN	D
FXISTING	LT	TH 91	RT		TH	RT		TH	RT	LT	TH	RT
AMBIENT	150	01	0	0	1070	443	0	U		10	U	000
RELATED												
PROJECT												
TOTAL	138	81	0	0	1078	449	0	0	0	18	0	606
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LANE	1	2			2	1						1 1
	Phasin	g F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	I	RTOR
SIGNAL	Prot-F	ix <	none>	Peri	n	OLA	<none< td=""><td>e> <</td><td>none></td><td>Split</td><td></td><td>Auto</td></none<>	e> <	none>	Split		Auto
Critica	I Moveme	ents Diag	ram —	E	SouthBour A: 5 3:	nd 39 0]					
		EastE	Bound —		٨		West	Bound		V/C RATIO	<u> </u>	<u>.0S</u>
			243		Ť			V		0.00 - 0.60	A	۱.
		В:	18				В:	0		0.61 - 0.70	E	5
					NorthBour	nd				0.71 - 0.80	c	;
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right 'olume	Volume	E	3: 1	38				0.81 - 0.90	0)
* = ATSAC	C Benefit									0.91 - 1.00	E	:
Res	ults — North	South C	ritical Mo	vomente	- B/N/	B) ⊥ ^	(S/B)					
	North/South Critical Movements = $B(N/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + A(F/B)$											
	11030	V	/C =	138	+ 539	+ (1425) +	243	= 0.576	; L	OS =	A

CalcaDB

INTERSECTION DATA SUMMARY SHEET

N/S: Hope St/US 101 SB Ramps W/E: Temple St I/S No: 2 AM/PM: AM Comments: EXISTING PLUS PROJECT												
Volume/Lane/Signal Configurations												
			50				WESTBOUND					
	LT TH RT			LT TH RT			LT TH RT			LT TH RT		
EXISTING	64	149	97	136	360	41	372	470	160	182	422 246	
AMBIENT												
RELATED												
PROJECT												
TOTAL	64	149	97	136	360	41	372	470	160	182	422 246	
			•-									
4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 4 2 4 4 2 4 4 2 4												
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
SIGNAL Perm Auto Perm Auto Prot-Fix Auto Prot-Fix Auto												
Critical Movements Diagram												
SouthBound												
	A	201										
					: 1	136						
EastBound					 			WestBound			LOS	
A: 334					ι A			A: 235			•	
B: 182					B: 372				0.00 - 0.00	~		
				——————————————————————————————————————	orthBou	nd				0.61 - 0.70	В	
A: 123										0.71 - 0.80	С	
A = Adjusted Through/Right Volume B = Adjusted Left Volume					-	64				0.81 - 0.90	D	
* = ATSAC]			0.91 - 1.00	E				
Results												
North/South Critical Movements = B(N/B) + A(S/B)												
	Wes	t/East Crit	tical Move	ments	= B(W	/B) + A	(E/B)					
$V/C = \frac{64 + 201 + 372 + 334}{1000000000000000000000000000000000000$												
	*1425											

Intersection 3

Figueroa Street 1,017 18 92 898 **3rd Street** 3rd Street/SR 110 Ramps 428 137 788 170 1) Lane Capacity for WB Throughs -900 vphpl Number of Lanes -5 WB Through V/C -898 4,500 0.2 = <u>or</u> Lane Capacity for WB Rights -1,425 vphpl Number of Lanes -1 WB Right V/C -92 1,425 0.065 = <u>or</u> Lane Capacity for EB Throughs -1,425 vphpl 2 Number of Lanes -EB Through V/C -428 2,850 0.150 = 2) Lane Capacity for NB Lefts -900 vphpl 3 Number of Lanes -NB Left V/C x 900 0.37 137 0.056

Existing plus Project Conditions A.M. Peak Hour

Lane Capacity for SB Rights -

1,425 vphpl


N/S:		Flower	St		W/E:		3r	d St		I/S No:	4
AM/PM:	AM		Comm	ents: E	XISTING		OJECT				
COUNT D	ATE:			STL	JDY DATE			(GROWTH	FACTOR:	
Volume	/I ane/Si	onal Conf	igurations								
		RTHBOU	ND	sc	DUTHBOU		W	FSTBOU	ND	FAST	BOUND
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT [·]	TH RT
EXISTING	1	24	0	0	1011	127	486	848	100	0	0 437
AMBIENT											
RELATED											
PROJECT											
TOTAL	1	24	0	0	1011	127	486	848	100	0	0 437
	ፋ 슈	ት ሐ ዓ	<u>ት</u> የ ነ	ፋ 슈	<u>ት ሕ</u> ና	ት የ ¹	ፋ 슈	<u> </u>	ረተን ላካ ረ	<u>ዓ</u> ዯ ዯ ዸ	ት ት ት
LANE	1	' (++) + 2		· 4	2	1	' (₽ 1	3 1			
	Phasii	ng l	RTOR	Phasi	ng	RTOR	Phasi	ing	RTOR	Phasing	RTOR
SIGNAL	Pern	1 <	none>	Peri	n	Auto	Spl	it	Auto	<none></none>	Free
Critica	I Movem	ents Diaq	ram ——								
l I		U		٦	SouthBou	nd	1				
				1	\:	506					
				E	B:	0					
		East	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	0		Ť		A:	231		0.00 - 0.60	Α
			U		1	_	<u></u> .			0.61 - 0.70	В
					NorthBour	nd 12				0.71 - 0.80	С
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	t Volume		 B:	1				0.81 - 0.90	D
* = ATSAC	C Benefit						J			0.91 - 1.00	Е
Res	ults —						(0/5)				
	Nort West	n/South C	ritical Mov	vements ments	= B(N/	′в) + А /B) + А	(S/B) (E/B)				
		v	/c	1	+ 506	+ 48	36 +	0	- 0.592	b LO	S= A
		V	/6 =		*	1500			= 0.392		

N/S:		Grand A	Ave		W/E:		3rd	l St		I/S No:	į	5
AM/PM:	AM		Comm	ents: E)	KISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	IDY DATE			(GROWTH	FACTOR:		
Volume	/Lane/Sig	nal Conf	igurations	,								
	NOF	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOU	ND	FAS	TBOU	ND
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	16	56	0	0	1051	151	0	0	0	21	0	53
PROJECT												
TOTAL	16	56	0	0	1051	151	0	0	0	21	0	53
4 分 分 分 分 か か り 分 分 分 分 分 分 分 分 分 分 分 分 分												
Critical Movements Diagram SouthBound A: 601 B: 0												
		EastE	Bound		٨		West	Bound		V/C RATIC	<u>)</u>	LOS
		A:	29		Ť		A:	U		0.00 - 0.60		A
		В:	21		I		В:	0		0.61 - 0.70		В
					lorthBou	nd 28				0.71 - 0.80		с
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	Volume	E	B:	16				0.81 - 0.90		D
* = ATŠAC	C Benefit									0.91 - 1.00		E
Resi	ults North West/	/South C East Crit	critical Mov	vements ments	= B(N/ = A(W/	′B) + A ′B) + A	(S/B) (E/B)					
		V	/C =	16	+ 601	+ 0) +	29	= 0.361	L	.0S =	A

Existing plus Project Conditions A.M. Peak Hour



N/S:		Flower	St		W/E:		5th	n St		I/S No:	-	7	
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR	OJECT						
COUNT D	ATE:			STU	DY DATE			G	BROWTH	FACTOR:			
Volume	/Lane/Sig	nal Conf	igurations										
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOUN	ND .	FAS	STBOU	ND	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	0	0	0	1250	280	242	1063	0	0	0	0	
PROJECT													
TOTAL	0	0	0	0	1250	280	242	1063	0	0	0	0	
	₲₫₫	<u>^</u>	ና የት የ ት	₲₯	ት _ጨ ት	₽ ₽ ₽		ት _ጨ ት	<mark>р цр ф1</mark> р	₲ ढ़ॖॖॖॖॖऀ Ҁ		ty the state	
LANE Image: A state of the													
PhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none><none><none><none></none></none></none></none></none>													
SIGNAL <none> Split Auto Split <none> <none></none></none></none>													
Critical Movements Diagram													
				A	: 2	55							
				В	:	0							
		EastE	Bound		Δ		Westl	Bound 213		V/C RATIO	<u>כ</u>	<u>LOS</u>	
		- A. B.	0		T		B·	242		0.00 - 0.60)	Α	
			•		l IorthBour	ad				0.61 - 0.70)	В	
				A		0				0.71 - 0.80)	с	
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	Volume	В	:	0				0.81 - 0.90)	D	
	Benefit						J			0.91 - 1.00)	E	
Resi	uits North	South C	ritical Mov	/ements	= A(N/	Έ) + Δ	(S/B)						
	West	East Crit	tical Mover	ments :	= B(W/	–, – A /B) + A	(E/B)						
		V	/C =	0	+ 255	+ 24	12 +	0	= 0.261	I	LOS =	Α	

Existing plus Project Conditions A.M. Peak Hour



N/S:		Flower	St		W/E:		6th	n St		I/S No:	9		
AM/PM:	AM		Comm	nents: E	XISTING	PLUS PR	OJECT						
COUNT D	ATE:			STL	JDY DATE	:		(GROWTH	FACTOR:			
Volume	e/Lane/Sig	gnal Conf	igurations	s ——									
	NO	RTHBOU	ND	SC	DUTHBOU	IND	W	ESTBOU	ND	FAS	TBOUN	D	
EXISTING		тн 0	RT O	LT 238	TH 932	RT 0		тн 0	RT 0		тн 1599	RT	
AMBIENT		•		200	002				•		1000	020	
RELATED													
PROJECT													
TOTAL	0	0	0	238	932	0	0	0	0	0	1599	523	
LANE	\$ 	ት _{ቆት} ና	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	⁴ ∂ 2	수 _∰ 수 4	2 b db	♠ ² / ₄		\$ } }		· 余 代	› ሶ ጥ 1	
LANE 2 4 3 1 1 Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL (nono) Split (nono) (nono) (nono) (nono)													
PhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none><none><none><none>Split<none><none>SplitAuto</none></none></none></none></none></none></none>													
	SIGNAL <none> <none> Split <none> <none> Split Auto</none></none></none></none>												
Critica	l Moveme	ents Diag	ram ——										
	Critical Movements Diagram												
				4	A: 2	233							
				E	B: 1	31							
		East	Bound		٨		West	Bound		V/C RATIC	<u> </u>	<u>_OS</u>	
		A:	424		Ť		A:	0		0.00 - 0.60	ļ	4	
		В:	0				В:	0		0.61 - 0.70	E	3	
					NorthBoui A:	nd 0				0.71 - 0.80	Ċ		
A = Adjus B = Adjus	ted Throu ted Left V	ugh/Right /olume	t Volume	E	3:	0				0.81 - 0.90)	
* = ATSAC	C Benefit				L		J			0.91 - 1.00	E	E	
Resi	ults —												
	North	n/South C	Critical Mov	vements	= A(N/	/B) + A	(S/B)						
	West	/⊨ast Cri	tical Move	ments	= A(W	/в) + А . <i>,</i>	(E/B) ∖	124					
		v	/C =	U	+ 233	+ (1500	, +	424	= 0.368	; L	.OS =	Α	

N/S:		Alvarado	o St		W/E: [Wilshi	re Blvd		I/S No:	1	0
COUNT D	AM ATE:			STU	DY DATE			C	GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations									
			ND PT			ND PT	W IT	ESTROUI	ND PT			D BT
EXISTING AMBIENT RELATED	0	805	139	0	890	164	54	823	55	71	1102	36
PROJECT												
TOTAL	0	805	139	0	890	164	54	823	55	71	1102	36
4 分 分 份 份 份 分 份 份 份 分 份 份 份 分 分 份 份 份 分 分 份 份 份 分 份												
Critical Movements Diagram SouthBound A: 351 B: 0												
		East	Bound		٨		West	Bound		V/C RATIO	<u>0</u>	LOS
		A:	569		Ť		A:	439		0.00 - 0.60)	A
		В:	71		I		B:	54		0.61 - 0.70)	В
					lorthBoui	nd 815				0.71 - 0.80)	с
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	B		0				0.81 - 0.90)	D
* = ATŚAC	Benefit									0.91 - 1.00)	E
Resi	ılts —											
	Nort West	h/South C t/East Crit	ritical Move	vements ments	= B(N/ = B(W/	′B) + A /B) + A	(S/B) (E/B)					
		v	/C =	0	+ 351	+ 5 1500	4 +	569	= 0.579)	LOS =	Α

AM/PM: COUNT D Volume EXISTING	AM ATE: e/Lane/Signal	Comm	s	ISTING DY DATE	PLUS PR	OJECT	C	ROWTH	FACTOR:				
Volume	ATE: /Lane/Signal	Configurations	STUI	DY DATE	E:		C	ROWTH	FACTOR:				
Volume	/Lane/Signal	Configurations	s ——						L]		
EXISTING	NORTH	Comgulation	3										
EXISTING	NORTH		601	ITUDOU		14/	FETROLI			TROUT			
EXISTING	LT T	TH RT		THBOU	RT		TH	RT		TH	RT		
	9	0 23	711	29	662	5	463	0	0	916	6		
AMBIENT													
RELATED													
PROJECT													
TOTAL	9	0 23	711	29	662	5	463	0	0	916	6		
	\$ <i>A A A</i>	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	ᡧ᠇ᢣ᠂ᠰ	\$ 🔶		ረጉን ላጉ ነ	<u> </u>	ے م د	ረተት ላካ ረ		
LANE		<u>H</u> H H H H	1	<u>'</u> (44) '	-> ' ' 1	' ∉' 1	1			2 2	<pre></pre>		
	LANE 1 1 1 1 1 1 1 2 1 1 Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Split Auto Split Auto Parm Auto												
PhasingRTORPhasingRTORPhasingRTORSIGNALSplitAutoSplitAutoPerm <none>PermAuto</none>													
	SIGNAL Split Auto Split Auto Perm <none> Perm Auto</none>												
Critica	Critical Movements Diagram												
Critical Movements Diagram													
			A:	- 4	167								
			B:	4	467								
	L'	EastBound		٨		West	Bound		V/C RATIO	<u>0</u>	LOS		
		4: 458		Ť			242		0.00 - 0.60)	Α		
	E	3: 0				В:	5		0.61 - 0.70)	В		
				orthBoui	nd 32				0.71 - 0.80)	С		
A = Adjus B = Adjus	ted Through/ ted Left Volu	Right Volume me	B		9				0.81 - 0.90)	D		
* = ATSA	C Benefit	-		L	~	J			0.91 - 1.00)	E		
	ults												
	North/So	uth Critical Mo	vements =	= A(N/	/B) + A	(S/B)							
	West/Eas	st Critical Move	ements =	= B(W/	/B) + A	(E/B)	150						
		V/C =	J∠ -	+ 40/	+ 5 1425	, +	438	= 0.605	I	LOS =	В		
SIGNAL Critica A = Adjus B = Adjus * = ATSA0 — Res	Split I Movements	Auto Diagram EastBound A: 458 3: 0 Right Volume me uth Critical Move v/C =	Split Split Scale	outhBour 	Auto Auto nd 167 167 167 167 167 167 167 167	Perm West A: B: (S/B) (E/B) 5	Bound Bound 242 5	none>	<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	<u>D</u>	Au LOS A B C D E B		

N/S:	Francis	co St Comm	ents: EX	W/E:	PLUS PR	Wilshi	re Blvd		I/S No:	1	2	
COUNT D	ATE:		STUE	DY DATE	≣:		C	GROWTH	FACTOR:			
Volume	/Lane/Signal Cor	nfigurations										
	NORTHBO	UND	SOL	ITHBOL	IND	W	STBOU	ND	FA	STBOU	ND	
	LT TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	33 13	122	8	1	9	190	400	53	69	1132	507	
PROJECT												
TOTAL	33 13	122	8	1	9	190	400	53	69	1132	507	
LANE	④ ☆ 수 ☆ ·	ት ት 1		Ê ∰ 4		ঀ _৾ ৻৴ 1	수 余 行 1 1	δηθ Φη φηθ Φη	ी कि	Ŷ ∰ 4	[→] r ^þ 4 _∏ ¢	
Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Perm Auto Perm Auto Perm Auto												
SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto												
Critical Movements Diagram SouthBound A: 18 B: 8												
	Eas	tBound		٨		West	Bound		V/C RATI	0	LOS	
	A:	820		Ĭ		A:	227		0.00 - 0.6	0	Α	
	В.	09		1		р.	190		0.61 - 0.7	0	В	
			A:	orthBou	nd 122				0.71 - 0.8	0	с	
A = Adjust B = Adjust	ted Through/Rigi ted Left Volume	ht Volume	B:		33				0.81 - 0.9	0	D	
* = AISAC						J			0.91 - 1.0	0	E	
Resi	Results North/South Critical Movements = A(N/B) + B(S/B) West/East Critical Movements = B(W/B) + A(E/B)											
		V/C =	122 4	- o	+ 1s *1500	, , , , , , , , , , , , , , , , , , ,	020	= 0.690		LOS =	В	

Existing plus Project Conditions A.M. Peak Hour



Existing plus Project Conditions A.M. Peak Hour



N/S:		Grand /	Ave		W/E:		Wilshi	re Blvd		I/S No:	1	5	
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR	OJECT						
COUNT D	ATE:			STU	DY DATE	E:		(GROWTH	FACTOR:			
	/Lane/Sig	gnal Conf	igurations										
	NO	RTHROU		SO			W	ESTROU		FAS	TROU		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	0	0	59	912	259	9	10	0	0	41	294	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	59	912	259	9	10	0	0	41	294	
	1 1	~ ~ ^		1	~ ~ /		1	~ ~ ^	\	1 ^ ^	~ ^		
	Ч Д Г			ሻ ፚ ፲ - 1			¶ ∯ I		→ → → → → → → → → → → → →	ሻ ቆ ^ር ተ			
					2								
PhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none>SplitAutoPerm<none>PermAuto</none></none></none>													
PhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none>SplitAutoPerm<none>PermAuto</none></none></none>													
Critica	I Movem	ents Diag	ram ——										
					outhBou	nd							
				A		308							
				B	:	59							
		East	Bound		٨		West	Bound		V/C RATIC	<u>)</u>	LOS	
		A:	168		Ť		A:	19		0.00 - 0.60		A	
		В:	0				B:	9		0.61 - 0.70		в	
		L			orthBou	nd	1]	0.74 0.00		-	
A = Adius	ted Thro	ugh/Right	Volume	A		0				0.71 - 0.80		L L	
B = Adjus	ted Left \	/olume		В	:	0				0.81 - 0.90		D	
= ATSAC							J			0.91 - 1.00		E	
Resi	ults —	h/South C		10m 251-		/D) · •	(C/D)						
	Wood	/East Crit		monte	= A(N/	/b) + A	(3/D) (E/B)						
	west	Lasi Uli		0	- ⊡(₩	, b) + A + (b,	(C/D)) _	168					
		v	/C =	U	+ JUO *	<u>+ *</u>	, т	100	= 0.253	; L	OS =	Α	

N/S:		Alvarado	o St		W/E:		7tł	n St		I/S No:	16	
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATE	:		(GROWTH	FACTOR:		
Volume	/Lane/Si	gnal Conf	igurations									
				50			W	ESTROLI		EAS		
	LT	ТН	RT	LT	TH	RT	LT	ТН	RT	LT	TH RT	
EXISTING	0	867	61	0	846	74	0	380	65	0	610 30	
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	867	61	0	846	74	0	380	65	0	610 30	
		~ ~ ~		1	~ ~ /		1 0	~ ~ ^	N N A N			
	л Ц Ц	イ 浜 省 2 1	איזי אין א	м ф. Г	↑ ∰ 1 2 1	<u>ч</u> р чі 4	м ф Г		<u>ф</u> руду	비값 ゴ	₩ ₩ ₩ ■ 1	
		2						• •				
PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoPermAuto												
SIGNAL Perm Auto Perm Auto Perm Auto												
Critica	l Movem	ents Diag	ram ——				_					
				S	outhBou	nd						
					·							
				В	-	0						
		East	Bound		٨		West	Bound		V/C RATIO	LOS	
		A:	320		Ť		A:	223		0.00 - 0.60	Α	
		В:	0				B:	0		0.61 - 0.70	В	
				N	orthBou	nd				0 71 - 0 90	C	
A = Adjus	ted Thro	ugh/Right	Volume	A		309				0.71 - 0.00		
B = Adjus	ted Left	Volume		В	:	0				0.81 - 0.90	D	
							_			0.91 - 1.00	E	
Rest	Nort	h/South C	ritical Mov	/emente	- Δ(N	/R) <u>+</u> R	(S/B)					
	Wes	t/East Crit	tical Move	ments :	= R(W	/B) + Δ	(E/B)					
	1163			309	- D(W) + 0	, , , , , , , , , , , , , , , , , , ,	(_,_,_,) +	320				
		V	/C =	500	· · ·	1500	, т		= 0.349) L(DS = A	
		V	/C =		*	1500			= 0.349) L(JS = A	

Existing plus Project Conditions A.M. Peak Hour

Î

Ν

Bix	cel Street		
	7	↓ 50 ↓ 304 ↓ 39	7th Street
30 321 165	< │ ↓ └►		→
1) Lane Capacity for WB L Number of Lanes -	efts -	900 vphpl 1	
WB Left V/C -	-	<u>39</u> 900 0.043	
Lane Capacity for EB Th	nroughs -	1,500 vphpl	
Number of Lanes -		1	
EB Through V/C -		<u>321</u> 1,500	
	=	0.214	
Lane Capacity for EB Ri	ights -	900 vphpl	
Number of Lanes -		1	
EB Right V/C -	-	<u>165</u> 900	
	=	0.183	
Critical V/C -	0.043 =	+ 0.214 0.257	
or			
Lane Capacity for EB Le	efts -	1,500 vphpl	
Number of Lanes -		1	
EB Left V/C -	-	30 1,500	
	=	0.02	
Lane Capacity for WB T	hroughs/Ri	ghts - 1,500 vpl	hpl

WB Through V/C -	$\left\{\frac{304}{}\right\}$	+ 3,000	50 }			
	=	0.118				
Critical V/C -	0.02	+	0.118			
	=	0.138				
2) Lane Capacity for NB & S	SB Directio	on -	1,500 v	vphpl		
Number of Lanes -		1 1	left through/righ	it		
Critical V/C -	{	+	400 1,500	+	76	}
or	{	+	153 1,500	+	25	}
	=	0.365				
Intersection V/C = 0.622	_	0.070	=	0.552		LOS A

2

Number of Lanes -

N/S:	F	rancisc	o St		W/E:		7th	n St		I/S No:	1	8	
AM/PM:	AM ATE:		Comm	ents: E STI	XISTING JDY DATE	PLUS PR	OJECT	(GROWTH	FACTOR:			
Volume	/Lane/Sig	nal Conf	igurations	s 									
		THBOU TH	ND RT		DUTHBOU TH	RT		ESTBOU TH	ND RT		STBOU TH	ND RT	
EXISTING	22	10	42	49	198	67	88	503	475	63	460	13	
PROJECT													
TOTAL	22	10	42	49	198	67	88	503	475	63	460	13	
$\begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{} \end{array}{$													
Critical Movements Diagram SouthBound A: 265 B: 49													
		EastE	Bound		٨		West	Bound		V/C RATI	<u>0</u>	<u>LOS</u>	
		А. В:	63		T		B:	88		0.00 - 0.6	0	Α	
					' NorthBou	nd				0.61 - 0.7	0	В	
					A:	42				0.71 - 0.8	0	с	
A = Adjus B = Adjus	ted Throughted Left Version	gh/Right olume	Volume		B:	22				0.81 - 0.9	0	D	
= ATSAC							J			0.91 - 1.0	0	E	
Kest	Results North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = A(W/B) + B(E/B) 22 + 265 + 489 + 63												
		V.	/6 =		*	1500			= 0.489		200 -	^	

Existing plus Project Conditions A.M. Peak Hour



N/S:		Flower	St		W/E:		7th	n St		I/S No:	2	0
AM/PM:	AM		Comm	ents: E)	ISTING	PLUS PF	OJECT					
COUNT D	ATE:			STU	DY DATE	E:		C	GROWTH	FACTOR:		
Volume	e/Lane/Sig	gnal Conf	igurations	;								
	NO	RTHBOU	ND	SO	UTHBOU	IND	W	FSTBOU	ND	FAS	STROUM	D
EVICTINO	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	68	852	181	84	730	0	0	336	146
PROJECT												
TOTAL	0	0	0	68	852	181	84	730	0	0	336	146
LANE SIGNAL		Ŷ ∰ Ŷ	È I [↑] III IIII RTOR none>	I ↓ I ↓ Phasin Split	수 슈 쉬 2 1 ng t	ようかか 中 「 「 の の の の の の の し し し し し し し し し し し し し	ी ट्री Phasin Pern	수 ↔ 수 2 ng n <	RTOR		` ⊕ () P H RTOR Auto
Critica	I Movem	ents Diag	ram ——	S A B	outhBou A: 2	nd 275 68]					
		East	Bound		٨		West	Bound		V/C RATIO	<u>c</u>	LOS
		A:	241		Ť		A:	299 84		0.00 - 0.60) .	Α
			Ū		l Iarrih Davi					0.61 - 0.70)	В
				A		0				0.71 - 0.80)	С
A = Adjus B = Adjus	ted Throuted Left	ugh/Right /olume	t Volume	В	:	0				0.81 - 0.90)	D
* = ATSAC	C Benefit						J			0.91 - 1.00)	E
Kesi	Norti West	n/South C :/East Cri	Critical Mov	vements ments	= A(N/ = B(W/	/B) + A /B) + A	.(S/B) .(E/B)					
		v	/C =	0	+ 275	+ 8 1500	4 +	241	= 0.330)	LOS =	A

N/S:	Olive	Ave		W/E:		7th	n St		I/S No:	2 [,]	1
AM/PM:	AM	Comm	ents: EXI	STING	PLUS PR	OJECT					
COUNT D	ATE:		STUD	Y DATE			(GROWTH	FACTOR:		
Volume	/Lane/Signal Cor	figurations	;								
	NORTHBO	IND	SOU	THBOU	ND	W	ESTROU	ND	FA	STROUM	D
EXISTING	LT TH	RT 61		<u>тн</u> 0	RT O		TH 609	RT 220		TH 435	RT 0
AMBIENT				•							
RELATED											
PROJECT											
τοται	184 893	61	0	0	0	0	609	220	0	435	0
		UI	Ū	U	Ū	Ū	000	220	Ū	400	U
LANE	Ⅰ ₽ ₽ ₽ ₽ 1 2 1 2 1	ት ሳ 1	♣ ☆ 수		ት ^የ ት ላ _ተ 6	� ₽	수 슈 수 2	≩ לי¢ לד∳ ליף לד∮ 1	ी _द ि द	2 <u></u>	ት ሳ 4 1
	Phasing	RTOR	Phasing	g l	RTOR	Phasi	ng	RTOR	Phasing	g	RTOR
SIGNAL	Split	Auto	<none></none>	> <	none>	Pern	n	Auto	Perm	<	none>
Critica	I Movements Dia	gram ——									
			So	uthBou	nd]					
					0						
			B:		0						
	Eas	tBound		٨		West	Bound		V/C RATI	<u>o i</u>	<u>LOS</u>
	A:	210		Ť		A.	305		0.00 - 0.6)	A
	В:	Ŭ		I		в:	0		0.61 - 0.7	D I	В
			No A·	rthBour	nd 85				0.71 - 0.80) (с
A = Adjus	ted Through/Rig	nt Volume	р.	4	84				0.81 - 0.9)	D
* = ATSAC	Benefit		D .		U - T				0.91 - 1 0	, I	F
— Resi	ults									-	
	North/South	Critical Mov	vements =	A(N/	B) + A	(S/B)					
	West/East C	itical Move	ments =	A(W/	′B) + B	(E/B)					
		V/C =	285 +	0	+ 30 1500)5 +	0	= 0.323	5	LOS =	Α

N/S:		Alameda	a St		W/E:		7th	n St		I/S No:	2	2
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATE	E:		C	GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations									
	NO			50			W	ESTROU		FA	STROU	
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	144	622	56	118	860	97	130	765	55	79	373	102
AMBIENT												
PROJECT												
TOTAL	144	622	56	118	860	97	130	765	55	79	373	102
	₲ 🗗		۹ ۱ ۵ ۹ _{۱ (}	\$ <u></u> }		<u>}</u> p 4p	ঀ 👉	ት 🚓 ና	<u>}</u> r⁰ 4тጶ	₲ ᠿ イ	<u>}</u>	² ቤ የተያ
LANE	1	1 1		1	1 1		1	1 1		1	1	1
	Phasir	ng F	RTOR	Phasir	ng	RTOR	Phasir	ng	RTOR	Phasing	g	RTOR
SIGNAL	Pern	1	Auto	Prot-F	ix	Auto	Pern	n	Auto	Perm		Auto
Critica	l Moveme	ents Diag	ram ——									
					outhBou	nd 179]					
					-	1/9						
				В	: 1	18						
			Bound 238		Δ		Westl	Bound 410		V/C RATI	<u>0</u>	LOS
		B.	70				B.	130		0.00 - 0.60	0	A
					l orthRow	nd		100		0.61 - 0.70)	В
				A	: 3	339				0.71 - 0.8)	с
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	В	:	44				0.81 - 0.90)	D
* = ATŠAC	C Benefit				L		J			0.91 - 1.0	D	E
Resi	ults —											
	Norti	h/South C	ritical Mov	ements	= B(N/	/B) + A	(S/B)					
	West	Last Crit	iicai Movei	ments =	= A(W)	/b) + B	(E/B) 0 →	70				
		V	/C =	144	<u>+ 419</u>	+ 4 1425	U +	19	= 0.710)	LOS =	С
		V	/C =	144	+ 4/9	+ 41 1425	U +	19	= 0.710		LOS =	С

N/S:		Soto S	St		W/E:		7th	n St		I/S No:	23
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR	OJECT				
COUNT D	ATE:			STU	DY DATE	E:			GROWTH	FACTOR:	
Volume	/Lane/Sig	nal Conf	igurations	,							
	NO			50			W	ESTROUI		FAST	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT
EXISTING	454	712	29	54	599	80	26	104	38	42	51 20
AMBIENT											
RELATED											
PROJECT											
TOTAL	454	712	29	54	599	80	26	104	38	42	51 20
		$\wedge \wedge \wedge$			$\wedge \wedge \wedge$		4 ^	$\wedge \wedge \wedge$		$ \land \land \land$	
LANE	ין קד 1	┬ 孫 飞 1 1		ין _ע ד 1	⊤ क् ा 1 1		יקר □□□	⊤ क् ा 1		י ₍ ד ⊤ [] 1	研
	Phasin	a F	RTOR	Phasir	na	RTOR	Phasir	na	RTOR	Phasing	RTOR
SIGNAL	Prot-F	ix i	Auto	Perm	<u>-</u>	Auto	Split	t	Auto	Split	Auto
Critica	l Moveme	ents Diag	ram								
		J		S	outhBou	nd	1				
				A		340					
				В	:	54					
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	93		Ť		A:	168		0.00 - 0.60	Α
		B:	42				В:	26		0.61 - 0.70	В
					orthBou	nd	1			0.71 - 0 80	C
A = Adjus	ted Throu	ıgh/Right	Volume	A	: 3	871				0.04 0.00	ř
B = Adjus * = ATSAC	ted Left V C Benefit	/olume		B	: 4	154				0.81 - 0.90	U
Resi	ults —						J			0.91 - 1.00	E
1.63(North	n/South C	ritical Mov	vements	= B(N/	/B) + A	(S/B)				
	West	/East Crit	ical Move	ments =	= A(W	/B) + A	(E/B)				
		V	/C =	454	+ 340	+ 16	68 +	93	= 0.697	, LC)S = B
		•	-		*	1375					

Existing plus Project Conditions A.M. Peak Hour



Existing plus Project Conditions A.M. Peak Hour



N/S:		Flower	St		W/E:		8ti	n St		I/S No:	2	6
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PF	ROJECT					
COUNT D	ATE:			STU	DY DATE	E:		C	BROWTH	FACTOR:		
	/Lane/Sig	gnal Conf	igurations									
	NO			so			w	ESTROU		ΕΔ	STROU	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	0	608	274	72	1042	0	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	0	608	274	72	1042	0	0	0	0
	1 1	~ ~ ^		1	~ ~ ^		1 1	~ ~ ~				
LANE	Ч ф П	イ 浜 イ 	у мр. чр. (ሻ 🖓	イ 浜 イ 4 ┃ ┃	ידע אין <u>א</u> 1	भ ₍ 7 1	イ 浜 て 3	אדא אין 👌	ካ _ፈ ት ተ	<u>` </u>	<u>с</u> , гу оту
					I							
	Phasir	ng i	RIOR	Phasir	ng	RIOR	Phase	ng I	RIOR	Phasing)	RIOR
SIGNAL	<none< td=""><td>≥> <</td><td>none></td><td>Split</td><td></td><td>Auto</td><td>Spli</td><td>t <</td><td>none></td><td><none:< td=""><td>></td><td><none></none></td></none:<></td></none<>	≥> <	none>	Split		Auto	Spli	t <	none>	<none:< td=""><td>></td><td><none></none></td></none:<>	>	<none></none>
Critica	I Movem	ents Diag	ram	E S	outhBou	nd						
				A	: 2	274						
				в	:	0						
			Designed		•	•		Davin d —			_	
		A:	50una 0		Ą		A:	279		V/C RATIO	<u>5</u>	LOS
		B.	0				в.	70		0.00 - 0.60)	Α
		В.	U		I	_	В.	12		0.61 - 0.70)	в
					orthBou	nd				0.71 - 0.80)	с
A = Adjus	ted Thro	ugh/Right	Volume		-	•				0.81 - 0.90)	D
* = Adjus	C Benefit	oiume			•	U				0.01 4.00	N	- C
	ults —									0.91 - 1.00	,	E
	Nort	h/South C	ritical Mov	ements	= A(N/	/B) + A	(S/B)					
	West	/East Cri	tical Mover	nents :	= A(W	/B) + A	(E/B)					
			-	0	+ 274	+ 27	79 +	0				•
		V	/C =		*	1500			= 0.299)	103 =	A





N/S:	Figuero	oa St	W/	Æ: 9th S	St/James	M Wood Blvd	I/S No:	28
AM/PM:	AM	Comm	ents: EXISTI	NG PLUS PF	ROJECT			
COUNT D	ATE:		STUDY D	ATE:		GROWTH	FACTOR:	
Volume	e/Lane/Signal Con	figurations						
	NORTHBOL	IND	SOUTH	BOUND	W	STROUND	FASTB	DUND
FXISTING	LT TH	RT		H RT		TH RT	LT TH	H RT
AMBIENT	0 1400	141			0			+2 0
RELATED								
PROJECT								
TOTAL	0 1406	141	0 0) 0	0	0 0	865 154	42 0
	\$ <i>A A A A</i>	ᡬ᠇ᢧ᠂ᡬ	<u>ዓ</u>	እ ት ት ት	ፋ 순	ት ራ ራ ላ ቀ	<u>ዓ</u> ድ ድ ድ	ት ት ት ት ት ት ት
LANE	· (+ · (+))	1			· (P			> +> · ·
	Phasing	RTOR	Phasing	RTOR	Phasir	ng RTOR	Phasing	RTOR
SIGNAL	Split	Auto	<none></none>	<none></none>	<none< td=""><td>e> <none></none></td><td>Split</td><td><none></none></td></none<>	e> <none></none>	Split	<none></none>
Critica	I Movements Diag	gram ——						
		-	South	Bound	7			
			A:	0				
			B:	0				
	East	Bound		٨	West	Bound	V/C RATIO	LOS
	A:	401		Ť		•	0.00 - 0.60	Α
	В:	481			в:	U	0.61 - 0.70	В
			A:	Bound 469			0.71 - 0.80	С
A = Adjus B = Adjus	ted Through/Righ	t Volume	B:	0			0.81 - 0.90	D
* = ATSA(C Benefit			-			0.91 - 1.00	E
Res	ults			- //>	(6/5)			
	North/South	Critical Move	/ements = /	A(N/B) + A	(S/B)			
	West/East Cl	//C =	469 +	0 + *1500	0 +	481 = 0.56	3 LOS	= A

N/S:	Cł	nerry St			W/E:		Pico	Blvd		I/S No:	2	9
AM/PM:	AM		Comme	nts: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:			STUI	DY DATE	E:		(GROWTH	FACTOR:		
Volume	/Lane/Signal	Configu	rations									
	NORTH	BOUND		SO	ITHBOL	IND	W	ESTBOU	ND	FA	STBOU	ND
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	524 5	501 2	221	196	0	7	0	353	238	216	547	0
PROJECT												
TOTAL	524 5	i01 2	221	196	0	7	0	353	238	216	547	0
		<u> </u>										
LANE	𝑘 𝑘 𝑘 𝑘 𝑘 𝑘 𝑘 𝑘 𝑘 𝑘 𝑘 𝑘 𝑘	☆ ☆ ! 1	₽\$4₽\$ < 	ት ᡒ ́ 2 │ │	Ŷ ∰ 4	Ê, î ⁰ (†1) 2 □	¶ ₽	← 余 行 1 1	<u>}</u> ו∿ לדף וווווווווווווווווווווווווווווווווווו	भ _द ि ∠ □ 1 ाः	À ∰ 4 3	
	Phasing	RTC	DR	Phasin		RTOR	Phasi	na	RTOR	Phasin		RTOR
SIGNAL	Split	Aut	to	Split	9	Auto	Pern	n	OLA	Perm	9	<none></none>
		J <u> </u>		•								
Critica	I Movements	Diagran	ח 									
		Ū		_Sα	outhBou	nd	1					
				A		4						
				B		108						
	Г	EastBou ⊿ ·	nd	, 	Δ		West	Bound 197		<u>V/C RATI</u>	<u>o</u>	<u>LOS</u>
		B:	216				B:	0		0.00 - 0.6	0	A
					ہ orthBou	nd				0.61 - 0.7	0	В
		·		A		342				0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Inrough/ ted Left Volu	ime	olume	B		342				0.81 - 0.9	0	D
										0.91 - 1.0	0	E
Kesi	North/So	outh Criti	cal Move	ements :	= A(N	/B) + B	(S/B)					
	West/Ea	st Critica	I Movem	ients =	A(W	/B) + B	(E/B)					
		V/C =	;	342 -	⊦ 108 ,	+ 19 1425	97 +	216	= 0.536	i	LOS =	Α

N/S:	AM	Figueroa	a St Comm	ients: E	W/E:	PLUS PR	Pico	Blvd		I/S No:	3	0
COUNT D	ATE:			STU	IDY DATE			(GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations	;								
	NO	RTHBOU	ND	SC	UTHBOU	IND	W	ESTBOU	ND	FA	STBOU	ND
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	200	1736	125	9	146	111	49	304	62	194	638	113
PROJECT												
TOTAL	200	1736	125	9	146	111	49	304	62	194	638	113
LANE	아 슈····································	Ŷ ∰ Ĝ	ላተን ላነ 	ዓ _ፈ ታ 1	수 슈 수 2	ት ሳ ት 1	∯ ∯ 1	수 슈 수 2	ት ሳ ት 1	₩ ↔ 4 1 :	₽ _₩ 2	ት ት 1
SIGNAL	Phasir Prot-F	ng F ix	RTOR Auto	Phasi Perr	ng n	RTOR OLA	Phasii Pern	ng n	RTOR Auto	Phasin Prot-Fi	g	RTOR OLA
Critica	l Moveme	ents Diag	ram —									
				S A E	SouthBou	nd 73 9						
		EastE	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS
		А. В:	194		Ī		B:	49		0.00 - 0.60	0	Α
			101		l Iarth Bau	n d				0.61 - 0.7	0	В
			N . 1	A		165				0.71 - 0.80	0	с
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right /olume	volume	E	3: 2	200				0.81 - 0.9	0	D
= AISAC							J			0.91 - 1.0	0	E
Kesi	North	n/South C	ritical Mo	vements	= A(N/	/B) + B	(S/B)					
	West	/East Crit	ical Move	ments	= B(W	/B) + A	(E/B)					
		V	/C =	465	+ 9	+ 4 1375	9 +	319	= 0.542		LOS =	A

N/S:	Hoov	ver St		W/E:	Alva	arado St/A	lvarad	o Ter	I/S No:	31	
AM/PM:	AM	Comm	ents: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:		STU	DY DATE	:		(GROWTH	FACTOR:		
	/Lane/Signal Co	onfigurations	, —								
	NORTHBO	DUND	SO	UTHBOU	ND	WF	STBOU	ND	FAS	TBOUN	D
EVISTING		RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	0 917	592	12	800	U	414	U	U	U	U	U
PROJECT											
TOTAL	0 917	592	12	800	0	414	0	0	0	0	0
	♠ 	ት የ	₲₯╯	ት 🚓 ና	<u>∖</u> ∱ 4⊤}	∮ ፚ ና	-> Ag 4	ት የት ላካ የ	\$ ኇ ዯ	€ €	۹ _ד ه م
LANE	1	1 1	1	1		1		1			
	Phasing	RTOR	Phasin	g	RTOR	Phasing	g	RTOR	Phasing	I	RTOR
SIGNAL	Perm	Free	Perm	<u>ا</u>	none>	Split		Auto	<none></none>	<	none>
Critica	Movements Di	agram ——									
				outhBou	nd]					
				- 4	10						
		_	D		12						
	Ea ⊿·	stBound		Δ		WestB	ound 207		V/C RATIO	<u>)</u> <u>L</u>	<u>.OS</u>
	р.			ſ		B·	207		0.00 - 0.60	A	۱.
	В.	U					201		0.61 - 0.70	E	3
				ortnBoui : 5	nd i03				0.71 - 0.80	C	;
A = Adjus B = Adjus	ted Through/Rig ted Left Volume	ght Volume	B	-	0				0.81 - 0.90)
* = ATŠAC	Benefit			L]			0.91 - 1.00	E	E
— Resi	Ilts			A /b1		(6/D)					
	West/Fast (Critical Move	vements : ments =	= A(N/ = A(W/	'B) + B /B) + ∆	(3/B) (E/B)					
			503	- 12	-, + A + 20	(_,_,_,)7 +	0				

AM/PM: MI Comments: EXISTING PLUS PROJECT COUNT DATE: STUDY DATE: GROWTH FACTOR: Volume/Lane/Signal Configurations SOUTHBOUND WESTBOUND LT TH RT EXISTING 0 0 AMBIENT Interview Interview PROJECT Interview Interview TOTAL 0 0 9 400 24 45 285 0 0 332 Image: Application of the structure Interview Interview Interview Interview Interview Interview RELATED Interview Interview Interview Interview Interview Interview Interview Interview Interview												
COUNT DATE: STUDY DATE: GROWTH FACTOR: Volume/Lane/Signal Configurations SOUTHBOUND WESTBOUND FASTBOUND LT TH RT LT TH RT EXISTING 0 0 9 400 24 45 285 0 332 AMBIENT Image: Construction of the state of												
Volume/Lane/Signal ConfigurationsNORTHBOUNDSOUTHBOUNDWESTBOUNDLTTHRTLTTHRTLTTHRTLTTHRTEXISTING000940024AMBIENTImage: Second state												
NORTHBOUNDSOUTHBOUNDWESTBOUNDEASTBOUNDLTTHRTLTTHRTEXISTING000940024AMBIENTImage: Stress of the stress of												
LTTHRTLTTHRTLTTHRTEXISTING0009400244528500332AMBIENT </td <td>--</td>	- -											
EXISTING0009400244528500332AMBIENT </td <td>RT</td>	RT											
AMBIENT Image: connect to the second conn	53											
RELATED Image: connect to the second connecond connecond connecond connect to the second connect to the sec												
PROJECT Image: constraint of the state of the sta												
TOTAL0009400244528500332 $4 \neq \uparrow \Rightarrow \Rightarrow \uparrow \Rightarrow$												
4 分 수 会 会 か か か 会 수 会 会 か か か 会 수 会 会 か か か 会 수 会 会 LANE Phasing RTOR Phasin	53											
「「子 子 張 馬」 ^p vip vi テ 子 張 馬 ^p vip vi テ 子 張 馬 LANE Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing R SIGNAL Connex Connex Split Auto Perm Connex Perm	-h (L-h											
Phasing RTOR Phasing RTOR Phasing RTOR Phasing R [*]												
SIGNAL <none> Split Auto Perm <none> Perm A</none></none>	OR											
	ito											
Critical Movements Diagram												
SouthBound												
A: 141												
B: 9												
EastBound V/C RATIO	<u>s</u>											
A: 193 A: 100 0.00 - 0.60 A												
B: 0 B: 45 0.61 - 0.70 B												
NorthBound 0.71 - 0.80 C												
A = Adjusted Through/Right Volume												
B = Adjusted Left Volume B: 0 * = ATSAC Benefit 0												
0.91 - 1.00 E												
North/South Critical Movements = A(N/B) + A(S/B)												
West/East Critical Movements = B(W/B) + A(E/B)												
$V/C = \frac{0 + 141 + 45 + 193}{*1500} = 0.183$ LOS = A												

N/S:		Grand /	Ave		W/E:		18tł	n St		I/S No:	33
AM/PM:	AM		Comm	nents: EX	ISTING	PLUS PR	OJECT				
COUNT D	ATE:			STU	DY DATE	E:		(GROWTH	FACTOR:	
Volume	/Lane/Sic	unal Conf	igurations								
				- 			14/6	ETROU		EACTD	
		TH	RT		TH	RT	LT	TH	RT		H RT
EXISTING	0	0	113	182	457	0	0	0	0	0 81	7 125
AMBIENT											
RELATED											
PROJECT											
TOTAL	0	0	113	182	457	0	0	0	0	0 81	17 125
	1	~ ^ ^		1	~ ~ ^		1	~ ~ /		1 ~ ~ ~	
LANE	ч ф ́́		2	ग रू 1	T 🕂 1 3				יזע און ק	N ↓ T ↓ ↓ 2	
	Phasir	a	RTOR	Phasir	na	RTOR	Phasir	na	RTOR	Phasing	RTOR
SIGNAI	Perm		Auto	Prot-F	ix <	none>		.9 > <	none>	Split	Auto
			luto							opin	Auto
	l Movom	onte Diag	ram —								
Critica	INOVEIN	into Diag	iani	∟s	outhBou	nd	1				
				A	: 1	152					
				В	-	82					
		East	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	212		Ť		A.	U		0.00 - 0.60	Α
		В:	0		I		В:	0		0.61 - 0.70	В
					orthBou	nd 62				0.71 - 0.80	С
A = Adjus	ted Throu	igh/Right	t Volume		-	0				0.81 - 0.90	D
* = ATSAC	Benefit	Juille		В	-	v				0.91 - 1 00	F
Resi	ults —										-
	North	n/South C	critical Mo	vements	= A(N/	/B) + B	(S/B)				
	West	/East Cri	tical Move	ments :	= A(W	/B) + A	(E/B)				
		v	/C = —	62	+ 182	+ (1425) +	272	= 0.292	LOS	= A

N/S:		Olive	St		W/E:		6th	n St		I/S No:	3	4
AM/PM:	AM		Comm	ents: EX	XISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	JDY DAT	E:			GROWTH	FACTOR:		
Volume	/Lane/Si	gnal Conf	igurations									
	NO	RTHBOU	ND	SC	UTHBOI	IND	W	FSTBOU	ND	FA	STBOU	ND
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	888	162	0	0	0	0	0	0	378	932	0
PROJECT												
TOTAL	0	888	162	0	0	0	0	0	0	378	932	0
LANE	Ф	수 _∰ 숙 4 1	ት ሳ _ገ (<u>ቁ</u> ፚ	수 _余 4	Ĵ Ĵ	\$ ₽	Ŷ ∰ 4	ት ሳ ት	ी ₍) ∠ 1 1 ;	}	τ _β μο φηο
	Phasi	ng I	RTOR	Phasi	ng	RTOR	Phasir	ng	RTOR	Phasin	g	RTOR
SIGNAL	Spli	t	Auto	<non< td=""><td>e> <</td><td><none></none></td><td><none< td=""><td>e> <</td><td>none></td><td>Split</td><td></td><td><none></none></td></none<></td></non<>	e> <	<none></none>	<none< td=""><td>e> <</td><td>none></td><td>Split</td><td></td><td><none></none></td></none<>	e> <	none>	Split		<none></none>
	l Movem	ents Diag	ram —									
ontiou		onto Diag		S S	SouthBou	und]					
				E	3:	0						
		East	Bound		^		Westl	Bound		V/C RATI	<u>o</u>	LOS
		A:	262		Í		A:	0		0.00 - 0.6	0	Α
		В.	202				D.	U		0.61 - 0.7	0	В
					NorthBou A:	210				0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	t Volume	E	B:	0				0.81 - 0.9	0	D
	, penerit]			0.91 - 1.0	0	E
Rest	Nort	h/South C	Critical Mov	vements	= A(N	I/B) + A	(S/B)					
	Wes	t/East Crit	tical Move	ments	= A(W	//B) + A	(E/B)					
		v	/C = —	210	+ 0	+ (*1500) +	262	= 0.245	i	LOS =	Α

N/S: Hope St W/E: 7th St I/S No: 35												
AM/PM: AM Comments: EXISTING PLUS PROJECT												
COUNT DATE: GROWTH FACTOR:												
Volume/Lane/Signal Configurations												
	NO	RTHBOU	ND	SO	UTHBOU	IND	W	ESTBOU	ND	EAS	STBOU	ND
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	37	222	60	9	230	24	0	813	104	0	349	62
PROJECT												
TOTAL	37	222	60	9	230	24	0	813	104	0	349	62
						· · · ·						· · · · ·
4 分 수 歳 気 ゆ 柳 4 分 수 歳 気 ゆ 柳 4 分 수 歳 気 ゆ 柳 LANE 1 1 1 1 1												
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR											
SIGNAL	Pern	n	Auto	Perm	<u>ו</u>	Auto	Pern	n	Auto	Perm		Auto
Critica	Movem	ents Diag	ram 🚃									
				A	outnBou : 1	nd 32						
				В	:	9						
		East	Bound	_	٨		West	Bound		V/C RATIO	<u>0</u>	LOS
		А: В-	200		Ĩ		А. в.	459		0.00 - 0.60)	Α
		р.	Ų		 orthPou	nd	D.	U		0.61 - 0.70)	В
				A	: 1	160				0.71 - 0.80)	С
A = Adjusted Through/Right VolumeB = Adjusted Left VolumeB:37							D					
	Benefit]			0.91 - 1.00)	E
Results North/South Critical Movements = B(N/B) + A(S/B)												
West/East Critical Movements = $A(W/B) + B(E/B)$												
V/C = $\frac{37 + 132 + 459 + 0}{*1500}$ = 0.349 LOS = A												

N/S: Grand Ave W/E: 7th St I/S No: 36													
AM/PM: AM Comments: EXISTING PLUS PROJECT													
COUNT D	COUNT DATE: GROWTH FACTOR: GROWTH FACTOR:												
Volume/Lane/Signal Configurations													
				50			W	ESTROIN		EAS		L	
	LT	ТН	RT	LT	LT TH RT			LT TH RT			LT TH RT		
EXISTING	0	0	0	93	1075	73	0	826	0	0	330	105	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	93	1075	73	0	826	0	0	330	105	
LANE	「「「「」」」」」」」」」」」」」」」」」」」」」」」」」」」」」」」」」												
	Phasir	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	RT	OR	
SIGNAL	<none< td=""><td>; ;> <</td><td>none></td><td>Spli</td><td>t</td><td>Auto</td><td>Pern</td><td>n <</td><td>none></td><td>Perm</td><td>Αι</td><td>uto</td></none<>	; ;> <	none>	Spli	t	Auto	Pern	n <	none>	Perm	Αι	uto	
Critica	l Moveme	ents Diag	ram ——										
- Childe		into Diag	. uni	∟s	outhBou	nd	1						
				4	: 2	269							
				E	: !	93							
		East	Bound		٨		West	Bound		V/C RATIO	LO	<u>s</u>	
		A:	100		Ť		A. D.	413		0.00 - 0.60	Α		
		р.	U				D :	U		0.61 - 0.70	В		
					iortnBoui	nd 0				0.71 - 0.80	С		
A = Adjusted Through/Right Volume B = Adjusted Left Volume B: 0										0.81 - 0.90	D		
* = ATSAC Benefit 0.91 - 1.00 E													
Results													
North/South Critical Movements = $A(N/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$													
$\frac{0}{100} + 269 + 413 + 0$													
V/C = = 0.385 LOS = A													

Existing plus Project Conditions A.M. Peak Hour



= 0.183

Critical V/C -		0.032	+	0.183	=	0.215
2) Lane Capaci	ty for NB ⁻	Throughs -			900	vphpl
Lane Capaci	ty for NB I	Left- and Rig	ht-turns -		1,425	vphpl
Number of La	anes -		1	l left-turn on	ly	
			3	3 throughs		
			1	I right-turn o	nly	
Critical V/C -		1,423	or	242	or	182
		2,700		1,425		1,425
		=	0.527			
Intersection V/C =	0.812	_	0.100	=	0.712	LOS C

N/S: Glendale Blvd W/E: Temple St I/S No: 38														
AM/PM: AM Comments: EXISTING PLUS PROJECT														
COUNT D	COUNT DATE: GROWTH FACTOR:													
Volume/Lane/Signal Configurations														
	NORTHBOUND					SOUTHBOUND			WESTBOUND			FASTBOUND		
EVISTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
	54	452	13	223	1045	140	60	434	119	187	571	132		
PROJECT														
TOTAL	54	452	13	223	1645	140	60	434	119	187	571	132		
	·····································													
LANE														
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL	Pern	n .	Auto	Perr	n	Auto	Prot-F	Fix	Auto	Prot-Fix	(Auto		
Critica	I Movem	ents Diag	ram —		outhBou	nd								
				A	юціпвоці \: 8	193								
				E	3: 2	23								
		East	Bound		٨		West	Bound		V/C RATIC	<u>)</u>	<u>.os</u>		
		R·	187		Ĩ		А. В·	60		0.00 - 0.60		4		
					l Iarrih Davu	- d				0.61 - 0.70	E	3		
				A A		233				0.71 - 0.80	•	;		
A = Adjus B = Adjus	E	8:	54				0.81 - 0.90	. [0					
	, Benerit									0.91 - 1.00	E	E		
North/South Critical Movements = B(N/B) + A(S/B)														
West/East Critical Movements = A(W/B) + B(E/B)														
V/C = $\frac{54 + 893 + 277 + 187}{*1425}$ = 0.920 LOS = E														

Existing plus Project Conditions A.M. Peak Hour



Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights







Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights



= 0

Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights


N/S: Lucas Ave W/E: 3rd St I/S No: 40														
AM/PM:	AM	Comr	nents: EX	ISTING	PLUS PR	OJECT								
COUNT DA	ATE:		STU	DY DATE	E:		(GROWTH	FACTOR:					
Volume/	/Lane/Signal	Configuration	s											
	NORTH	BOUND	SO	UTHBOU	IND	W	ESTBOU	ND	FA	STBOUN	D			
FXISTING	LT T	H RT	LT	TH 538	RT	LT 46	TH 756	RT 58	LT	TH	RT 66			
	100 22	100	107	550	120	40	730	50	130	1042	00			
RELATED														
PROJECT														
TOTAL	100 22	24 100	107	538	128	46	756	58	158	1042	66			
	φ φ φ φ	2 Å Å Å	6 Δ		ላ ግ የተን	ά Δ		2 4 44	ά Δ 4		ላ ት የተ			
4 分 수 歲 貴 ሶ ஸ 4 分 수 歲 貴 ሶ ஸ 4 分 수 歲 貴 ሶ ஸ 4 分 수 歲 貴 ሶ ஸ LANE 1 2 1 1 1 2 1 1 2 1														
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoPermAuto														
Critical Movements Diagram														
			В	6: 1	07									
		EastBound		Δ		West	Bound 378		V/C RATI	0	LOS			
	B	: 158				B:	46		0.00 - 0.6	0	A			
				י IorthBou	nd				0.61 - 0.7	0	В			
	a di Tribucci di At		A	.: 1	12				0.71 - 0.8	0	С			
A = Adjust B = Adjust	ed Left Volur	ne	в	:	00				0.81 - 0.9	0	D			
= ATSAC						J			0.91 - 1.0	0	E			
Resu	North/Sou	uth Critical Mc	vements	= B(N/	′B) + A	(S/B)								
	West/Eas	t Critical Move	ements :	= B(W	/B) + A	(E/B)								
		V/C =	100	+ 333	+ 4	6 +	521	= 0.597	,	LOS =	Α			

N/S:	N/S: Lucas Ave W/E: 6th St I/S No: 41													
AM/PM:	AM		Comm	nents: E	XISTING	PLUS PR	OJECT							
COUNT D	ATE:			STI	JDY DATE	:		C	GROWTH	FACTOR:				
Volume	/Lane/Si	gnal Conf	igurations	s —										
	NO	RTHBOU	ND	S	DUTHBOL	IND	W	ESTBOU	ND	FAST	BOUND			
FXISTING	LT 20	TH 174	RT 19	LT	TH	RT	LT	TH	RT 26	LT	TH RT			
	29	174	10	43	294	100	50	044	20	144 1	030 100			
RELATED														
PROJECT														
τοται	20	174	18	43	294	166	58	644	26	144 1	030 168			
	LJ	1/4	10	73	234	100	50	077	20	144 1	000 100			
4														
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoPermAuto														
Critical Movements Diagram														
Critical Movements Diagram														
				4	A:	503								
					B:	43								
		East	Bound		٨		West	Bound		V/C RATIO	LOS			
		A:	599		Ť		A:	322		0.00 - 0.60	Α			
		B:	144		I		B:	58		0.61 - 0.70	В			
		-			NorthBou	nd	1			0.71 - 0.80	С			
A = Adjus	ted Thro	ugh/Right	Volume		<u> </u>					0.81 - 0.90	D			
* = Adjus	Benefit	olume			ن	29				0.91 - 1.00	F			
— Resi	ults —									0.01 - 1.00	<u> </u>			
	Nort	h/South C	ritical Mo	vements	s = B(N/	/B) + A	(S/B)							
	Wes	t/East Crit	tical Move	ments	= B(W	/B) + A	(E/B)							
		V	/C =	29	+ 503	+ 5 1500	8 +	599	= 0.723	; LC)S = C			

N/S:		Lucas A	Ave		W/E:		Wilshi	ire Blvd		I/S No:	42	
AM/PM:	AM		Comm	nents: EX	ISTING		OJECT					
COUNT D	ATE:			STU	DY DATE			(GROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	igurations	; —								
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOU	ND	FAS	STBOUN	D
EVISTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	29	139	23	01	204	/ 1	59	502		52	901	54
PROJECT												
TOTAL	29	139	23	61	204	71	59	502	71	52	951	54
					~ ^ ^			~ ^ /				
	Ч ф			Ч ф			м ф	イ _後 1	→ [↑] [↑]	۲ کړ ۲	<u> </u>	مله ما م
LANE		1			1		1	1	1	1 1		1
	Phasi	ng l	RTOR	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasing	g I	RTOR
SIGNAL	Pern	n	Auto	Pern	n	Auto	Perr	n	Auto	Perm		Auto
— Critica	I Movem	ents Diag	ram ——									
				S	outhBou	nd 36						
					-							
):	01						
		Eastl	Bound		٨		West	Bound		V/C RATIO	<u>2</u>	<u>OS</u>
		A.	520		Ť			720		0.00 - 0.60) 4	1
		В:	52		I		В:	59		0.61 - 0.70) Е	5
					lorthBour	nd o1				0.71 - 0.80) C	;
A = Adjus	ted Thro	ugh/Right	t Volume			20				0.81 - 0.90) [)
* = AUJUS	C Benefit	oluille			-	23				0.91 - 1.00) =	
Res	ults —									0.01 - 1.00	, L	•
	Nort	h/South C	Critical Mo	vements	= B(N/	B) + A	(S/B)					
	Wes	t/East Cri	tical Move	ments	= B(W/	′B) + A	(E/B)					
				29	+ 336	+ 5	9 +	528				
		v	/c = —	20			•		= 0.565		LOS =	Α

N/S:		Grand A	ve		W/E:		US 101 N	B Ramp	s	I/S No:	1
AM/PM:	PM		Comr	nents: EX	XISTING	PLUS PR	OJECT				
	ATE:			STL	JDY DATI	E:		C	ROWTH	FACTOR:	
Volume	e/Lane/Sig	gnal Confi	iguration	s ——							
	NO	RTHBOU	D	sc	OUTHBOL	IND	W	ESTBOU	D	FASTB	DUND
FXISTING	LT 675	TH 834	RT O		TH	RT 337		TH	RT O	LT TH	H RT
AMBIENT	075	034	0		307	337	0	U		07 0	ZJZ
RELATED											
PROJECT											
TOTAL	675	834	0	0	507	337	0	0	0	67 0	252
	ቁ 🕁	ት 🚓 🕁	ሳተን ላካ	ፋ 🕁	수 🄬 ረ	ᡷ᠂ᠰ᠂ᠰ	ዓ ፚ	ት 🚓 ና	ት የ ¹		; -
LANE		2			2	1					
	Phasii	ng F	RTOR	Phasi	ng	RTOR	Phasir	ng l	RTOR	Phasing	RTOR
SIGNAL	Prot-F	ix <r< td=""><td>none></td><td>Perr</td><td>n</td><td>OLA</td><td><none< td=""><td>e> <</td><td>none></td><td>Split</td><td>Auto</td></none<></td></r<>	none>	Perr	n	OLA	<none< td=""><td>e> <</td><td>none></td><td>Split</td><td>Auto</td></none<>	e> <	none>	Split	Auto
	Maxam	anto Diag									
Critica	II WOVEIN	ents Diagi	alli	۲s	SouthBou	Ind]				
				4	\:	270					
				E	B:	0					
		EastB	Bound		٨		West	Bound		V/C RATIO	LOS
		B.	U 67		Ť		R.	0		0.00 - 0.60	Α
		D.	U/					U		0.61 - 0.70	В
						na 417				0.71 - 0.80	с
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	E	B:	675				0.81 - 0.90	D
* = ATSA	C Benefit						J			0.91 - 1.00	E
Res	ults	h/South C	ritical Mo	vements	= R/N	/B) ∔ ∆	(S/B)				
	West	t/East Crit	ical Move	ements	= A(W	//B) + B	(E/B)				
		V/	/C =	675	+ 270	+ () +	67	= 0.640	LOS	= B
						1420					

N/S: Hope St/US 101 SB Ramps W/E: Temple St I/S No: 2 AM/PM: PM Comments: EXISTING PLUS PROJECT														
	/Lane/Signal	Configurations	. —											
						14/6	ESTROU		EAS	TROUND				
		TH RT	LT	TH	RT	LT	TH	RT	LT	TH R	Т			
EXISTING	214 2	40 198	72	34	16	136	733	217	474	731 72	2			
AMBIENT														
RELATED														
PROJECT														
TOTAL	214 2	40 198	72	34	16	136	733	217	474	731 7	2			
			• =	•			100							
4 4														
SIGNAL PETIN AUTO PETIN AUTO PTOT-FIX AUTO PTOT-FIX AUTO														
Critical Movements Diagram														
Childa	Critical Movements Diagram SouthBound A: 25 B: 72													
	Г	EastBound		٨		West	Bound		V/C RATIC	LOS				
		A: 402		Ť		A:	367		0.00 - 0.60	Α				
	E	B: 474		I		В:	136		0.61 - 0.70	в				
			N	orthBou	ind	1			0.74 0.00	-				
A = Δdius	ted Through/	Right Volume	A		219				0.71 - 0.80	C				
B = Adjus	ted Left Volu	me	B	: :	214				0.81 - 0.90	D				
" = AISAC	Benefit]			0.91 - 1.00	Е				
Resi	ults													
	North/So	outh Critical Mo	vements =	= A(N	/B) + B	(S/B)								
	west/Eas	v/C =	ments = 219 +	⊧ A(W	+ 36 + 36 *1425	(E/B) 67 +	474	= 0.724	; L	OS = C				

Intersection 3 Existing plus Project Conditions P.M. Peak Hour **Figueroa Street** 643 22 107 1,684 **3rd Street** 3rd Street/SR 110 Ramps 56 -2,405 74 882 1) Lane Capacity for WB Throughs -900 vphpl Number of Lanes -5 WB Through V/C -1,684 4,500 0.374 = <u>or</u> Lane Capacity for WB Rights -1,425 vphpl Number of Lanes -1 WB Right V/C -107 1,425 0.075 = <u>or</u> Lane Capacity for EB Throughs -1,425 vphpl 2 Number of Lanes -56 2,850 EB Through V/C -

= 0.0202) Lane Capacity for NB Lefts - 900 vphpl Number of Lanes - 3 NB Left V/C - $\left\{ \frac{882 \times 0.37}{900} \right\}$ = 0.363

Lane Capacity for SB Rights -

```
1,425 vphpl
```

Numb	er of Lanes -		2				
SB Ri	ght V/C -	{ <u> 643 </u>	x 1,425	<u>0.55</u> }			
		=	0.248				
Critica	I V/C -	0.363	+	0.248	=	0.611	
or							
Lane	Capacity for NB Th	roughs & F	Rights -	1,425	i vphpl		
Numb	er of Lanes -		2 1	throughs through/rig	ght		
NB Th	rough/Right V/C -		{ <u>2,405</u>	+ 4,275	74 }	or	<u>74</u> 1,425
		=	0.580				
Intersection V/	C = 0.985	_	0.100	=	0.885	LOS	D

N/S:	N/S: Flower St W/E: 3rd St I/S No: 4													
AM/PM:	PM		Comm	ents: E)	(ISTING	PLUS PR	OJECT							
COUNT D	ATE:			STU	DY DATE	E:		0	BROWTH	FACTOR:				
Volume	/Lane/Sig	nal Conf	igurations											
		THROM		50			W	ESTROUM		EAS	TROU			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	ТН	RT		
EXISTING	135	209	0	0	431	473	117	1158	62	0	0	144		
AMBIENT														
RELATED														
PROJECT														
TOTAL	135	209	0	0	431	473	117	1158	62	0	0	144		
4 2 1 2 1 3 1 1 1														
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Perm <none> Perm Auto Split Auto <none> Free</none></none>														
SIGNAL Perm Auto Split Auto <none> Free</none>														
Critical Movements Diagram														
Critical Movements Diagram														
	SouthBound A: 473													
				В	3:	0								
		EastE	Bound		٨		West	Bound 305		V/C RATIO	<u>)</u>	<u>LOS</u>		
		A. B.	0		T		D .	303		0.00 - 0.60)	Α		
		в:	U		ا 	_	В:	117		0.61 - 0.70)	в		
					iorthBou \:	nd 105				0.71 - 0.80)	с		
A = Adjus B = Adjus	ted Throug	gh/Right olume	Volume	В	3:	135				0.81 - 0.90)	D		
* = ATSAC	Benefit						J			0.91 - 1.00)	E		
Resi	lits	Cauth O		(0 m c m t -		/D) · •	(C/D)							
	West/	East Crit	ical Move	ments	= в(N/ = A(W	/B) + A /B) + A	(3/B) (E/B)							
		V	/C =	135	+ 473	+ 30)5 +	0	= 0.539) [_OS =	Α		

N/S:		Grand A	Ave		W/E:		3rd	l St		I/S No:		5		
AM/PM:	PM		Comm	ents: E)	(ISTING	PLUS PR	OJECT							
COUNT D	ATE:			STU	DY DATE	:		(GROWTH	FACTOR:				
Volume	/Lane/Si	gnal Conf	igurations											
		RTHBOU	ND	SO	UTHBOL	IND	W	ESTBOU	ND	FAS	STROU	ND		
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	21	268	0	0	803	69	0	0	0	151	0	112		
PROJECT														
TOTAL	21	268	0	0	803	69	0	0	0	151	0	112		
IOTAL2126800803690001510112 $4 \neq \uparrow \Leftrightarrow \Leftrightarrow \phi \phi$														
Critica	Critical Movements Diagram SouthBound A: 436 B: 0													
		East	Bound		٨		West	Bound		V/C RATIO	<u>2</u>	<u>LOS</u>		
		A:	62		Ť		A:	U		0.00 - 0.60)	Α		
		В:	151		I		В:	0		0.61 - 0.70)	В		
					lorthBou	nd 134				0.71 - 0.80)	с		
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	в		21				0.81 - 0.90)	D		
* = ATŠAC	C Benefit									0.91 - 1.00)	E		
Resi	ults —	h/8audt 0		ioment:	D/11	/D) · •	(8/P)							
	NOrt	n/South C	tical Move	vernents ments	= B(N/	/¤) + A //R) ⊥ R	(3/B) (F/B)							
		V	/C =	21	+ 436	+ () +	151	= 0.335	; 1	LOS =	A		

Existing plus Project Conditions P.M. Peak Hour



N/S:		Flower	St		W/E:		5th	n St		I/S No:		7		
AM/PM:	РМ		Comm	ents: E)	ISTING	PLUS PR	OJECT							
COUNT D	ATE:			STU	DY DATE			G	BROWTH	FACTOR:				
Volume	e/Lane/Sigr	nal Conf	igurations											
	NOR	THBOU	ND	SO	UTHBOU	ND	W	ESTROUM	ND.	FAS	STBOU	ND		
	LT	TH	RT	LT	ТН	RT	LT	ТН	RT	LT	TH	RT		
EXISTING	0	0	0	0	1155	518	212	1372	0	0	0	0		
RELATED PROJECT														
TOTAL	0	0	0	0	1155	518	212	1372	0	0	0	0		
TOTAL0001155518212137200000 $4 \rightarrow 2 \rightarrow 3 \rightarrow 4$ $4 \rightarrow 2 \rightarrow 4 \rightarrow 4$ $4 \rightarrow 4 \rightarrow 4 \rightarrow 4 \rightarrow 4$ $4 \rightarrow 4 \rightarrow 4 \rightarrow 4 \rightarrow 4$ $4 \rightarrow 4 \rightarrow 4 \rightarrow 4 \rightarrow 4$ $4 \rightarrow 4 \rightarrow 4 \rightarrow 4 \rightarrow 4$ $4 \rightarrow 4 \rightarrow$														
Critica	Critical Movements Diagram SouthBound A: 279 B: 0													
]	East	Bound		٨		West	Bound		V/C RATIO	<u>2</u>	<u>LOS</u>		
		A:	0		Ť		A:	2/4		0.00 - 0.60)	A		
		Б.	U		ا - بر ا		В.	212		0.61 - 0.70)	В		
				A	lorthBour	nd 0				0.71 - 0.80)	с		
A = Adjus B = Adjus	ted Throug	gh/Right plume	Volume	В	:	0				0.81 - 0.90)	D		
* = ATSAC	C Benefit]			0.91 - 1.00)	E		
Resi	Results North/South Critical Movements = A(N/B) + A(S/B) West/East Critical Movements = A(W/B) + A(E/B)													
		v	/C =	0	+ 279	+ 27 1500	74 +	0	= 0.299)	LOS =	Α		

Existing plus Project Conditions P.M. Peak Hour



N/S: Flower St W/E: 6th St I/S No: 9													
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR	OJECT						
COUNT D	ATE:			STU	DY DATE			(GROWTH	FACTOR:			
Volume	/Lane/Sig	gnal Conf	igurations										
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOU		FAS	STROUM		
	LT	TH	RT	LT	ТН	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	0	0	316	1091	0	0	0	0	0	1105	560	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	316	1091	0	0	0	0	0	1105	560	
	4 Δ.		A	4 Δ		2 -1 (-1)	4 Δ.		<u> </u>	4 4 4		<u>م</u> ه م	
4 7 3 1 1 LANE 2 4 2 4 3 1 1													
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL <none> <</none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none></none>													
SIGNAL <none> <none> <none> Split Auto</none></none></none>													
Critical Movements Diagram													
Critical Movements Diagram													
				A	.: 2	273							
				В	: 1	74							
		East	Bound		Λ		West	Bound		V/C RATIC	<u>)</u>	LOS	
		A:	333		Ť		A.	U		0.00 - 0.60) _	A	
		В:	0		I		В:	0		0.61 - 0.70)	В	
				A	lorthBoui	nd 0				0.71 - 0.80) (с	
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	В	:	0				0.81 - 0.90)	D	
* = ATŠAC	C Benefit				L		J			0.91 - 1.00)	E	
Resi	ults —												
	North	n/South C	ritical Mov	vements	= A(N/	(B) + A	(S/B)						
	west	/East Crit		ments :	= A(W/	ив) + А . , ,	(⊏/B) \	222					
		V	/C =	U	+ 213	+ (1500	, +	333	= 0.334	L	_OS =	Α	

N/S:	N/S: Alvarado St W/E: Wilshire Blvd I/S No: 10													
AM/PM:	PM		Comn	nents: E	EXISTING	PLUS PF	OJECT							
COUNT D	ATE:			ST	UDY DATE	:		G	ROWTH	FACTOR:				
Volume	/Lane/Si	gnal Conf	igurations	s —										
	NC	RTHBOU		s	OUTHBOU		w	ESTROUM		FΔ	STROU			
	LT	TH	RT	LT	ТН	RT	LT	TH	RT	LT	TH	RT		
EXISTING	0	1020	67	0	844	95	96	1078	97	85	942	53		
AMBIENT														
RELATED														
PROJECT														
TOTAL	0	1020	67	0	844	95	96	1078	97	85	942	53		
	1 1	~ ~ ~	N 4 N	1 ^	~ ~ ^	N N A N	1	~ ~ ~		1 ~ /	~ ^ ^			
	LANE 2 1 2 1 1 1 1 1 1 1 1 1 1													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR														
SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto														
Critical Movements Diagram														
SouthBound A: 313														
					<u>~</u> .									
					В:	0								
		EastE	Bound		٨		West	Bound		<u>V/C RATI</u>	<u>o</u>	LOS		
		A:	498		Τ		A:	500		0.00 - 0.6	0	Α		
		B:	85		I		B:	96		0.61 - 0.7	0	в		
					NorthBou	nd				0.71 - 0.8	0	с		
A = Adjus	ted Thro	ugh/Right	Volume		A: 3					0.91 0.0	0			
B = Adjus * = ATSAC	ted Left ' Benefit	Volume			В:	0				0.01 - 0.9		_		
	ults —									0.91 - 1.0	U	E		
	Nort	h/South C	ritical Mo	vement	s = A(N/	/B) + B	(S/B)							
	Wes	t/East Crit	ical Move	ements	= A(W	/B) + B	(E/B)							
			<i>(</i>)	362	+ 0	+ 58	38 +	85	0.000		108 -	в		
		V	/C =		*	1500			= 0.620		203 =	0		

N/S:	N/S: Beaudry Ave W/E: Wilshire Blvd I/S No: 11													
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR	OJECT							
COUNT D	ATE:			STU	DY DATI	E:		C	GROWTH	FACTOR:				
	/l ane/Sigr	nal Conf	igurations											
volume							14/				TROUN			
		THBOU	RT	LT	TH	RT	LT	TH	RT		TH	RT		
EXISTING	5	0	32	225	46	442	8	627	0	0	816	30		
AMBIENT														
RELATED														
PROJECT														
TOTAL	5	0	32	225	46	442	8	627	0	0	816	30		
	<u>ዓ</u> ራ	- - - - - - - - - - - - - - - - - - -	ቀተን ፋነ	ፋ 순	4 <u>A</u> 4	የተን ፋ ት	\$ 🔶	4 <u>6</u> 4	ት የ ተ	6 <i>A</i> A		- - - - - - - - - - - - - - - - - - -		
4 分 수 歲 춚 ሶ ŵ 4 分 수 歲 춚 ሶ ŵ 4 分 수 歲 춚 ሶ ŵ 4 分 수 歲 춚 ሶ ŵ LANE 1 1 1 1 1														
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL	Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Split Auto Split Auto Perm Auto													
	SIGNAL Split Auto Split Auto Perm <none> Perm Auto</none>													
Critica	Critical Movements Diagram													
Critical Movements Diagram														
				A	-	244								
				В	: :	225								
]	EastE	Bound		٨		West	Bound		V/C RATIO	<u> </u>	<u>_OS</u>		
		A:	408		Ť			330		0.00 - 0.60	ļ	4		
		в:	0		 		В:	8		0.61 - 0.70	E	3		
	_				orthBou	37			_	0.71 - 0.80	c			
A = Adjus B = Adjus	ted Throug	gh/Right	Volume	R		5				0.81 - 0.90	0	0		
* = ATSAC	C Benefit				-	-				0.91 - 1.00	E	E		
Resi	ults —													
	North/	South C	ritical Mov	vements	= A(N	/B) + A	(S/B)							
	West/I	East Crit	tical Move	ments :	= B(W	//B) + A	(E/B)	400						
		V	/C =	37	+ 244	+ 8 *1425	5 +	408	= 0.419	L	OS =	Α		
						. 720								

N/S:	Francis	co St		W/E:		Wilshi	re Blvd		I/S No:	1	2
AM/PM:	PM	Comm	ents: EXI	STING	PLUS PR	OJECT					
COUNT D	ATE:		STUD	Y DATE	:		C	GROWTH	FACTOR:		
Volume	/Lane/Signal Con	figurations									
	NORTHBOL		SOU	THROL		W	ESTROUI		FA	STROUI	
	LT TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	156 0	468	51	9	28	40	536	10	13	969	119
AMBIENT											
RELATED											
PROJECT											
TOTAL	156 0	468	51	9	28	40	536	10	13	969	119
LANE	ၛ	☆ ゆ 钟 ↓ 1 ┃ RTOR	ዓ ኯ ት Phasing	`	₽ ₽ ■ RTOR	∯ ∂ 1 Phasii	수 ☆ 行 1 1 ng	È rÞ ीrÞ Ì I I I I I I I I I I I I I I I I I I I	ी dr dr 1 Phasing	}	} /
SIGNAL	Perm	Auto	Perm		Auto	Pern	n	Auto	Perm		Auto
Critical	Movements Dia	uram ——									
		.	So A: B:	uthBou	nd 88 51						
	East	Bound		٨		West	Bound		V/C RATI	<u>o</u>	<u>LOS</u>
	A:	544		Ť		A:	273		0.00 - 0.60	D	A
	В.	13		1		В.	40		0.61 - 0.70	D	В
			No A:	orthBou	nd 468				0.71 - 0.80	D	с
A = Adjust B = Adjust	ted Through/Righ ted Left Volume	t Volume	В:		156				0.81 - 0.9	D	D
* = ATSAC	Benefit]			0.91 - 1.0	D	E
Resi	lits North/South	Critical Mov	vements =	A(N	/B) + B	(S/B)					
	West/East Cr	itical Move	ments =	B(W	/B) + A	(E/B)					
	N	//C =	468 +	51	+ 4	0 +	544	= 0.665		LOS =	В

Existing plus Project Conditions P.M. Peak Hour



Existing plus Project Conditions P.M. Peak Hour



N/S:		Grand A	Ave		W/E:		Wilshir	e Blvd		I/S No:	15	
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATE			(GROWTH	FACTOR:]
Volume	/Lane/Sig	gnal Conf	igurations									
	NO	RTHBOU		SO	UTHROU		WE	STROU		FAS	TROUND	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT	
EXISTING	0	0	0	5	1146	160	39	45	0	0	6 540	0
AMBIENT												
INCOLOI		[
TOTAL	0	0	0	5	1146	160	39	45	0	0	6 540	0
LANE	♣	ት _ቆ	\$ f\$ \$f\$	ी ∲ •	수 余 수 2 1	אַד¢ לז קד¢ לז	ी की क	Ŷ क़ऀ ᡤ	² ቤ ብ ⁴	ዓ _ቆ ን ት	↔ ↔ / [•] ·	€ _∏ >
	Phasir	ng l	RTOR	Phasir	ng	RTOR	Phasir	ng	RTOR	Phasing	RTOR	ł
SIGNAL	<none< td=""><td>e> <</td><td>none></td><td>Spli</td><td>t</td><td>Auto</td><td>Perm</td><td>۱ <</td><td>none></td><td>Perm</td><td>Auto</td><td>)</td></none<>	e> <	none>	Spli	t	Auto	Perm	۱ <	none>	Perm	Auto)
Critica	l Moveme	ents Diag	ram ——									
				S A	outhBou	nd ;28						
				В	:	5						
		EastE	Bound		Δ			Bound 84		V/C RATIO	LOS	
		B:	0				B	39		0.00 - 0.60	Α	
			v		l IorthBou	nd				0.61 - 0.70	В	
				A	:	0				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right /olume	Volume	В	:	0				0.81 - 0.90	D	
* = ATSAC	Benefit						J			0.91 - 1.00	Е	
Resu	ults —				A /b 1/		(0/D)					
	West	/East Crit	niical Mover	ments	= A(N/ = B(W/	⊡) + A /B) + ∆	(3/B) (E/B)					
		V	/C =	0	+ 328	+ 3 1500	9 +	273	= 0.357	· L	OS = A	

N/S:		Alvarad	o St		W/E:		7th	n St		I/S No:	16
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR	OJECT				
COUNT D	ATE:			STU	DY DATE	:		(GROWTH	FACTOR:	
Volume	/Lane/Si	gnal Conf	igurations								
	NC			SO	UTHBOU		w	ESTROU		FAST	
	LT	ТН	RT	LT	TH	RT	LT	ТН	RT	LT	TH RT
EXISTING	0	887	74	0	819	64	0	706	101	0 6	527 106
AMBIENT											
RELATED											
PROJECT											
TOTAL	0	887	74	0	819	64	0	706	101	0 6	627 106
	ቁ 🕁	수	չ լծ գրծ	ቁ ፈን	ት 🚓 ና	չ լծ գեծ	ፋ 순	ት 🚓 ና	ᡩ᠇ᢩᢀ᠂ᢤ		歳ᠿᡑ
LANE		2 1			2 1			1 1			
	Phasi	na l	RTOR	Phasir	na	RTOR	Phasi	na	RTOR	Phasing	RTOR
SIGNAL	Perr	n	Auto	Pern		Auto	Pern	n	Auto	Perm	Auto
				. •							
	l Movem	onts Diag	ram —								
Ontica	i movem	cinto Diag	lan	∟s	outhBou	nd	1				
				A	: 2	294					
				В	-	0					
		EastE	Bound 367		Ą		West	Bound 404		V/C RATIO	LOS
		B.	0				B.	0		0.00 - 0.60	Α
		р.	V					v		0.61 - 0.70	В
				A		11a 320				0.71 - 0.80	С
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	В	:	0				0.81 - 0.90	D
^ = ATSAC	Benefit						J			0.91 - 1.00	Е
Resi	ults —	h/Cauth C		iomente	A /61	<u>م</u> . (م/	(C/D)				
	Nort	t/East Crit	tical Move	vernents ments :	= A(N/ = A(W	/B) + B /B) + R	(5/B) (E/B)				
		V	/C =	320	+ 0	+ 4()4 +	0	= 0.413	LO	S= A
						1300					

Existing plus Project Conditions P.M. Peak Hour

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Bi	xel Street				
57 297 6	52	<↓	- 62 - 565 - 237		7th Street
65 - 627 - 339 -		▲ 111	122	58	
1) Lane Capacity for WB L Number of Lanes -	.efts -	900) vphpl		
WB Left V/C -	-	237 900 0.263			
Lane Capacity for EB T	hroughs -	1,500) vphpl		
Number of Lanes -		1	l		
EB Through V/C -		627 1,500			
	=	0.418			
Lane Capacity for EB R	ights -	900) vphpl		
Number of Lanes - EB Right V/C -		1 <u>339</u> 900			
	=	0.377			
Critical V/C -	0.263 =	+ 0.681	0.418		
or					
Lane Capacity for EB L	efts -	1,500) vphpl		
Number of Lanes -		1	l		
EB Left V/C -		65 1,500			
	=	0.043			
Lane Capacity for WB 1	hroughs/Ri	ights -	1,5	00 vphpl	

WB Through V/C -	{ <u>565</u>	+ 3,000	<u>62</u> }		
	=	0.209			
Critical V/C -	0.043	+	0.209		
	=	0.252			
2) Lane Capacity for NB & SE	3 Directio	n -	1,500 v	phpl	
Number of Lanes -		1 1	left through/right	:	
Critical V/C -	{ <u>111</u>	+	297 1,500	+	}
or	{ <u></u>	+	122 1,500	+	}
	=	0.310			
Intersection V/C = 0.991	_	0.070	=	0.921	LOS E

2

Number of Lanes -

N/S:	Franc	isco St		W/E:		7th	n St		I/S No:	1	8
AM/PM:	PM	Comm	nents: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:		STUI	DY DATE	E:		(GROWTH	FACTOR:		
Volume	/Lane/Signal C	onfigurations									
	NORTHB		SO	ITHBOL		W	ESTROLI		FA	STROU	
	LT TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	51 47	140	293	34	177	65	721	114	23	591	8
AMBIENT											
RELATED											
PROJECT											
TOTAL	51 47	140	293	34	177	65	721	114	23	591	8
LANE				Ŷ 余 イ ┃ 1	μο μο μο μο μο μο μο μο μο μο	ी । ।		ф ф ф •		P क़	δηθ Φη Φ
	Phasing	RTOR	Phasin	a	RTOR	Phasi	na	RTOR	Phasin	a	RTOR
SIGNAL	Perm	Auto	Perm		Auto	Pern	n	Auto	Perm	9	Auto
	Movomonte D	iagram —									
Ontica	Novements D	lagram	_ So	outhBou	nd	7					
			A	: 2	211						
			B		293						
	Ea	astBound		Λ		West	Bound		V/C RATI	<u>o</u>	LOS
	A.	300		Ĩ		A. D.	410		0.00 - 0.6	0	Α
	D.	23		1		В:	CO		0.61 - 0.7	0	В
			A:	ortnBou : 1	na 140				0.71 - 0.8	D	с
A = Adjus B = Adjus	ted Through/Ri ted Left Volum	ght Volume e	B		51				0.81 - 0.9	D	D
^ = AISAC	Benefit					J			0.91 - 1.0	D	E
Resi	lits	h Critical Ma	vomente	A / NI	/D) . D	(S/B)					
	West/East	Critical Move	ments =	- A(N/	/B) + B	(E/B)					
		V/C =	140 -	<u>⊦ 293</u>	+ 4 ⁻ 1500	18 +	23	= 0.513	i	LOS =	A

Existing plus Project Conditions P.M. Peak Hour



N/S:		Flower	St		W/E:		7th	n St		I/S No:	2	0
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATE	:		C	GROWTH	FACTOR:		
	/Lane/Sig	gnal Conf	igurations									
	NO			50			W	ESTROUI		EAG	STROU	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	ТН	RT
EXISTING	0	0	0	74	1905	196	107	750	0	0	738	210
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	74	1905	196	107	750	0	0	738	210
	1 1	~ ~ ^		1	~ ~ ^		4	~ ~ ^		1		
LANE	м Ф		איזי אין א	ণ ∰ □ 1 □	イ 浜 て 2 1	אדא אז <u>ל</u>	^भ ∉ि □ 1	イ 浜 行 2	<u>4</u> чр «1 4	ሻ ፈታ ተ 1	,	אדע אין <u>א</u> 1
	Phasir	ng l	RTOR	Phasir	ng	RTOR	Phasir	ng	RTOR	Phasing]	RTOR
SIGNAL	<none< td=""><td>e> <</td><td>none></td><td>Spli</td><td>t</td><td>Auto</td><td>Pern</td><td>n <</td><td>none></td><td>Perm</td><td></td><td>Auto</td></none<>	e> <	none>	Spli	t	Auto	Pern	n <	none>	Perm		Auto
<u> </u>												
Critica	I Movem	ents Diag	ram		outhBou	nd						
				A	сипвои : 5	j44						
				в		74						
					-	/ 4		<u> </u>				
		East	Bound		٨		Westl	Bound 375		V/C RATIO	<u>2</u>	LOS
			- 1-		T			407		0.00 - 0.60) .	Α
		в:	0		I		В:	107		0.61 - 0.70)	В
		P			orthBoui	nd	1			0.71 - 0.80)	с
A = Adjus	ted Throu	ugh/Right	Volume		-	v				0.81 - 0 90		D
в = Aajus * = ATSAC	C Benefit	roiume		В	-	U				0.01 1.00		-
	ults —									0.31 - 1.00	,	L
	Nort	h/South C	ritical Mov	/ements	= A(N/	′B) + A	(S/B)					
	West	/East Cri	tical Mover	ments :	= B(W/	/B) + A	(E/B)					
			<i>i</i> c	0	+ 544	+ 10)7 +	474	- 0 690	, I	0S =	в
		v	/6 =		*	1500			= 0.000			-

N/S:	Olive A	ve	W/E:		7th	n St		I/S No:	21				
AM/PM:	PM ATE:	Commer	nts: EXISTING	PLUS PR	OJECT	(GROWTH	FACTOR:					
Volume,	/Lane/Signal Conf	igurations											
		RT		RT		ESTROU	RT			RT			
EXISTING AMBIENT RELATED	113 1066	85	0 0		0	680	217		811	0			
PROJECT													
TOTAL	113 1066	85	0 0	0	0	680	217	0	811	0			
LANE SIGNAL	୩ ନୁ ନ ନୁ ମୁ 1 2 1 1 Phasing 1 Split	À (†) (†) (†) ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	Phasing <none> <</none>	À r (†) A TOR RTOR	ी ∰ Phasir Pern	수 ∰ 수 2 ng	À r ^à ∰ 1 RTOR Auto		× ↔ ↔ ↔	r) 4r) TOR None>			
Critical	Critical Movements Diagram SouthBound A: 0 B: 0												
	East	Bound	Λ		West	Bound		V/C RATIO	<u>)</u>	<u>os</u>			
	A: B:	406 0			A: B:	340 0		0.00 - 0.60) A				
				nd				0.61 - 0.70) В				
			A:	316				0.71 - 0.80	c c	;			
A = Adjust B = Adjust	ed Through/Right ed Left Volume	Volume	B: 1	113				0.81 - 0.90	D				
= ATSAC			L		J			0.91 - 1.00) Е				
Resi	Its North/South C West/East Cri V	critical Move tical Movem /C =3	ments = A(N ents = B(W 316 + 0	/B) + A /B) + A + (1500	(S/B) (E/B)) +	406	= 0.411	I	_OS =	A			

N/S:		Alameda	a St		W/E:		7th	n St		I/S No:	2	2
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATE	E:		(GROWTH	FACTOR:		
Volume	e/Lane/Si	gnal Conf	igurations	; <u> </u>								
		RTHBOU			UTHBOU TH			ESTBOU TH			STBOUI TH	
EXISTING	81	749	83	106	883	8	99	431	76	107	759	169
AMBIENT												
RELATED												
PROJECT												
TOTAL	81	749	83	106	883	8	99	431	76	107	759	169
	ፋ 슈	<u> </u>	ረጉ የተን	ዓ 슈	ት ሐ ና	ረ ሌ የ	∮ ዯ	ት ሐ ና	⟨ ϯ Ϸ ⟨ϡ <u>∕</u>	ፋ ጵ ና	ے م د	ᡷ᠂ᡥ᠂ᡏ᠇᠈
LANE	1	1 1		1	1 1		1	1		1		1
	Phasi	na l	RTOR	Phasir	าต	RTOR	Phasir	na	RTOR	Phasin	a	RTOR
SIGNAL	Pern	n .	Auto	Prot-F	ix	Auto	Pern	n	Auto	Perm		Auto
	1						L					
Critica	l Movem	ents Diag	ram 🚃									
				S	outhBou	nd						
					-	140						
				В	1	106						
		EastE	Bound 464		Δ		Westl	Bound 254		V/C RATIO	<u>0</u>	LOS
		B:	107				B	99		0.00 - 0.60)	Α
			101		l IorthBou	nd				0.61 - 0.70)	В
		_		A	: 4	416				0.71 - 0.80)	с
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right Volume	Volume	в		81				0.81 - 0.90)	D
* = ATSAC	C Benefit]			0.91 - 1.00)	E
Resi	ults —	h/8		10 m c - 1 -	D/V	/D) · •	(8/8)					
	NOIT	t/Fast Crit		ments	= B(N/ = B(W	/⊡) + A /B) ∔ ∆	(3/B) (F/B)					
	1103			81	+ 446	·_, + 9	9 +	464				
		V	/C =		*	1425			= 0.695		LOS =	В

N/S:	S	Soto St		W/E:		7tł	n St		I/S No:	23	3
AM/PM:	РМ	Com	ments: E)	KISTING	PLUS PF	ROJECT					
COUNT D	ATE:		STU	IDY DATE	:		(GROWTH	FACTOR:		
Volume	e/Lane/Signa	I Configuration	s								
	NORTH	BOUND	SO	UTHBOU	IND	W	ESTBOU	ND	FAS	TROUN	D
	LT	TH RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	493 8	375 31	34	686	62	6	32	11	76	49	53
PROJECT											
TOTAL	493 8	375 31	34	686	62	6	32	11	76	49	53
	ፋ 슈 수	ት ት ት የ	ፋ 슈	<u> </u>	ᡧᠯᡐᡧᠯ	ፋ 슈	<u> </u>	ᡧᠯᡐᡧᠯ	ፋ 슈 수	<u>ት</u>	ረተቅ ፋነ
LANE		1	1	1 1		· (P	1			442 4	1
	Phasing	RTOR	Phasi	na	RTOR	Phasi	na	RTOR	Phasing		RTOR
SIGNAL	Prot-Fix	Auto	Pern	n	Auto	Spli	t	Auto	Split		Auto
Critica	I Movements	s Diagram 💳									
			_s	outhBou	nd	7					
			A		874						
			B	8:	34						
		EastBound		٨		West	Bound		V/C RATIO	<u> </u>	<u>_OS</u>
		A: 125		Ť		A:	49		0.00 - 0.60	Å	4
		В: 76				B:	6		0.61 - 0.70	E	3
				lorthBou	nd				0.71 - 0.80	c	2
A = Adjus	ted Through	/Right Volume		· 4	100				0 81 - 0 90	г	1
B = Adjus * = ATSA	C Benefit	1116	В	. 4	195				0.01 1.00		-
— Res	ults ——								0.31 - 1.00		-
	North/So	outh Critical Mo	ovements	= B(N/	′B) + A	(S/B)					
	West/Ea	st Critical Mov	ements	= A(W	/B) + A	(E/B)					
		V/C = -	493	+ 374	+ 4	9 +	125	= 0.687	L	OS =	в
		,, <u> </u>		*	1375			_ 0.001			

Existing plus Project Conditions P.M. Peak Hour



Existing plus Project Conditions P.M. Peak Hour



N/S:		Flower	St		W/E:		8th	n St		I/S No:	2	26
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATE			G	BROWTH	FACTOR:		
	/Lane/Sig	gnal Conf	igurations									
				50			W	ESTROUM		EA	STROU	
	LT	TH	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT
EXISTING	0	0	0	0	1689	399	89	1590	0	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	0	1689	399	89	1590	0	0	0	0
	1 1	~ ~ ^		1 1	^ ^ ^		1 1	~ ~ ~				^
	Ч ф П		ا ا ا مله ما {	м ф Г		עדייז א 1	শ ∉ ⊺ 1		<u>о по апо</u>	۲ ۲ ۱		<u>с</u> рания При при при при при при при при при при п
					T			•				
	Phasir	ng l	RTOR	Phasir	ng l	RTOR	Phasi	ng F	RTOR	Phasin	g	RTOR
SIGNAL	<none< td=""><td>> <</td><td>none></td><td>Spli</td><td>t</td><td>Auto</td><td>Spli</td><td>t <</td><td>none></td><td><none:< td=""><td>></td><td><none></none></td></none:<></td></none<>	> <	none>	Spli	t	Auto	Spli	t <	none>	<none:< td=""><td>></td><td><none></none></td></none:<>	>	<none></none>
Critica	I Movem	ents Diag	ram		authDau	a d						
				A	оитьои : 4	22						
				В		0						
					-	U						
		Eastl	Bound		Δ		West	Bound 420		V/C RATI	<u>o</u>	LOS
					T			-120		0.00 - 0.6	D	Α
		в:	0		I		В:	89		0.61 - 0.7	D	В
		, <u></u>			orthBour	nd				0.71 - 0.8	D	С
A = Adjus	ted Thro	ugh/Right	Volume			v				0.81 - 0.94	n	П
B = Adjus * = ATSAC	ted Left \ C Benefit	/olume		B	:	U				0.01 - 0.90		-
	ults —									0.91 - 1.00	U	E
	Nort	h/South C	ritical Mov	vements	= A(N/	B) + A	(S/B)					
	West	/East Cri	tical Mover	ments :	- A(W/	′B) + A	(E/B)					
			-	0	+ 422	+ 42	20 +	0				•
		V	/C =		*	1500			= 0.491		LU3 =	A



AM/PM: P					W/E:	9th 3	ov James	IVI VVOOd	Biva	I/S No:	28
	M		Comm	ents: EX	ISTING	PLUS PR	OJECT				
COUNT DA	TE:			STU	DY DATE	:		G	BROWTH	FACTOR:	
Volume/I	Lane/Sig	gnal Conf	igurations	;							
	NO	RTHBOU	ND	SOL	JTHBOU	ND	WE	STROUM	ND	FASTB	OUND
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT T	H RT
EXISTING	0	1254	177	0	0	0	0	0	0	421 13	28 0
AMBIENT											
RELATED											
PROJECT											
TOTAL	0	1254	177	0	0	0	0	0	0	421 13	28 0
	ፋ 순	<u>ት </u>	ᡷ᠇ᢩ᠈᠂ᡧ	ᡩᢓᢧ᠘	ት 🔬 ና	х ср фђ ¢	ᠳᡒ	ት 🔬 ቲ	ረተን ላካ እ	<u> </u>	የት ሳ ታ
LANE		3 1									
	Phasi	ng F	RTOR	Phasin	g I	RTOR	Phasir	ng F	RTOR	Phasing	RTOR
SIGNAL	Spli	t	Auto	<none< td=""><td>> <</td><td>none></td><td><none< td=""><td>e> <۱</td><td>none></td><td>Split</td><td><none></none></td></none<></td></none<>	> <	none>	<none< td=""><td>e> <۱</td><td>none></td><td>Split</td><td><none></none></td></none<>	e> <۱	none>	Split	<none></none>
Critical	Movem	ents Diag	ram ——								
				Sc	outhBou	nd]				
				A:		0					
				B:		0					
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	350		Ť		A:	0		0.00 - 0.60	Α
		D:	350		1		D:	U		0.61 - 0.70	В
					orthBour	nd 158				0.71 - 0.80	С
A = Adjuste B = Adjuste	ed Thro ed Left \	ugh/Right /olume	Volume	B:		0				0.81 - 0.90	D
* = ATSAC	Benefit]			0.91 - 1.00	Е
Resul	its —	h/Carth O		10ma=1-	A /b1/	<u>ہ</u>	(C/D)				
	West	t/East Crit	tical Move	ments =	= A(N/ : A(W/	ы) + А /B) + А	(3/B) (E/B)				
		V	/C = —	358 +	• 0	+ () +	350	= 0.402	LOS	= A

N/S:	C	herry	St		W/E:		Pico	Blvd		I/S No:	2	9	
AM/PM:	AM/PM: PM Comments: EXISTING PLUS PROJECT												
COUNT D	COUNT DATE: GROWTH FACTOR:												
Volume	/Lane/Signa	l Confi	gurations	, —									
		HBOUN		9			W	ESTROLI		FA	STROU		
	LT	TH	RT	LT	TH	RT				LT	TH	RT	
EXISTING	667 6	620	215	96	0	24	0	807	382	139	573	0	
AMBIENT													
RELATED													
PROJECT													
TOTAL	667 6	620	215	96	0	24	0	807	382	139	573	0	
LANE	「 平 平 平 平 平 平 平 平 平 平 平 平 平 平 平 平 1 <th1< th=""> 1 1 1<td></td></th1<>												
	Phasing	R	TOR	Pha	sina	RTOR	Phasi	na	RTOR	Phasin	a	RTOR	
SIGNAI	Split			Sn	lit	Auto	Pern	n		Perm	9	<none></none>	
OIGHAL	Opin		luto	0		Auto	T CIT		ULA	T CITI			
	Movement	e Diagr											
Critica		s Diagi	am	Г	SouthBou	Ind	1						
					A:	13							
					B:	53							
		EastB	ound	_	WestBound						<u>0</u>	LOS	
		A	191		Ť		A.	404		0.00 - 0.6	D	Α	
		В:	139		I		В:	0		0.61 - 0.7	D	В	
					NorthBou	nd 429]		_	0.71 - 0.8	D	с	
A = Adjus B = Adjus	ted Through ted Left Volu	/Right ume	Volume		B: 4	429				0.81 - 0.9	D	D	
* = ATŠAC	Benefit]			0.91 - 1.0	D	E	
Resi	ults ——												
	North/So	outh C	ritical Mo	vement	s = A(N	/B) + B	(S/B)						
	West/Ea	ist Criti	ical Move	ments	= A(W	/B) + B	(E/B)						
		V/	c = —	429	+ 53	+ 40)4 +	139	= 0.649)	LOS =	В	

N/S: Figueroa St W/E: Pico Blvd I/S No: 30 AM/PM: PM Comments: EXISTING PLUS PROJECT												
COUNT D	COUNT DATE: GROWTH FACTOR:											
Volume	/Lane/Sign	al Confi	igurations	;								
	NOR	THBOUN	ND	SO	UTHBOU	IND	W	STBOU	ND	FA	STROU	ND
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	130	1299	130	21	299	266	124	744	131	180	544	177
PROJECT												
TOTAL	130	1299	130	21	299	266	124	744	131	180	544	177
4 分 分 分 分 か か り 分 分 分 か か り 分 分 か か か か か												
Critical Movements Diagram SouthBound A: 150 B: 21												
	Г	EastB	Bound					WestBound			<u>o</u>	LOS
		A:	2/2		Ť		A:	3/2		0.00 - 0.6	D	A
		B :	180		I		В:	124		0.61 - 0.7	D	В
					lorthBou	nd 357				0.71 - 0.8	D	с
A = Adjus B = Adjus	ted Throug ted Left Vo	h/Right lume	Volume	в	: 1	30				0.81 - 0.90	D	D
* = ATSAC	Benefit						J			0.91 - 1.00	D	E
Resi	ults —											
	North/S	South C	ritical Mov	vements	= A(N/	/B) + B	(S/B)					
	vvest/E	ast Crit V/	C =	357	= A(W) + 21	+ 37 + 37 1375	(2/8) 72 +	180	= 0.606		LOS =	в

N/S:		Hoover	St		W/E:	Alva	arado St/A	Alvarado	Ter	I/S No:	31			
AM/PM:	PM		Comm	ents: E)	KISTING	PLUS PF	ROJECT							
COUNT D	ATE:			STU	STUDY DATE: GROWTH FACTOR:									
	e/Lane/Si	gnal Conf	igurations											
		RTHBOU	ND	SO	UTHBOU	ND	WF	STBOUN	D	FASTBOUND				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT 1	TH RT			
EXISTING	0	1037	623	29	879	0	632	0	0	0	0 0			
AMBIENT														
RELATED														
PROJECT														
TOTAL	0	1037	623	29	879	0	632	0	0	0	0 0			
	ፋ 슈	<u>ት ሕ</u> ብ	<u>ት</u> የካ	ፋ 슈	<u> </u>	ᢤ᠇᠌ᡷ᠂ᡧ	ፋ 슈 ረ	<u>ት </u>	ሰት ላ	<u>ዓ</u>	ት ት ት			
LANE		· (++) + 1 1		· (P	1		1	' (++) +> 	1		чучучучу 			
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasin	g R	TOR	Phasing	RTOR			
SIGNAL	Perr	n	Free	Perr	n <	none>	Split		Auto	<none></none>	<none></none>			
	Mayam	anto Diag	*om ===											
Gillica	i woveni	ents Diag	ram	rs	outhBou	nd	٦							
				A	A: 527									
				E	8:	29								
		East	Bound		٨		WestB	ound		V/C RATIO	LOS			
		A:	0		Ť		A:	316		0.00 - 0.60	Α			
		В:	0		I		в:	316		0.61 - 0.70	В			
					lorthBou	nd	1			0.71 - 0.80	С			
				<i>"</i>										
A = Adjus B – ∆dius	ted Thro	ugh/Right	t Volume	F	۶.	0				0.81 - 0.90	D			
A = Adjus B = Adjus * = ATSA0	ted Thro ted Left ` C Benefit	ugh/Right Volume	t Volume	E	3:	0				0.81 - 0.90 0.91 - 1.00	DE			
A = Adjus B = Adjus * = ATSA(—— Res	ted Thro ted Left ` C Benefit ults —	ugh/Right Volume	t Volume	E	3:	0				0.81 - 0.90 0.91 - 1.00	D E			
A = Adjus B = Adjus * = ATSA(—— Res	ted Thro ted Left C Benefit ults — Nort	ugh/Right Volume h/South C	t Volume	vements	3:	0 /B) + B	(S/B)			0.81 - 0.90 0.91 - 1.00	D E			
A = Adjus B = Adjus * = ATSAC — Rest	ted Thro ted Left ' C Benefit ults — Nort Wes	ugh/Right Volume h/South C t/East Crit	t Volume Critical Move	vements	3: = A(N/ = A(W/	0 (B) + B (B) + A	(S/B) (E/B)			0.81 - 0.90 0.91 - 1.00	D E			

N/S:		Flower	St		W/E:		Venic	e Blvd		I/S No:	32		
AM/PM:	AM/PM: PM Comments: EXISTING PLUS PROJECT												
COUNT D	COUNT DATE: GROWTH FACTOR:												
Volume	/Lane/Sig	nal Conf	igurations										
							14/1	EAS					
		ТН	RT	LT	ТН	RT	LT	TH	RT	LT TH RT			
EXISTING	0	0	0	28	1256	91	61	413	0	0	304 41		
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	28	1256	91	61	413	0	0	304 41		
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
SIGNAL	SIGNAL <none> <a>Split Auto Perm <a>Split Auto Perm <a>Auto</none>												
Critica	l Moveme	nts Diag	ram —										
					SouthBou	nd Mo							
				E E	3:	28							
		East	Bound		٨		West	Bound		V/C RATIO	LOS		
		A:	173		Ť		A:	208		0.00 - 0.60	Α		
		B:	0		I		B:	61		0.61 - 0.70	В		
		<u> </u>			NorthBou	nd				0.71 - 0.80	С		
A = Adjus	ted Throu	gh/Right	Volume		4:	U				0.04 0.00	- D		
B = Adjus * = ATSAC	ted Left V C Benefit	olume			B:	0				0.01 - 0.90	U _		
- Res	ults —			L			_			0.91 - 1.00	E		
1.03	North	/South C	critical Mov	vements	s = A(N/	/B) + A	(S/B)						
	West	East Cri	tical Move	ments	= A(W	/B) + B	(E/B)						
		v	/C = —	0	+ 449	+ 26	58 +	0	= 0.408	; L	OS = A		

N/S:	(Grand A	Ave		W/E:		18tł	n St		I/S No:	33		
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR	OJECT						
COUNT D	COUNT DATE: GROWTH FACTOR:												
Volume	/Lane/Sigr	nal Conf	igurations	,									
		THROLL		50			WE	STROU		EAST			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT		
EXISTING	0	0	164	273	920	0	0	0	0	0 1	120 183		
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	164	273	920	0	0	0	0	0 1	120 183		
	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$												
LANE	LANE 2 1 3 1 3 1 1 2 1 1 1 1												
	Phasing	j F	RTOR	Phasir	ng	RTOR	Phasir	ng	RTOR	Phasing	RTOR		
SIGNAL	SIGNAL Perm Auto Prot-Fix <none> <none> Split Auto</none></none>												
Critica	l Movemer	nts Diag	ram ——										
				S	outhBou	nd							
				A									
				B	: 2	273							
	[EastE	Bound		∧ WestBound					V/C RATIO	LOS		
		A. D.						0		0.00 - 0.60	Α		
		В.	U		 arthBau	n d	В.	U		0.61 - 0.70	В		
				A		90				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Throug ted Left Vo	gh/Right Slume	Volume	В	:	0				0.81 - 0.90	D		
* = ATSAC	Benefit]			0.91 - 1.00	Е		
Resi	JITS North/	South C	ritical Ma	omente	- A/N/	(R) . D	(S/B)						
	West/E	East Crit	tical Move	ments :	– A(W/	/B) + A	(E/B)						
		V	/C =	90	+ 273	+ () +	373	= 0.446	LO	S= A		
N/S:		Olive	St		W/E:		6th	St		I/S No:	34		
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AM/PM:	РМ		Comm	ents: EX		PLUS PR	OJECT						
COUNT D	ATE:			STU	DY DATE	±:		C	GROWTH	FACTOR:			
Volume	e/Lane/Sig	gnal Conf	igurations	;									
	NO	RTHBOU	ND	SO	UTHBOL	IND	WF	STBOU	ND	FASTE	ROUND		
FYISTING		TH	RT 176		TH	RT		тн	RT	LT 1	TH RT		
	U	1240	170	U	U		U	U	U	573 IC	152 0		
		<u> </u>											
PROJECT													
TOTAL	0	1248	176	0	0	0	0	0		573 10	052 0		
	•	12.10		U	Ŭ	•		•					
	₲ ₽		ᡷ᠇᠈᠋ᡐᠯ	ঀ৵৵		ᡩ᠂ᡥ᠂ᡧᡕ	ᠳᢩᡒ᠊	ት 🚓 ና	ት የነ (¶ ๙ 수 ∦	\$ { r r r		
LANE		4 1								1 1 3			
	Phasi	ng l	RTOR	Phasin	ng	RTOR	Phasin	ig I	RTOR	Phasing	RTOR		
SIGNAL	Spli	t	Auto	<none< td=""><td>\$> <</td><td>none></td><td><none< td=""><td>> <</td><td>none></td><td>Split</td><td><none></none></td></none<></td></none<>	\$> <	none>	<none< td=""><td>> <</td><td>none></td><td>Split</td><td><none></none></td></none<>	> <	none>	Split	<none></none>		
	Movem	onte Diag	ram —										
Ontice		ents blag	lam	_S¢	outhBou	Ind	1						
				Α		0							
				В	:	0							
		East	Bound		٨		WestE	Bound		V/C RATIO	LOS		
		A :	325		Ц Т		A:	0		0.00 - 0.60	Α		
		В:	325		I		B:	0		0.61 - 0.70	В		
					orthBou	nd			I	0.71 - 0.80	с		
A = Adjus	ted Thro	ugh/Right	Volume		-	603				0.81 - 0.90	D		
в = Aajus * = ATSA	C Benefit	voiume		В	•	U				0.01 - 1.00	- F		
— Res	ults —									0.01 1.00			
	Nort	h/South C	critical Mo	vements :	= A(N	/B) + A	(S/B)						
	Wes	t/East Cri	tical Move	ments =	= A(W	//B) + A	(E/B)						
		v	/C = —	285 -	+ 0	+ () +	325	= 0.337	LOS	S = A		
					*	*1500			· · · ·				

N/S:		Hope \$	St		W/E:		7th	n St		I/S No:	35	
AM/PM:	PM		Comm	nents: E)	KISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATE			G	ROWTH	FACTOR:		
- Volume	e/Lane/Si	gnal Conf	igurations	s —								
	NC	RTHBOU	ND	SO	UTHBOU	IND	W	ESTBOUN	D	FAS	STBOUN	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	85	288	/1	13	293	27	0	796	83	U	654	88
PROJECT												
TOTAL	85	288	71	13	293	27	0	796	83	0	654	88
	ፋ ፚ	<u>ት </u>	ረተን ላካ አ	∮ ፹	ት	ᢤᠯ᠈ᢤ᠋	∮ ፹	ት	ረ ተን ላካ 🖯	∮ ኇ ና	<u>ት</u>	ሰ ላገ
ANE					1			1 1			1 1	
	Phasi	ng F	RTOR	Phasi	ng	RTOR	Phasir	ng F	RTOR	Phasing	g l	RTOR
SIGNAL	Pern	n	Auto	Pern	n	Auto	Pern	n /	Auto	Perm		Auto
Critica	l Movem	ents Diag	ram —	S A	outhBour	nd 73						
		- FastF										
		Last	3ound —				Westl	Bound		V/C RATIO	ЪL	os
		A:	Bound 371		Ą		Westl	Bound 440		<u>V/C RATIONS 0.00 - 0.60</u>	<u>2</u>	<u>os</u>
		A:B:	3ound 371 0		A T		Westl A: B:	Bound 440 0		<u>V/C RATIO</u> 0.00 - 0.60	<u>D L</u> D A	<u>OS</u>
		A:B:	3ound 3710		A lorthBou	nd	Westl	Bound 440 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70	2 <u>L</u>) A) E	<u>OS</u>
	(.	A:B:	371 0		A JorthBour	nd	Westl	Bound 440 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80	2 <u>L</u>) A) E	<u>os</u>
A = Adjus B = Adjus * - ATSA	ted Thro ted Left `	A: B: ugh/Right Volume	371 371 0 Volume		A JorthBour A: 2 3: 3	nd 265 85	Westl	Bound 440 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90	D L) A) E) C) C	OS S
A = Adjus B = Adjus * = ATSA(ted Thro ted Left C Benefit	A:	371 371 0		A JorthBour A: 2 3: 3	nd 265 85	Westl	Bound 440 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	D L) A) E) C) C) C	<u>OS</u>
A = Adjus B = Adjus * = ATSAG — Res	ted Thro ted Left V C Benefit ults — Nort	A: B: ugh/Right Volume	371 371 0 Volume	N A B vements	 lorthBour : 2 3: 3 = A(N/	nd 265 85 (B) + B	Westl	Bound 440 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	D L) A) E) C) C) E	<u>OS</u>
A = Adjus B = Adjus * = ATSA(— Rest	ted Thro ted Left ^v C Benefit ults — Nort Wes	A: B: Volume	371 371 0 Volume	vements	 lorthBour : 2 3: 3 = A(N/ = A(W/	nd 265 85 /B) + B	(S/B) (E/B)	Bound 440 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	D L) A) E) C) C) E	<u>OS</u>
A = Adjus B = Adjus * = ATSAG — Rest	ted Thro ted Left ^v C Benefit ults — Nort Wes	A: B: Volume	371 371 0 Volume	vements 265	 lorthBour :: 2 3: 3 = A(N/ = A(W/ + 13	nd 265 85 /B) + B /B) + B (B) + B	Westl A: B: (S/B) (E/B) 40 +	Bound 440 0	_ 0 400	<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	<u>D</u>) A) E) C) E LOS =	<u>OS</u>

N/S:		Grand A	Ave		W/E:		7th	n St		I/S No:	36	
AM/PM:	PM		Comm	ents: E)	KISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	IDY DATE			C	GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations									
	NO	RTHROU		SO			w	ESTROUI		FAS	TROUND	
	LT	ТН	RT	LT	ТН	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	170	1339	70	0	792	0	0	629	171
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	170	1339	70	0	792	0	0	629	171
	1	$\wedge \wedge \wedge$		1 ^	~ ~ ^		1	~ ~ ~	N 1 N 1 N		~ ~	N 4 N
LANE	Ч ф ^т	^十		੧ ₍ ਸੋ 1	イ 浜 て 4	1	л ф П	イ 浜 て 2	<u>а</u> ну лі – (भ ₍ नि नि 2		יזי יזי 1
	Phasir		RTOR	Phasi	na	RTOR	Phasi	na	RTOR	Phasing	P	TOR
SIGNAL			nones	Snli	+		Dorn	ng	nones	Porm		
SIGNAL				Opi	•	Auto	I CII			I CIIII		luto
	Mayam	nto Dian										
Critica	i woverne	ents Diag	ram	⊏s	outhBou	nd	1					
				4	N: 3	35						
				B	8: 1	70						
		EastE	Bound 315		Δ		West	Bound 396		V/C RATIO	<u>LC</u>	<u>os</u>
		B.	0.0				B.	0		0.00 - 0.60	Α	
		Ъ.	V					0		0.61 - 0.70	В	
						1d 0				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	Е	3:	0				0.81 - 0.90	D	
* = ATŠAC	C Benefit				L		J			0.91 - 1.00	Е	
Resi	ults —											
	Nort	n/South C	ritical Mov	vements	= A(N/	′B) + A	(S/B)					
	West	/East Crit		ments	= A(W/	ив) + В	(E/B)	0				
		V	/C = —	U	+ 335	+ 39 1500	+ 00	<u> </u>	= 0.417	, L	.OS = 4	A

Existing plus Project Conditions P.M. Peak Hour



= 0.163

Critical V/C -	0.051	+	0.163	=	0.214
2) Lane Capacity for NB Lane Capacity for NB	Throughs -	ht-turns -		900 1,425	vphpl vphpl
Number of Lanes -		1	1 left-turn on 3 throughs 1 right-turn o	ly nly	
Critical V/C -	1,254 2,700	or	<u> 295 </u>	or	<u> 125 </u> 1,425
	=	0.464			
Intersection V/C = 0.916	—	0.100	=	0.816	LOS D

N/S:	(Glendale	Blvd		W/E:		Tem	ple St		I/S No:	3	8
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATE	:		(GROWTH	FACTOR:		
Volume	/Lane/Si	gnal Conf	igurations									
	NO			50			W	ESTROII		EA	STROU	
	LT	ТН	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT
EXISTING	60	1657	19	83	716	207	29	565	237	317	665	77
AMBIENT												
RELATED												
PROJECT												
TOTAL	60	1657	19	83	716	207	29	565	237	317	665	77
	φ		ትት	6 Δ		ረትን ላት ረ	ά Δ		ላት ሌ	4 Δ Δ		۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲. ۲
LANE	י _ל µ 1	└		ין _ע ו 1	1 44) 1 1 1		י _ל ו 1	1 (H) 1		1	ц Фр	
	Phasi	ng F	RTOR	Phasir	ng	RTOR	Phasi	ng	RTOR	Phasing	9	RTOR
SIGNAL	Pern	n I	Auto	Pern	<u>-</u>	Auto	Prot-F	Fix	Auto	Prot-Fi	- x	Auto
	l Movem	ente Diag	ram —									
ontica				⊏s	outhBou	nd	1					
				A	: 4	462						
				В	-	83						
		EastE	Bound	I	Λ		West	Bound		V/C RATIO	<u>.</u>	<u>LOS</u>
		B.	217		T		А. В.	20		0.00 - 0.60) .	Α
		р.	311		 arthBou	nd	D.	25		0.61 - 0.70)	В
				A	: 8	338				0.71 - 0.80)	с
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right /olume	Volume	В	:	60				0.81 - 0.90)	D
* = ATSAC	C Benefit]			0.91 - 1.00)	E
Resi	ults —	h/Cauth O		ioment-	A /61	(D) - D	(C/D)					
	Wes	t/East Crit	ical Move	ments :	= A(N/ = A(W	/B) + B	(3/B) (E/B)					
		V	/C =	838	+ 83	+ 40 1425)1 +	317	= 1.080) 1	LOS =	F

Existing plus Project Conditions P.M. Peak Hour



Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights



Phase 2) Glendale Boulevard, 1st Street, and 2nd Street - Southbound Lefts, Throughs, and Rights, and
 a.) Westbound Rights on 1st Street
 b.) Westbound Rights on 2nd Street



Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights



I N



Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights



N/S:		Lucas A	Ave		W/E:		3rc	d St		I/S No:	4	0
AM/PM:	PM		Comm	nents: E)	ISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATE	:		G	BROWTH	FACTOR:		
Volume	/Lane/Si	gnal Conf	igurations									
				50			14/	ESTROUM			STROU	
	LT	ТН	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT
EXISTING	34	486	81	29	304	82	50	1025	166	88	792	103
AMBIENT												
RELATED												
PROJECT												
TOTAL	34	486	81	29	304	82	50	1025	166	88	792	103
	1	~ ~ ~	N 4 N	1 ^	~ ^ /		1 1	~ ~ ~		1 ~ /	~ ~ /	
LANE	ਪ ਹਿੱ 1	イ 孫 年 2	יידי יז 1	ਾ ਹੋ 1	イ 研 1 1 1		ַיּקֿי ר	Ŷ₩ ^ˆ	יעדי יין 1	Ч ф ² ² [1] [2	ビ 研 「 2	קאייין 1
	Phasi	na l	ртор	Phasi		PTOP	Phasi	na l	ртор	Phasin		PTOP
SIGNAL	PildSi			PildSi		Auto	Pilasi			Pliasin	9	Auto
SIGNAL	Fen		Auto	Fell		Auto	Fell		Auto	Feim		Auto
Critica	I Movem	ents Diag	ram	⊏s	outhBou	nd	1					
				A	.: 1	193						
				В		29						
		EastE	Bound 396	I	Δ		West	Bound 513		V/C RATI	<u>o</u>	<u>LOS</u>
		B.	00				в.	50		0.00 - 0.6	0	A
		р.	00				В.	50		0.61 - 0.7	0	В
				A	lorthBou	nd 243				0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	в	:	34				0.81 - 0.9	0	D
^ = AISA(, Benetit						J			0.91 - 1.0	0	E
Resi	ults —				A /A1	(D) D	(C/D)					
	Nort Wes	t/East Crit	tical Move	ments	= A(N/ = A(W	/B) + B	(3/B) (E/B)					
		V	/C =	243	+ 29	+ 51	3 +	88	= 0.512	!	LOS =	A
						1300						

AM/PM: PM Comments: EXISTING PLUS PROJECT COUNT DATE: STUDY DATE: GROWTH FACTOR: Volume/Lane/Signal Configurations SOUTHBOUIND WESTBOUIND FASTBOUND LT TH RT LT TH RT EXISTING 60 322 63 27 215 101 65 881 63 149 834 20 AMBIENT Image: Configurations Texisting 60 322 63 27 215 101 65 881 63 149 834 20 TOTAL 60 322 63 27 215 101 65 881 63 149 834 20 TOTAL 60 322 63 27 215 101 65 881 63 149 834 20 LANE 1 1 1 1 1 1 1 1 1
COUNT DATE: STUDY DATE: GROWTH FACTOR: Volume/Lane/Signal Configurations SOUTHBOUIND SOUTHBOUIND FASTBOUIND EXISTING 60 322 63 27 215 101 65 881 63 149 834 20 AMBIENT It TH RT It TH RT It TH RT RELATED It It It It RT It It RT It
Volume/Lane/Signal Configurations NOBTHBOUIND SOUTHBOUIND WESTBOUIND FASTBOUIND LT TH RT LT TH RT EXISTING 60 322 63 27 215 101 65 881 63 149 834 20 AMBIENT Image: Configuration of the state of th
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$
LT TH RT TT TH RT LT TH RT LT TH RT TH <td< td=""></td<>
EXISTING 60 322 63 27 215 101 65 881 63 149 834 24 AMBIENT
AMBIENT Image: constraint of the second consecond conseconstraint of the second constraint of the s
RELATED Image: constraint of the second diagram Image: consecond diagram Image: constraint of the s
PROJECTImage: constraint of the state of the
TOTAL603226327215101658816314983424 q
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
I = I = I = I = I = I = I = I = I = I =
Phasing RTOR Auto Critical Movements Diagram
SIGNAL Perm Auto Perm Auto Perm Auto Critical Movements Diagram SouthBound A: 343 B: 27 EastBound A: 430 A: 441 0.00 - 0.60 A B: 149 H H 65 0.00 - 0.60 A
Critical Movements Diagram SouthBound A: 343 B: 27 EastBound A: 441 A: 430 A: 441 B: 149 B: 65 0.00 - 0.60 A
Critical Movements Diagram SouthBound A: 343 B: 27 EastBound A: 441 A: 430 B: 149 Image: SouthBound B: A: 65 0.00 - 0.60 A 0.61 - 0.70 B
SouthBound A: 343 B: 27 A: 430 B: 149 A: 441 0.00 - 0.60 A 0.61 - 0.70 B
A: 343 B: 27 EastBound A: 430 B: 149 B: 149 A: 420 B: 65 Contended A: 441 B: 65 Contended A: 441 Contended Contend Con
B: 27 EastBound WestBound A: 430 B: 149 WestBound A: 441 B: 65 0.00 - 0.60 A B: 149
EastBound WestBound V/C RATIO LOS A: 430 A: 441 0.00 - 0.60 A B: 149 B: 65 0.61 - 0.70 B
A: 430 B: 149 D: 140 D: <
D. 143 0.61 - 0.70 B
I North Kound
A: 445 0.71 - 0.80 C
A = Adjusted Through/Right Volume B = Adjusted Left Volume B: 60
* = ATSAC Benefit 0.91 - 1.00 E
Results
West/East Critical Movements = $A(W/B) + B(E/B)$
$V/C = \frac{445 + 27 + 441 + 149}{*1500} = 0.638$ LOS = B

N/S:		Lucas A	Ave		W/E:		Wilshi	re Blvd		I/S No:	4	2
AM/PM:	PM		Comm	ents: E)	KISTING	PLUS PR	OJECT					
COUNT D	ATE:			STU	DY DATI	E:			GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations									
	NO			SO			W	ESTROUI		FA	STROU	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	48	240	32	19	273	69	85	919	80	65	788	49
AMBIENT												
RELATED												
PROJECT												
TOTAL	48	240	32	19	273	69	85	919	80	65	788	49
	1 1	$\wedge \wedge \wedge$			~ ~ /			$\wedge \wedge \wedge$			\	
LANE	Ч ф П	十		Ч Т П	^十		יע עד ו	十 ₄ 1 1	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	Ψ ₄ ⁻	「	[] r v r 1
	Phasii	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasin	g	RTOR
SIGNAL	Pern	n .	Auto	Perr	n	Auto	Pern	n	Auto	Perm		Auto
		J /						J <u>L</u>		<u></u>		
Critica	I Movem	ents Diag	ram ——									
		J		∟s	outhBou	Ind	1					
				A		361						
				E	B:	19						
		East	Bound		٨		West	Bound		V/C RATI	<u>o</u>	<u>LOS</u>
		А. В.	524		Т		р. П	95		0.00 - 0.6	0	Α
		р.	0.9		 		В.	85		0.61 - 0.7	0	В
				A I		320				0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	E		48				0.81 - 0.9	0	D
* = ATSAC	C Benefit]			0.91 - 1.0	0	E
Resu	ults				B //-	(D) -	(0/5)					
	Nort	h/South C	ritical Move	vements	= B(N = Δ(\\\	/B) + A	(5/B) (F/B)					
	1103	V	/C =	48	+ 361	+ 63	30 +	65	= 0.666	i	LOS =	в
					1	1500						

EXISTING PLUS PROJECT WITH TDM PROGRAM CONDITIONS

N/S:		Grand A	Ave		W/E:		US 101 N	IB Ramp	S	I/S No:	1
AM/PM:	AM		Comm	ents: EX	XISTING	PLUS PR	OJECT	WITH TD	M		
COUNT D	ATE:			STU	JDY DATE			(GROWTH	FACTOR:	
Volume	e/Lane/Sig	gnal Conf	igurations								
	NO	RTHBOU	ND	SC	UTHBOU	ND	W	ESTBOU	ND	FAST	BOUND
EXISTING	LT	TH	RT	LT	TH	RT		тн	RT	LT	TH RT
	130	01	U	U	1009	447	U	U	U	10	0 397
RELATED		<u> </u>									
PROJECT											
TOTAL	138	81	0	0	1069	447	0	0	0	18	0 597
	\$1 ∯	<u> </u>	እ የት ላተ እ	₲ ढ़ॖॖ	수 🚓 수	ት ላ _ך ላ	¶ ∯	<u>ት ሐ</u> ና	ት ስ ላተኦ ት	∮ ቆ ቀ	<u>₩ 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, </u>
LANE	1	2			2	1					1 1
	Phasir	ng l	RTOR	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasing	RTOR
SIGNAL	Prot-F	ix <	none>	Perr	n	OLA	<non< td=""><td>e> <</td><td>none></td><td>Split</td><td>Auto</td></non<>	e> <	none>	Split	Auto
Critica	l Moveme	ents Diag	ram ——								
		-		s	SouthBou	nd]				
				4	A: 5	35					
				E	3:	0					
		East	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	239		Ť		A:	V		0.00 - 0.60	Α
		В:	18		I		B:	0		0.61 - 0.70	В
		_		N	NorthBour	nd 41				0.71 - 0.80	С
A = Adjus B = Adjus	ted Throut	ugh/Right	t Volume		<u>'</u>	38				0.81 - 0.90	D
* = ATSAC	C Benefit	Juille]			0.91 - 1.00	Е
Resi	ults —										
	Nortl	h/South C	Critical Mov	vements	= B(N/	'B) + A	(S/B)				
	West	/East Crit	tical Move	ments	= A(W/	/B) + A	(E/B)				
		v	/C =	138	+ 535	+ (1425) +	239	= 0.570) L(DS = A

Г

CalcaDB

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N/S:	Hope St	/US 101	SB Ram	ps	W/E:		Temp	ole St		I/S No:	2	
AM/PM:	AM		Comn	nents: E)	ISTING	PLUS PR		VITH TC	M			
COUNT D	ATE:			STU	DY DATE	E:		(GROWTH I	FACTOR:		
Volume	/Lane/Sig	nal Conf	igurations	s —								
	NOF	RTHBOU	ND	SO	UTHBOU	IND	WF	STBOU	ND	FAS)
EVISTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT 246
	04	149	97	130	330	41	312	470	100	100	422	240
RELATED												
PROJECT												
TOTAL	64	149	97	136	336	41	372	470	160	180	422	246
LANE	ी (J) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	♪ ☆ 兌 1 1	, г ^р 4 ₁ р	ी _{ } ¶	수 슈 수 1 1	2 4 1 2 4 1 4	€h ₆ 2 4 1 1	Ŷ ∰ 4 2	ት ሳ ት 1	ी ∰ ी 1 1	- ∰ ∰ 1	ላተ ቅ ላነ
	Phasin	g F	RTOR	Phasi	ng	RTOR	Phasin	g	RTOR	Phasing	R	TOR
SIGNAL	Perm		Auto	Pern	n	Auto	Prot-F	ix	Auto	Prot-Fix		uto
Critica	l Moveme	nts Diag	ram 🚃									
				S	outhBou ·	nd						
						20						
					-	50						
		EastE	30und 334		Δ		A:	235		V/C RATIC	<u>) LC</u>	<u>DS</u>
		B.	180				в.	379		0.00 - 0.60	Α	
		D.	100		l Iorrth Dow	n d		V 12		0.61 - 0.70	В	
				A	: 1	23				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	Volume	в	:	64				0.81 - 0.90	D	
* = ATSAC	Benefit]			0.91 - 1.00	E	
Resi	lits North	South C	ritical Ma	vomente	- A/NI	(R) . D	(S/B)					
	Weet/	Fast Crit		ments	- A(N) - B(W)	/B) + ∆	(5/B)					
	11030	V/	/C =	123	+ 136	+ 37 1425	<u>/2</u> +	334	= 0.607	L	.OS = E	3



Existing plus Project with TDM Conditions A.M. Peak Hour

Lane Capacity for SB Rights -

1,425 vphpl



N/S:		Flower	St		W/E:		3r	d St		I/S No:	4
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR	OJECT	WITH TC	M		
COUNT D	ATE:			STUE	DY DATE	:			GROWTH	FACTOR:	
Volume			Igurations		ITUDOU		10	ECTROLI		FACTO	
		тн	RT		тн	RT		тн	RT		
EXISTING	1	24	0	0	971	127	486	848	100	0 0) 437
AMBIENT		1									
RELATED											
PROJECT											
TOTAL	1	24	0	0	971	127	486	848	100	0 () 437
	ፋ 슈	ት ሐ ዓ	ላተን ላካ <i>Հ</i>	\$ ኇ 4	ት <u>ኡ</u> ና	ላ _ተ ን ላ _ገ <i>*</i>	ፋ 슈	수 슈 4	ረተን ላካ <i>አ</i>	<u>ዓ</u> ጵ ጵ	ት ት ት
LANE	1	2 2			2 2	1	1	3 1			▶ 4 > ' '
	Phasi	ng l	RTOR	Phasin	g l	RTOR	Phasi	ng	RTOR	Phasing	RTOR
SIGNAL	Pern	n <	none>	Perm		Auto	Spl	it	Auto	<none></none>	Free
Critica	l Movem	ents Diag	ram —								
				Sc	outhBou	nd	1				
				A:	4	86					
				В:		0					
		Eastl	Bound		٨		West	Bound		V/C RATIO	LOS
		B:	0		Ť		B:	231 486		0.00 - 0.60	Α
			v		1					0.61 - 0.70	В
					orthBour	nd				0.71 - 0.80	С
A = Adjus B = Adjus	ted Thro ted Left V	ugh/Right Volume	t Volume	В:		1				0.81 - 0.90	D
* = ATSAC	Benefit						J			0.91 - 1.00	E
	ults —				D/NI/	B) T V	(C/D)				
	Nort	h/South (ritical Ma	vomonte -		· · · · · · · · · · · · · · · · · · ·					
	Nort Wes	h/South C t/East Cri ⁻	Critical Mov tical Move	vements = ments =	= B(W/	B) + A	(5/B) (E/B)				

N/S:		Grand A	Ve		W/E:		3rd	St		I/S No:	5
AM/PM:	AM		Comn	nents: E	XISTING	PLUS PR		VITH TD	М		
COUNT D	ATE:			STL	JDY DATE	:		C	GROWTH	FACTOR:	
Volume	e/Lane/Sig	gnal Conf	iguration	s							
	NO	RTHBOU	ND	SC	DUTHBOU	ND	WF	STBOU	ND	FAST	BOUND
FYISTING	LT 16	TH 56	RT		TH	RT		тн	RT	LT	TH RT
	10	50	U	U	1030	151	U	U		21	0 55
PROJECT											
TOTAL	16	56	0	0	1030	151	0	0	0	21	0 53
	<u> 위 护</u>	<u> </u>	; lb 415	<u> </u>	<u> 分 </u>	<u>}</u> [} 4]	<u> </u>		<u>}</u> [P 4]P	<u>ዛ ፚ ተ </u>	
LANE	1	2			1 1					1	2
	Phasir	ng F	RTOR	Phasi	ng	RTOR	Phasin	ig l	RTOR	Phasing	RTOR
SIGNAL	Pern	n	Auto	Peri	n	Auto	<none< td=""><td>> <</td><td>none></td><td>Split</td><td>Auto</td></none<>	> <	none>	Split	Auto
Critica	I Movem	ents Diag	ram	– 8	SouthBou	nd	7				
					A: 5	i91					
				E	B:	0					
		EastE	Bound —	<u> </u>			WestE	Bound		V/C RATIO	LOS
		A:	29		Å		A:	0		0.00 - 0.60	 A
		В:	21				B:	0		0.61 - 0.70	В
		L			NorthBou	nd	1			0.74 0.00	-
A = Adius	ted Thro	uah/Riaht	Volume		A: 2	28				0.71 - 0.80	C
B = Adjus	ted Left	/olume	, ciunic	E	B:	16				0.81 - 0.90	D
							J			0.91 - 1.00	E
Res	Nortl	h/South C	ritical Mo	vements	= B(N/	′B) + A	(S/B)				
	West	/East Crit	ical Move	ements	= A(W/	/B) + A	(E/B)				
		V	/C =	16	+ 591	+ () +	29	= 0.354	LO	S= A
		v	-		*	1500			- 5.004		

Existing plus Project with TDM Conditions A.M. Peak Hour



N/S:		Flower	St		W/E:		5th	St		I/S No:	7		
AM/PM:	AM		Comm	ents: E)	ISTING	PLUS PR		VITH TD	М				
COUNT D	ATE:			STU	DY DATE	:		G	BROWTH	FACTOR:			
Volume	e/Lane/Sigr	nal Conf	igurations	,									
	NOR	THBOU	ND	SO	UTHBOU	ND	W	STBOU	ND	FASTB	OUND		
EVICTING	LT	TH	RT	LT	TH	RT	LT	TH	RT		H RT		
	U	U	U	U	1207	280	242	1063	U	U	JU		
PROJECT													
TOTAL	0	0	0	0	1207	280	242	1063	0	0	00		
小 介 介 ☆ ☆ か か か か 수 ☆ ☆ か か か か 수 ☆ ☆ か か か か													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL <none> Split Auto Split <none> <none></none></none></none>													
Critica	I Movemer	its Diag	ram	S A B	outhBounds: 2	nd 248 0							
	Г	EastE	Bound		٨		West	Bound		V/C RATIO	LOS		
		A :	0		Ц Т		A:	213		0.00 - 0.60	Α		
		В:	0		I		B:	242		0.61 - 0.70	В		
	_				lorthBour	nd 0				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Throug	gh/Right olume	Volume	В	3:	0				0.81 - 0.90	D		
* = ATSAC	C Benefit]			0.91 - 1.00	E		
- Kesi	North/	South C	ritical Mov	vements	= A(N/	′B) + A	(S/B)						
	West/E	East Crit	ical Move	ments	= B(W/	/B) + A	(E/B)						
		V	/C =	0	+ 248	+ 24 1500	12 +	0	= 0.257	LOS	6 = A		



Existing plus Project with TDM Conditions A.M. Peak Hour

N/S:		Flower	St		W/E:		6th	n St		I/S No:	g		
AM/PM:	AM		Comm	ents: E)	(ISTING	PLUS PR		WITH TD	M				
COUNT D	ATE:			STU	DY DATE	E:		(GROWTH	FACTOR:			
	/Lane/Sig	gnal Conf	igurations	. —									
	NO	RTHBOU		SO	UTHBOU		w	ESTROU		FAS	STROUM		
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	0	0	238	889	0	0	0	0	0	1598	521	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	238	889	0	0	0	0	0	1598	521	
	4 ^	$\wedge \wedge \wedge$	<u> </u>	4 A	$\wedge \wedge \land$	<u> </u>	4 A	$\wedge \wedge Z$		4 ^ ^		<u>, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,</u>	
低量 低g 低g 低g 低g 低g 低g 低g 低g													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL <none> <none> <none> <none> <none> <none> <none></none></none></none></none></none></none></none>													
SIGNAL <none> <none> Split <none> <none> Split Auto</none></none></none></none>													
	Movem	ante Diag	ram —										
Critical Movements Diagram													
				A	2	222							
				В	8: 1	31							
		East	Bound		Λ		West	Bound		V/C RATIO	<u>2</u>	LOS	
		A.	424		T		A.	U		0.00 - 0.60)	A	
		В:	0		I		В:	0		0.61 - 0.70)	В	
					lorthBou	nd				0.71 - 0.80)	с	
A = Adjus B = Adjus	ted Throuted ted Left \	ugh/Right /olume	Volume	В		0				0.81 - 0.90)	D	
* = ATŠAC	C Benefit				L					0.91 - 1.00)	E	
Resi	ults —												
	Nortl	n/South C	critical Mov	vements	= A(N/	′B) + A	(S/B)						
	West	/East Cri	tical Move	ments	= A(W	/B) + A	(E/B)						
		v	/C =	0	+ 222	+ () +	424	= 0.361	I	LOS =	Α	
					•	1500							

N/S: Alvarado St W/E: Wilshire Blvd I/S No: 10 AM/PM: AM Comments: EXISTING PLUS PROJECT WITH TDM													
AM/PM:	AM ATE:		Comm	ents: E) STU	(ISTING DY DATE	PLUS PR		WITH TD	GROWTH	FACTOR:			
Volume	/Lane/Si	gnal Conf	igurations	,									
	NO	RTHBOU	ND	SO	UTHBOU	IND	W	ESTBOU	ND	FA	STROUM	D	
EXISTING	LT	TH	RT	LT	TH	RT		TH	RT	LT	TH	RT 26	
	U	004	139	U	090	104	54	021	54	/1	1093	30	
RELATED													
PROJECT													
TOTAL	0	804	139	0	890	164	54	821	54	71	1093	36	
									· · · · ·		~ ^ ^		
4 分 午 益 贷 户 钟 4 分 午 益 贷 户 钟 4 分 午 益 贷 户 钟 LANE													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto													
Critica	l Movem	ents Diag	ram ——										
SouthBound A: 351													
				A		351							
				B	3:	0							
		East	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS	
		A. D.	74		T		А. В.	430		0.00 - 0.6	0	Α	
		В.	71		 		р.	J 4		0.61 - 0.7	0	В	
				A		314				0.71 - 0.8	0	с	
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right Volume	Volume	В		0				0.81 - 0.9	0	D	
* = ATSAC	Benefit]			0.91 - 1.0	0	E	
Resi	ults —	h/South C	ritical Ma	omente	_ D/N/	/D) · ·	(\$/B)						
	Wes	t/East Crit	tical Move	ments	– D(W) = B(W)	/B) + A	(E/B)						
		v	/C =	0	+ 351	+ 5	4 +	565	= 0.577	,	LOS =	A	

N/S: Beaudry Ave W/E: Wilshire Blvd I/S No: 11													
AM/PM:	AM		Comm	nents: E)	(ISTING	PLUS PF	ROJECT	WITH TD	М				
COUNT D	ATE:			STU	DY DATE	:		G	BROWTH	FACTOR:			
Volume	/Lane/Sig	inal Conf	igurations	s —									
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	FSTBOUN		FA	STBOU		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	9	0	23	684	29	662	5	460	0	0	897	6	
RELATED PROJECT													
TOTAL	9	0	23	684	29	662	5	460	0	0	897	6	
LANE (4)													
Critical Movements Diagram SouthBound A: 458 B: 458													
		East	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS	
		A:	449		Ť		A:	240		0.00 - 0.6	0	A	
		В.	0		ا 	-	В.	3		0.61 - 0.7	0	В	
					iorthBou \:	nd 32				0.71 - 0.8	0	с	
A = Adjus B = Adjus	ted Throu ted Left V	igh/Righ [:] olume	t Volume	E	B:	9				0.81 - 0.9	0	D	
* = ATSAC	Benefit									0.91 - 1.0	0	E	
Results North/South Critical Movements = A(N/B) + A(S/B) West/East Critical Movements = B(W/B) + A(E/B)													
		V	//C =	32	+ 458	+ !	ō +	449	= 0.592	2	LOS =	Α	

N/S:	Fran	cisco St		W/E:		Wilshi	re Blvd		I/S No:	12	
AM/PM:	АМ	Comm	ents: EXI	STING P	PLUS PR		NITH TD	M			
COUNT D	ATE:		STUD	Y DATE:			C	GROWTH	FACTOR:		
Volume	/Lane/Signal			TUDOUN							
			SOU		D			ND PT) DT
EXISTING	30 1	3 100	8	1	9	138	400	53	69	1130	463
AMBIENT				•	•						
RELATED											
PROJECT											
TOTAL	30 1	3 100	8	1	9	138	400	53	69	1130	463
	<u>ላ</u>	ᡷ᠊ᠿ᠂ᡥ	ፋ ፚ ና	• <u>余</u> �	የት ላገ	ቁ ፚ	ት ሒ ና	<u>ұ</u> р қ ₁ қ	ፋ 순 ና	<u>`</u>	የት ላገ
LANE				1			1 1		1	1	
	Phasing	RTOR	Phasing	g R	TOR	Phasir	ng	RTOR	Phasing	g F	RTOR
SIGNAL	Perm	Auto	Perm	A	luto	Pern	n	Auto	Perm		Auto
Critica	I Movements I	Diagram ——									
		-	So	uthBoun	d	1					
			A:	18	8						
			В:	8							
		astBound		٨		Westl ⊿.	Bound 227		V/C RATIO	<u> L</u>	<u>os</u>
	В	: 69		T		B:	138		0.00 - 0.60) A	
				uth D =	a				0.61 - 0.70) В	i
			A:	nthBound	u 10				0.71 - 0.80) с	:
A = Adjus B = Adjus	ted Through/F ted Left Volun	Right Volume ne	B:	30	0				0.81 - 0.90) D)
* = ATSA(Benefit		<u> </u>]			0.91 - 1.00) Е	
Res	North/Sou	Ith Critical Mov	vements =	A(N/B	8) + B	(S/B)					
	West/East	t Critical Move	ments =	B(W/E	3) + A	(E/B)					
		V/C =	100 +	8	+ 13	38 +	797	= 0.625		LOS =	В
				*1	500						

Existing plus Project with TDM Conditions A.M. Peak Hour



Flower Street Ν 381 1,009 84 282 41 Wilshire Boulevard 496 337 1) Lane Capacity for WB Direction -900 vphpl Number of Lanes -2 WB Direction V/C -41 282 or 41 1,800 900 0.179 = Lane Capacity for EB Direction -1,500 vphpl 2 Number of Lanes -EB Direction V/C -496 337] or 337 + 3,000 1,500 0.278 = 2) Lane Capacity for SB Throughs and Lefts -1,500 vphpl Number of Lanes -3 throughs 1 left-turn only SB Through V/C -1,009 4,500 0.224 = SB Left V/C -84 1,500 0.056 = Lane Capacity for SB Rights -900 vphpl Number of Lanes -1 SB Right V/C -381 900 0.423 =

Existing plus Project with TDM Conditions A.M. Peak Hour

Intersection V/C = 0.701 _ 0.070 0.631 LOS B =

N/S:	N/S: Grand Ave W/E: Wilshire Blvd I/S No: 15 AM/PM: AM Comments: EXISTING PLUS PROJECT WITH TDM													
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR	OJECT	NITH TD	M					
COUNT D	ATE:			STU	DY DATE	E:		0	GROWTH	FACTOR:				
Volume	/Lane/Sig	nal Conf	igurations											
	NO	RTHBOU	ND	SO	UTHBOL	IND	W	ESTBOU	ND	FAS	TBOUN			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	0	0	0	59	911	239	9	10	0	0	41	291		
PROJECT														
TOTAL	0	0	0	59	911	239	9	10	0	0	41	291		
LANE $Phasing RTOR Phasing RTO$														
PhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none>SplitAutoPerm<none>PermAuto</none></none></none>														
SIGNAL <none> <none> Split Auto Perm <none> Perm Auto</none></none></none>														
Critica	l Moveme	ents Diag	ram ——											
	Critical Movements Diagram SouthBound A: 302 B: 59													
		East	Bound		٨		West	Bound		V/C RATIO	<u>)</u>	LOS		
		A:	100		Ĩ		B.	19		0.00 - 0.60		Α		
		5.	v	<u> </u>	 arthBou	nd	μ.			0.61 - 0.70		В		
				A	:	0				0.71 - 0.80		с		
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right /olume	Volume	В	:	0				0.81 - 0.90		D		
* = ATSAC	C Benefit									0.91 - 1.00		E		
Resi	uits North	n/South C	critical Mov	/ements	= A(N	/B) + A	(S/B)							
	West	/East Crit	tical Mover	ments =	= B(W	/B) + A	(E/B)							
		V	/C =	0	+ 302	+ 9) +	166	= 0.248	; L	.OS =	Α		

N/S:		Alvarad	o St		W/E:		7tl	h St		I/S No:	16	
AM/PM:	AM		Comm	nents: E)	KISTING	PLUS PF	OJECT	WITH TD	М			
	ATE:			STU	IDY DATE			C	GROWTH	FACTOR:		
Volume	e/Lane/Si	qnal Conf	igurations	;								
	NO			SO	UTHBOU	ND	w	FSTBOU		FAS	TBOUN	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	867	61	0	846	74	0	378	64	0	601	30
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	867	61	0	846	74	0	378	64	0	601	30
	ፋ ፚ	수	ᡷ᠇᠋᠈ᡐᠯ	ፋ ፚ	ት 🔬 ና	ᡷ᠂ᡰ᠈ᡧᠯ᠈	ፋ 순	수	ᡷ᠂ᡥ᠂ᡏᡟ	\$ ኇ ት	<u></u>	የት ላገ
LANE		2 1			2 1			1 1			1	
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	F	RTOR
SIGNAL	Pern	n	Auto	Perr	n	Auto	Perr	n	Auto	Perm		Auto
Critica	I Movem	ents Diag	ram —									
				۲s	outhBou	nd	٦					
				4	A: 3	807						
				E	3:	0						
		East	Bound		٨		West	Bound		V/C RATIO	<u> </u>	<u>os</u>
		A:	516		Ť			22'l		0.00 - 0.60	A	
		<u>р</u> .	U		 lorthPo:··	ad ———	U.	U		0.61 - 0.70	В	
				A	A: 3	609				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	t Volume	E	3:	0				0.81 - 0.90	D	1
* = ATSA(C Benefit]			0.91 - 1.00	E	
Kes	Nort	h/South C	critical Mo	vements	= A(N/	′B) + B	(S/B)					
	Wes	t/East Cri	tical Move	ments	= B(W/	/B) + A	(E/B)					
		v	/C = —	309	+ 0	+ () +	316	= 0.347	L	OS =	A
					*	1500						

Existing plus Project with TDM Conditions A.M. Peak Hour

Ν



Number of Lanes -

WB Through V/C -	<u>{300</u>	+ 3,000	_50_}				
	=	0.117					
Critical V/C -	0.02	+	0.117				
	=	0.137					
2) Lane Capacity for NB &	SB Directio	on -	1,500 v	/phpl			
Number of Lanes -		1 1	left through/righ	t			
Critical V/C -	{	+	400 1,500	+	76	}	
or	{	+	153 1,500	+	25	}	
	=	0.365					
Intersection V/C = 0.613	-	0.070	=	0.543		LOS	Α

N/S:	F	rancisc	o St		W/E:		7th	ı St		I/S No:	18		
AM/PM:	۹M		Comm	ents: E	XISTING	PLUS PR		NITH TD	М				
COUNT D	ATE:			STI	JDY DATE			C	GROWTH	FACTOR:			
Volume	/Lane/Sig	nal Conf	igurations	,									
	NOF	RTHBOU	ND	S	OUTHBOU	IND	W	FSTBOU	ND	FAS	TBOUND		
	LT	TH	RT	LT	TH	RT	LT	ТН	RT	LT	TH RT		
EXISTING	22	10	42	39	198	63	88	501	360	54	460 13		
AMBIENT													
RELATED													
PROJECT													
TOTAL	22	10	42	39	198	63	88	501	360	54	460 13		
		• • •			~ ~ ~			~ ~ ~					
4 分 合 命 命 合 f f f f f f f f f f f f f f f f f f f </td													
LANE 1 1 1 1 1 1 1 1 1 1													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL	Perm		Auto	Per	m	Auto	Pern	n 🗌	Auto	Perm	Auto		
Critica	Moveme	nts Diag	ram ——										
				4	A: 2	261							
				1	B:	39							
		East	Bound —				West	Bound		V/C RATIO	LOS		
		A:	237		<u></u>		A :	431		0.00 - 0.60	<u> </u>		
		B:	54				В:	88		0.00 - 0.00	A		
					NorthBou	nd				0.61 - 0.70	В		
					A:	42				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	Volume		B:	22				0.81 - 0.90	D		
* = ATSAC	Benefit	-								0.91 - 1.00	Е		
— Resi	ilts —												
	North	/South C	ritical Mo	vements	s = B(N/	′B) + A	(S/B)						
	West/	East Cri	tical Move	ments	= A(W	/B) + B	(E/B)						
		v	/C = —	22	+ 261	+ 43	31 +	54	= 0.442	e Lo	OS = A		

Existing plus Project with TDM Conditions A.M. Peak Hour



N/S: Flower St W/E: 7th St I/S No: 20 AM/PM: AM/PM:													
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR		WITH TD	М				
COUNT DA	ATE:			STU	DY DATE	E:		C	GROWTH	FACTOR:			
Volume/	/Lane/Sigr	nal Conf	igurations										
	NOR	THBOU		SO	UTHBOU		w	ESTBOU		FAST	BOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT		
EXISTING	0	0	0	67	850	168	84	668	0	0	329 145		
FROJECT													
TOTAL	0	0	0	67	850	168	84	668	0	0	329 145		
 4													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL													
Critical	Movemer	nts Diag	ram 🚃				_						
SouthBound A: 271													
				В	:	67							
	[EastE	Bound		٨		West	Bound		V/C RATIO	LOS		
		A:	237		Ť		A:	2/9		0.00 - 0.60	Α		
		в:	0			_	В:	84		0.61 - 0.70	В		
					orthBoui	nd 0				0.71 - 0.80	С		
A = Adjust B = Adjust	ed Throug ed Left Vo	gh/Right blume	Volume	В		0				0.81 - 0.90	D		
* = ATSAC	Benefit									0.91 - 1.00	Е		
Resu	lts —												
	North/	South C	ritical Mov	vements :	= A(N/	/B) + A	(S/B)						
	West/E	ast Crit	ical Mover	nents =	= B(W/	/B) + A	(E/B)	007					
		V	/C =	U .	+ 271	+ 8	4 +	231	= 0.325	; LC)S = A		

N/S:		Olive A	ve		W/E:		7t	h St		I/S No:	21		
AM/PM:	AM		Comm	ents: E)	KISTING	PLUS PR	OJECT	WITH TC	M				
COUNT D	ATE:			STU	IDY DATE	E:		(GROWTH	FACTOR:			
Volume	/Lane/Si	gnal Conf	igurations										
	NO	RTHBOU	ND	SC	UTHBOU	IND	W	/ESTBOU	ND	FAST	BOUND		
FXISTING	LT	TH	RT 61		тн	RT		TH	RT	LT	TH 420	RT O	
	147	093	01	U	U	U	U	565	220	U	430	U	
PROJECT													
TOTAL	147	893	61	0	0	0	0	585	220	0	430	0	
	₲₽		ላ _ቸ ን ላ _{ገ ረ}	ঀ৵	수 _슈 수	לדף לן קדף לו	₲₽		ት ሳ _ት ለ	ቁ 🕁 수	€ €	ቦ ላተኦ	
LANE	1	2 1						2	1	2			
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasi	ing	RTOR	Phasing	RT	OR	
PhasingRTORPhasingRTORPhasingRTORSIGNALSplitAuto <none><none>PermAutoPerm<none></none></none></none>													
Critica	l Movem	ents Diag	ram ——										
				s	outhBou	nd]						
				A		0							
				E	B:	0							
		East	Bound		٨		West	Bound		V/C RATIO	<u>L0</u>	<u>s</u>	
		A:	213		Ť			293		0.00 - 0.60	Α		
		В:	U				в:	U		0.61 - 0.70	В		
					NorthBour	nd 275				0.71 - 0.80	с		
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right /olume	Volume	E	3: 1	47				0.81 - 0.90	D		
* = ATSAC	C Benefit				L		J			0.91 - 1.00	Е		
Resi	ults —												
	Nort	h/South C	ritical Mov	vements	= A(N/	/B) + A	(S/B)						
	Wes	v⊨ast Crit	lical Move	ments	= A(W	/b) + B	(⊏/B)	0					
		v	/C =	213	+ U *	+ 29	1 5 +	<u> </u>	= 0.309) LC	DS = A		

N/S: Alameda St W/E: 7th St I/S No: 22													
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR	OJECT	NITH TD	Μ				
COUNT D	ATE:			STU	DY DATE			C	GROWTH	FACTOR:			
	/Lane/Sig	gnal Conf	igurations	_									
	NO	RTHBOU	ND	SO	UTHBOU		W	FSTBOU		FA	STBOU		
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	133	622	56	118	860	97	130	760	55	79	372	100	
AMBIENT								1					
FROJECT													
TOTAL	133	622	56	118	860	97	130	760	55	79	372	100	
 4													
LANE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Perm Auto Prot-Fix Auto Perm Auto Perm Auto													
Critical Movements Diagram													
SouthBound A: 479													
				В	: 1	18							
		EastE	Bound		٨		West	Bound		V/C RATIO	<u>0</u>	LOS	
		A:	236		Ť		A:	408		0.00 - 0.60)	Α	
		В:	79				В:	130		0.61 - 0.70)	в	
					orthBou : 3	nd 339				0.71 - 0.80)	с	
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	B		33				0.81 - 0.90)	D	
* = ATSAC	Benefit	-]			0.91 - 1.00)	E	
Resi	ults —												
	Norti	h/South C	ritical Mov	/ements	= B(N/	′B) + A	(S/B)						
	West	/East Crit	lical Move	ments =	= A(W)	/B) + B	(E/B)	70					
		V	/C =	100	т 4/9 *	+ 40 1425	·o +	19	= 0.701	l	LOS =	С	

N/S:	Soto St				W/E: 7th St					I/S No: 23				
AM/PM:	AM		Comm	ents: E)	ISTING	PLUS PR	OJECT V		М					
COUNT D	ATE:			STU	STUDY DATE:			G	ROWTH	FACTOR:				
- Volume	e/Lane/Si	gnal Confi	igurations	, ——										
	NORTHBOUND			SOUTHBOUND			WESTBOUND			FASTBOUND				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
	449	/12	29	54	599	80	26	104	38	42	51	20		
PROJECT														
TOTAL	440		20	E 4		00	26	104	20	42	54	20		
IUIAL	449	112	29	54	299	00	20	104	30	42	51	20		
	∮ ቆ		የት ላ	∮ ኇ	ት _{ଲି} ବି	°⊔γ (†)	₲₯╯	Ŷ ∰ Ĝ	┊ _┠ ╸ᡧᠯ	∮ ፚ ተ		۲ <u>۵</u> ۲۹		
LANE	1	1 1		1	1 1 1						1 1			
	Phasing RTOR F			Phasi	ng l	Phasing RTOR			Phasing RTOR					
SIGNAL	IGNAL Prot-Fix Auto					Perm Auto			Split Auto			Split Auto		
Critica	I Movem	ents Diagr	am —											
					SouthBound									
						40								
				B	.: 5	54								
EastBound					Α			WestBound A: 168			<u>2 I</u>	<u>_OS</u>		
A: 93												4		
		р. 🗆	40				р.	26		0.00 - 0.60				
		B:	42				B:	26		0.00 - 0.60 0.61 - 0.70	l	3		
		B:	42		lorthBour	nd	B:	26		0.00 - 0.60 0.61 - 0.70 0.71 - 0.80	 	в С		
A = Adjus B = Adjus	ted Thro	B:	42 Volume		lorthBour .: 3	nd 71	B:	26		0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90		3 C D		
A = Adjus B = Adjus * = ATSAG	ted Thro ted Left \ Benefit	B:	42 Volume	N A B	 lorthBour .: 3 : 4	nd 71 49	B:	26		0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	 	3 C D		
A = Adjus B = Adjus * = ATSA(—— Res	ted Thro ted Left ^v C Benefit ults —	B:	42 Volume	N A B	lorthBour : 3 : 4	nd 71 49	B:	26		0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	 	3 C D E		
A = Adjus B = Adjus * = ATSA(— Res	ted Thro ted Left C Benefit ults — Nort	B: ugh/Right Volume h/South C	42 Volume ritical Mo	N A B vements	lorthBour :: 3 :: 4 = B(N/	nd 71 49 B) + A	B:	26		0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	 	3 C D E		
A = Adjus B = Adjus * = ATSA(— Res	ted Thro ted Left V C Benefit ults — Nort Wes	B: ugh/Right Volume h/South C t/East Crit	42 Volume ritical Mo ical Move	Vements	lorthBour .: 3 :: 4 = B(N/I = A(W/	nd 71 49 B) + A B) + A	(S/B) (E/B)	26		0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	1	3 C D E		

Bixel Street Ν 52 782 359 589 163 8th Street SR 110 SB On-Ramp 1) Lane Capacity for WB Lefts -750 vphpl Number of Lanes -2 WB Left V/C -163 1,500 0.109 = or Lane Capacity for WB Throughs and Rights -1,500 vphpl 2 throughs Number of Lanes -Number of Lanes -1 right-turn only WB Through/Right V/C -589 359 or 3,000 1,500 0.239 = 1,500 vphpl 2) Lane Capacity for SB Rights -Number of Lanes -1 SB Right V/C -52 1,500 0.035 = or Lane Capacity for SB Throughs -750 vphpl Number of Lanes -2 WB Through/Right V/C -782 1,500 0.521 = Intersection V/C = LOS B 0.760 0.100 0.660 =

Existing plus Project with TDM Conditions A.M. Peak Hour





N/S:	Flower St W/E:					8th St				I/S No: 26				
AM/PM:	AM		Comn	nents: EX	KISTING	PLUS PR	ROJECT	WITH TD	М					
COUNT DATE: GROWTH FACTOR:														
	e/Lane/Sig	nal Conf	iguration	s ——										
	NORTHBOUND			SC	SOUTHBOUND			WESTBOUND			FASTBOUND			
FXISTING		ТН	RT 0		TH 605	RT 274	LT 72	TH 1042	RT O		<u>тн</u> О	RT		
AMBIENT		U		0	005	214	12	1042	U	U	U			
RELATED														
PROJECT														
TOTAL	0	0	0	0	605	274	72	1042	0	0	0	0		
LANE	ी कि री 		фр ф ₁	<u>ቁ</u> ፈታ	← 余 行 4	_ ኯ 1	୩ _୧ ୮ 1	↑ ♣ ↑ 3	\$_f\$_{T}\$	<u>ቁ</u> ፈን ና	× ⊕ 4	مله ما م		
	Phasing	g F	RTOR	Phasi	Phasing RTOR			Phasing RTOR			Phasing RTOR			
SIGNAL	SIGNAL <none> <none></none></none>				Split Auto			Split <none></none>			<pre><none></none></pre>			
Critica	I Moveme	EastE A: B:	ram Bound 0 0		SouthBou A: 2 3: A A	nd 274 0	West A:	Bound 279 72		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70	<u>2</u>	<u>LOS</u> A B		
A = Adjusted Through/Right Volume B = Adjusted Left Volume					NorthBou A: B:	nd 0 0				0.71 - 0.80 0.81 - 0.90)	C D		
* = ATSAC	* = ATSAC Benefit						J			0.91 - 1.00)	E		
Results North/South Critical Movements = $A(N/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + A(E/B)$ $V/C = \frac{0 + 274 + 279 + 0}{*1500} = 0.299$ LOS = A														


N/S:	Figue	eroa St	W/E	: 9th 3	St/James	M Wood Blvd	I/S No:	28
AM/PM:	АМ	Comm	ents: EXISTIN	G PLUS PI				
COUNT D	ATE:		STUDY DA	TE:		GROWTH	FACTOR:	
Volume	e/Lane/Signal C	onfigurations	s ———					
	NORTHB	OUND	SOUTHBO	DUND	W	STBOUND	FASTBO	DUND
EVICTING	LT TH	RT	LT TH	RT	LT	TH RT		H RT
	0 138	7 141	0 0	0	U	UU	830 154	42 0
PROJECT								
TOTAL	0 138	7 141	0 0	0	0	0 0	830 154	42 0
	∮ 순 수 佘	ᡩᡎ᠕	$h \uparrow h \uparrow h$	ት ት ት	ፋ 슈	ት		: ት ሶ ጥ
LANE	3	1		-y · ·	. 4-		1 1 3	
	Phasing	RTOR	Phasing	RTOR	Phasir	ng RTOR	Phasing	RTOR
SIGNAL	Split	Auto	<none></none>	<none></none>	<none< td=""><td>e> <none></none></td><td>Split</td><td><none></none></td></none<>	e> <none></none>	Split	<none></none>
Critica	I Movements D	iaqram ——						
		C	SouthBo	ound				
			A:	0				
			B:	0				
	Ea	astBound		Δ	Westl ⊿·	Bound	V/C RATIO	LOS
	B:	474		T	B:	0	0.00 - 0.60	Α
	5.			 			0.61 - 0.70	В
			A:	462			0.71 - 0.80	С
A = Adjus B = Adjus	ted Through/Ri ted Left Volum	ght Volume e	B:	0			0.81 - 0.90	D
* = ATSA(C Benefit						0.91 - 1.00	E
Res	North/Sout	h Critical Mo	vements = Al	N/B) + A	(S/B)			
	West/East	Critical Move	ments = A(W/B) + A	(E/B)			
		V/C =	462 + 0) + *1500	0 +	474 = 0.554	LOS	= A

N/S:	Cherry	y St		W/E:		Pico	Blvd		I/S No:	2	9		
AM/PM:	AM ATE:	Comm	sTU	ISTING DY DATE				GROWTH	FACTOR:				
Volume	e/Lane/Signal Cor	nfigurations	s ——										
	NORTHBO	IND	SO	UTHBOU	ND	W	ESTBOU	ND	FA	STROU	ND		
FXISTING	LT TH	RT		TH	RT 7		TH 252	RT	LT	TH	RT		
	524 501	214	190	U	<i>'</i>	U	353	230	210	347			
PROJECT													
TOTAL	524 501	214	196	0	7	0	353	238	216	547	0		
LANE SIGNAL	Image: Sector of the sector												
Critical Movements Diagram SouthBound A: 4 B: 108													
	Eas	tBound	_	٨		West	Bound		V/C RATI	<u>o</u>	LOS		
	A: B·	216		Ĩ		B.	197		0.00 - 0.6	0.	Α		
	В.	210		 			U		0.61 - 0.7	0	В		
			A	i 3	na 342				0.71 - 0.8	0	с		
A = Adjus B = Adjus	ted Through/Rigi ted Left Volume	nt Volume	в	: 3	342				0.81 - 0.9	0	D		
									0.91 - 1.0	0	E		
Rest	North/South	Critical Mo	vements	- Δ(N/	/R) ⊥ R	(S/B)							
	West/East Cr	itical Move	ments :	= A(W	_, + B /B) + B	(E/B)							
	,	V/C =	342	+ 108	+ 19 1425	97 +	216	= 0.536	6	LOS =	A		

N/S: AM/PM: COUNT D	N/S: Figueroa St W/E: Pico Blvd I/S No: 30 AM/PM: AM Comments: EXISTING PLUS PROJECT WITH TDM COUNT DATE: STUDY DATE: GROWTH FACTOR:												
	<u> </u>									L			
Volume	/Lane/Sig	ınal Conf	igurations	;									
	NOF	RTHBOU		SC	UTHBOU		w	ESTBOU		FA	STBOU		
	LT	TH	RT	LT	ТН	RT	LT	TH	RT	LT	TH	RT	
EXISTING	200	1725	125	9	146	111	49	304	62	187	638	113	
AMBIENT													
RELATED													
PROJECT													
TOTAL	200	1725	125	9	146	111	49	304	62	187	638	113	
LANE SIGNAL	LANE $1 \ 3 \ 1 \ 1 \ 2 \ 1 \ 1 \ 2 \ 1 \ 1 \ 2 \ 1 \ 1$												
Critical Movements Diagram SouthBound A: 73 B: 9													
		EastE	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS	
		A:	319		Ť		A:	192		0.00 - 0.6	0	Α	
		B:	187		I		B:	49		0.61 - 0.7	0	в	
					NorthBou	nd	1			0.71 - 0.8	0	с	
A = Adjus	ted Throu	igh/Right	Volume		••	603				0.04 0.04	0	n	
B = Adjus * = ATSAC	ted Left V SBenefit	olume		E	3: 2	200				0.01 - 0.9	0	D	
- Resi	ults —			R			-			0.91 - 1.0	U	E	
Results North/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $B(W/B) + A(E/B)$ $V/C = \frac{463 + 9 + 49 + 319}{*1375} = 0.541$ LOS = A													

N/S:	AM	Hoover	St Comm	nents: EX	W/E:	Alva PLUS PR	arado St//	Alvarad VITH TD	o Ter DM	I/S No:	3	; 1	
				510					GROWIII	ACTOR.			
Volume	/Lane/Si	gnal Conf	igurations	;									
		RTHBOU	ND	SO	UTHBOU		WE	STBOU		FAS	STBOU	ND	
EXISTING AMBIENT RELATED	0	917	592	12	800		414	0			0		
PROJECT													
TOTAL	0	917	592	12	800	0	414	0	0	0	0	0	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $													
Critical Movements Diagram SouthBound A: 436 B: 12													
		EastE	Bound <u> </u>		Ą		WestB	Bound 207		V/C RATIO	<u>2</u>	<u>LOS</u>	
		В:	0				В:	207		0.00 - 0.60)	Α	
				N	orthBou	nd				0.61 - 0.70)	В	
A = Adjus	ted Thro	ugh/Right	Volume	A		503				0.71 - 0.80)	C	
B = Adjus * = ATSAC	ted Left V Benefit	/olume		В	•	0				0.81 - 0.90)	D	
— Resi	ults —									0.91 - 1.00)	E	
	ResultsNorth/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $A(W/B) + A(E/B)$ V/C = $\frac{503 + 12 + 207 + 0}{*1500}$ = 0.411LOS = A												

N/S:		Flower	St		W/E:		Venic	e Blvd		I/S No:	3	2		
AM/PM:	AM		Comm	ents: E)	(ISTING	PLUS PR	OJECT	NITH TD	Μ					
COUNT D	ATE:			STU	DY DATE			C	BROWTH	FACTOR:				
Volume	/Lane/Sig	gnal Conf	igurations											
	NO	RTHBOU	ND	so	UTHBOU	IND	W	FSTBOU		FAS	STBOU			
	LT	TH	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT		
EXISTING	0	0	0	9	397	24	45	285	0	0	332	53		
PROJECT														
TOTAL	0	0	0	9	397	24	45	285	0	0	332	53		
	ዓ	ት	۲ <u>۱</u> ۵ (۱۲	ፋ 슈	수 <i>슈</i> 4	ት የነ የ	<u>ዓ</u>	수	ᡷ᠂ᡁ᠈᠂ᡧᠯ	ፋ 순 수	· 余 イ	ᡩ᠇ᢩᢀ᠂ᢔ		
LANE				1	2 1			1				1		
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR														
SIGNAL	Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL <none> <none> Split Auto Perm <none> Perm Auto</none></none></none>													
Critica	I Moveme	ents Diag	ram	∟	outhBou	nd	1							
				A		140								
				В	:	9								
		Eastl	Bound 193		Ą		Westl A:	Bound 188		V/C RATIO	<u>2</u>	<u>LOS</u>		
		B:	0				В:	45		0.00 - 0.60)	Α		
					IorthBou	nd				0.61 - 0.70		В		
				A		0				0.71 - 0.80)	С		
A = Adjus B = Adjus * - ATSAC	ted Throu ted Left V	igh/Right /olume	Volume	В	:	0				0.81 - 0.90)	D		
Boo]			0.91 - 1.00)	E		
Resi	North	n/South C	critical Mov	vements	= A(N	/B) + A	(S/B)							
	West	/East Cri	tical Move	ments	= B(W	/B) + A	(E/B)							
		v	/C = —	0	+ 140	+ 4 1500	5 +	193	= 0.182	. 1	_OS =	А		

N/S:		Grand /	Ave		W/E:		18tl	h St		I/S No:	33			
AM/PM:	AM		Comm	ents: EX	ISTING	PLUS PR		NITH TD	M					
COUNT D	ATE:			STU	DY DATE	:		(GROWTH	FACTOR:				
	e/Lane/Sig	nal Conf	iqurations											
				50			10/6	ESTROU		EASTE				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT I	TH RT			
EXISTING	0	0	113	179	455	0	0	0	0	0 8	10 125			
AMBIENT														
RELATED														
PROJECT														
TOTAL	0	0	113	179	455	0	0	0	0	0 8	10 125			
	4 ^ /	$\wedge \wedge \land$		4 Λ.	$\wedge \wedge \land$	<u>a</u> . a. <i>l</i> .	μ Λ	$\wedge \wedge Z$	<u> </u>	4 ^ ^ /				
LANE	ч ф ⁻	ТдуТ	2	ין _ע ד 1	т д, т 3			т _ф , т 		╹ _{ ₽ ⁻ ⊤ ₍ 2	Б Б ^{р чр}			
	LANE 2 1 3													
SIGNAL	PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoProt-Fix <none><none><none>SplitAuto</none></none></none>													
										opin				
	Moveme	nte Diag	ram —											
Citica	i wovenie	into Diag	ram	۲s	outhBou	nd	7							
				A	: 1	152								
				В	-	179								
		East	Bound		٨		West	Bound		V/C RATIO	LOS			
		A:	270		Ť		A.	U		0.00 - 0.60	Α			
		В:	0		I		B:	0		0.61 - 0.70	В			
				N A	orthBou	nd 62				0.71 - 0.80	с			
A = Adjus B = Adjus	ted Throu	igh/Right	t Volume			0				0.81 - 0.90	D			
* = ATSAC	C Benefit				-	-				0.91 - 1.00	Е			
Resi	ults —													
	North	/South C	Critical Mo	vements	= A(N/	/B) + B	(S/B)							
	West	East Cri	tical Move	ments :	= A(W	/B) + A	(E/B)							
		v	/C = —	62	+ 179	+ () +	270	= 0.289	LOS	S = A			

N/S:	0	live St		W/E:		6th	n St		I/S No:	34	ŀ		
AM/PM:	AM	Comm	nents: EX	ISTING	PLUS PF		WITH TD	M					
COUNT D	ATE:		STU	DY DATE	:		C	GROWTH	FACTOR:				
Volume	/Lane/Signal	Configurations	,										
	NORTH	BOUND	SO	UTHBOU		W	ESTBOUI		FAS	STROUN	D		
	LT 1	TH RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	0 8	88 162	0	0	0	0	0	0	376	932	0		
AMBIENT													
RELATED													
PROJECT													
TOTAL	0 8	88 162	0	0	0	0	0	0	376	932	0		
		ፈ ሲ ሶ ቀን	ᡩ᠋ᢓ	ት	ት የካ ፈ	ዓ ታ	수	ላተ የሳ	ዓ 순 ና	· <u></u>	ሳት ላ		
LANE						V		V					
	Phasing	RTOR	Phasir	ng	RTOR	Phasii	ng l	RTOR	Phasing	y I	RTOR		
PhasingRTORPhasingRTORPhasingRTORSIGNALSplitAuto <none><none><none><none>Split<none></none></none></none></none></none>													
Critica	I Movements	Diagram —	S	outhBou	nd								
			A		0								
			В	:	0								
	Г	EastBound		٨		West	Bound		V/C RATIO	<u>2</u>	<u>.0S</u>		
		A: 262		Ť		A:	0		0.00 - 0.60) A	۱.		
	E	3: 262				B:	0		0.61 - 0.70) E	8		
			N N	orthBou	nd	ĺ			0.71 - 0.80) (;		
A = Adjus B = Adjus	ted Through/	Right Volume	R	. 2	0				0.81 - 0.90) C)		
* = ATSA	C Benefit			-	~				0.91 - 1.00) E	E		
Res	ults ——												
	North/So	uth Critical Mo	vements	= A(N/	′B) + A	(S/B)							
	West/Eas	st Critical Move	ments =	= A(W	/B) + A	(E/B)							
		V/C =	210 ·	+ 0	+ () +	262	= 0.245	I	_OS =	A		
				*	1500								

N/S:		Норе	St		W/E:		7th	n St		I/S No:	35
AM/PM:	٩M		Comm	ents: E)	ISTING	PLUS PR		WITH TD	M		
COUNT D	ATE:			STU	DY DATE	:		(GROWTH	FACTOR:	
Volume	/Lane/Sig	gnal Conf	igurations	;							
	NO	RTHBOU	ND	SO	UTHBOU	IND	W	ESTBOU	ND	FAST	BOUND
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH RT
EXISTING	37	222	60	9	230	24	0	751	104	0	341 62
AMBIENT											
RELATED											
PROJECT											
TOTAL	37	222	60	9	230	24	0	751	104	0	341 62
	6 Δ	$\land \land \land$	A	6 Δ		ላ ግ የተን	6 Δ		ላ ተን ላት ረ	6 Φ Φ	
LANE	יקי 1	<u>'</u> (++) + 1		'' ∉' 1	· (小) (ч фі	· ↔ ·		'' ∉'' ' 1	
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	RTOR
SIGNAL	Pern	n	Auto	Pern	n	Auto	Pern	n	Auto	Perm	Auto
							_			_	
Critical	Moyem	onte Diag	ram —								
Ontical	movern	citto Diag	i uni	∟s	outhBou	nd	7				
				A		32					
				В	3:	9					
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	202		Ť		A. D.	420		0.00 - 0.60	Α
		Ь.	U		l I		<u>В.</u>	U		0.61 - 0.70	В
		_		A		60				0.71 - 0.80	С
A = Adjust B = Adjust	ed Thro	ugh/Right Volume	Volume	в	3	37				0.81 - 0.90	D
* = ATSAC	Benefit						J			0.91 - 1.00	E
Resu	Nort	h/South C	ritical Mo	vemente	- R/N/	/B) ⊥ ^	(S/B)				
	Wes	t/East Crit	tical Move	ments	– D(N) – A(W)	/B) + B	(E/B)				
		V	/C =	37	+ 132	+ 42 1500	28 +	0	= 0.328	3 LC	DS = A

N/S:		Grand A	Ave		W/E:		7th	n St		I/S No:	36		
AM/PM:	AM		Comm	nents: E	XISTING	PLUS PR		WITH TD	М				
COUNT D	ATE:			STL	JDY DATE	:		C	GROWTH	FACTOR:			
	/l ane/Si	anal Conf	igurations	, —									
Volume				, 						FAOTE			
		TH	RT		ТН	RT		TH	RT		TH RT		
EXISTING	0	0	0	93	1072	72	0	765	0	0 3	26 101		
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	93	1072	72	0	765	0	0 3	26 101		
LANE			<u>к</u> р фр	∯ ∯ 1	수 _命 行 4	≩ וף לקי וויייייייייייייייייייייייייייייייייי	¶ ∂ ²	수 _余 行 2	δ (τρ (τη (τ	♠ ᠿ 수 ∅	፝፟፟፝ኯ ፝፟፟፝ኯ ፟ <mark>፟፟፟፟፟፟፟</mark> ፟		
	Phasii	ng l	RTOR	Phasi	ing	RTOR	Phasir	ng	RTOR	Phasing	RTOR		
SIGNAL	<none< td=""><td>≥> <</td><td>none></td><td>Spl</td><td>it</td><td>Auto</td><td>Pern</td><td>n <</td><td>none></td><td>Perm</td><td>Auto</td></none<>	≥> <	none>	Spl	it	Auto	Pern	n <	none>	Perm	Auto		
<u> </u>													
Critica	Critical Movements Diagram SouthBound A: 268 B: 93												
		East	Bound		٨		West	Bound		V/C RATIO	LOS		
		A:	163		Ť		A:	383		0.00 - 0.60	Α		
		B:	0				В:	0		0.61 - 0.70	В		
		<u> </u>			NorthBoui	nd N	1			0.71 - 0.80	С		
A = Adjus B = Adjus	ted Thro	ugh/Right	t Volume		 	0				0.81 - 0.90	D		
* = ATSAC	C Benefit	Volume		Ľ		U				0.91 - 1.00	E		
— Resi	ults —												
	Nort	h/South C	Critical Mo	vements	= A(N/	′B) + A	(S/B)						
	west	V	/C =	0	= A(W/ + 268	+ 38 + 38 1500	(=/B) 33 +	0	= 0.364	LOS	6= A		

Existing plus Project with TDM Conditions A.M. Peak Hour



= 0.183

Critical V/C -	0.032	+	0.183	=	0.215
2) Lane Capacity for NE	3 Throughs -			900	vphpl
Lane Capacity for NE	B Left- and Rig	ht-turns -		1,425	vphpl
Number of Lanes -			1 left-turn on	y	
		;	3 throughs		
			1 right-turn o	nly	
Critical V/C -	1,404	or	242	or	182
	2,700		1,425		1,425
	=	0.520			
Intersection V/C = 0.805	_	0.100	=	0.705	LOS C

N/S:	G	lendale	Blvd		W/E:		Temj	ple St		I/S No:	3	8	
AM/PM:	AM		Comm	nents: E	XISTING	PLUS PF	ROJECT	WITH TD	M				
COUNT D	ATE:			STI	JDY DATE			(GROWTH	FACTOR:			
Volume	/Lane/Sid	unal Conf	igurations										
							14/				CTDOU		
		TH	RT	LT	TH	RT	LT	TH	RT		TH	RT	
EXISTING	54	451	13	223	1645	140	60	434	119	187	571	132	
AMBIENT													
RELATED													
PROJECT													
TOTAL	54	451	13	223	1645	140	60	434	119	187	571	132	
	<u>ዓ</u> ନ	ት	የተ	ፋ ታ	수 쇼 수	ላተ ላካ	ନ	수	ረተን ላካ 🕺	<u>ዓ</u>	<u>ک</u> ہ ۲	ረት የ	
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoProt-FixAutoProt-FixAuto													
Critica	I Moveme	ents Diag	ram		SouthBou	nd	-						
					A: 8	93							
					B. 2	22							
					Б. <u> </u>	.23		_					
		EastE	Bound 752		٨		West	Bound 277		V/C RATI	<u>0</u>	LOS	
		B.	187		T		R.	60		0.00 - 0.6	0	Α	
			107				D.	00		0.61 - 0.7	0	В	
					NorthBour A: 2	nd 32				0.71 - 0.8	0	с	
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume		B:	54				0.81 - 0.9	0	D	
" = AISAC	, Benetit						J			0.91 - 1.0	0	E	
Resi	ults —	Courth C			DAV	<u>م</u>	(C/D)						
	Wost	/Fast Crit	ontical Move	vements	5 = Β(N/	D) + A (R) <u>+</u> D	(3/B)						
	11031	V	/C =	54	+ 893	+ 27	77 +	187	= 0.920)	LOS =	E	
					*	1425							

Existing plus Project with TDM Conditions A.M. Peak Hour



Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights



Phase 2) Glendale Boulevard, 1st Street, and 2nd Street - Southbound Lefts, Throughs, and Rights, and
 a.) Westbound Rights on 1st Street
 b.) Westbound Rights on 2nd Street

a.)
$$\frac{27}{1}$$

& $\left\{\frac{735}{1} - 137\right\}$ & $\left\{\frac{1,017}{2}\right\}$
= 27
b.) $\left\{\frac{1,017}{2} - 27\right\}$
or $\left\{\frac{735}{1} - 137 - 27\right\}$
& $\frac{154}{2}$
= 571

Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights

$$\left\{\frac{154}{2} - 571\right\}$$

ı N



Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights



N/S:		Lucas A	Ave		W/E: [3rc	d St		I/S No:	4	0	
COUNT D	AM ATE:			STU	DY DATE				GROWTH	FACTOR:			
Volume	/Lane/Sig	gnal Conf	igurations	s									
		RTHBOU		SO			W	ESTBOU		EA FA	STROU		
EXISTING AMBIENT	100	223	100	107	538	128	46	756	58	158	1042	66	
PROJECT													
TOTAL	100	223	100	107	538	128	46	756	58	158	1042	66	
4 分 分 分 分 か か か か か か か か か か か か か か か													
Critical Movements Diagram SouthBound A: 333 B: 107													
		EastE A:	Bound 521		Ą		West A:	Bound 378		V/C RAT	0	<u>LOS</u>	
		В:	158				В:	46		0.00 - 0.6	0 0	A B	
				N	orthBou	nd				0.71 - 0.8	0	c	
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	В		100				0.81 - 0.9	0	D	
* = ATSAC	Benefit]			0.91 - 1.0	0	E	
Results North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = B(W/B) + A(E/B)													
		V	/C =	100	+ 333	+ 4 1500	6 +	521	= 0.597	,	LOS =	Α	

N/S:		Lucas A	lve		W/E:		6t	h St		I/S No:	41	
AM/PM:	AM		Comm	nents: E)	KISTING	PLUS PR	OJECT	WITH TD	M			
COUNT D	ATE:			STU	IDY DATE	:		(GROWTH	FACTOR:		
	/l ane/Sid	anal Conf	igurations									
Volume		RTHBOU		so	UTHBOU	ND	W	FSTBOU	ND	FAS	STBOUN	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	27	173	18	43	294	166	58	644	26	144	1030	159
AMBIENT												
RELATED												
PROJECT												
TOTAL	27	173	18	43	294	166	58	644	26	144	1030	159
	ፋ 순	<u>ት </u>	ረተን ፈት		수 슈 수	ሳተን ላ _ገ <i>Հ</i>	ፋ 순	수 쇼 수	ᢤ᠇᠈ᡧ	ፋ 순 ና	<u>ት</u>	ሰት ላ
LANE		1		· 4	1		1	2	1	1	۲ ۲ ۱	
	Phasir	ng F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	g F	RTOR
SIGNAL	Pern	n .	Auto	Perr	n	Auto	Perr	n	Auto	Perm		Auto
	l Movem	ents Diag	ram —									
••••••		j		۲s	outhBou	nd	1					
				4	\: 5	i03						
				В	3: 4	43						
			Pound				<u> </u>	Pour d				
		Last	50UNA 505		Λ		vvest	322	_	V/C RATIO	<u> L</u>	<u> </u>
		~.	555		Т			VLL		0.00 - 0.60) A	
		B:	144				B:	58		0.61 - 0.70) R	1
					lorthBour	nd	1				_	
A _ A _!;	tod These	uab/Diati	Values		.: 2	218				0.71 - 0.80) C	;
A = Aajus B = Adjus	ted Inrol	olume	voiume	E	B:	27				0.81 - 0.90) D)
= AI JAU]			0.91 - 1.00) E	
Nesi	Nort	h/South C	ritical Mo	vements	= B(N/	′B) + A	(S/B)					
	West	t/East Crit	tical Move	ments	= B(W/	/B) + A	(E/B)					
						_						

N/S:	N/S: Lucas Ave W/E: Wilshire Blvd I/S No: 42													
AM/PM:	AM		Comm	nents: E	XISTING	PLUS PF	ROJECT	WITH TD	М					
COUNT D	ATE:			STU	JDY DATE			(GROWTH	FACTOR:				
Volume	/Lane/Sig	Inal Conf	igurations	<u> </u>										
				S			W	ESTROLI		FA	STROUI			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	29	137	23	52	204	71	59	499	70	52	942	54		
AMBIENT														
RELATED														
PROJECT														
TOTAL	29	137	23	52	204	71	59	499	70	52	942	54		
	4 A 4	4 4 4 4	v ч⊳ (ч-)	6 A	4 4 4	<u>∖</u>	ሌ 🛆	$\varphi \varphi \zeta$	ላ ተን ላት ረ	<u> </u>	2 <u>4</u> 4	ረት የ ላ		
4 分 수 歲 춚 ሶ ŵ 4 分 수 歲 춚 ሶ ŵ 4 分 수 歲 춚 ሶ ŵ 4 分 수 歲 춚 ሶ ŵ LANE 1 1 1 1														
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoPermAuto														
Critical Movements Diagram														
					4: 3	827								
				E	B:	52								
		EastE	Bound		Λ		West	Bound		V/C RATI	<u>o</u>	<u>LOS</u>		
		R.	52		T		B.	59		0.00 - 0.6	D	A		
			52		l I					0.61 - 0.7	0	В		
						89				0.71 - 0.8	D	с		
A = Adjus B = Adjus	ted Throu ted Left V	ıgh/Right 'olume	Volume	E	B:	29				0.81 - 0.9	D	D		
* = ATSAC	Benefit									0.91 - 1.0	0	E		
Kesi	North	South C	ritical Mo	vemente	= R/N/	/B) ⊥ ∆	(S/B)							
	West	/East Crit	tical Move	ments	= B(W	_, ₊ / /B) + A	(E/B)							
		V	/C = —	29	+ 327	+ 5	i9 +	523	= 0.555	i	LOS =	A		

N/S:		Grand A	ve		W/E:		US 101 N	B Ramp	S	I/S No:	1		
AM/PM:	PM		Comr	nents: EX	KISTING	PLUS PR		VITH TD	М				
COUNT D	ATE:			STU		:		C	GROWTH	FACTOR:			
Volume	e/Lane/Sig	gnal Conf	iguration	s ——									
	NO	RTHBOU	ND	SC	UTHBOL	IND	WF	STBOU	ND	FASTE	BOUND		
FXISTING	LT 675	TH 834	RT		TH	RT 325		TH	RT O	LT 1	TH RT		
AMBIENT	075	004	U		504	525	0	U		07	0 243		
RELATED													
PROJECT													
TOTAL	675	834	0	0	504	325	0	0	0	67	0 249		
	ፋ 🕁	ት 🔬 🕁		፹		ᡷ᠂᠋ᢀ᠂ᡏᢧ	<u>ዓ</u> ታ '	ት 🔬 ና	ᡷ᠂ᡥ᠂ᡏᡟ	<u> </u>	ት ት ት		
LANE	1	2			2	1							
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
Phasing RTOK Phasing RTOK Phasing RTOK SIGNAL Prot-Fix <none> Perm OLA <none> Split Auto</none></none>													
Critica	l Moveme	ents Diag	ram —										
				S	SouthBou	nd]						
				A		258							
				E	3:	0							
		EastE	Bound		Λ		WestE	Bound		V/C RATIO	LOS		
			~~		T			×		0.00 - 0.60	Α		
		В.	67		ا 		Б:	U		0.61 - 0.70	В		
					NorthBou	nd				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	Ē	3:	675				0.81 - 0.90	D		
* = ATSA(C Benefit						J			0.91 - 1.00	E		
Res	ults —	h/South O	ritical M-	womant-	_ D/N	/B) · •	(C/D)						
	West	/East Crit		ements	= Β(Ν) = Δ(W)	/B) + R	(3/B) (E/B)						
	1100	V	/C = -	675	+ 258	+ ((_, _, _,) +	67	= 0.632	LO	S = B		
						1420							

N/S: Hope St/US 101 SB Ramps W/E: Temple St I/S No: 2 AM/PM: PM Comments: EXISTING PLUS PROJECT WITH TDM COUNT DATE: STUDY DATE: GROWTH FACTOR:													
Volume	/Lane/Sigr	nal Conf	igurations										
	NOR	THBOU		so	UTHBO		WF	STBOU		FAS	STROUM		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	214	240	198	72	28	16	136	733	217	464	731	72	
AMBIENT													
RELATED													
PROJECT													
TOTAL	214	240	198	72	28	16	136	733	217	464	731	72	
TOTAL21424019872281613673321746473172													
Critical Movements Diagram SouthBound A: 22 B: 72													
	Γ	EastE	Bound		٨	١	West	Bound		V/C RATIO	<u>)</u>	LOS	
		A:	402		Í	7	A:	367		0.00 - 0.60)	A	
		B:	464				В:	136		0.61 - 0.70)	в	
	L				lorthBou	und	1			0.71 0.90		c	
A = Adius	ted Throug	ah/Riaht	Volume	A		219				0.71-0.80			
B = Adjus	ted Left Vo	olume		В	:	214				0.81 - 0.90)	D	
= AISAC	, penetit						J			0.91 - 1.00) 1	E	
Results North/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$ $V/C = \frac{219 + 72 + 367 + 464}{*1425} = 0.717$ LOS = C													



Existing plus Project with TDM Conditions P.M. Peak Hour

Lane Capacity for SB Rights -

1,425 vphpl

	Number of Lanes -		2	2			
	SB Right V/C -	{ <u> 643 </u>	x 1,425	0.55			
		=	0.248				
	Critical V/C -	0.358	+	0.248	=	0.606	
	<u>or</u>						
	Lane Capacity for NB T	hroughs & I	Rights -	1,42	5 vphpl		
	Number of Lanes -		2 1	2 throughs through/ri	ght		
	NB Through/Right V/C -		{ <u>2,360</u>) + 4,275	}	or	<u>74</u> 1,425
		=	0.569				
Intersec	tion V/C = 0.980	_	0.100	=	0.880	LOS	D

N/S:	F	lower	St		W/E:		3rc	l St		I/S No:		4	
AM/PM:	PM		Comm	ents: E)	(ISTING	PLUS PR		NITH TD	Μ				
COUNT D	ATE:			STU	DY DATE	:		G	BROWTH	FACTOR:			
Volume	/Lane/Signa	al Confi	gurations										
		HBOUN		SO	UTHBOU		W	ESTROUM		FAS	STROU		
	LT	ТН	RT	LT	ТН	RT	LT	TH	RT	LT	ТН	RT	
EXISTING	135	209	0	0	419	473	117	1158	62	0	0	144	
AMBIENT													
RELATED													
PROJECT													
TOTAL	135	209	0	0	419	473	117	1158	62	0	0	144	
4													
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Perm <none> Perm Auto Split Auto <none> Free</none></none>													
SIGNAL Perm rone Perm Auto Split Auto rone Free													
Critical Movements Diagram													
Critical Movements Diagram													
				4		173							
				E	B:	0							
	Г	EastB	ound		٨		Westl	Bound		V/C RATIO	<u>2</u>	<u>LOS</u>	
		A.	U		T		A.	305		0.00 - 0.60)	A	
		в:	0		 	_	В:	117		0.61 - 0.70)	в	
					iorthBou 1: 1	nd 105				0.71 - 0.80)	С	
A = Adjus B = Adjus	ted Througi ted Left Vol	h/Right lume	Volume	E	3:	35				0.81 - 0.90)	D	
* = ATSAC	Benefit						J			0.91 - 1.00)	E	
Resi	Jits	auth O		(0 m c + + -		(D) · ·	(C/D)						
	West/Ea	ast Criti	ical Move	ments	= B(N/ = A(W/	/B) + A	(S/B) (E/B)						
		V/	C = —	135	+ 473	+ 30)5 +	0	= 0.539) [_OS =	A	

N/S:		Grand A	Ave		W/E:		3rd	St		I/S No:	5			
AM/PM:	PM		Comm	ents: EX	XISTING	PLUS PR		VITH TD	М					
COUNT D	ATE:			STL	IDY DATE	E:		C	GROWTH	FACTOR:				
Volume	/Lane/Sig	ınal Conf	igurations											
				SC				STBOUI		FAST				
EXISTING AMBIENT	21	268	0	0	797	69	0	0	0	151	0 112			
RELATED PROJECT														
TOTAL	21	268	0	0	797	69	0	0	0	151	0 112			
小 子 会 合 仲 外 合 子 会 合 仲 外 合 子 会 合 仲 外 小 子 会 合 仲 外 ク 子 会 合 仲 外 LANE 1 2 Phasing RTOR SIGNAL Perm Auto Perm														
Critical Movements Diagram														
	Critical Movements Diagram SouthBound A: 433 B: 0													
		EastE A:	Bound 62		Ą		WestE A:	Bound 0		<u>V/C RATIO</u>	LOS			
		В:	151				В:	0		0.00 - 0.60 0.61 - 0.70	A B			
					NorthBou	nd 34				0.71 - 0.80	С			
A = Adjus B = Adjus	ted Throu ted Left V	ıgh/Right ′olume	Volume	E	B:	21				0.81 - 0.90	D			
* = ATSAC	Benefit]			0.91 - 1.00	E			
Rest	North	/South C	ritical Mo	vements	= B(N/	/B) + A	(S/B)							
	West	/East Crit	ical Move	ments	= A(W	/B) + B	(E/B)	454						
		V	/C =	21	+ 433	+ (· +	151	= 0.333	LO	S = A			

Existing plus Project with TDM Conditions P.M. Peak Hour



N/S:	N/S: Flower St W/E: 5th St I/S No: 7 AM/PM: PM Comments: EXISTING PLUS PROJECT WITH TDM 7													
COUNT D	ATE:			STU	DY DATE			WITH TD G	M BROWTH	FACTOR:				
Volume	e/Lane/Sig		igurations					ESTROUM			STROU			
		тн	RT		тн	RT		TH	RT		тн	RT		
EXISTING AMBIENT RELATED		0	0	0	1143	518	212	1372			0			
PROJECT														
TOTAL	0	0	0	0	1143	518	212	1372	0	0	0	0		
、 、 、 、 、 、 、 、 、 、 、 、 、														
Critica	Critical Movements Diagram SouthBound A: 277 B: 0													
		East	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS		
		A :	0		Ц Т		A:	274		0.00 - 0.60	0	Α		
		В:	0				В:	212		0 61 - 0 7	0	B		
				N	orthBour	nd				0.74 0.04	•	0		
A = Adius	ted Throu	ah/Riah	Volume	A		0				0.71 - 0.80	U	C C		
B = Adjus	ted Left V	olume		В	:	0				0.81 - 0.90	0	D		
= ATSA							J			0.91 - 1.0	0	E		



Existing plus Project with TDM Conditions P.M. Peak Hour

N/S:		Flower	St		W/E:		6th	St		I/S No:	9	
AM/PM:	PM		Comn	nents: E)	KISTING	PLUS PF		WITH TD	М			
COUNT D	ATE:			STU	IDY DATE			G	ROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	iguration	s —								
	NO	RTHBOU	ND	SC	UTHBOU	ND	W	STBOUN	D	FA	STBOUN	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	316	1079	0	0	0	0	0	1093	558
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	316	1079	0	0	0	0	0	1093	558
	ቁ ፚ	ት 🚓 🕆	ሳተን ላ _ገ ረ	ቁ 🕁	수	ት የ ¹ ላ	<u>ዓ</u>	ት 🚓 ቲ	ሳተን ላ _ገ <i>3</i>		<u>ት </u>	_በ ን ፋተን
LANE				2	4						3 1	1
Phasing RTOR Phasing RTOR Phasing RTOR Phasing												RTOR
SIGNAL	<non< td=""><td>e> <i< td=""><td>none></td><td>Spli</td><td>t <</td><td>none></td><td><none< td=""><td>\$> < </td><td>none></td><td>Split</td><td></td><td>Auto</td></none<></td></i<></td></non<>	e> <i< td=""><td>none></td><td>Spli</td><td>t <</td><td>none></td><td><none< td=""><td>\$> < </td><td>none></td><td>Split</td><td></td><td>Auto</td></none<></td></i<>	none>	Spli	t <	none>	<none< td=""><td>\$> < </td><td>none></td><td>Split</td><td></td><td>Auto</td></none<>	\$> <	none>	Split		Auto
Critica	I Movem	ents Diag	ram —	S A	SouthBour	nd 70]					
				E	3: 1	74						
		EastE	Bound 330		Δ		Westl	Bound 0		V/C RATI	<u>o L</u>	<u>.0S</u>
			~~~~					-		0.00 - 0.6	0 A	١
		В	U		I		В:	U		0.61 - 0.7	D E	5
					lorthBour	nd	Ī		<b>.</b>	071-09		•
A = Adius	ted Thro	uqh/Riaht	Volume	A		0				0.71 - 0.00		•
B = Adjus	ted Left	Volume		E	3:	0				0.81 - 0.9	0 C	)
	ults —									0.91 - 1.0	D E	
N62	Nort	h/South C	ritical Mo	vements	= A(N/	'B) + A	.(S/B)					
	Wes	t/East Crit	tical Move	ements	= A(W/	/B) + A	(E/B)					
		V	/C =	0	+ 270	+ (	) +	330	= 0.330	I	LOS =	A
		•	<b>. .</b>		*	1500						

N/S:	N/S: Alvarado St W/E: Wilshire Blvd I/S No: 10													
AM/PM:	PM		Comm	ents: E)	ISTING	PLUS PR	OJECT	WITH TD	М					
COUNT D	ATE:			STU	DY DATE	<b>E:</b>		G	BROWTH	FACTOR:				
Volume	/Lane/Si	gnal Conf	igurations	;										
	NC	RTHBOU	ND	SO	UTHBOU	IND	W	FSTBOUN	ND -	FA	STBOU	ND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	0	1020	67	0	844	95	96	1068	90	85	939	53		
PROJECT														
TOTAL	0	1020	67	0	844	95	96	1068	90	85	939	53		
TOTAL0102067084495961068908593953 $\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensuremath{\langle}\ensure$														
Critica	Critical Movements Diagram SouthBound A: 313 B: 0													
		EastE	Bound		٨		West	Bound		<u>V/C RATI</u>	<u>o</u>	LOS		
		А.	490		T		А. В.	575		0.00 - 0.6	0	A		
		В:	85				В:	90		0.61 - 0.7	0	в		
					iorthBou	nd 362				0.71 - 0.8	0	с		
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right Volume	Volume	В		0				0.81 - 0.9	0	D		
* = ATSAC	Benefit						J			0.91 - 1.0	0	E		
Resi	ults —	h/Sauth C		(omonto	A /NI	/D) . D	(C/D)							
	Wes	t/East Crif		ments	= A(N/ = A(W	/B) + B	(3/B) (E/B)							
		V	/C =	362	+ 0	+ 57 *1500	(_, _, _, 79 +	85	= 0.614	l	LOS =	В		

N/S:	N/S: Beaudry Ave W/E: Wilshire Blvd I/S No: 11													
AM/PM:	РМ		Comm	ents: E	XISTING	PLUS PF	ROJECT	WITH TD	Μ					
COUNT D	ATE:			ST	UDY DATE	E:		G	BROWTH	FACTOR:				
Volume	/Lane/Sigr	nal Conf	igurations	, —										
		TURALI		6			W	ESTROUM		EAS	TROUN			
	LT	TH	RT	LT	ТН	RT	LT	ТН	RT	LT	TH	RT		
EXISTING	5	0	32	218	46	442	8	606	0	0	811	30		
AMBIENT														
RELATED														
PROJECT														
TOTAL	5	0	32	218	46	442	8	606	0	0	811	30		
					~ ~ ^		1	~ ~ ~			~ ~			
4 命令命令 序钟 4 命令命令 序钟 4 命令命令 序钟 4 命令命令 序钟       LANE														
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL Split Auto Split Auto Perm <none> Perm Auto</none>														
Critical Movements Diagram														
					SouthBou	nd 244								
					B. 4	010								
	_				D. 2	10								
		Easte	Bound		Λ		West	Bound 319		V/C RATIC	<u>)</u> <u>L</u>	<u>.OS</u>		
		<u> </u>	400		T			515		0.00 - 0.60	A	<b>\</b>		
		В:	0		I		В:	8		0.61 - 0.70	B	3		
	L				NorthBou	nd 27	Ī			0.71 - 0.80	c	;		
A = Adjus	ted Throug	gh/Right	Volume		A:	3/				0.91 0.00	-			
B = Adjus * = ATSAC	ted Left Vo C Benefit	olume			В:	5				0.01 - 0.90				
	ults —			<b></b>						0.91 - 1.00	E			
	North/	South C	ritical Mo	vements	6 = A(N/	/B) + A	(S/B)							
	West/I	East Crit	tical Move	ments	= B(W	/B) + A	(E/B)							
			10	37	+ 244	+ 8	3_+	406	A 444	, ı	- 20	۵		
		V	/0 =		*	1425			= 0.418	, L	.00 =	~		

N/S:	N/S:     Francisco St     W/E:     Wilshire Blvd     I/S No:     12       AM/PM:     PM     Comments:     EXISTING PLUS PROJECT WITH TDM													
COUNT D	ATE:		STUI	OY DATE	E:		(	GROWTH	FACTOR:					
Volume	/Lane/Signal Co	nfigurations	, <u> </u>											
	NORTHBO	UND	SO	ITHBOL	IND	W	ESTBOU	ND	FAS	STBOUI	ND			
EVIOTINO		RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
EXISTING	135 0	354	51	9	28	27	536	10	13	968	108			
PROJECT														
TOTAL	135 0	354	51	9	28	27	536	10	13	968	108			
TOTAL135035451928275361013968108 $\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array}$ $\begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array}$ $\begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array}$ $\begin{array}{c} \end{array}$ $\begin{array}{c} \end{array} \\ \end{array}$ $\begin{array}{c} \end{array} \end{array}$ $\begin{array}{c} \end{array} \\ \end{array}$ $\begin{array}{c} \end{array} \end{array}$ $\begin{array}{c} \end{array}$ $\begin{array}{c} \end{array} \end{array}$ $\begin{array}{c} \end{array}$ $\begin{array}{c} \end{array}$ $\begin{array}{c} \end{array}$ $\begin{array}{c} \end{array}$ $\begin{array}{c} \end{array} \end{array}$ $\begin{array}{c} \end{array} $ $\begin{array}{c} \end{array}$ $\end{array}$ $\begin{array}{c} \end{array}$ $\end{array}$ $\begin{array}{c} \end{array}$ $\end{array}$ $\begin{array}{c} \end{array} \end{array}$ $\begin{array}{c} \end{array}$ $\begin{array}{c} \end{array}$ $\begin{array}{c} \end{array} \end{array}$ $\begin{array}{c} \end{array} \end{array}$ $\begin{array}{c} \end{array}$ 10101111111111111111111111111111111111 <t< td=""></t<>														
Critical Movements Diagram SouthBound A: 88 B: 51														
	Eas	tBound		٨		West	Bound		V/C RATION	<u>o</u>	LOS			
	A:	538		Ť		A:	2/3		0.00 - 0.60	<b>)</b>	Α			
	В:	13		I		В:	27		0.61 - 0.70	)	В			
				orthBou	nd 354				0.71 - 0.80	0	с			
A = Adjust B = Adjust	ted Through/Rig ted Left Volume	ht Volume	B	:	135				0.81 - 0.90	D	D			
* = ATSAC	Benefit			L		J			0.91 - 1.00	)	E			
Results North/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $B(W/B) + A(E/B)$ $V/C = \frac{354 + 51 + 27 + 538}{27 + 538} = 0.577$ LOS = A														
					*1500									

#### Existing plus Project with TDM Conditions P.M. Peak Hour







N/S:	Grand Ave W/E:							re Blvd		I/S No:	15		
AM/PM:	РМ		Comn	nents: E	XISTING	PLUS PF	ROJECT	WITH TC	M				
COUNT D	ATE:			STI	JDY DATE	:			GROWTH	FACTOR:			
Volume	e/Lane/Sigr	nal Conf	iguration	. —									
	S	SOUTHBOUND			ESTBOU	ND	FASTBOUND						
	LT	ΤН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	0	0	5	1145	156	39	45	0	0	6	526	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	5	1145	156	39	45	0	0	6	526	
	<u>ቁ</u> ፚ ት	` & ¢	ላተት ላነ 	¶∂ ↓ ↓ 1		<u>а</u> р фр	ी कि	<u> </u>	<u>д</u> р фр	\$ \$ \$		ቦ ^{} ላ} ተን 1	
				•								•	
	Phasing	j F	RTOR	Phas	Phasing RTOR			Phasing RTOR			Phasing RTOR		
SIGNAL	<none></none>	> <i< td=""><td>none&gt;</td><td>Spl</td><td colspan="3">Split Auto</td><td colspan="3">Perm <none></none></td><td colspan="3">Perm Auto</td></i<>	none>	Spl	Split Auto			Perm <none></none>			Perm Auto		
	l Movemer	nts Diag											
		g			SouthBou	nd	7						
					A: 3	27							
					B:	5							
	-	- East	Pound —				Wast	Bound-					
			266		Δ			84		<u>V/C RATIO</u>	<u>LC</u>	<u>55</u>	
					T			<b>V</b> T		0.00 - 0.60	Α		
		В:	0				B:	39		0.61 - 0.70	В		
	L				NorthBou	nd	1		<b>I</b>	0.74 0.00	~		
Δ – Adius	ted Throug	h/Riaht	Volume		A:	0				0.71 - 0.80	C		
B = Adjus	ted Left Vo	olume	- oranie		B: 0					0.81 - 0.90	D		
* = ATSA(	C Benefit									0.91 - 1.00	Е		
	ults —												
	North/	South C	ritical Mo	vements	s = A(N/	'B) + A	(S/B)						
	West/E	East Crit	ical Move	ments	= B(W/	/B) + A	(E/B)						
		M	ic	0	+ 327	+ 3	9 +	266	_ 0.351	1.	OS = _ △		
		V/	0 =		*	1500			= 0.331	<b>–</b>		-	

N/S: Alvarado St W/E: 7th St I/S No: 16													
AM/PM:	РМ		Comm	ents: EX	ISTING	PLUS PR	OJECT	WITH TD	M				
COUNT D	ATE:			STU	DY DATE	:		(	GROWTH	FACTOR:			
Volume/Lane/Signal Configurations													
	NC	RTHBOU	ND	SO				WESTBOUND			FASTBOUND		
	LT	ТН	RT	LT	LT TH RT			LT TH RT			LT TH RT		
EXISTING	0	887	74	0	819	64	0	696	101	0	624	106	
TROJECT													
TOTAL	0	887	74	0	819	64	0	696	101	0	624	106	
LANE	4 分 午 歳 後 ゆ 柳 4 分 午 歳 後 ゆ 柳 4 分 午 歳 後 ゆ 柳       LANE												
	Phasi	ng l	RTOR	Phasir	ng	RTOR	Phasi	ng	RTOR	Phasing	 	RTOR	
SIGNAL	Perr	n	Auto	Pern	n	Auto	Pern	n	Auto	Perm		Auto	
Critica	l Movem	ents Diag	ram ——	S A B	outhBou .: 2	nd 294 0							
		East	Bound	_				Bound		V/C RATIC	<u>) L</u>	<u>.0S</u>	
		A:	365					A: 399			۵	١	
		В:	0				В:	0		0.61 - 0.70	B	3	
				A	iortnBou .:	nd 320				0.71 - 0.80	c	;	
A = Adjus B = Adjus	ted Thro ted Left '	ugh/Right Volume	Volume	В	:	0				0.81 - 0.90	C	)	
* = ATSAC Benefit						J	J			0.91 - 1.00	E	:	
Resi	ults —					( <b>D</b> ) -	(0/5)						
	Nort Wee	h/South C t/Fast Crit	ritical Move	/ements	= Α(Ν/ = Δ(W/	/B) + B	(S/B) (F/B)						
	West/East Critical Movements = $A(W/B) + B(E/B)$ $V/C = \frac{320 + 0 + 399 + 0}{*1500} = 0.409$ LOS = A												

#### Existing plus Project with TDM Conditions P.M. Peak Hour

Ν



Number of Lanes -

```
2
```

WB Through V/C -	{ <u>545</u>	+ 3,000	}				
	=	0.202					
Critical V/C -	0.043	+	0.202				
	=	0.245					
2) Lane Capacity for NB & S	B Directio	on -	1,500 v	phpl			
Number of Lanes -			1 left 1 through/right				
Critical V/C -	{ <u>   111   </u>	+	297 1,500	+	57	}	
or	{ <u>62</u>	+	122 1,500	+	58	}	
	=	0.310					
Intersection V/C = 0.972	_	0.070	=	0.902		LOS	Е

N/S: Francisco St W/E: 7th St I/S No: 18 AM/PM: PM Comments: EXISTING PLUS PROJECT WITH TDM											
COUNT D	COUNT DATE: GROWTH FACTOR:										
Volume/Lane/Signal Configurations											
	NORTHBO	UND	SO	ITHBOL	IND	WESTBOUND			FASTBOUND		
EXISTING AMBIENT	LT TH 51 47	RT 140	LT 225	тн 34	RT 143	LT 65	тн 719	RT 78	LT 21	тн <b>590</b>	RT 8
RELATED PROJECT											
TOTAL	51 47	140	225	34	143	65	719	78	21	590	8
LANE SIGNAL	4 分 分 份 份 份 分 分 份 份 分 分 份 份 份 分 分 份 份 份 分 分 份 份 份 分 分 份 份 份 份 份 份 份 份 份 份 份 份 份 份 份 份 份 份 份 份										
Critica	Movements Dia	gram ——	So	outhBou	nd	]					
			B:		225						
	Eas A:	tBound 299					WestBound A: <u>399</u>			<u>o</u>	LOS
	В:	21				B:	65		0.61 - 0.7	0	B
			A:	ortnBou :	na 140				0.71 - 0.8	0	с
A = Adjus B = Adjus * = ATSAC	A = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC Bonofit				51				0.81 - 0.9	0	D
Boot	uite					J			0.91 - 1.0	0	E
Rest	Results North/South Critical Movements = A(N/B) + B(S/B) West/East Critical Movements = A(W/B) + B(E/B)										
	V/C = <u> 140 + 225 + 399 + 21</u> *1500 = 0.453 LOS = A										

#### Existing plus Project with TDM Conditions P.M. Peak Hour



N/S:		Flower	St		W/E:		7th	St		I/S No:	I/S No: 20			
AM/PM:	PM		Comn	nents: EX	KISTING	PLUS PR		VITH TD	М			7		
COUNT D				STU	IDY DATE			C	BROWTH	FACTOR:				
	e/Lane/Sig	nal Conf	iguration	s —										
	NORTHBOUND				SOUTHBOUND			STBOU	ND	FASTBOUND				
FXISTING		тн	RT	LT 73	TH	RT 199	LT	TH 721	RT O		TH RT	۲ و		
	U	U	U	13	1090	100	107	731	U	U	091 19	0		
PROJECT														
TOTAL	0	0	0	73	1898	188	107	731	0	0	691 19	8		
LANE	€		ሳት ሳ _ገ	ণ ঐ 1		λ β Ι				^{\$}				
	Phasin	g F	RTOR	Phasi	Phasing RTOR			Phasing RTOR			Phasing RTOR			
SIGNAL	<none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Spli</td><td colspan="4">Split Auto Perm</td><td colspan="4"><none> Perm Auto</none></td></none<>	> <	none>	Spli	Split Auto Perm				<none> Perm Auto</none>					
Critica	I Moveme	nts Diag	ram —	S A E	SouthBour	nd 40 73								
		EastE	Bound		Δ	WestBound           A:         366           B:         107			V/C RATIO	LOS				
			v 0		T				0.00 - 0.60	Α				
		<u>р</u> .	U				D.	I.V.		0.61 - 0.70	В			
					NorthBour	nd O				0.71 - 0.80	С			
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	Volume	Ē	3:	0				0.81 - 0.90	D			
* = ATSAC Benefit					L	]	]			0.91 - 1.00	Е			
Res	ults —				A /b1/	<u>م</u>	(C/D)							
	West	/South C	ical Move	ements	= A(N/ = B(W/	⊡) + A /B) + ∆	(5/B) (E/B)							
	11030	V/	'C = -	0	+ 540 *	+ 10 1500	)7 +	445	= 0.658	L	OS = B			
N/S:	Olive	Ave		W/E:		7th	n St		I/S No:	2	1			
---------------------------------------------------------	-------------------------------------------------	--------------	----------------------	---------------------	--------------	--------------	---------	-------------	------------	----------	-----	--	--	--
AM/PM:	PM ATE:	Comm	ents: EXIS	TING PLU ' DATE:	S PR		WITH TD	M GROWTH	FACTOR:					
Volume	/Lane/Signal Co	nfigurations		HBOUND		W	ESTBOU	ND	FA	STBOU	ND			
	LT TH	RT	LT	TH R	Т	LT	ТН	RT	LT	TH	RT			
EXISTING	102 1066	85	0	0 (	)	0	674	217	0	788	0			
AMBIENT														
RELATED														
PROJECT														
TOTAL	102 1066	85	0	0 (	)	0	674	217	0	788	0			
LANE $12$ roce $ce$ $e$ $e$ $e$ $e$ $e$ $e$ $e$ $e$ $e$														
Critica	Critical Movements Diagram SouthBound A: D B: D													
	Eas	tBound		٨		West	Bound		V/C RATI	<u>o</u>	LOS			
	A:	394		Ť		A:	337		0.00 - 0.6	0	Α			
	В:	0		 		В:	0		0.61 - 0.7	0	В			
			Nor A:	thBound 313					0.71 - 0.8	0	С			
A = Adjus B = Adjus	ted Through/Rig ted Left Volume	ht Volume	В:	102					0.81 - 0.9	0	D			
* = ATSAC	Benefit			<u></u>					0.91 - 1.0	0	E			
Resi	Ilts North/South West/East C	Critical Mov	vements = ments =	A(N/B) B(W/B)	+ A( + A(	S/B) E/B)								
		V/C =	313 +	0 + *1500	0	+	394	= 0.401		LOS =	Α			

N/S:	Alamed	da St	W/E:         7th St         I/S No:         22								
AM/PM:	РМ	Comm	nents: EX	ISTING	PLUS PF	OJECT	WITH TC	M			
COUNT D	ATE:		STUE	DY DATE	:		(	GROWTH	FACTOR:		
Volume	e/Lane/Signal Cor	nfigurations									
	NORTHBO	UND	SOL	ITHBOU	ND	W	FSTBOU	ND	FAS	STROUN	D
FXISTING	LT TH	RT 92	LT	TH	RT Q		TH	RT 76	LT	TH 755	RT 157
AMBIENT	11 143	05	100	005	0	33	430	70	107	155	157
RELATED											
PROJECT											
TOTAL	77 749	83	106	883	8	99	430	76	107	755	157
	ч ф ф ф ф ф ф	ᡩ᠇᠈ᡧ	₲ ᡒ᠘	- 	ት ቤ የተል	∮ ቆ		ት ሳት	ቁ ፚ ና	\$ \$ \$	ሰት ላ
LANE	1 1	1	1 '	1 1		1	1 1	1	1 1	1	
	Phasing	RTOR	Phasin	g l	RTOR	Phasi	ng	RTOR	Phasing	j F	RTOR
SIGNAL	Perm	Auto	Prot-Fi	ix	Auto	Perr	n	Auto	Perm		Auto
Critica	I Movements Dia	gram ——									
			Sc A:	outhBoui	nd 46						
			В:	1	06						
	Eas	tBound		۸		West	Bound		V/C RATIO	<u>  L</u>	<u>.os</u>
	A:	456		Ц Т		A:	253		0.00 - 0.60	) A	L .
	B:	107				<b>B</b> :	99		0.61 - 0.70	) В	6
	L			orthBour	nd 16				0.71 - 0.80	) C	;
A = Adjus	sted Through/Right	nt Volume	A:	4	77				0.81 - 0.90	) D	)
* = Adjus * = ATSA	C Benefit		В.			]			0.91 - 1.00	- ) F	
Res	ults										
	North/South	Critical Mo	vements =	= B(N/	'B) + A	(S/B)					
	West/East Cr	ritical Move	ments =	B(W/	/B) + A	(E/B)					
	,	V/C =	77 +	• 446 *	+ 9	9 +	456	= 0.686	i I	_OS =	в
					1420						

N/S:		Soto S	ŝt		W/E:		7th	St		I/S No:	2:	3		
AM/PM:	PM		Comm	ents: E	XISTING	PLUS PR		VITH TD	M					
COUNT D	ATE:			STI	JDY DATE			(	GROWTH	FACTOR:				
Volume	/Lane/Sign	al Confi	igurations											
	NORT	THBOUN	ND	S	DUTHBOU	ND	W	STBOU	ND	FAS	TROUM	D		
EXISTING	LT 492	TH 875	RT 31	LT 34	TH 686	RT 62	LT 6	TH 32	RT	LT 76	TH 49	RT 53		
AMBIENT			•	•••										
RELATED														
PROJECT														
TOTAL	492	875	31	34	686	62	6	32	11	76	49	53		
LANE SIGNAL	TOTAL49287531346866263211764953 $4 \Rightarrow + \pm \pm$													
							•							
Critica	Critical Movements Diagram SouthBound A: 374 B: 34													
	Γ	EastB	Bound		^		West	Bound		V/C RATIC	<u>)</u>	LOS		
		A:	125		Ť		A:	49		0.00 - 0.60		A		
		В:	76		I		В:	6		0.61 - 0.70		в		
	L				NorthBour	nd				0 71 - 0 80		c		
A = Adjus	ted Throug	h/Right	Volume		4: 4	53				0.71 - 0.00				
B = Adjus	ted Left Vol	lume			B: 4	92				0.81 - 0.90	l	D		
Boo	ulte —						J			0.91 - 1.00		E		
Rest	Results North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = A(W/B) + A(E/B)													
		V/	/C =	492	+ 374	+ 4 1375	9 +	125	= 0.686	; L	.0S =	В		

#### **Bixel Street** Ν 48 600 365 927 740 8th Street SR 110 SB On-Ramp 1) Lane Capacity for WB Lefts -750 vphpl Number of Lanes -2 WB Left V/C -740 1,500 0.493 = or Lane Capacity for WB Throughs and Rights -1,500 vphpl 2 throughs Number of Lanes -Number of Lanes -1 right-turn only WB Through/Right V/C -927 365 or 3,000 1,500 0.243 = 2) Lane Capacity for SB Rights -1,500 vphpl Number of Lanes -1 SB Right V/C -48 1,500 0.032 = or Lane Capacity for SB Throughs -750 vphpl Number of Lanes -2 WB Through/Right V/C -600 1,500 0.400 = Intersection V/C = LOS C 0.893 0.100 0.793 =

#### Existing plus Project with TDM Conditions P.M. Peak Hour





N/S:		Flower	St		W/E:		8th	n St		I/S No:	26			
AM/PM:	PM		Comm	nents: E)	ISTING	PLUS PR		NITH TD	М					
COUNT D	ATE:			STU	DY DATE	:		G	BROWTH	FACTOR:				
Volume	/Lane/Sig	nal Conf	igurations	,										
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOUN	D	FAST	BOUND			
EVICTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT			
	0	0	0	0	1670	399	89	1590	0	0	0 0			
PROJECT														
TOTAL	0	0	0	0	1670	399	89	1590	0	0	0 0			
LANE	\${}		\$_f\$_\$f	ት _ቆ ታ	수 슈 수 4	} ∮ f ^{\$} 4† ∮	\$1 €	수 🚓 숙 3	<u>р</u> р фр	♠ ☆ ↑	₿ € 			
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL	PhasingRTORPhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none>SplitAutoSplit<none><none><none></none></none></none></none></none>													
Critica	Critical Movements Diagram													
		East	Bound		٨		West	Bound		V/C RATIO	LOS			
		A:	0		Υ Τ		A:	420		0.00 - 0.60	Α			
		В:	0				B:	89		0.61 - 0.70	В			
					iorthBour \:	nd O				0.71 - 0.80	С			
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	t Volume	B	3:	0				0.81 - 0.90	D			
	Benefit									0.91 - 1.00	E			
Kesi	North	/South C	critical Mo	vements	= A(N/	B) + A	(S/B)							
	West	East Cri	tical Move	ments	= A(W/	′B) + A	(E/B)							
		v	/C =	0	+ 418	+ 42	20 +	0	= 0.489	) LO	S = A			



N/S:	Figuero	oa St	W/	E: 9th S	St/James	M Wood Blvd	I/S No:	28						
AM/PM:	РМ	Comme	ents: EXISTI		ROJECT	WITH TDM								
COUNT D	ATE:		STUDY D	ATE:		GROWT	H FACTOR:							
	1													
Volume	e/Lane/Signal Con	figurations												
	NORTHBOL	IND	SOUTHE		W	ESTBOUND	FASTB	OUND						
EVICTING		RT		H RT	LT	TH RT		H RT						
	0 1248	1//	0 0	U	U	0 0	411 132	28 0						
PROJECT														
TOTAL	0 1248	177	0 0	0	0	0 0	411 13	28 0						
	₲ ፚ 수 ፚ 4	ረት ላካ ቭ		: ት ት		ት	୬ <b>५</b> ጵ ጵ ሐ	ት ሳ ታ						
LANE		1												
	Phasing	RTOR	Phasing	RTOR	Phasii	ng RTOR	Phasing	RTOR						
SIGNAL	Phasing     RTOR     Phasing     RTOR     Phasing     RTOR       SIGNAL     Split     Auto <none> <none> <none> <none>     Split     <none></none></none></none></none></none>													
Critica	I Movements Diad	aram —												
		<b>,</b>	SouthE	Bound	7									
			A:	0										
			В:	0										
	East	Bound		Λ	West	Bound	V/C RATIO	LOS						
	R·	340		T	B.	0	0.00 - 0.60	Α						
		040		l Downed ———		•	0.61 - 0.70	В						
			A:	356			0.71 - 0.80	С						
A = Adjus B = Adjus	ted Through/Righ	t Volume	В:	0			0.81 - 0.90	D						
* = ATSA	C Benefit						0.91 - 1.00	E						
Kes	North/South	Critical Mov	vements =	A(N/B) + A	(S/B)									
	West/East Cr	itical Mover	nents = A	(W/B) + A	(E/B)									
	١	//C =	356 +	0 + *1500	0 +	<u>348</u> = 0.3	99 LOS	= A						

N/S:	Cherr	y St		W/E: [		Pico	Blvd		I/S No:	2	9			
COUNT D			STU	DY DATE			WITH TD	GROWTH	FACTOR:					
Volume	/Lane/Signal Co	nfigurations												
	NORTHBO	UND	SO	UTHBOL	IND	W	ESTBOU	ND	FA	STBOU	D			
EVICTING	LT TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
EXISTING	667 620	213	96	0	24	0	807	382	139	5/3	0			
RELATED														
PROJECT														
TOTAL	667 620	213	96	0	24	0	807	382	139	573	0			
IOTAL $667$ $620$ $213$ $96$ $0$ $24$ $0$ $807$ $382$ $139$ $573$ $0$ $4 \Rightarrow 2 \Rightarrow 35$ $620$ $213$ $96$ $0$ $24$ $0$ $807$ $382$ $139$ $573$ $0$ $4 \Rightarrow 2 \Rightarrow 35$ $6 \Rightarrow 4 \Rightarrow 35$ $6 \Rightarrow 4 \Rightarrow 4 \Rightarrow 35$ $6 \Rightarrow 4 \Rightarrow $														
Critica	Critical Movements Diagram SouthBound A: 13 B: 53													
	Eas	tBound		٨		West	Bound		V/C RATI	<u>o</u>	LOS			
	A:	191		Ť		A:	404		0.00 - 0.6	0	A			
	В:	139				В:	0		0.61 - 0.7	0	в			
			- N	orthBou	nd	l			0.74 0.0	•	-			
Δ – Δdiue	ted Through/Rig	ht Volume	A	: 4	429				0.71 - 0.8	U	L L			
B = Adjus	ted Left Volume		В	: 4	129				0.81 - 0.9	0	D			
* = ATSAC	Benefit					J			0.91 - 1.0	0	E			
	ults													
	North/South	Critical Mo	vements	= A(N/	/B) + B	(S/B)								
	West/East C	ritical Move V/C =	ments = 429 ·	= A(W + 53	/B) + B + 4( 1425	(E/B) )4 +	139	= 0.649	)	LOS =	В			

N/S:	PM	Figueroa	a St Comn	nents: E	W/E:	PLUS PR	Pico ROJECT V	Blvd WITH TD	M	I/S No:	3	0	
COUNT D	ATE:			STI	JDY DATE			(	GROWTH	FACTOR:			
Volume	e/Lane/Sig	nal Conf	igurations										
	NOF	RTHBOU	ND	S	DUTHBOU	ND	W	ESTBOU	ND	FA	STBOU	ND	
EVIOTINO	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	130	1295	130	21	299	266	124	744	131	178	544	177	
RELATED													
PROJECT													
TOTAL	130	1295	130	21	299	266	124	744	131	178	544	177	
4 分 수 歲 ☆ ሶ փ 4 分 수 歲 ☆ ሶ փ 4 分 수 歲 ☆ ሶ փ 4 分 수 歲 ☆ ሶ փ         1 3 1         1 2 1													
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
SIGNAL		y r		Dor	m		Dorn	iy			y w		
SIGNAL	Prot-F		Auto	Per	m	ULA	Perm	1	Auto	Prot-Fi	X	ULA	
<u> </u>													
Critical Movements Diagram													
					Soumbou A: 1	50							
					-								
					<b>D</b> .	21							
		EastE	Bound		٨		West	Bound		V/C RATI	<u>0</u>	LOS	
		A:	272		Ϋ́		A:	372		0.00 - 0.6	0	Α	
		<b>B</b> :	178				В:	124		0 61 - 0 7	0	в	
					NorthBou	nd				0.01 0.7	•		
۸ – ۸ طنب م	tod Throw	ah/Diah+	Volumo		A: 3	56				0.71 - 0.8	U	C	
B = Adjus	ted Left V	olume	volume		B: 1	30				0.81 - 0.9	0	D	
* = ATSAC	C Benefit									0.91 - 1.0	0	E	
Resi	ults —												
	North	/South C	ritical Mo	vements	s = A(N/	′B) + B	(S/B)						
	West/	East Crit	ical Move	ments	= A(W	/B) + B	(E/B)						
		W	ic	356	+ 21	+ 37	72 +	178	- 0.604	1	LOS =	в	
		V			*	1375			_ 0.004			-	

N/S:		Hoover	St		W/E:	Alvarado St/Alvarado Ter I/S No: 31							
AM/PM:	PM		Comn	nents: E)	ISTING	PLUS PR	OJECT W	ITH TD	м				
COUNT D	ATE:			STU	DY DATE	:		G	ROWTH	FACTOR:			
- Volume	e/Lane/Si	gnal Conf	iguration	s —									
	NC	RTHBOU	ND	SO	UTHBOU	ND	WE	STROUM	D	FA	STBOU	ND	
	LT	TH	RT		TH	RT	LT	TH	RT		TH	RT	
	U	1037	623	29	879	U	632	U	U	U	U	0	
TOTAL		1027	600	20	970		622	0	•		0		
IUIAL	U	1037	023	29	0/9	U	032	U	U	U	U	U	
	∮ ቆ		ᡩ᠇ᡐ᠂ᠬ	∮ ቆ		°⊔∿ (†)	∮ ፚ ና	A 4	ст⊳ «т⊳	ቁ ቍ 4	2 🊓 4	ት ሳ	
LANE		1 1	1	1	1		1		1				
	Phasi	ng F	RTOR	Phasi	ng l	RTOR	Phasing	g F	RTOR	Phasin	g	RTOR	
SIGNAL	Perr	n	Free	Pern	n <	none>	Split		Auto	<none< td=""><td>&gt;</td><td><none></none></td></none<>	>	<none></none>	
Critica	I Movem	ents Diag	ram —	S _A	outhBour	nd							
		- East	Dound —	B		29	WeetB	od —			_		
		A:			Ą		A:	316		V/C RATE	<u>u</u>	<u>LOS</u>	
		B:	0				B:	316		0.00 - 0.6	0	A	
					IorthBour	nd				0.61 - 0.7	0	В	
					: 5	53				0.71 - 0.8	0	С	
				P	A: 553 B: 0								
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	B	8	0				0.81 - 0.9	0	D	
A = Adjus B = Adjus * = ATSA(	ted Thro ted Left C Benefit	ugh/Right Volume	t Volume	B		0				0.81 - 0.90 0.91 - 1.00	0 0	D	
A = Adjus B = Adjus * = ATSA( — Res	ted Thro ted Left C Benefit ults —	ugh/Right Volume		B	- A/N/	0	(S/B)			0.81 - 0.9 0.91 - 1.0	0	D E	
A = Adjus B = Adjus * = ATSA( — Res	ted Thro ted Left C Benefit ults — Nort Wes	ugh/Right Volume h/South C	: Volume Critical Move	evements	= A(N/	0 B) + B (B) + A	(S/B) (E/B)			0.81 - 0.90 0.91 - 1.00	0	D E	
A = Adjus B = Adjus * = ATSA( — Res	ted Thro ted Left C Benefit ults — Nort Wes	ugh/Right Volume h/South C t/East Crit	Critical Mo tical Move	evements 553	= A(N/ = A(W/ + 29	0 B) + B (B) + A + 31	(S/B) (E/B) 6 +	0	0.520	0.81 - 0.9 0.91 - 1.0	0	D E	

N/S:		Flower	St		W/E:		Venic	e Blvd		I/S No:	3	2		
AM/PM:	PM		Comm	ents: E	XISTING	PLUS PR		NITH TD	М					
COUNT D	ATE:			STU	JDY DATE	i:		G	GROWTH	FACTOR:				
	/Lane/Sig	Inal Conf	igurations	. —										
				6			W	ESTROUM		EA	STROU			
	LT	TH	RT	LT	ТН	RT	LT	TH	RT	LT	ТН	RT		
EXISTING	0	0	0	28	1237	91	61	413	0	0	304	41		
AMBIENT														
RELATED														
PROJECT														
TOTAL	0	0	0	28	1237	91	61	413	0	0	304	41		
	4 Δ A		ላ ተን	4 Δ		ላ ግ ሞን	4 Δ		ላ ግ የተያ	4 Δ Z		ጋ ካ ሞን		
LANE	你													
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL	<none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Spl</td><td>it</td><td>Auto</td><td>Pern</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></none<>	> <	none>	Spl	it	Auto	Pern	n <	none>	Perm		Auto		
							_							
	l Moveme	nts Diag	ram											
Ontica	in woverne	into Diag	lam	۲٩	SouthBou	nd	1							
					A: 4	43								
				E	B: 2	28								
		East	Bound	<b>I</b>	٨		West	Bound		V/C RATION	<u>0</u>	<u>LOS</u>		
		A:	173		Ť		А.	200		0.00 - 0.60	ס	A		
		р.	U		 NorthBou	a d	D.	01		0.61 - 0.70	ט	В		
					A:	0				0.71 - 0.80	ט	с		
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right 'olume	Volume	E	B:	0				0.81 - 0.90	)	D		
* = ATSAC	Benefit						]			0.91 - 1.00	0	E		
Resi	uits —	South C	rition Mar	(omost-	A/NI	<u>م</u>	(C/D)							
	West	/East Crit	tical Move	ments	= A(N) = A(W)	ы) + А /B) + B	(3/B) (E/B)							
		V	/C =	0	+ 443	+ 26	58 <b>+</b>	0	= 0.404		LOS =	А		
					*	1500								

N/S:		Grand /	Ave		W/E:		18tl	h St		I/S No:	33			
AM/PM:	PM		Comm	ents: EX	ISTING	PLUS PR		NITH TD	M					
COUNT D	ATE:			STU	DY DATE			(	GROWTH	FACTOR:				
Volume	/Lane/Sig	nal Conf	igurations											
	NOF	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOU	ND	FAST	BOUND			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT			
EXISTING	0	0	164	254	908	0	0	0	0	0 1	118 183			
PROJECT														
τοται		0		054	000			•			440 400			
TOTAL	U	0	164	254	908	U	U	0	0	0 1	118 183			
LANE	ムNE (サイム) なん (サインス) なん (サインス) (サイン													
SIGNAI	Perm	9 '		Prot-F	ix <	none>		יש כים כים	none>	Snlit				
OIGHAL	1 6111		Auto	11011						Opin	Auto			
	Movomo	nto Diag	rom —											
Childa	Critical Movements Diagram SouthBound A: 303 B: 254													
		East	Bound		٨		West	Bound		V/C RATIO	LOS			
		А. В·	0		T		R.	0		0.00 - 0.60	Α			
		D.	U	╧┻	 	- d		U		0.61 - 0.70	В			
				A		90				0.71 - 0.80	С			
A = Adjus B = Adjus	ted Throu ted Left V	gh/Righ olume	Volume	В	:	0				0.81 - 0.90	D			
* = ATSAC	Benefit						J			0.91 - 1.00	Е			
Resi	ults —	South C	ritical Ma	omente	A/NI/	(D) . D	(\$/B)							
	West/	East Cri	tical Move	ments =	– A(W/	/B) + A	(E/B)							
		V	/C =	90	+ 254	+ ( 1425	) +	373	= 0.433	LO	S = A			

N/S:	С	live St		w/	E:	6th	n St		I/S No:	34				
AM/PM:	PM	С	omments	s: EXISTII	NG PLUS PF			M						
COUNT D	ATE:			STUDY D	ATE:		(	GROWTH	FACTOR:					
Volume	/Lane/Signal	Configura	tions =											
	NORTH	BOUND		SOUTHE		W	FSTBOU	ND	FAS					
	LT	TH R1	·		I RT	LT	ТН	RT	LT	TH RT				
EXISTING	0 12	248 17	6	0 0	0	0	0	0	561 1	052 0				
RELATED PROJECT														
TOTAL	0 12	248   17	6	0 0	0	0	0	0	561 1	1052 0				
	\$ <del>{}</del> <del>}</del>		ዋኑ ቀ		ት ^በ ት	<u>ቁ</u> ፚ	<u>ት                                    </u>	φτ <b>λ</b> (λ. φτλ	\$ \$ 1 1 2 2					
LANE	4								1 1 3					
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL	PhasingRTORPhasingRTORPhasingRTORSIGNALSplitAuto <none><none><none><none>Split<none></none></none></none></none></none>													
	Mayamanta	Diagram												
Critica	i wovements	Diagrafii		SouthE	Bound	7								
				A:	0									
				В:	0									
	Г	EastBound	3		Δ	West	Bound 0		V/C RATIO	LOS				
		R· 2				B.	0		0.00 - 0.60	Α				
		<b>J</b> . <b>J</b> .	.5		l Pound		v		0.61 - 0.70	В				
				A:	285				0.71 - 0.80	С				
A = Adjus B = Adjus	ted Through ted Left Volu	/Right Volu Ime	me	В:	0				0.81 - 0.90	D				
									0.91 - 1.00	E				
Kesi	North/Sc	outh Critica	l Movem	ents =	A(N/B) + A	(S/B)								
	West/Ea	st Critical I	lovemen	its = A	(W/B) + A	(E/B)								
		V/C =	28	5 +	0 + ( *1500	0 +	323	= 0.335	; L(	DS = A				

N/S:		Hope	St		W/E:		7th	n St		I/S No:	3	5		
COUNT D	ATE:			STU	IDY DATE			WITH TD	GROWTH	FACTOR:				
Volume	/Lane/Sig	gnal Conf	igurations											
	NO	RTHBOU	ND	SC	UTHBOU	IND	W	ESTBOU	ND	FA	STROUM			
EXISTING	LT 85	тн 288	RT 71	LT 13	тн 293	RT 27	LT 0	тн 777	RT 83	LT 0	тн 606	RT 88		
AMBIENT														
RELATED PROJECT														
TOTAL	85	288	71	13	293	27	0	777	83	0	606	88		
LANE SIGNAL	$\begin{array}{c c c c c c c c c c c c c c c c c c c $													
Critica	Critical Movements Diagram SouthBound A: 173 B: 13													
		EastE	Bound 347		Ą		West A:	Bound 430		V/C RATI	<u>o</u> <u>i</u>	<u>LOS</u>		
		B:	0				В:	0		0.00 - 0.6	0 /	A		
					lorthBou	nd	1			0.61 - 0.70	0	в		
م الم الم الم الم الم الم	tod Thurs	unde /D: art- (	Values	A		265				0.71 - 0.8	0	С		
A = Adjus B = Adjus * = ATSAC	ted Left \ Benefit	olume	volume	E	3:	85				0.81 - 0.9	0	D		
- Resi	ulte —			L			-			0.91 - 1.0	D	E		
nest	Results North/South Critical Movements = A(N/B) + B(S/B) West/East Critical Movements = A(W/B) + B(F/B)													
		V	/C = —	265	+ 13	+ 43	30 +	0	= 0.402	2	LOS =	Α		

N/S:		Grand A	Ave		W/E:		7tř	n St		I/S No:	3	6	
AM/PM:			Comm	nents: E	XISTING			WITH TD		EACTOR			
				510					SKOWIII	TACTOR.			
	e/Lane/Sig	gnal Conf	igurations	s —									
	NO	RTHBOU	ND	S	OUTHBOU	ND	W	ESTBOUN	ND	FA	STBOUN	ND	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	0	0	170	1326	69	0	775	0	0	606	146	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	170	1326	69	0	775	0	0	606	146	
	ፋ 슈	<u>ት                                    </u>	ረተን ላካ ሃ	ቁ 슈	<u> </u>	ት የ ት	ፋ 슈	<u>ት                                    </u>	የተቅ ፋነ <u>የ</u>	ፋ 슈 ሩ	<u>ک</u> ہے د	∖ ₩	
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
PhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none>SplitAutoPerm<none>PermAuto</none></none></none>													
Critica	I Movem	ents Diag	ram —										
					SouthBou	nd							
					_	·J2							
					B: 1	70							
		EastE	Bound 303		Δ		West	Bound 388		V/C RATI	<u>0</u>	LOS	
		B:	0		T		B:	0		0.00 - 0.60	<b>)</b>	A	
					ا NorthRow	ad				0.61 - 0.70	0	В	
					A:	0				0.71 - 0.80	0	с	
A = Adjus B = Adjus	ted Throu	ugh/Right /olume	volume	1	B:	0				0.81 - 0.90	0	D	
	, Benerit						J			0.91 - 1.00	0	E	
Resi	Norti	h/South C	ritical Mo	vemente	. = Δ(N/	′R) ⊥ ∆	(S/B)						
	West	/East Cri	tical Move	ments	= A(W/	/B) + B	(E/B)						
		v	/C = —	0	+ 332	+ 38	38 +	0	= 0.410	)	LOS =	A	
					*	1500							

Existing plus Project with TDM Conditions P.M. Peak Hour



= 0.163

Critical V/C -	0.051	+	0.163	=	0.214
2) Lane Capacity for NE Lane Capacity for NE	3 Throughs - 3 Left- and Rig	ht-turns -		900 1,425	vphpl vphpl
Number of Lanes -		1 3 1	left-turn on throughs right-turn o	ly nly	
Critical V/C -	<u>1,248</u> 2,700	or	<u>    295     </u> 1,425	or	<u>    125                                </u>
	=	0.462			
Intersection V/C = 0.914	_	0.100	=	0.814	LOS D

N/S:	(	Glendale	Blvd		W/E:		Tem	ple St		I/S No:	3	8	
AM/PM:	PM		Comn	nents: E	XISTING	PLUS PF	ROJECT	WITH TD	M				
COUNT D	ATE:			STI	JDY DATE	E:		0	GROWTH	FACTOR:			
	/Lane/Si	gnal Conf	igurations	s —									
				6			W/	ESTROI		EA	STROU		
	LT	ТН	RT	LT	ТН	RT	LT	ТН	RT	LT	TH	RT	
EXISTING	60	1653	19	83	716	207	29	565	237	317	665	77	
AMBIENT													
RELATED													
PROJECT													
TOTAL	60	1653	19	83	716	207	29	565	237	317	665	77	
	1 0	~ ~ ~	N 4 N	1	~ ~ ^		1 ^	~ ~ /	\	1 ~ /	\		
	Ч Д П		אדא אז ;	Ч ф			Ч ф Г		→ rv чтv	ሻ ፚ <u>ር</u> 1		чр v1 4	
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL	SIGNAL     Perm     Auto     Perm     Auto     Prot-Fix     Auto     Prot-Fix     Auto												
Critica	l Movem	ents Diag	ram —										
				٦	SouthBou	nd	7						
					A: 4	462							
					B:	83							
		EastE	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS	
		A:	371		Ϋ́		<b>A</b> :	401		0.00 - 0.6	D	A	
		B:	317				В:	29		0 61 - 0 7	n	B	
					NorthBou	nd	1			0.01 0.14		0	
Δ – Δdius	ted Thro	uah/Riaht	Volume		A: 8	336				0.71 - 0.8	U	C	
B = Adjus	ted Left	Volume	. oranic		B:	60				0.81 - 0.9	D	D	
^ = AISA(	, Benefit						J			0.91 - 1.0	D	E	
Resi	ults —	L/O /L . C			A /PT	(D) -	(0/D)						
	North/South Critical Movements = $A(N/B) + B(S/B)$												
	West/East Critical Movements = $A(W/B) + B(E/B)$												
		V	/C = —	830	+ 83 *	+ 4	JI +	317	= 1.079	)	LOS =	F	
						1723							

#### Existing plus Project with TDM Conditions P.M. Peak Hour



Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights



Phase 2) Glendale Boulevard, 1st Street, and 2nd Street - Southbound Lefts, Throughs, and Rights, and
 a.) Westbound Rights on 1st Street
 b.) Westbound Rights on 2nd Street



Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights



I N



Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights



N/S:		Lucas A	Ave		W/E:		3rc	l St		I/S No:	4	0		
AM/PM:	PM		Comm	nents: E)	ISTING	PLUS PR		WITH TD	Μ					
COUNT D	ATE:			STU	DY DATE	:		G	BROWTH	FACTOR:				
	/Lane/Si	gnal Conf	igurations	. —										
	NC			so	UTHBOL		W	ESTROUM		FA	STROUI			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	34	482	81	29	304	82	50	1025	166	88	792	103		
AMBIENT														
RELATED														
PROJECT														
TOTAL	34	482	81	29	304	82	50	1025	166	88	792	103		
		~ ~ ~			~ ~ /		4 ^	~ ~ ^		$\Lambda \wedge I$	~ ~ /			
LANE	[¶] (ਸੋ   1	午 孫 年 2	ידעי איז <u>א</u> <b>1</b>	ין קד 1	十一百 1 1		ין עד 1	イ 浜 て 2	ייי איי <b>1</b>	Ч _Ф ⁻	ר 🕀 ז 2	עדי יז ↓ 1		
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Perm Auto Perm Auto Perm Auto														
OIOII/IE			luto	1 011		/ lato			luio	1 0111		Auto		
	Maxam	onto Diag												
Critica	INOVEIII	ents Diag	Iam	∟s	outhBou	nd	1							
				A	.: 1	93								
				B		29								
		EastE	Bound 396		٨		West	Bound 513		V/C RATI	<u>o</u>	<u>LOS</u>		
		р.			T		ь.	50		0.00 - 0.6	0	Α		
		р.	00				В.	50		0.61 - 0.7	0	В		
					lorthBou .:	nd 241				0.71 - 0.8	0	с		
A = Adjus B = Adjus	ted Thro ted Left `	ugh/Right Volume	Volume	В	:	34				0.81 - 0.9	0	D		
* = ATSAC	C Benefit						J			0.91 - 1.0	0	E		
Resi	ults —					-	(-)							
	Nort	h/South C t/Fast Crit	ritical Mo	vements	= A(N/ - A////	/B) + B /B) ⊥ P	(S/B) (F/B)							
	1163	v Last Off	/C =	241	+ 29	+ 51	3 +	88	= 0.511		LOS =	A		
		•			ł	1500								

N/S:		Lucas A	Ave		W/E:		6th	n St		I/S No:	4	1		
AM/PM:	PM		Comm	ents: E)	<b>(ISTING</b>	PLUS PF	ROJECT	WITH TD	M					
COUNT D	ATE:			STU	DY DATE	:		(	GROWTH	FACTOR:				
Volume	/Lane/Sig	gnal Conf	igurations	;										
	NO	RTHBOU	ND	SO	UTHBOL		w	FSTBOU		FA	STBOU			
	LT	ТН	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT		
EXISTING	50	318	63	27	215	101	65	881	63	149	833	24		
AMBIENT														
RELATED														
PROJECT														
TOTAL	50	318	63	27	215	101	65	881	63	149	833	24		
	1	~ ^ ^		1	~ ~ /		1	~ ~ /		1 ~ /	\ _ /			
LANE	Ч Д П	十一千 1 1	>  v v v	Ч ф П	十一番 1 1		ין עד קד 1	イ (石) 「 2	ערי יין ע <b>1</b>	Ч ф ⁻ 1 1 7		-}		
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL	Phasing     RTOR     Phasing     RTOR     Phasing     RTOR       SIGNAL     Perm     Auto     Perm     Auto     Perm     Auto													
	<u> </u>													
	l Movem	ents Diag	ram —											
ontiou		onto Diug	. uni	∟s	outhBou	nd	7							
				A	.: ;	343								
				E		27								
		EastE	Bound		٨		West	Bound		V/C RATION	<u>0</u>	LOS		
		А.	429		T		Б.			0.00 - 0.60	)	A		
		р.	149		l 		<u>.</u>	05		0.61 - 0.70	)	В		
				A		110 431				0.71 - 0.80	)	с		
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	E	3:	50				0.81 - 0.90	)	D		
* = ATSAC	Benefit						J			0.91 - 1.00	)	E		
Resi	ults —													
	North/South Critical Movements = $A(N/B) + B(S/B)$													
	wes	v East Off		431	- A(VV + 27	, b) + b + 44	(±/5) 41 +	149	= 0.629	1	LOS =	в		
					ŕ	[•] 1500								

N/S:		Lucas A	Ave		W/E:		Wilshi	re Blvd		I/S No:	4	2		
AM/PM:	PM		Comm	ents: E)	(ISTING	PLUS PR		WITH TD	M					
COUNT D	ATE:			STU	DY DATE	<b>E:</b>		(	GROWTH	FACTOR:				
	l ana/Si	anal Conf	igurationa											
volume				, 										
		R I HBOU	ND RT			RT		ESTBOU TH	ND RT		STROU TH	RT		
EXISTING	48	230	32	17	273	69	85	903	76	65	785	49		
AMBIENT														
RELATED														
PROJECT														
TOTAL	48	230	32	17	273	69	85	903	76	65	785	49		
	ሌ 수	$\land \land \land$	ላ ተን ላት ላ	<b>ά</b> φ	$\varphi \varphi 4$	ረትን የተ	ሌ 수		2 ሐን (ሐን	<b>6</b> 4 4	2 A 4	2 ዓ ተን		
LANE	ч фі	<u>'</u> (+) 4   <b>1</b>		· •	· (4)		[™] ( ^µ	· ↔ ·	1		(中) 日 日 日	1		
	LANE     1     1     1     1     1     1     1       Phasing     RTOR     Phasing     RTOR     Phasing     RTOR     Phasing     RTOR													
PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoPermAuto														
		J <u> </u>												
Critica	l Movem	ents Diag	ram ——											
		U		۲s	outhBou	Ind	1							
				4		359								
				E	:	17								
		East	Bound		٨		West	Bound		V/C RATIO	<u>0</u>	<u>LOS</u>		
		А. В.	525		T		р.	95		0.00 - 0.60	0	Α		
		р.	63		l 		D.	05		0.61 - 0.70	)	В		
						na 310				0.71 - 0.80	D	с		
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	B		48				0.81 - 0.90	ס	D		
* = ATSAC	C Benefit						J			0.91 - 1.00	ס	E		
Resi	Results													
	North/South Critical Movements = $B(N/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$													
	1103			48	+ 359	+ 62	22 +	65		<b>.</b> 1	108 -	в		
		V	/C =		ŕ	*1500			= 0.659		LU3 =	D		

## ALTERNATE FUTURE WITHOUT PROJECT CONDITIONS

(YEAR 2020)

N/S:		Grand A	Ave		W/E:		US 101 N	B Ramps	6	I/S No:	1
AM/PM:	AM		Comm	nents: F	UTURE V	VITHOUT	PROJEC	T (YEAR	2020)		
COUNT D	ATE:			STU	JDY DATE	:		G	ROWTH	FACTOR:	
	/Lane/Si	gnal Conf	igurations	s							
	NO	RTHBOU	ND	S	DUTHBOU	ND	W	ESTROUN	ID	FASTB	OUND
FXISTING		TH	RT		TH	RT		TH	RT		H RT
	030		U	U	1239	521	U	U	U	29 0	030
PROJECT											
TOTAL	696	212	0	0	1239	527	0	0	0	29 0	690
	<u>「</u> 」			м ф	<u>イ み</u> て	^۲ ۳ ۲۰		<u> </u>	ر مله ما م		
LANE	1	2			2	1					
	Phasi	ng l	RTOR	Phas	ing	RTOR	Phasir	ng F	RTOR	Phasing	RTOR
SIGNAL	Prot-F	ix <	none>	Per	m	OLA	<none< td=""><td>e&gt; <!--</td--><td>none&gt;</td><td>Split</td><td>Auto</td></td></none<>	e> </td <td>none&gt;</td> <td>Split</td> <td>Auto</td>	none>	Split	Auto
Critica	l Movem	ents Diag	ram —		SouthBou	nd					
					A: 6	620					
					B:	0					
		East	Bound —		L		West	Bound			1.05
		A:	12		Ą		A:	0			<u></u>
		B:	29				B:	0		0.00 - 0.60	A
					NorthBou	nd				0.61 - 0.70	В
					A: 1	06				0.71 - 0.80	С
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	t Volume		B: 6	696				0.81 - 0.90	D
* = ATSA(	Benefit									0.91 - 1.00	E
Kes	Nort	h/South C	critical Mo	vements	s = B(N/	′B) + ∆	(S/B)				
	Wes	t/East Crit	tical Move	ements	= A(W	_, - / /B) + E	S(E/B)				
		v	/C =	696	+ 620	+	0 +	29	= 0.874	LOS	= D
		•			*	1425					

## CalcaDB January 25, 2

N/S:	Hope S	t/US 101	SB Ram	ps	W/E:		Temp	ole St		I/S No:	2	
AM/PM:	AM		Comn	nents: FL	JTURE V	VITHOUT	PROJEC	CT (YEAR	R 2020)			
COUNT D	ATE:			STU	DY DATE			(	GROWTH	FACTOR:		
	/l ane/Si	anal Conf	iguration	s								
Volume				, 			· · · · ·					
		TH	RT		тн	RT	I T	-STBOU TH	ND RT		TH	D RT
EXISTING	69	381	105	170	389	44	403	595	218	274	513	266
AMBIENT												
RELATED												
PROJECT												
TOTAL	69	381	105	170	389	44	403	595	218	274	513	266
	₲ ᠿ		ላተቅ ላካ 🗧	ቁ 🕁	ት 🚓 ና	չ Գի ֆի ֆի	ቁ 🕁	ት 🚓 ና	չ իծ գեծ	₲ ᠿ 4	↑ ♣ €	, _Г р ф ¹ р
LANE	1	1 1		1	1 1		1	2	1	1	1 1	
	Phasi	ng l	RTOR	Phasir	ng	RTOR	Phasir	ng	RTOR	Phasin	ig l	RTOR
SIGNAL	Perr	n	Auto	Pern	<b>n</b>	Auto	Prot-F	ix	Auto	Prot-F	ix	Auto
	L											
	l Movem	ente Diag	ram —									
Ondea		citto Diag	i ani	∟s	outhBou	nd	1					
				A	.: 2	217						
				В		70						
		EastE	Bound 390		Ą		Westl	Bound 298		V/C RATI	<u>IO L</u>	<u>.0S</u>
		B.	274				B.	403		0.00 - 0.6	0 A	•
		D.	214					700		0.61 - 0.7	0 E	3
				A		243				0.71 - 0.8	o 0	;
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	B	:	69				0.81 - 0.9	0 0	)
* = ATSAC	C Benefit	-								0.91 - 1.0	0 E	E
Res	ults —											
	North/South Critical Movements = A(N/B) + B(S/B)											
	West/East Critical Movements = B(W/B) + A(E/B)											
		V	/C = —	243	+ 170	+ 40	13 +	390	= 0.776	5	LOS =	С
						1723						



#### Future without Project Conditions A.M. Peak Hour (Year 2020)

Lane Capacity for SB Rights -

1,425 vphpl

Number of Lanes -		2				
SB Right V/C -	<u>{ 1,135</u>	x 1,425	<u>0.55</u> }			
	=	0.438				
Critical V/C -	0.060	+	0.438	=	0.498	
<u>or</u>						
Lane Capacity for NB T	hroughs & I	Rights -	1,425	vphpl		
Number of Lanes -		2 1	throughs through/rig	lht		
NB Through/Right V/C -		<u>977</u>	+ 4,275	}	or	<u>184</u> 1,425
	=	0.272				
Intersection V/C = 0.742	_	0.100	=	0.642	LOS	В

# CalcaDB

N/S:	F	lower	St		W/E:		3rc	d St		I/S No:	4		
AM/PM:	AM		Comm	ents: Fl		VITHOUT	PROJEC	CT (YEAF	R 2020)				
COUNT D	ATE:			STU	DY DATE			G	BROWTH	FACTOR:			
Volume	/Lane/Sign	al Conf	igurations										
	NOR	ГНВОШ		so	UTHROU		W	ESTROU		FAST			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT		
EXISTING	1	26	0	0	1030	137	526	1043	108	0	0 473		
AMBIENT													
RELATED													
PROJECT													
TOTAL	1	26	0	0	1030	137	526	1043	108	0	0 473		
	\$	金令	ላተቅ ላ		수	ት የ ¹ ረ	ፋ 순	수	ላተን ላነ ረ	ፋ ፚ 수	金仓飞		
LANE	1 2				2	1	1	3 1					
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
SIGNAL	Phasing       RTOR       Phasing       RTOR       Phasing       RTOR         SIGNAL       Perm <none>       Perm       Auto       Split       Auto       <none>       Free</none></none>												
	L												
Critica	l Movemen	ts Diag	ram ——										
		U		∟s	outhBou	nd	1						
				A	5	i15							
				В	:	0							
	Γ	EastE	Bound		٨		West	Bound		V/C RATIO	LOS		
		А.	0		T		А. 	200		0.00 - 0.60	Α		
		В.	U	┘		1	р.	320		0.61 - 0.70	В		
						na 13				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Throug ted Left Vo	h/Right Iume	Volume	В		1				0.81 - 0.90	D		
* = ATSAC	C Benefit						J			0.91 - 1.00	E		
Resi					<b>D</b> /11/								
	North/South Critical Movements = B(N/B) + A(S/B) West/Fast Critical Movements = B(W/B) + A(F/B)												
		V	/C =	1	+ 515	+ 52	26 +	0	= 0.625	L	DS = B		
					*	1500							

N/S:	Gi	rand Ave	•		W/E:         3rd St         I/S No:         5							
AM/PM:	АМ		Comme	nts: FL	JTURE W	/ITHOUT	PROJEC	CT (YEAF	R 2020)			
COUNT D	ATE:			STU	DY DATE	:		G	ROWTH	FACTOR:		
Volume	e/Lane/Signa	al Configu	rations									
	NORT	HBOUND		SO	UTHBOU	ND	W	ESTBOUN	ND	FAS	STBOUN	D
	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	17	68	0	0	1168	163	0	0	0	23	0	88
AMBIENT												
RELATED												
PROJECT												
TOTAL	17	68	0	0	1168	163	0	0	0	23	0	88
	\$ ፚ ት	<b>☆</b> �	۹ م ^ل ه ما	ካ 👉	ት 🚓 ବ୍	۹ <del>۱</del> ۵ ۹۱ ۲	ቁ ፚ	수 🚓 숙	\$_f\$_{T}\$	ላ ፚ ና	<u>`</u>	ል _በ ት ላ _{ገ ል}
LANE	1 2				1 1					1		2
	Phasing	RTO	DR	Phasi	ng F	RTOR	Phasi	ng l	RTOR	Phasing	9	RTOR
SIGNAL	Perm	Au	to	Pern	n ,	Auto	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></non<>	e> <	none>	Split		Auto
Critica	I Movement	s Diagran	n ———									
		U		S	outhBour	nd 66	]					
					· .	00						
						U						
	Г	EastBou	Ind	1	Λ		West	Bound		V/C RATIO	<u> </u>	LOS
		A:	48		Ť		A:	U		0.00 - 0.60	)	A
		B:	23				B:	0		0.61 - 0.70	)	В
	L_				lorthBour	nd	1		<b>I</b>	0.74 0.00		<b>~</b>
A = Adius	ted Through	n/Riaht Va	olume	A	.: 3	34				0.71 - 0.80	,	
B = Adjus	ted Left Volu	ume		B		7				0.81 - 0.90	)	D
							J			0.91 - 1.00	)	E
Res	North/S	outh Criti	cal Move	ements	= B(N/	B) + A	(S/B)					
	West/Fast Critical Movements = $\Delta(W/B) + \Delta(F/B)$											
		V/C		17	+ 666	+ (	) +	48	= 0.417	I	LOS =	А
					*•	1500						

Future without Project Conditions A.M. Peak Hour (Year 2020)



# CalcaDB

N/S:		Flower	St		W/E:		5th	n St		I/S No:		7		
AM/PM:	AM		Comm	ents: FL	JTURE W	VITHOUT	PROJEC	CT (YEAF	R 2020)					
COUNT D	ATE:			STU	DY DATE			G	BROWTH	FACTOR:				
Volume	/Lane/Sig	inal Conf	igurations											
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	FSTBOUN	ND .	FAS	STBOU	ND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	0	0	0	0	1273	316	262	1380	0	0	0	0		
PROJECT														
TOTAL	0	0	0	0	1273	316	262	1380	0	0	0	0		
	U	•	U	U	1210	010	LUL	1000	U		•	•		
LANE	ी ₍ ) (	ት _ጨ ቲ	б _Т р фр 	<u>ላ</u> ታ	수 余 수 3   1	} ₽ 1	ी <b>।</b>	수 余 숙 5 │ │	<mark>б р др</mark>	<u>ዛ</u> ፚ ና		τ _φ μο φηο Γ		
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL	Phasing     RTOR     Phasing     RTOR     Phasing     RTOR       SIGNAL <none> <none>     Split     Auto     Split     <none> <none></none></none></none></none>													
Critica	l Moveme	ents Diag	ram ——											
				S	outhBou	nd	1							
				A	.:	18								
				B	:	0								
		Eastl	Bound		Δ		Westl	Bound 276		V/C RATIO	<u>0</u>	<u>LOS</u>		
		B·	0				B.	262		0.00 - 0.60	0	Α		
			Ŭ		ا IorthBour	nd ———				0.61 - 0.70	0	В		
				A		0				0.71 - 0.80	D	с		
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right /olume	Volume	В	:	0				0.81 - 0.90	0	D		
* = ATSAC	Benefit						J			0.91 - 1.00	D	E		
Resi		South C	ritical Mov	amonto	- A/N/	/B) ⊥ ^	(S/B)							
	West	/East Cri	tical Mover	ments	– A(W/	/B) + A	(E/B)							
		V	/C =	0	+ 318	+ 27	76 +	0	= 0.326	;	LOS =	A		



6th Street	Figuero	oa Stree			↑ N
936 1,347 SR 110 Off-Ramps			2,315	143	> 6th Street
1) Lane Capacity for EB Dire Number of Lanes -	ction -	1,500 1 1 1 3	) vphpl left-turn lar shared left through lar through lar	ne from 6th /through la ne from 6th nes from Sl	n Street ne from 6th Street n Street R 110 Off-Ramps
Critical V/C -	{ <u>936</u> =	+ 4,500 <b>0.299</b>	301 }	or	<u>1,347</u> 4,500
2) Lane Capacity for NB Thro	oughs -	900	) vphpl		
Number of Lanes -		5	;		
Critical V/C -	_	2,315 4,500			
	=	0.514			
or					
Lane Capacity for NB Right	nts -	1,500	) vphpl		
Number of Lanes -		1			
Critical V/C -	-	143 1,500			
	=	0.095			
Intersection V/C = 0.813	—	0.100	=	0.713	LOS C

# CalcaDB

N/S:		Flower	St		W/E:		6th	n St		I/S No:	ç	)
AM/PM: AM Comments: FUTURE WITHOUT PROJECT (YEAR 2020)												
COUNT DATE: GROWTH FACTOR:												
	/Lane/Sig	gnal Conf	igurations	,								
				50			W	ESTROU		EA	STROUM	
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	269	929	0	0	0	0	0	1800	648
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	269	929	0	0	0	0	0	1800	648
		$\wedge \wedge \wedge$			$\wedge \wedge \wedge$		1 1	~ ~ /				
LANE	N 存 午 祷 话 邝 柳 Ŋ 存 午 祷 话 邝 柳 Ŋ 存 午 祷 话 ሾ 柳       LANE     N 同											
	Phasir	na l	RTOR	Phasi	na	RTOR	Phasir	na	RTOR	Phasin	n	RTOR
SIGNAI		ح	none>	Soli	t c	none>			none>	Split	9	Auto
OIGHAL	SIGNAL CHOILES Split CHOILES CHOILES Split Auto											
A: 232												
	B: 148											
		East	Bound		٨		West	Bound		V/C RATIO	<u>0</u>	LOS
		A:	490		Ť		A:	U		0.00 - 0.60	)	A
		B:	0				B:	0		0.61 - 0.70	)	В
		P			lorthBou	nd 🗌	1			0.71 - 0.80	)	с
A = Adjusted Through/Right Volume						0				0.81 - 0.90	)	D
* = ATSAC Benefit					•	U				0.01 - 1.00	- -	F
Resi	0.91 - 1.00 E											
	North/South Critical Movements = A(N/B) + A(S/B)											
	West	/East Cri	tical Move	ments	= A(W	/B) + A	(E/B)					
	$V/C = \frac{0 + 232 + 0 + 490}{100000000000000000000000000000000000$											

N/S:		Alvarad	o St		W/E: Wilshire Blvd I/S No: 10							)
AM/PM:	AM		Comm	nents: F	UTURE W	/ITHOUT	PROJE	CT (YEAF	R 2020)			
COUNT D	ATE:			STI	JDY DATE	:		G	ROWTH	FACTOR:		
	/Lane/Si	gnal Con	figurations	s —								
							W	ESTBOUN	ND.	FA	STBOUN	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	U	883	154	U	1024	191	76	1009	64	111	1233	39
	<u> </u>	1										
	<u> </u>	1										
FROJECT												
TOTAL	0	883	154	0	1024	191	76	1009	64	111	1233	39
	<b>€</b>	4 4 4 4	∢ <del>,</del> , ∧, ∠	<b>%</b> ↔	$   \Delta \Delta \Delta $	የተን	\$ 🔶	$   \Delta \Delta 4 $	የተን የኮ •	<u>ፋ                                   </u>	2 4 4	ሐት ዓ
								•     •				
	Phasi	ng	RTOR	Phasi	ing F	RTOR	Phasi	ing l	RTOR	Phasing	g l	RTOR
SIGNAL	Pern	n	Auto	Perm         Auto         Perm         Auto         Perm         Auto							Auto	
Critica	l Movem	ents Diag	jram —									
					SouthBour	nd 05						
						09						
					B:	0						
EastBound					٨		West	Bound		V/C RATI	<u>o L</u>	<u>.0S</u>
	A: 636 4				Ť		A:		0.00 - 0.60	0 A	<b>\</b>	
		B:	111				B:	76		0.61 - 0.70	0 E	3
		<u> </u>			NorthBour	nd	1		I	0.71 0.94	- •	
A = Adjusted Through/Right Volume					A: 3	46				0.71-0.80	U C	,
B = Adjusted Left Volume * - ATSAC Benefit					B:	0				0.81 - 0.90	0 C	)
= ATSAU							J			0.91 - 1.00	0 E	: 
Resi	lits —	h/South (	Critical Ma	vomonto		D)	(C/D)					
	Woo	f/East Cri		monte	= B(N)	D) + A (B) . ^	(3/D) (E/B)					
West/East Critical Movements = B(W/B) + A(E/B)												
				0	, 40F	, , ,	e .	636				

N/S: Beaudry Ave W/E: Wilshire Blvd I/S No: 11												
AM/PM: AM Comments: FUTURE WITHOUT PROJECT (YEAR 2020)												
COUNT D	COUNT DATE: GROWTH FACTOR:											
	/l ane/Sign	al Conf	igurations									
Volume	W	ESTROUM		EA	STROUM							
	LT	TH	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT
EXISTING	10	0	25	743	31	741	5	612	0	0	1076	6
AMBIENT												
RELATED												
PROJECT												
TOTAL	10	0	25	743	31	741	5	612	0	0	1076	6
LANE												
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR											
SIGNAL	SIGNAL Split Auto Split Auto Perm Auto											
Critica	Critical Movements Diagram											
				S	outhBo	und	]					
	A: 505											
				E	3:	505						
	Γ	EastE	Bound 538		Δ	1	West	Bound 321		V/C RATI	<u>o</u>	LOS
		B:	0				B:	5		0.00 - 0.60	D .	A
					' IorthBoi	und				0.61 - 0.70	D	В
		L/D!	Mala	A		35				0.71 - 0.8	D	с
A = Adjusted Through/Right Volume B = Adjusted Left Volume					3:	10				0.81 - 0.90	D	D
							J			0.91 - 1.0	D	E
Resi	Results North/South Critical Movements = A(N/B) + A(S/B)											
	West/E	ast Crit	ical Move	ments	= B(V	//B) + A	(E/B)					
	$V/C = \frac{35 + 505 + 5 + 538}{*1425} = 0.690  LOS = B$											

N/S: Francisco St W/E: Wilshire Blvd I/S No: 12 AM/PM: AM Comments: FUTURE WITHOUT PROJECT (YEAR 2020)									
COUNT DATE: STUDY DATE: GROWTH FACTOR:									
Volume/Lane/Signal Configurations									
LT         TH         RT         LT         TH         RT         LT         TH           EXISTING         34         14         67         9         1         10         53         546           AMBIENT	RT         LT         TH         RT           57         75         1357         476								
RELATED        PROJECT									
TOTAL 34 14 67 9 1 10 53 546	57 75 1357 476								
4 分 分 分 分 份 份 分 分 分 份 份 分 分 分 份 份 分 分 份 份 分 分 份 份         LANE         1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1									
Critical Movements Diagram SouthBound A: 20 B: 9									
EastBoundWestBoundA:917A:302	V/C RATIO LOS								
B: 75 B: 53	0.61 - 0.70 B								
NorthBound A: 67	0.71 - 0.80 C								
A = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC Reposit	0.81 - 0.90 D								
	0.91 - 1.00 E								
ResultsNorth/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $B(W/B) + A(E/B)$ V/C = $\frac{67 + 9 + 53 + 917}{4500} = 0.627$									

#### Future without Project Conditions A.M. Peak Hour (Year 2020)




#### Future without Project Conditions A.M. Peak Hour (Year 2020)

N/S:		Grand A	Ave		W/E:		Wilshi	re Blvd		I/S No:	1	5
AM/PM:	AM		Comm	nents: Fl		ITHOUT	PROJEC	T (YEAF	R 2020)			
COUNT D	ATE:			STU	IDY DATE			C	GROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	igurations	s —								
	NO	RTHBOU	ND	SC	UTHBOU	ND	W	ESTBOU	ND	FAS	STROUN	D
	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	64	1121	223	10	11	0	0	44	311
RELATED												
PROJECT												
TOTAL	0	0	0	64	1121	223	10	11	0	0	44	311
	∮ ፚ	ት 🚓 ጚ	ላተን ላነ ረ	ፋ ታ	ት 🚓 ት	ላተ ላካ	∮ ኯ	ት ሒ	ᡷᠾ᠈ᡧᠯ	\$	·	᠋ᡷ᠂ᡁ᠈ᡧᠯ᠈
LANE				1	2 1		1				1	1
	Phasii	ng l	RTOR	Phasi	ng	RTOR	Phasir	ng	RTOR	Phasing	I	RTOR
SIGNAL	<none< td=""><td><b>&gt;</b> &lt;</td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Pern</td><td>1 &lt;</td><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></none<>	<b>&gt;</b> <	none>	Spli	t	Auto	Pern	1 <	none>	Perm		Auto
Critica	l Movem	ents Diaq	ram —									
		Ū		۲s	SouthBou	nd	7					
				4	\: 3	52						
				E	3: (	64						
		East	Bound		٨		West	Bound		V/C RATIO	<u>2 I</u>	<u>_OS</u>
		A:	178		Ť		A:	21		0.00 - 0.60		4
		D:	0				D.	IU		0.61 - 0.70	) E	3
					NorthBour	nd O				0.71 - 0.80		<b>C</b>
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	t Volume	E	3:	0				0.81 - 0.90		ס
* = ATSA	C Benefit					]				0.91 - 1.00	•	E
Res	ults —					<b>-</b>	(0,17)					
	Nort	h/South C	ritical Mo	vements	= A(N/	B) + A B) ⊥ ^	(S/B) (F/B)					
	1103	401 011		0	+ 352	_, + <u>1</u>	<u>0 +</u>	178	0 200		05 -	Δ
		v	/0 =		*	1500			= 0.290	L		~

# CalcaDB

N/S:		Alvarado	o St		W/E:		7th	n St		I/S No:	1(	6
AM/PM:	AM		Comm	ents: FU	ITURE V	VITHOUT	PROJEC	CT (YEAF	R 2020)			
COUNT D	ATE:			STU	DY DATE	:		(	GROWTH	FACTOR:		
Volume	/Lane/Si	gnal Conf	igurations	_								
	NC	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOU	ND	FAS	TROUM	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	0	958	66	0	995	80	0	463	67	0	700	32
PROJECT												
TOTAL	0	958	66	0	995	80	0	463	67	0	700	32
	<b>ф</b>		۹ _۲ ۵ ۹ _۲ ۵ (	\$ {}		2 b 41	¶ ∂		\$ f\$ 47\$	५ _€ २ २	· ♣ €	\$ f\$ \$f\$
		2 1			2			•     •				
	Phasi	ng F	RTOR	Phasir	ng	RTOR	Phasi	ng	RTOR	Phasing	J	RTOR
SIGNAL Perm Auto Perm Auto Perm Auto												Auto
	Mayam	anta Dian										
Critica	Iwovem	ents Diag	ram	_s	outhBou	nd	]					
				A		358						
				В	:	0						
		EastE ∆·	Bound 366		Δ		West	Bound 265		V/C RATIO	<u>2</u>	LOS
		B:	0				B:	0		0.00 - 0.60		A
				N	ہ orthBou	nd				0.61 - 0.70		В
				A	: 3	841				0.71 - 0.80		C
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	В		0				0.81 - 0.90		D
	, penerit									0.91 - 1.00		E
Rest	Nort	h/South C	ritical Mov	/ements	= B(N/	/B) + A	(S/B)					
	Wes	t/East Crit	ical Move	ments =	= B(W	/B) + A	(E/B)					
		V	/C =	0	+ 358	+ ( 1500	) +	366	= 0.413	; L	_OS =	Α

### Future without Project Conditions A.M. Peak Hour (Year 2020)

Ν



WB Through V/C -	{ <u>360</u>	+ 3,000	<u>63</u> }		
	=	0.141			
Critical V/C -	0.023	+	0.141		
	=	0.164			
2) Lane Capacity for NB & S	SB Directio	on -	1,500	vphpl	
Number of Lanes -		1 1	left through/righ	nt	
Critical V/C -	{ <u>79</u>	+	572 1,500	+	}
or	{ <u>112</u>	+	166 1,500	+	}
	=	0.491			
Intersection V/C = 0.851	_	0.100	=	0.751	LOS C

# CalcaDB

N/S:	Fran	cisco St		W/E:		7th	St		I/S No:	18	}
COUNT DA	AM ATE:	Comm	stu	DY DATE		PROJEC	T (YEAF	R 2020) GROWTH	FACTOR:		
Volume/	Lane/Signal		s	UTHBOU		W	ESTBOU		FAS	STBOUN	
	LT T	H RT	LT	TH	RT	LT	TH	RT	LT	ТН	RT
EXISTING AMBIENT RELATED	41 1	1 79	56	269	75	150	582	128	42	550	143
PROJECT											
TOTAL	41 1	1 79	56	269	75	150	582	128	42	550	143
LANE		₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩		Ŷ ∰ ᡤ 1 י9 ı	À r fr A RTOR Auto			À r ⁰ ∰ I RTOR Auto			户 仲 口 RTOR Auto
Critical	Movements	Diagram ——	S A B	outhBou : 3	nd 344 56						
		EastBound		٨		West	Bound		V/C RATIO	<u>2</u>	<u>.0S</u>
	E	3: 42		Ĩ		B:	150		0.00 - 0.60	Δ Δ	<b>\</b>
				l orthPou	nd		D		0.61 - 0.70	) E	3
			A	:	79				0.71 - 0.80	) C	;
A = Adjust B = Adjust	ed Through/l ed Left Volur	Right Volume ne	в		41				0.81 - 0.90	) C	)
* = ATSAC	Benefit					J			0.91 - 1.00	) E	
— Resu	lts North/So West/Eas	uth Critical Mo t Critical Move V/C = —	vements = ments = 41	= B(N/ = B(W/ + 344	/B) + A /B) + A + 15	(S/B) (E/B) 50 +	347	= 0.518	; L	_OS =	A

#### Future without Project Conditions A.M. Peak Hour (Year 2020)



# CalcaDB January 25,

N/S:		Flower	St		W/E:		7tł	n St		I/S No:	20	
AM/PM:	AM		Comm	nents: Fl	JTURE W	ITHOUT	PROJEC	CT (YEAF	R 2020)			
COUNT D	ATE:			STU	IDY DATE	:		C	GROWTH	FACTOR:		
	e/Lane/Sig	gnal Con	figurations	s —								
	NO	RTHBOU	ND	SC	UTHBOU	ND	W	ESTBOUI	ND	FAS	STROUN	
	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	U	0	67	1002	115	116	679	0	0	432	163
RELATED												
PROJECT												
TOTAL	0	0	0	67	1002	115	116	679	0	0	432	163
	ቁ ፹	ት ሒ ና	ᢤᡅᡐᡁ		수	የተቅ ፋ _ገ ;	ፋ 순	수	ላተን « ¹ %	\$ ኇ ና	<u>ት</u> ድር	የት ላ
LANE					2 1			2			1	
	Phasir	ng	RTOR	Phasi	ng F	RTOR	Phasi	ng l	RTOR	Phasing	j F	TOR
SIGNAL	<none< td=""><td><del>?</del>&gt; &lt;</td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Perr</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></none<>	<del>?</del> > <	none>	Spli	t	Auto	Perr	n <	none>	Perm		Auto
Critica	l Movem	ents Diac	ıram ——									
		-		_s	SouthBour	nd	1					
				4	A: 2	96						
				E	B: 6	67						
		East	Bound		٨		West	Bound		V/C RATIO	<u> L</u>	<u>os</u>
		A:	298		Ť		A:	304		0.00 - 0.60	) A	
		В:	0		ļ		В:	116		0.61 - 0.70	) В	
					lorthBoun	nd D				0.71 - 0.80	o c	
A = Adjus B = Adius	ted Throuted Left V	ugh/Righ /olume	t Volume		3:	0				0.81 - 0.90	) D	
* = ATSAC	C Benefit						J			0.91 - 1.00	) Е	
Resi	ults —											
	Nort	h/South (	Critical Mo	vements	= A(N/	B) + A B) + ^	(S/B) (E/B)					
	11631			0	+ <u>296</u>	+ 11	( <u> </u>	298	0 400		08 -	۸
		V	WC						- 0403		=	~

N/S:	Olive	e Ave	w	/E:	7tł	n St		I/S No:	21	
AM/PM:	АМ	Comm	ents: FUTUF	RE WITHOUT	PROJEC	CT (YEAF	R 2020)			
COUNT D	ATE:		STUDY D	DATE:		C	GROWTH	FACTOR:		
<u></u>										
Volume	e/Lane/Signal Co	onfigurations								
		DUND	SOUTH		W	ESTBOUI		FAS		
EXISTING	<b>74</b> 101	RT 3 102		н RT D 0		709	RT 238		600	кт 0
							200			v
RELATED										
PROJECT										
TOTAL	74 101	3 102	0	0 0	0	709	238	0	600	0
	<u>ዓ</u>	ራ የት የተን	<u> </u>	ት ት ት <del>የ</del>	ፋ 슈	<u> </u>	ት የ የ	<u> </u>		ሳተን ላነ
LANE	· (+ · (+))	4) · · · · · · · · · · · · · · · · · · ·	• • • •	φ φ ^{τα} τ ^η	' &'	· (中) 「 2		2	ው ዓ 	
	Phasing	RTOR	Phasing	RTOR	Phasi	ng I	RTOR	Phasing	R	TOR
SIGNAL	Split	Auto	<none></none>	<none></none>	Pern	n	Auto	Perm	<n< td=""><td>one&gt;</td></n<>	one>
Critica	I Movements Di	agram ——								
		-	South	Bound	7					
			A:	U						
			В:	0						
	Ea	stBound	<b>I</b>	Λ	West	Bound		V/C RATIO	<u> </u>	<u> </u>
	A:	300		Ť	A:	ა <b>ე</b> ე		0.00 - 0.60	Α	
	В:	U		I 	В.	U		0.61 - 0.70	В	
			North	Bound 297			_	0.71 - 0.80	С	
A = Adjus B = Adjus	ted Through/Rig ted Left Volume	ght Volume e	B:	74				0.81 - 0.90	D	
* = ATSA(	C Benefit							0.91 - 1.00	E	
Res	ults North/South	h Critical Mov	vements –	Δ(N/B) ± 4	(S/B)					
	West/East (	Critical Move	ments =	A(W/B) + E	8(E/B)					
		V/C =	297 +	0 + 3	55 +	0	= 0.365	; L	.OS = 4	4
				*1500						

# CalcaDB

N/S:		Alameda	a St		<b>W/E</b> :		7th	St		I/S No:	2	2
AM/PM:	AM		Comm	ents: Fl	JTURE V	WITHOUT	PROJEC	T (YEAF	R 2020)			
COUNT D	ATE:			STU	DY DATE	≣:		C	GROWTH	FACTOR:		
Volume	/Lane/Sig	nal Conf	igurations									
	NO	RTHROU		SO			W	STROU		FA	STROU	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	117	673	62	128	931	105	146	907	60	86	526	106
AMBIENT												
RELATED												
PROJECT												
TOTAL	117	673	62	128	931	105	146	907	60	86	526	106
	\$ ቍ	2 <u>2</u> 2	ላ ተን	♠ ↔	4 4 4	₩ ₩	<b>۹</b>	4 <u>6</u> 4	⟨ <del>╻</del> ┣ ⟨ҧ <i>ҫ</i>	<u>ፋ</u> ራ ረ	ے بے د	ᡩ᠇ᡕ᠙ᡕ᠅
LANE	' (+) 1	' ₩ ¥ 1   1		· (P	1 (H)	1 I	' ⊕ 1	<u>'</u> (++) '' 1   1		1	، «به ا	₽''' 1
	Phasin	g F	RTOR	Phasi	ng	RTOR	Phasir	ng	RTOR	Phasing	9	RTOR
SIGNAL	Perm		Auto	Prot-F	ix	Auto	Perm	ו ו	Auto	Perm		Auto
Critica	l Moveme	nts Diag	ram ——									
				<b>S</b>	outhBou	ind	]					
				4		518						
				E	B: ^	128						
		EastE	Bound		٨		West	Bound		V/C RATION	<u>0</u>	LOS
		A:	310 06		Ĩ		A. D.	404		0.00 - 0.60	)	Α
		D.	00		 IorthRou	nd	D	140		0.61 - 0.70	)	В
				A		368				0.71 - 0.80	)	с
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	Volume	B		117				0.81 - 0.90	)	D
^ = ATSAC	Benefit						]			0.91 - 1.00	)	E
Resi	uits North	South C	ritical May	omente	- R/N	/B) + ^	(S/B)					
	West	East Crit	tical Move	ments	– в(N) = A(W	//B) + B	(E/B)					
		V	/C =	117	+ 518	+ 48 *1425	34 +	86	= 0.776	i	LOS =	с

#### January 25, 2011 ,Tuesday 12:50:00 PM

# CalcaDB

N/S:		Soto S	St		W/E:		7th	n St		I/S No:	2	3
AM/PM:	AM		Comm	ents: FL	JTURE V	VITHOUT	PROJEC	T (YEAF	R 2020)			
COUNT D	ATE:			STU	DY DATE	:		C	BROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations									
				50			\A/I	ESTROU		EAG	TROU	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	475	771	31	58	648	88	28	113	41	50	55	22
AMBIENT												
RELATED												
PROJECT												
TOTAL	475	771	31	58	648	88	28	113	41	50	55	22
	1 ^	^ ^ ^		1	~ ~ ^		4	~ ^ ^				<b>N</b> N A N
LANE	역 (규 1	イ 孫 年 1   1	у ну «Цу «	^ଏ む 1	イ 浜 イ <mark>1   1</mark>	чр чі <del>(</del>	Ч ф П	イ 浜 て   <b>1</b>	אדעא אין <del>(</del>	역 값 T	`	לא ^{רא עדא} 1
	Phasir		RTOR	Phasi	na	RTOR	Phasir	na	RTOR	Phasing	4	RTOR
SIGNAL	Drot-E			Dorn	iy n		- nasii Solii		Auto	Solit	,	Auto
SIGNAL	1101-1		Auto	I CIII		Auto	Opin		Auto	Opin		Auto
Critica		ents Diag	ram	⊏s	outhBou	nd	1					
				A		368						
				в	:	58						
		East	Bound		Λ		Westl	Bound		V/C RATIO	<u>2</u>	<u>LOS</u>
		A.	105		T			102		0.00 - 0.60	)	A
		В:	50		l		В:	28		0.61 - 0.70	)	в
					orthBou	nd	1			0.71 - 0.80	)	с
A = Adjus	ted Throu	ugh/Right	Volume	A	. 4	IUI				0.94 0.00		D
B = Adjus * = ATSAC	ted Left \ C Benefit	/olume		B	: 4	175				0.01 - 0.90	,	_
	ults —						4			0.91 - 1.00	)	E
1.63(	Nortl	h/South C	ritical Mov	vements	= B(N/	/B) + A	(S/B)					
	West	/East Cri	tical Move	ments	= A(W	/B) + A	(E/B)					
		_		475	+ 368	+ 18	32 +	105			00	6
		V.	/C =		*	1375			= 0.752	I	_03 =	С



#### Future without Project Conditions A.M. Peak Hour (Year 2020)

Future without Project Conditions A.M. Peak Hour (Year 2020)



# CalcaDB

AM/PM:       AM       Comments:       FUTURE WITHOUT PROJECT (YEAR 2020)         COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       SOUTHBOUND       EASTBOUND         LT       TH       RT       LT       TH       RT         LT       TH       RT       LT       TH       RT       LT       TH       RT         EXISTING       0       0       0       734       332       79       1532       0       0       0       0         RELATED       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I<
COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations
Volume/Lane/Signal Configurations           NORTHBOUND         SOUTHBOUND         WESTBOUND         FASTBOUND           LT         TH         RT         RT         RT         TH         RT         LT         TH         RT         LT         TH         RT         LT         TH         RT         RT </td
NORTHBOUND       SOUTHBOUND       WESTBOUND       FASTBOUND         LT       TH       RT       TH       RT       TH       RT       RT </td
LT       TH       RT       LT       LT       TH       RT <th< td=""></th<>
EXISTING       0       0       0       734       332       79       1532       0       0       0       0         AMBIENT                                1532       0       0       0       0       0
AMBIENT
RELATED
PROJECT
TOTAL 0 0 0 0 734 332 79 1532 0 0 0 0
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR
SIGNAL <none> <none> Split Auto Split <none> <none> <none></none></none></none></none></none>
Critical Movements Diagram
A: 332
EastBound WestBound <u>V/C RATIO</u> LOS
A. 0 7 A. 403 0.00 - 0.60 A
B: 0 B: 79 0.61 - 0.70 B
NorthBound 0.71 - 0.80 C
A: U A: A
B = Adjusted Left Volume B: 0 0.81 - 0.90 D
0.91 - 1.00 E
North/South Critical Movements = $\Delta(N/R) + \Delta(S/R)$
West/East Critical Movements = $A(W/B) + A(F/B)$
0 + 332 + 403 + 0
$V/C = \frac{1}{1500} = 0.420$ LOS = A



N/S:		Figueroa	a St		W/E:	9th S	st/James	M Wood	d Blvd	I/S No:	28
AM/PM:	AM		Comn	nents: Fl	JTURE	WITHOUT	PROJEC	T (YEAI	R 2020)		
COUNT D	ATE:			STU	IDY DATI	E:		(	GROWTH	FACTOR:	
Volume	e/Lane/Si	gnal Conf	iguration	s —							
	NC	RTHBOU	ND	sc	UTHBOL	IND	WE	STBOU	ND	FASTB	OUND
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT TI	H RT
EXISTING	0	1641	158	0	0	0	0	0	0	1024 18 ⁻	10 0
AMBIENT											
RELATED											
PROJECT											
TOTAL	0	1641	158	0	0	0	0	0	0	1024 18	10 0
	ቁ ନ	수 쇼 습	ረ ተን ፈታ ን	∮ ፹		ት ቀ	ዓ ፚ	ት	አ ሌ ላተን		ቀት ለ ታ :
LANE		3	/						V		
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasin	ng	RTOR	Phasing	RTOR
SIGNAL	Spli	t	Auto	<non< td=""><td>e&gt; &lt;</td><td><none></none></td><td><none< td=""><td><b>\$</b>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<></td></non<>	e> <	<none></none>	<none< td=""><td><b>\$</b>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<>	<b>\$</b> > <	none>	Split	<none></none>
	l Movem	ents Diag	ram —								
		U		٦	SouthBou	Ind	1				
				4	<b>\:</b>	0					
				E	3:	0					
		East	Bound	L	٨		WestE	Bound		V/C RATIO	LOS
		A:	567		Ц Т		<b>A</b> :	0		0.00 - 0.60	Α
		В:	567				В:	0		0.61 - 0.70	В
		L			NorthBou	ind	1			0.74 0.00	-
Δ – Adius	ted Thro	uah/Riah	Volume			547				0.71 - 0.80	C
B = Adjus	ted Left	Volume	. volume	E	B:	0				0.81 - 0.90	D
* = ATSA(	Benefit						]			0.91 - 1.00	E
- Kes	Nort	h/South C	critical Mo	vements	= A(N	/B) + A	(S/B)				
	Wes	t/East Crit	tical Move	ements	= A(W	//B) + A	(E/B)				
		V	/C =	547	+ 0	+ (	) +	567	= 0.673	LOS	= B
		•			,	*1500					

N/S:	Cł	nerry St		W/E:		Pico	Blvd		I/S No:	2	9
AM/PM:	AM	Comr	nents: FU	TURE V	WITHOUT	PROJEC	CT (YEAI	R 2020)			
COUNT D	ATE:		STU	DY DATE	E:		(	GROWTH	FACTOR:		
Volume	/Lane/Signal	Configuration	s								
	NORTH	BOUND	SO	UTHBOL	IND	w	ESTBOU	ND	FA	STBOU	ND
	LT T	rh rt	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	567 5	42 215	229	0	8	0	406	330	234	600	0
PROJECT											
TOTAL	567 5	42 215	229	0	8	0	406	330	234	600	0
	00. 0		220	U	•		100	000	201		U
LANE	৸     ↓     ↓       1     1     1	<u>א</u> קייאי     <b>1</b>	ी ₍ ) ⁴	Ŷ ∰ 4	Ê, î² ∮†≯  2	€	↑     ↓     ↓       1     ↓	אַן לאָ אָליי לין ו <b>1</b> ו	भ _€ 7 4 1 :	}	\$ fÞ 4†Þ
	Phasing	RTOR	Phasir	g	RTOR	Phasi	ng	RTOR	Phasin	q	RTOR
SIGNAL	Split	Auto	Split		Auto	Pern	n	OLA	Perm	-	<none></none>
Critica	I Movements	Diagram									
			A	outnBou	and 4						
			в		126						
	Г	EastBound		٨		West	Bound		V/C RATI	<u>o</u>	LOS
		A: 200		Ť		A:	245		0.00 - 0.6	<b>D</b> .	A
		3: 234				В:	0		0.61 - 0.7	D	в
			A	ortnBou :	nd 370				0.71 - 0.8	D	с
A = Adjus B = Adjus	ted Through/ ted Left Volu	Right Volume me	В	:	370				0.81 - 0.9	D	D
* = ATSAC	C Benefit					J			0.91 - 1.0	D	E
Resi	ults	uth Critical Ma	vomente	Λ/Ν	/R) + P	(S/B)					
	West/Eas	st Critical Move	ements =	(W = A(W	//B) + B	(E/B)					
		V/C =	370	+ 126	+ 24	15 +	234	= 0.614		LOS =	В

N/S:	F	igueroa	a St		W/E:		Pico	Blvd		I/S No:	3(	)
AM/PM:	AM		Comr	nents: Fl	JTURE V	VITHOUT	PROJEC	CT (YEAI	R 2020)			
COUNT D	ATE:			STU	IDY DATE	E:		(	GROWTH	FACTOR:		
Volume	e/Lane/Sigr	nal Conf	iguration	s ——								
	NOR	THBOU	ND	SC	UTHBOL	IND	W	ESTBOU	ND	FAS	STROUM	D
FXISTING	LT	TH 2010	RT 146	LT	TH	RT	LT 50	TH 207	RT	LT	TH 700	RT
	230	2013	140	10	150	120	39	331	110	100	100	141
RELATED												
PROJECT			]									
TOTAL	256	2019	146	10	158	120	59	397	118	186	700	141
	4		۹ <del>۱</del> ۵ ۹۱ (	<u>ቁ</u> ፚ		} ₽ ₽	₲ ढ़ॖॖऀ	수 _슈 수	۲۵ ۲۵ ۲۵	₲ ᡒ ᡝ	<u>}</u>	^م له م
LANE	1 3			1	2		1	2			2	
	Phasing	g F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	g	RTOR
SIGNAL	Prot-Fix	x	Auto	Peri	n	OLA	Perr	n	Auto	Prot-Fi	x	OLA
Critica	l Movemer	nts Diag	ram —	E E	SouthBou A:	nd 79 10	]					
	]	EastE	Bound		٨		West	Bound		V/C RATION	<u>o i</u>	LOS
		A:	300		Ť			133		0.00 - 0.60	)	4
		в:	186		I	_	в:	59		0.61 - 0.70	)	В
	-				NorthBou	nd 541				0.71 - 0.80	) (	C
A = Adjus B = Adjus	ted Throug	gh/Right	Volume	,   F		256				0.81 - 0.90	)	D
* = ATSAC	C Benefit									0.91 - 1.00	)	E
Resi	ults —											
	North/	South C	ritical Mo	ovements	= A(N	/B) + B	(S/B)					
	West/I	East Crit V/	ical Move /C =	ements 541	= B(W + 10	/B) + A + 5 1375	(E/B) 9 +	350	= 0.628		LOS =	В

N/S:		Hoover	St		W/E:	Alva	arado St//	Alvarad	o Ter	I/S No:	3	1		
AM/PM:	AM		Comm	ents: FL	JTURE V	VITHOUT	PROJEC	T (YEA	R 2020)					
COUNT D	ATE:			STU	DY DATE	:			GROWTH	FACTOR:				
	/Lane/Si	gnal Conf	igurations											
	NC	RTHROU		SO			WE	STROU		FAS	TROU			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	0	998	648	13	875	0	494	0	0	0	0	0		
AMBIENT														
RELATED														
PROJECT														
TOTAL	0	998	648	13	875	0	494	0	0	0	0	0		
	<b>ፋ</b>	4 4 4 4	ላ ተ	\$ 🔶	4 <u>6</u> 4	ά <del>π</del> ) 4π - έ	\$ <u></u>	<u> </u>	ት	4 <i>4</i> 4	ے <u>ب</u>	₹ <del>₩</del> ₹		
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR														
SIGNAL     Perm     Free     Perm														
OIGHAL														
Critical Movements Diagram														
Critical Movements Diagram														
A: 477														
				В		13								
		East	Bound —		٨		West	Bound		V/C RATIO	<u>)</u>	LOS		
		A:	0		Ť		А: 	247		0.00 - 0.60	)	Α		
		В:	U		l 		Б:	241		0.61 - 0.70	)	В		
				A		na 549				0.71 - 0.80	)	с		
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right Volume	t Volume	в	:	0				0.81 - 0.90	)	D		
* = ATSAC	* = ATŠAC Benefit 0.91 - 1.00 E													
Resi	Results North/South Critical Movements = A(N/B) + B(S/B)													
West/East Critical Movements = $A(W/B) + A(E/B)$														
		v	/C = —	549	+ 13	+ 24	47 +	0	= 0.469	. 1	_OS =	А		
					^	1000								

N/S:		Flower	St		W/E:		Venic	e Blvd		I/S No:	32			
AM/PM:	AM		Com	nents: Fl	UTURE V	WITHOUT	PROJE	CT (YEAF	R 2020)					
COUNT D	ATE:			STL	JDY DATE	<b>E</b> :		C	BROWTH	FACTOR:				
Volume	e/Lane/Sig	nal Confi	guration	s ——										
	NO	RTHBOU	ND	SC	UTHBOL	IND	W	FSTBOU	ND	FAS	TBOUND	)		
FXISTING		ТН	RT	LT	TH	RT	LT 40	TH 342	RT		TH	RT 57		
	0	U	U	10	550	51	43	342	U	U	412	51		
PROJECT														
TOTAL	0	0	0	10	538	31	49	342	0	0	412	57		
LANE	₲ ᠿ ╯		ф ф	ी _{ ਹੋ		₿ ₽ ₽	୩ _ସ ୁମ 1	↑ ♣ ↑ 1	ት ሳ ት	₲ ☆ 수       Ⅰ     1		ላተን ላነ		
	Phasin	g F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	R	TOR		
SIGNAL <none> <a>Split</a> <a>Auto</a> <a>Perm</a> <a>none&gt; <a>Perm</a> <a>Auto</a></a></none>														
Critica	Critical Movements Diagram SouthBound A: 190 B: 10													
		EastB	Sound		Δ		West 	Bound		V/C RATIO	<u>L(</u>	<u> </u>		
		B.			Γ		R.			0.00 - 0.60	Α			
			U			1				0.61 - 0.70	В			
					vorthBou A:	na O				0.71 - 0.80	С			
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	Volume	E	B:	0				0.81 - 0.90	D			
* = ATSAC	C Benefit						J			0.91 - 1.00	Е			
Resi	ults North West	/South C	ritical Mo	ovements	= A(N	/B) + A	(S/B) (E/B)							
	$V/C = \frac{0 + 190 + 49 + 235}{*1500} = 0.246 \qquad LOS = A$													

N/S:		Grand	Ave		W/E:		18tl	h St		I/S No:	33			
AM/PM:	AM		Comm	ents: Fl	JTURE V	VITHOUT	PROJEC	T (YEAF	R 2020)					
COUNT D	ATE:			STL	IDY DATE	::		(	GROWTH	FACTOR:				
	/I ane/Si	anal Con	figurations											
, i ciunic										E A OTI				
		THBOU	RT		TH	RT	LT	-STROU	RT		TH RT			
EXISTING	0	0	122	406	499	0	0	0	0	0 1	045 138			
AMBIENT														
RELATED														
PROJECT														
TOTAL	0	0	122	406	499	0	0	0	0	0 1	045 138			
		~ ~ ^	N N A N		~ ~ ~		4	~ ~ ^			^ ^ N 4 N			
LANE														
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR														
Phasing     RTOR     Phasing     RTOR     Phasing     RTOR       SIGNAL     Perm     Auto     Prot-Fix <none> <none>     Split     Auto</none></none>														
SIGNAL Perm Auto Prot-Fix <none> <none> <none> Split Auto</none></none></none>														
Critical Movements Diagram														
Critical Movements Diagram														
					A: 1	66								
				E	3: 4	06								
		East	Bound —				West	Bound		V/C RATIO	1.05			
		A:	348		Ą		A:	0						
		В:	0				в:	0		0.00 - 0.60	Α			
				╧╷┝╴	' IorthBou	nd				0.61 - 0.70	В			
					\:	67				0.71 - 0.80	C			
A = Adjus B = Adjus	ted Thro	ugh/Righ /olume	t Volume	E	3:	0				0.81 - 0.90	D			
* = ATSAC	Benefit				L					0.91 - 1.00	Е			
— Resi	ults —													
North/South Critical Movements = A(N/B) + B(S/B)														
West/East Critical Movements = A(W/B) + A(E/B)														
		v	//C =	67	+ 406	+ (	0 +	348	= 0.506	; LO	S = A			
					*	1425								

N/S:	Oliv	St	W	/E:	6th	St	I/S N	o: 34	
AM/PM:	AM	Comm	ents: FUTUR		PROJEC	T (YEAR 202	20)		
COUNT D	ATE:		STUDY D	ATE:		GRO	WTH FACTOF	R:	
Volume	e/Lane/Signal Co	nfigurations							
	NORTHBO	UND	SOUTH	BOUND	WF	STROUND		FASTBOUND	
EXISTING		RT		H RT		TH R		TH	RT
		1/3			U		9 400	1040	U
RELATED						I			
PROJECT									
TOTAL	0 1009	175	0 (	) 0	0	0 (	D 460	1045	0
LANE	♠ A A A		५ ∂ A ∂	ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት	ी कि दि 		ी ी ि ी ि ी ी ी	· ↑ み 分 3	ሳተን ላ [†]
	Phasing	RTOR	Phasing	RTOR	Phasing	g RTO	R Pha	sing RT	OR
SIGNAL	Split	Auto	<none></none>	<none></none>	<none:< td=""><td>&gt; <none< td=""><td>e&gt; Sp</td><td>olit <no< td=""><td>ne&gt;</td></no<></td></none<></td></none:<>	> <none< td=""><td>e&gt; Sp</td><td>olit <no< td=""><td>ne&gt;</td></no<></td></none<>	e> Sp	olit <no< td=""><td>ne&gt;</td></no<>	ne>
Critica	I Movements Dia	gram ——	Southl A: B:	Bound 0 0	]				
	Eas	tBound		٨	WestB	ound	<u>V/C R/</u>		<u>s</u>
	A:	301		Ť	A:	0	0.00 -	0.60 A	
	B:	301			B:	0	0.61 -	0.70 B	
	<u>L</u>		North	Bound			」 071₋1	0.80 C	
A = Adjus	ted Through/Rig	ht Volume	A:	237			0.71-		
B = Adjus * = ATSA0	ted Left Volume C Benefit		B:	0			0.81 - 0	n.an D	
- Res	ults —						0.91 -	1.00 E	
Real	North/South West/East C	Critical Mov	vements = //	A(N/B) + A A(W/B) + A	A(S/B) A(E/B)				
		V/C =	237 +	0 + *1500	0 + 3	<u>301</u> =	0.289	LOS = A	

#### January 25, 2011 ,Tuesday 12:50:00 PM

# CalcaDB

N/S:		Норе	St		W/E:		7tł	n St		I/S No:	35			
AM/PM:	AM		Comm	nents: FU	ITURE V	VITHOUT	PROJEC	CT (YEAR	R 2020)					
COUNT D	ATE:			STU	DY DATE	<b>:</b>		(	GROWTH	FACTOR:				
Volume	/Lane/Si	gnal Conf	igurations											
	NO			50			W	ESTROLI		FAS				
	LT	TH	RT	LT	TH	RT	LT	ТН	RT	LT	TH RT			
EXISTING	41	263	146	10	250	26	0	792	113	0	435 73			
AMBIENT														
RELATED														
PROJECT														
TOTAL	41	263	146	10	250	26	0	792	113	0	435 73			
	ሌ ፉ		ላ ተን ላት ላ	ሌ 수	4 4 4	ረትን ላት ረ	ሌ 수		2 49 449	6 A A	$\Diamond \Diamond \land \land \Leftrightarrow$			
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR														
SIGNAL   Perm   Auto   Perm   Auto   Perm   Auto														
Critical Movements Diagram														
	A: 148													
				В		10								
		Eastl	Bound		٨		West	Bound		V/C RATIO	LOS			
		р.	204		T		B.	0		0.00 - 0.60	Α			
		D.	U		 			U		0.61 - 0.70	В			
				A		225				0.71 - 0.80	С			
A = Adjus B = Adjus	ted Thro ted Left '	ugh/Right Volume	Volume	В	:	41				0.81 - 0.90	D			
* = ATSAC	* = ATSAC Benefit 0.91 - 1.00 E													
Resi	ults —	h/Cauth C		uomente.	A /F1	(D) - D	(C/D)							
	Nort Wes	t/East Cri	fitical Move	ments :	= A(N/ = A(W	/B) + B	(3/B) (E/B)							
$V/C = \frac{225 + 10 + 453 + 0}{*1500} = 0.389$ LOS = A														
						1300								

# CalcaDB

N/S:		Grand A	Ave		W/E:		7ti	n St		I/S No:	36	6	
AM/PM:	AM		Comm	ents: FL		VITHOUT	PROJEC	CT (YEAF	R 2020)				
COUNT D	ATE:			STU	DY DATE			C	GROWTH	FACTOR:			
Volume	/Lane/Sig	gnal Conf	igurations										
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOU	ND	FAS	TROUN	D	
EXISTING		тн 0	RT 0	LT 99	TH 1298	RT 67		TH 819	RT 0		тн 489	RT	
AMBIENT											100		
RELATED													
PROJECT													
TOTAL	0	0	0	99	1298	67	0	819	0	0	489	121	
	ፋ ፚ	수	ረተቅ ላካ	∮ ฏ	수 슜 수	\$ ₁ \$ \$ ₁ \$	ፋ ፚ	수	ᡷ᠇᠈ᡧᠯ	<u>ዓ</u>	· 슈 숙	᠂ᡁ᠈᠂ᡧᠯ	
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL <none> <none> Split Auto Perm <none> Perm Auto</none></none></none>													
Critical Movements Diagram													
Critical Movements Diagram													
A: 325													
				в	3: 9	99							
		East	Bound		Λ		West	Bound		V/C RATIC	<u>) L</u>	<u>.os</u>	
			245		T			-10		0.00 - 0.60	4	4	
		В:	U		I		В:	U		0.61 - 0.70	E	3	
					lorthBour \:	nd O				0.71 - 0.80	C	•	
A = Adjus B = Adjus	ted Throuted Left \	ugh/Right /olume	Volume	в	:	0				0.81 - 0.90		0	
* = ATSAC	C Benefit						J			0.91 - 1.00	E	Ē	
Resi	North/South Critical Movements = A(N/B) + A(S/B)												
	West/East Critical Movements = $A(W/B) + B(E/B)$												
		v	/C =	0	+ 325	+ 41 1500	10 +	0	= 0.420	) L	-0S =	A	

### Future without Project Conditions A.M. Peak Hour (Year 2020)



= 0.203

Critical V/C -	0.035	+	0.203	=	0.238	
2) Lane Capacity for NI	B Throughs -			900	vphpl	
Lane Capacity for NI	B Left- and Rig	ht-turns -		1,425	vphpl	
Number of Lanes -		1	l left-turn on 3 throuahs	ly		
		1	l right-turn o	nly		
Critical V/C -	1,602	or	262	or	197	
	2,700		1,420		1,420	
	=	0.593				
Intersection V/C = 0.925	—	0.100	=	0.825	LOS D	)

N/S:	(	Glendale	Blvd		W/E:		Temj	ole St		I/S No:	38		
AM/PM:	AM		Comm	ents: Fl	JTURE W	VITHOUT	PROJEC	T (YEAF	R 2020)				
COUNT D	ATE:			STU	IDY DATE			C	GROWTH	FACTOR:			
Volume	/Lane/Si	gnal Conf	igurations										
	NO	RTHBOU	ND	SC	UTHBOU		W	ESTBOU		FAS			
EXISTING AMBIENT	58	627	14	252	1850	152	65	607	184	202	657 143		
RELATED PROJECT													
TOTAL	58	627	14	252	1850	152	65	607	184	202	657 143		
小 分 分 分 分 分 分 分 分 分 分 分 分 分 分 分 分 分 分 分													
Critical Movements Diagram SouthBound A: 1001 B: 252													
		EastE A: B:	3ound 400 202		Å		A: B:	Bound 396 65		<u>V/C RATIO</u> 0.00 - 0.60	<u>LOS</u> A		
					' IorthBour	nd				0.61 - 0.70	В		
	tod The-	ualh/D:	Valuma	A	A: 3	21				0.71 - 0.80	С		
A = Adjus B = Adjus	A = Adjusted Through/Right VolumeB = Adjusted Left VolumeB:580.81 - 0.90D												
* = ATSAC Benefit 0.91 - 1.00 E													
Kesi	North/South Critical Movements = $B(N/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$ $V/C = \frac{58 + 1001 + 396 + 202}{58 + 1001 + 396 + 202} = 1.093$ LOS = F												
					*	1425							

#### Future without Project Conditions A.M. Peak Hour (Year 2020)



Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights



Phase 2) Glendale Boulevard, 1st Street, and 2nd Street - Southbound Lefts, Throughs, and Rights, and
 a.) Westbound Rights on 1st Street
 b.) Westbound Rights on 2nd Street



Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights



I N



Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights



# CalcaDB

N/S:		Lucas A	Ave		W/E:		3rc	d St		I/S No:	40	)	
AM/PM:	AM		Comm	nents: FL	JTURE V	VITHOUT	PROJEC	CT (YEAR	R 2020)				
COUNT D	ATE:			STU	DY DATE			(	GROWTH	FACTOR:			
	/l ane/Sig	nal Conf	igurations										
Volume				, 				ESTROIN		EA			
		TH	RT	LT	ТН	RT	LT	TH	RT	LT	TH	RT	
EXISTING	140	321	124	131	636	139	74	887	90	171	1200	106	
AMBIENT													
RELATED													
PROJECT													
TOTAL	140	321	124	131	636	139	74	887	90	171	1200	106	
	\$ ቍ	2 <u>.</u> .	ላ ተን ላት ‹	€	4 <u>4</u> 4	\$ +} <b>{</b> +}	ፋ 🔶	4 4 4 4	<u></u> Ан} 4п 4	ፋ ቍ ሩ	ے بے د	ረተት የኮ	
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto													
Critical Movements Diagram													
SouthBound A: 388													
						000							
					1	131							
		EastE	Bound		٨		West	Bound		V/C RATIO	<u>ı c</u>	<u>.0S</u>	
		р.	171		T		р.	7/		0.00 - 0.60	) 4	4	
		D.	171		l I D		D.			0.61 - 0.70	) E	3	
				A		161				0.71 - 0.80	) (	2	
A = Adjus B = Adjus	A = Adjusted Through/Right VolumeB = Adjusted Left VolumeB:140												
* = ATSAC	C Benefit						]			0.91 - 1.00	) E	Ē	
Resi	uits North	South C	ritical Ma	Vomente	- P/N/	/R) + ^	(S/B)						
	West/	East Crit	tical Move	ments	= B(W	/B) + A	(E/B)						
$V/C = \frac{140 + 388 + 74 + 600}{*1500} = 0.731 \qquad LOS = C$													

# CalcaDB

N/S:		Lucas A	Ave		W/E:		6th	n St		I/S No:	4	1	
AM/PM:	AM		Comm	nents: FU	JTURE V	VITHOUT	PROJEC	CT (YEAI	R 2020)				
COUNT D				STU	DY DATE			(	GROWTH	FACTOR:			
	/l ane/Si	nnal Conf	igurations										
Volume				, 			10/1	ESTROLI			STROUM		
		TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	52	203	19	58	360	210	63	801	41	184	1156	180	
AMBIENT													
RELATED													
PROJECT													
TOTAL	52	203	19	58	360	210	63	801	41	184	1156	180	
	<b>6</b> Δ	ΑΑΑ	ላ ተን	6 Δ	$\triangle \land 4$	ረት ሌ	ሌ 🛆		ረት የ ረ	6 Δ Δ	<u>م د</u>	2 -12 (-12)	
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto													
Critical Movements Diagram													
SouthBound A: 628													
				B		58							
		—	<u> </u>		-	50							
		Easte	3ouna 668		Δ		A:	Bound 401		V/C RATIO	<u>0</u>	<u>LOS</u>	
		B.	18/				B·	63		0.00 - 0.60	)	Α	
		D.	104		l Iarrith Diarri			~~~		0.61 - 0.70	)	В	
				A		274				0.71 - 0.80	)	с	
A = Adjus B = Adjus	ted Thro ted Left \	ugh/Right /olume	Volume	в		52				0.81 - 0.90	)	D	
* = ATSAC Benefit 0.91 - 1.00 E													
Resi	Results												
	North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = B(W/B) + A(E/B)												
West/East Critical Movements = $B(W/B) + A(E/B)$ 52 + 628 + 63 + 668													
		V	/C =	JL	+ 020	+ 0 1500	<u>5</u> T	000	= 0.871		LOS =	D	

AM/PM:       MI       Comments:       FUTURE WITHOUT PROJECT (YEAR 2020)         COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations	N/S:		Lucas A	lve		W/E:		Wilshi	re Blvd		I/S No:	42	
COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       SOUTHBOUND       WESTBOUND       EASTBOUND         LT       TH       RT       LT       TH       RT         EXISTING       59       164       71       48       278       77       106       655       99       56       1059       72         AMBIENT	AM/PM:	AM		Comm	nents: FL		WITHOUT	PROJEC		R 2020)			
Volume/Lane/Signal Configurations         NORTHROUND       SOUTHBOUND       WESTBOUND         LT       TH       RT       LT       TH       RT         LSISTING       59       164       71       48       278       77       106       655       99       56       1059       72         AMBIENT	COUNT D	ATE:			STU	DY DATE	<b>E:</b>		(	GROWTH	FACTOR:		
Volume/Lane/signal Configurations         EXISTING       SOUTHBOUND       EASTEQUIND         LT       TH       RT         MORTHBOUND       LT       TH       RT         AMBIENT       LT       TH       RT       TO       G6       1059       72         AMBIENT       Southal 278       T7       106       655       99       56       1059       72         AMBIENT       TOTAL       59       164       71       106       65       1059       72         AR       A       A       A       A       A       A       A <th cols<="" th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th>	<th></th>												
NURTHRUIDUDPESTRUMUNTPESTRUMUNTPESTRUMUNTUT TH RTLT TH RTLT TH RTLT TH RTLT TH RTIT HE RTI	Volume	/Lane/Sig	inal Conf	igurations	s <u> </u>						FAOT		
EXISTING ES INA TI 48 278 77 106 655 99 56 1059 72 AMBIENT RELATED PROJECT TOTAL 59 164 71 48 278 77 106 655 99 56 1059 72 $4 \Rightarrow 2 \Rightarrow 4 \Rightarrow 4 \Rightarrow 4 \Rightarrow 2 \Rightarrow 5 \Rightarrow 5 = 5 = 1059$ 72 $4 \Rightarrow 2 \Rightarrow 4 \Rightarrow 4 \Rightarrow 4 \Rightarrow 2 \Rightarrow 5 \Rightarrow 5 = 1059$ 72 LANE Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Perm Auto Perm Auto Perm Auto Perm Auto Perm Auto Critical Movements Diagram A: 642 B: 56 NorthBound A: 642 B: 59 A = Adjusted Through/Right Volume B = Adjusted Through/Right Volume T = ATSAC Benefit NorthSouth Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = B(W/B) + A(S/B)			тн	PT		тн	PT			PT			
AMBIENT       Image: constraint of the second	EXISTING	59	164	71	48	278	77	106	655	99	56 1	059 72	
RELATED       Image: constraint of the second	AMBIENT												
PROJECT       Image: constraint of the state of the sta	RELATED												
TOTAL 59 164 71 48 278 77 106 655 99 56 1059 72 $(h \downarrow \uparrow \uparrow \downarrow \downarrow \downarrow \uparrow \uparrow \downarrow \uparrow \uparrow \downarrow \uparrow \downarrow \uparrow \downarrow \uparrow \downarrow \uparrow $	PROJECT												
LANE $\begin{array}{c c c c c c c c c c c c c c c c c c c $	TOTAL	59	164	71	48	278	77	106	655	99	56 1	059 72	
LANE $(v, v, v$		ፋ 슈 4	ት <u>ሕ</u> ት	ረተቅ ላካ ነ	ፋ 슈	<u> </u>	ረት ላካ ረ	ፋ 슈	<u> </u>	∖ ¢†}¢₁	<u>ዓ</u>		
Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       RTOR         SIGNAL       Perm       Auto       Perm       Auto       Perm       Auto       Perm       Auto         Critical Movements Diagram       SouthBound       A:       403       B:       48       V/C RATIO       LOS         A:       642       A:       646       B:       106       0.00 - 0.60       A         B:       56       NorthBound       A:       646       B:       0.00 - 0.60       A         B:       56       NorthBound       A:       646       D.00 - 0.60       A         A:       294       B:       59       0.81 - 0.90       D         * = ATSAC Benefit       0.91 - 1.00       E       E       0.91 - 1.00       E         North/South Critical Movements =       B(W/B) + A(S/B)       Vest/East Critical Movements =       B(W/B) + A(S/B)       Vest/East Critical Movements =       0.91 - 1.00       E	LANE	. 4	· (+) · ·		· «	1		1	1	1		<u>(+)</u> +) + 1	
SIGNAL       Perm       Auto       Perm       Auto       Perm       Auto         Critical Movements Diagram       SouthBound       A:       403       B:       43         EastBound       A:       403       B:       48       V/C RATIO       LOS         A:       642       A:       646       0.00 - 0.60       A         B:       56       NorthBound       A:       646       0.61 - 0.70       B         A = Adjusted Through/Right Volume       B:       294       0.71 - 0.80       C         A = Adjusted Left Volume       B:       59       0.81 - 0.90       D         * = ATSAC Benefit       0.91 - 1.00       E         North/South Critical Movements =       B(W/B) + A(S/B)       Usest/East Critical Movements =       B(W/B) + A(E/B)         59       +       403       +       106       +       642		Phasin	g F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	RTOR	
Critical Movements Diagram         SouthBound         A:       403         B:       48         A:       642         B:       56         NorthBound       A:         A:       646         B:       56         NorthBound       0.00 - 0.60         A:       646         B:       106         0.61 - 0.70       B         A:       294         B:       0.71 - 0.80         C       A:         A:       294         B:       59         0.81 - 0.90       D         0.91 - 1.00       E         Results       0.91 - 1.00         North/South Critical Movements =       B(N/B) + A(S/B)         West/East Critical Movements =       B(W/B) + A(E/B)         59       + 403       + 106       + 642	SIGNAL	Perm		Auto	Pern	n	Auto	Pern	n	Auto	Perm	Auto	
SouthBound A: 403 B: 48 A: 642 B: 56 NorthBound A: 642 B: 56 NorthBound A: 646 B: 106 NorthBound A: 646 B: 106 NorthBound A: 646 B: 106 NorthBound A: 294 B: 59 NorthBound A: 294 B: 59 NorthSouth Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = B(W/B) + A(E/B) 59 + 403 + 106 + 642	Critica	l Moveme	ents Diag	ram —									
A: 403B: 48B: 48 $V/C RATIO LOS0.00 - 0.60 AB: 56NorthBoundA: 646B: 1060.00 - 0.60 A0.61 - 0.70 B0.61 - 0.70 B0.61 - 0.70 B0.61 - 0.70 B0.71 - 0.80 C0.81 - 0.90 D0.91 - 1.00 ENorth/South Critical Movements = B(N/B) + A(S/B)West/East Critical Movements = B(W/B) + A(E/B)59 + 403 + 106 + 642$			J		s	outhBou	ind	]					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					A		403						
EastBoundWestBoundV/C RATIOLOSA:642A:6460.00 - 0.60AB:56NorthBoundB:1060.61 - 0.70BA = Adjusted Through/Right VolumeA:2940.71 - 0.80CB = Adjusted Left VolumeB:590.81 - 0.90D* = ATSAC Benefit0.91 - 1.00ENorth/South Critical Movements =B(N/B)+A(S/B)West/East Critical Movements =B(W/B)+A(E/B)59+403+106+642					B	B:	48						
A: $642$ $4$ A: $646$ $0.00 - 0.60$ AB: $56$ $106$ $0.61 - 0.70$ BA = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC Benefit $0.71 - 0.80$ CC $0.81 - 0.90$ D $0.91 - 1.00$ EC $0.91 - 1.00$ ES $0.91 - 1.00$ ES $59 + 403 + 106 + 642$ $0.61 - 0.70$			EastE	Bound		٨		West	Bound		V/C RATIO	LOS	
B:56B:106CA = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC BenefitNorthBound A:C0.61 - 0.70B:59C0.81 - 0.90D0.91 - 1.00C0.91 - 1.00C0.91 - 1.00C0.91 - 1.00C59S59S59S59S59S59S59S59S59S59S59S59S59S59S59S59S59S59S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50S50 <t< td=""><td></td><td></td><td>A:</td><td>642</td><td></td><td>4 T</td><td></td><td>A:</td><td>646</td><td></td><td>0.00 - 0.60</td><td>Α</td></t<>			A:	642		4 T		A:	646		0.00 - 0.60	Α	
A = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC BenefitNorthBound A: 294 B: 59 $0.71 - 0.80$ 0.81 - 0.90 0.91 - 1.00 E- Results North/South Critical Movements = $S9 + 403 + 106 + 642$ $0.61 - 0.70$ 0.91 - 0.80 0.91 - 0.80 C			B:	56				<b>B</b> :	106		0.61.0.70	P	
A = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC BenefitA: 294 B: 59 $0.71 - 0.80$ C $0.81 - 0.90$ Morth/South Critical Movements = West/East Critical Movements = $59 + 403 + 106 + 642$ $0.71 - 0.80$ C $0.81 - 0.90$						lorthBou	nd	1			0.01 - 0.70	D	
A = Adjusted Inrough/Kight Volume B = Adjusted Left Volume * = ATSAC BenefitB: 59 $0.81 - 0.90$ D* = ATSAC Benefit $0.91 - 1.00$ E• ResultsNorth/South Critical Movements = $B(N/B)$ + $A(S/B)$ West/East Critical Movements = $B(W/B)$ + $A(E/B)$ 59+ 403+ 106+ 642- 0.900		( <del></del> .			A	.: 2	294				0.71 - 0.80	С	
Image: Construction of the second		ted Left V	olume	voiume	В	):	59				0.81 - 0.90	D	
North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = B(W/B) + A(E/B) 59 + 403 + 106 + 642	= AISA							J			0.91 - 1.00	E	
West/East Critical Movements = B(W/B) + A(E/B) 59 + 403 + 106 + 642	103	North	/South C	ritical Mo	vements	= B(N	/B) + A	(S/B)					
59 + 403 + 106 + 642		West	/East Crit	tical Move	ments	= B(W	//B) + A	(E/B)					
V/C =			v	/C = —	59	+ 403	+ 10	)6 +	642	= 0.737	· LC	)S = C	

N/S:		Grand A	ve		W/E:		US 101 N	IB Ramp	S	I/S No:	1
AM/PM:	PM		Comr	nents: F		VITHOUT	PROJEC	CT (YEAF	R 2020)		
COUNT D	ATE:			STU	JDY DATE			C	GROWTH	FACTOR:	
Volume	/Lane/Sig	gnal Conf	iguration	s ——							
	NO	RTHBOU	ND	SC	OUTHBOU	IND	W	ESTBOU	ND	FASTB	OUND
EXISTING	LT	TH 1053	RT O		TH 751	RT 348		TH 0	RT O	LT T	H RT
AMBIENT		1000	•		701	040	•				, 010
RELATED											
PROJECT											
TOTAL	1107	1053	0	0	751	348	0	0	0	120 (	D 676
	ቁ ፚ	~ <u></u>	ርቅ ፋተቅ		수 🚓 イ	ት የካ <del>ላ</del>	ቁ ፚ	수 슶 순	ት የካ ፋ	ላ ፚ 수 ፚ	ᡷ᠊ᠿᢑ᠂ᡥ᠈ᢤ
LANE	1	2			2	1					
	Phasii	ng F	RTOR	Phasi	ing	RTOR	Phasi	ng l	RTOR	Phasing	RTOR
SIGNAL	Prot-F	ix <	none>	Peri	m	OLA	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Split</td><td>Auto</td></non<>	e> <	none>	Split	Auto
Critica	l Movem	ents Diag	ram —								
		U		۲	SouthBou	nd	1				
					A:	376					
				6	B:	0					
		EastE	Bound —	<b>I</b>	٨		West	Bound		V/C RATIO	LOS
		A:	120		Ť			0		0.00 - 0.60	Α
		<b>D</b> .	120					U		0.61 - 0.70	В
					NorthBou A:	nd 527				0.71 - 0.80	С
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume		B: 1	107				0.81 - 0.90	D
* = ATSA(	C Benefit									0.91 - 1.00	Е
	ults —										
	Nort	h/South C	ritical Mo	vements	B = B(N/2)	/B) + A /D) · D	(S/B)				
	west	v∟ast Crit V	/C = -	1107	= A(W) + 376	(B) + B + ( 1425	(=/B) ) +	120	= 1.055	LOS	)= F

N/S: Hope St/US 101 SB Ramps W/E: Temple St I/S No: 2													
AM/PM: PM Comments: FUTURE WITHOUT PROJECT (YEAR 2020)													
COUNT DA	COUNT DATE: GROWTH FACTOR:												
	l ana/Si	anal Conf	iguration										
volumen	Lane/Si		igurations	, 									
EXISTING	232	410	214	130	542	17	147	995	259	536	899	78	
AMBIENT													
RELATED													
PROJECT													
TOTAL	232	410	214	130	542	17	147	995	259	536	899	78	
	ᠳᢩᡒ	↑ ♣ €	_በ ት ላ _ተ	ᠳᢓ	수 _슈 수	ት የካ <del>(</del>		ት 🚓 ና	<u>∖</u> ଜ ଦ _T ହ	᠋ᡩᢩᡘ	ት 🚓 🛱	۹ <del>۱</del> ۵ ۹۱ (	
LANE	1	1 1		1	1 1		1	2	1	1	1 1		
	Phasir	na F	RTOR	Phasi	ina	RTOR	Phasir	na	RTOR	Phasin	a	RTOR	
SIGNAI	Perm			Peri	m	Auto	Prot-F	ix	Auto	Prot-F	ix	Auto	
	Movom	nto Diag											
Critical	woverne	ins Diag	am	L a	SouthBou	nd	1						
					A: 2	280							
				E	<b>3</b> : 1	30							
		EastE	Bound		WestBound 				V/C RATIO		<u>_OS</u>		
		в.	526			P: 147			0.00 - 0.60		4		
		р.	536		I		В.	147		0.61 - 0.7	'O E	3	
					NorthBou	nd				0.71 - 0.8	60 C	2	
A = Adjuste	ed Throu	ugh/Right	Volume		A. 312						о г	)	
ь = Adjuste * = ATSAC	В = Adjusted Left Volume * = ATSAC Benefit					. <b>ə</b> Z				0.04 4.0	 	-	
— Resul	lts —									0.91 - 1.0		-	
	North	n/South C	ritical Mo	vements	= B(N/	′B) + A	(S/B)						
	West	/East Crit	ical Move	ments	= A(W	/B) + B	(E/B)						
		V	/C = —	232	+ 280	+ 49	8 +	536	= 1.015	;	LOS =	F	



### Future without Project Conditions P.M. Peak Hour (Year 2020)

Lane Capacity for SB Rights -

1,425 vphpl



N/S:	Flo	wer St		W/E:		3rc	d St	I/S No:	4			
AM/PM: PM Comments: FUTURE WITHOUT PROJECT (YEAR 2020)												
COUNT D	ATE:		STUD	STUDY DATE: GROWTH FACTOR:								
Volume	e/Lane/Signal (	Configurations										
	NORTH	BOUND	SOUTHBOUND			W	ESTBOU	ND	FAST	BOUND		
EVISTING		H RT	LT	TH	RT	LT	TH	RT	LT	тн	RT	
	140 22		U	510	512	12/	1330	10		U	σει	
PROJECT												
ΤΟΤΑΙ				510	512	107	1320	67		0	156	
	140 22		U	510	JIZ	121	1330	07	U	U	150	
	<u>ቁ</u> ኇ ኇ ኇ	È È Iề ଐề	∮ ፚ ና	` 🊓 🕏	ſ₽ ¢ _T ₽	ቁ ፚ	ት 🚓 ና	ሳተን ፋነ 6	∮ ∱ 수	<b>♣</b> €	የት ሳ	
LANE	1 2		2		1	1	3 1				1	
	Phasing	RTOR	Phasing	Phasing RTOR			Phasing RTOR			Phasing RTOR		
SIGNAL	Perm	<none></none>	Perm	A	Auto	Spli	t	Auto	<none></none>	Fr	ee	
Critica	I Movements I	Diagram ——	So	uthBoun	d	1						
			A:	51	2							
			В:	0	)							
		astBound		•		West	Bound		V/C RATIO	LOS	<u>s</u>	
	A	: 0		Ц Т		A:			0.00 - 0.60	Α		
	В	: 0				В:	127		0.61 - 0 70	R		
			No	rthBoun	d	1			0.74 0.00			
A = Adius	ted Through/F	Right Volume	A:	11	3				0.71 - 0.80	C		
B = Adjus	B = Adjusted Left Volume				16				0.81 - 0.90	D		
- ATSA						J			0.91 - 1.00	E		
Kes	North/Sou	th Critical Mo	vements =	B(N/P	β) + Δ	(S/B)						
	West/East	t Critical Move	ments =	A(W/E	3) + A	(E/B)						
		V/C =	146 +	512	+ 34	9 +	0	= 0.601	LC	)S = B		
				*1	500							

N/S:		Grand A	ve		W/E:		3rd	I/S No:	5	5			
AM/PM:	РМ		Comr	nents: Fl	JTURE V	VITHOUT	PROJEC	T (YEAF	2020)				
COUNT D	ATE:			STU	STUDY DATE: GROWTH						FACTOR:		
	/Lane/Siç	gnal Confi	iguration	s									
	NO	RTHBOUN	D	so	UTHBOU	ND	WF	STROUM	D	FA	STBOUI	D	
EVIETING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
	23	333	U	U	961	/5	U	U	U	163	U	127	
	 							<b> </b>				<u> </u>	
												1	
TOTAL	23	333	0	0	961	75	0	0		163	0	127	
					<u> </u>							<u> </u>	
	ी <u>(</u> } '		የት ላተ	ᠳ_	*****					<u> </u>			
LANE	1	2								1	2		
	Phasir	וg R	TOR	Phasi	ng	RTOR	Phasing RTOR			Phasing RTOR			
SIGNAL Perm Auto					Perm Auto <none> <none></none></none>					Split Auto			
	I Moveme	ents Diagr	'am —										
				s	outhBou	nd	1						
				A	A: 5	18							
				B	3:	0							
		EastB	ound		Λ		West	Bound		V/C RATIO	<u>o</u>	LOS	
		A:	70		Ц Т		A:	0		0.00 - 0.60	<b>)</b>	A	
		B:	163				В:	0		0.61 - 0.7(	0	в	
					lorthBour	nd	1		I	0.74 0.00	,	~	
A – Adius	ted Throu	uah/Riaht	Volume	A	<b>۱:</b> 1	67				U./1 - U.ou	)	C	
B = Adjusted Left Volume				B	3:	23				0.81 - 0.90	)	D	
B = Adjus							]			0.91 - 1.00	)	E	
B = Adjus * = ATSAC	Benefit												
B = Adjus * = ATSA(	Jenefit		-itical Ma										
B = Adjus * = ATSAC	ults — North	1/South Ci	ritical Mo	vements	= B(N/	'B) + A	(S/B)						
B = Adjus * = ATSAC	ults — Nortł West	ז/South C /East Criti	ritical Mo ical Move	vements	= B(N/ = A(W/	'B) + A 'B) + B(	(S/B) (E/B)	460					

Future without Project Conditions P.M. Peak Hour (Year 2020)



#### January 25, 2011 ,Tuesday 12:50:31 PM

# CalcaDB

N/S:         Flower St         W/E:         5th St         I/S No:         7													
AM/PM: PM Comments: FUTURE WITHOUT PROJECT (YEAR 2020)													
COUNT D	COUNT DATE: GROWTH FACTOR:												
Volume	/Lane/Sig	gnal Conf	igurations										
	NO	RTHBOU		SO						FASTBOUND			
	LT	TH	RT	LT	LT TH RT LT			TH	RT	LT	RT		
EXISTING AMBIENT	0	0	0	0	1312	574	229	1629	0	0	0	0	
RELATED PROJECT													
TOTAL	0	0	0	0	1312	574	229	1629	0	0	0	0	
LANE SIGNAL	小 分 分 分 分 か か 分 分 分 分 分 分 分 分 分 分 分 分 分												
Critica	l Moveme	ents Diagi	ram ——										
				S A E	SouthBour A: 3 3:	nd 577 0							
		EastE	Bound		Δ		West	Bound 326		V/C RATI	<u>o</u>	LOS	
		B:	0		T T			B: 229			0	A	
					lorthBour	nd				0.61 - 0.70	0	В	
A = Adius	ted Throu	ugh/Right	Volume	A	<b>\:</b>	0				0.71 - 0.8	D	C	
B = Adjusted Left Volume * = ATSAC Benefit					B: 0				0.81 - 0.9	D I	D		
	ults —									0.31 - 1.0		<b>_</b>	
	Nortl	h/South C	ritical Mo	vements	= A(N/	'B) + A	(S/B)						
	West	t/East Crit V/	ical Move /C =     —	ments 0	= A(W/ + 377	/B) + A + 3/ 1500	.(E/B) 26 +	0	= 0.399	)	LOS =	A	




# CalcaDB

N/S:		Flower	St		W/E:		6th	n St		I/S No:	9	
AM/PM:	PM		Comm	nents: Fl		VITHOUT	PROJEC	T (YEAF	R 2020)			
COUNT D	ATE:			STU	DY DATE			(	GROWTH	FACTOR:		
Volume	/Lane/Sid	inal Conf	igurations									
							14/1				TROUND	
		THBOU	RT	LT	TH	RT	LT	TH	RT		TH	RT
EXISTING	0	0	0	365	1243	0	0	0	0	0	1514 7	700
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	365	1243	0	0	0	0	0	1514 7	700
		$\wedge \wedge \wedge$			$\wedge \wedge \wedge$		λΛ	~ ~ ^		1 ^ ^		N 1_N
LANE	Ч ф	<u>⊤ ⊕ </u>		ਪ _ਦ 2	Τ _Φ τ 4		Ч ф П П П	ー 承 て 		ਪ _ਦ ਜ	「	r yr 1
	Phasin			Phasi			Phasir			Phasing	PTC	פר
SIGNAL				Soli		nones			nones	Split		to
SIGNAL				Shi		none>			none>	Spin	Au	10
Critica	i woveme	ents Diag	ram	۳s	outhBou	nd	7					
				A	.: 3	11						
				E	3: 2	01						
		East	Bound —				West	Bound —				•
		A:	443		Ą		A:	0		<u>WORATIC</u>	<u>/ 103</u>	<u>.</u>
		B:	0				В:	0		0.00 - 0.60	Α	
					' IorthBour	nd				0.61 - 0.70	В	
				A		0				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right 'olume	Volume	E	B:	0				0.81 - 0.90	D	
* = ATSAC	C Benefit						J			0.91 - 1.00	Е	
Resi	ults —				_							
	North	/South C	ritical Mo	vements	= A(N/	B) + A	(S/B)					
	West	/⊨ast Cri	lical Move	ements	= A(W/	′в) + А . ,	(E/B)	442				
		V	/C = —	U	+ 311	+ (	, +	443	= 0.433	L	.OS = A	

N/S:		Alvarado	o St		W/E:		Wilshi	re Blvd		I/S No:	10	)
AM/PM:			Comn	nents: F	UTURE V		PROJEC	T (YEAF	R 2020)	FACTOR:		
COUNTD				SIL	JDY DATE			e	ROWIN	FACTOR:		
Volume	/Lane/Si	gnal Conf	igurations									
	NC	RTHBOU	ND	S	OUTHBOU	IND	W	ESTBOUN	D	FA	STROUN	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	1172	99	0	951	124	117	1245	85	100	1166	57
PROJECT												
TOTAL	0	1172	99	0	951	124	117	1245	85	100	1166	57
	ፋ 슈		ላተን ላካ	ፋ 순	4 <u>6</u> 4	ት ሌ ት	ፋ 순	4 <u>6</u> 4	የተን ፋካ	ፋ ቍ 4	2 <u>.</u>	የተን ላካ ያ
LANE	- 4-	2 1		- 4	2		1	1   1	> · ·	1 /	' (++) + 1   1	
	Phasi	ng F	RTOR	Phas	ing	RTOR	Phasir	ng F	RTOR	Phasin	g	RTOR
SIGNAL	Perr	n	Auto	Per	m	Auto	Pern	n .	Auto	Perm		Auto
Critica	i wovem	ents Diag	ram	L.	SouthBou	nd	1					
					A: 3	358						
				1	B:	0						
		EastE ∡·	Bound		Δ		Westl	Bound 665		V/C RATI	<u>o l</u>	<u>_OS</u>
		B:	100				B:	117		0.00 - 0.6	0 4	4
					NorthBou	nd				0.61 - 0.7	0 E	3
	fod Thr-	uah/Diati	Values		A: 4	124				0.71 - 0.8	0 0	C
A = Adjus B = Adjus * = ATSAC	ted Left	volume	voiume	1	B:	0				0.81 - 0.9	0 [	D
	ilts —			<u> </u>			J			0.91 - 1.0	0 E	E
Nest	Nort	h/South C	ritical Mo	vements	s = A(N/	/B) + B	(S/B)					
	Wes	t/East Crit	ical Move	ments	= A(W	/B) + B	(E/B)					
		V	/C = —	424	+ 0	+ 60 1500	65 +	100	= 0.723	5	LOS =	С

N/S:	Ве	audry	Ave		W/E:		Wilshi	re Blvd		I/S No:	11
AM/PM:	PM		Comm	ents: Fl	JTURE	WITHOUT	PROJEC	CT (YEAF	R 2020)		
	ATE:			STU	IDY DAT	E:			GROWTH	FACTOR:	
Volume	/Lane/Signa	al Conf	igurations								
	NORT	HBOU	ND	SC	UTHBOI	IND	W	ESTBOUI	ND	FAS	BOUND
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT
EXISTING	5	0	35	255	50	619	9	801	0	0 1	028 32
PROJECT											
TOTAL	5	0	35	255	50	619	9	801	0	0	028 32
					• •	· · · · ·					
LANE	ሻ ቆ ^ር ተ	<u> </u>	אדיי ייז   <b>1</b>	ሻ ፈቻ 1	イ 浜 イ    <b>1</b>	τ _δ ι ^ρ «τν   1	^역 전 <b>1</b>	イ 浜 イ <b>1</b>	مله ما <del>را</del>	비값       비값       비값       1       2	新 G P W
	Phasing	F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	RTOR
SIGNAL	Split		Auto	Spli	t	Auto	Pern	n <	none>	Perm	Auto
Critica	I Movement	ts Diag	ram ——		SouthBou	und	1				
				A	A:	335					
				E	B:	255					
	Γ	EastE	Bound		Λ		West	Bound		V/C RATIO	LOS
		R.	0		T		B·	420		0.00 - 0.60	Α
	L	_	•	<u> </u>	l JorthBou	und				0.61 - 0.70	В
				A	A:	40				0.71 - 0.80	С
A = Adjus B = Adjus	ted Through	n/Right lume	volume	E	B:	5				0.81 - 0.90	D
										0.91 - 1.00	E
Rest	North/S	South C	ritical Mo	vements	= A(N	I/B) + A	(S/B)				
	West/E	ast Crit	tical Move	ments	= B(W	//B) + A	(E/B)				
		V	/C = —	40	+ 335	+ 9 *1425	) +	514	= 0.560	L	DS = A

N/S:	F	rancisc	o St		W/E:		Wilshi	re Blvd		I/S No:	12
AM/PM:	PM		Comn	nents: FL		WITHOUT	PROJEC	CT (YEAF	R 2020)		
COUNT D	ATE:			STU	DY DATI	≣:		C	GROWTH	FACTOR:	
	/Lane/Sig	jnal Conf	iguration	s —							
	NO	RTHBOU	ND	so	UTHBOI	IND	W	ESTBOU	ND	FAST	ROUND
	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT 1	TH RT
EXISTING	101	0	90	55	10	30	51	770	11	14 11	87 146
AMBIENT											
RELATED											
PROJECT											
TOTAL	101	0	90	55	10	30	51	770	11	14 11	87 146
	ᡩᢩᢓ᠇᠂	ት	ሰት ላ	∮ ฏ	수 쇼 4	ᡩ᠇ᢀ᠂ᡬ		수	ላተ ላካ	<u> </u>	ን ማ ቀን
LANE	1		1		1		1	1 1			
	Phasin	ng F	RTOR	Phasir	ng	RTOR	Phasi	ng l	RTOR	Phasing	RTOR
SIGNAL	Perm	1	Auto	Pern	n	Auto	Perr	n	Auto	Perm	Auto
Critica	I Moveme	ents Diag	ram —	∟s	outhBou	ind	1				
				A		95					
				В	:	55					
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS
			667		Ť		A:	391		0.00 - 0.60	Α
		В:	14		I		в:	อไ		0.61 - 0.70	В
					lorthBou	nd	1			0 71 - 0 80	C
A = Adius	ted Throu	ıah/Riaht	Volume	A		101				0.71 - 0.00	U
B = Adjus	ted Left V	/olume		В		101				0.81 - 0.90	D
= AISAU										0.91 - 1.00	E
Rest	North	n/South C	ritical Mo	vements	= B(N	/B) + A	(S/B)				
	West	/East Crit	ical Move	ements :	= B(W	//B) + A	(E/B)				
		V	/C =	101	+ 95	+ 5	1 +	667	= 0.539	LOS	6= A
		•	-		,	*1500					

#### Future without Project Conditions P.M. Peak Hour (Year 2020)





#### Future without Project Conditions P.M. Peak Hour (Year 2020)

N/S:		Grand /	Ave		W/E:		Wilshir	e Blvd		I/S No:	15
AM/PM:	PM		Comm	ents: Fl	JTURE W	VITHOUT	PROJEC	T (YEAF	R 2020)		
COUNT D	ATE:			STU	IDY DATE	:		C	GROWTH	FACTOR:	
Volume	/Lane/Sig	gnal Conf	igurations								
	NO	RTHBOU		SO	UTHROU		WF	STROU		FASTE	
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT 1	TH RT
EXISTING	0	0	0	5	1429	176	42	49	0	0	6 532
FROJECT											
TOTAL	0	0	0	5	1429	176	42	49	0	0	6 532
LANE	ी कि Phasir		È IP IIP ↓ ↓ ↓	ी ₍ ] 1 Phasi	수 슈 수 2 1	È ℓ ^è ⊄Ì ^è	ी ्री ↓ 1 Phasin		È rÌ ी∳ Ì I I I I I I I I I I I I I I I I I I I	아 슈 수 á	
SIGNAL	<none< td=""><td>····</td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Perm</td><td>) &lt;</td><td>none&gt;</td><td>Perm</td><td>Auto</td></none<>	····	none>	Spli	t	Auto	Perm	) <	none>	Perm	Auto
Critica	l Moveme	ents Diag	ram ——								
		J		S A E	SouthBour	nd 103 5					
		East	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	269		Ť		A:	91		0.00 - 0.60	Α
		В:	0				B:	42		0.61 - 0.70	В
					IorthBour	nd 0			_	0.71 - 0.80	С
A = Adjus B = Adjus	ted Throu ted Left V	ugh/Right /olume	t Volume	E	3:	0				0.81 - 0.90	D
* = ATSAC	C Benefit				L					0.91 - 1.00	Е
Resi	ults —										
	North	n/South C	Critical Mov	ements	= A(N/	(B) + A	(S/B)				
	west	/East Cri	/C =	0	= B(W/ + 403	(B) + A + 4 1500	(E/B) 2 +	269	= 0.406	i LOS	6 = A

# CalcaDB January 25, 2

N/S:		Alvarado	o St		W/E:		7t	h St		I/S No:	16	
AM/PM:	PM		Comn	nents: Fl	UTURE V	VITHOUT	PROJE	CT (YEAI	R 2020)			
COUNT D	ATE:			STU	JDY DATE	E:		(	GROWTH	FACTOR:		
Volume	e/Lane/Sig	gnal Conf	igurations	s —								
	NO	RTHBOU	ND	SC	UTHBOU	IND	W	FSTBOU	ND	FAST	BOUND	
EVISTING	LT	TH	RT	LT	TH	RT	LT	TH	RT		TH R	λT 4 Ε
	U	1056	00	U	930	09	U	012	100	<u> </u>	59 I	15
PROJECT												
TOTAL	0	1058	80	0	938	69	0	812	106	0 7	<b>759</b> 1 ⁻	15
	<b>ά</b> Δ		ላ ተን ላት	<b>6</b> Δ		- ሌ (ተያ	<b>φ</b>			<b>6</b> Δ Δ	۰ م	· (+-)
	י עד ריין	└ 供 โ 2   1		י <del>ע</del> ר	_ (∰ ⊺ 2		י עד רדר	 		, ⊥ (∮ 'r 1	₩, 4, ¹ /	۳ <b>۲</b>
		<u>-</u>			<u> </u>			•				
	Phasi	ng F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	RTO	R
SIGNAL	Pern	n	Auto	Perr	n	Auto	Perr	n	Auto	Perm	Aut	0
	Moyom	onte Diag	ram —									
Cilica		una Diagi		_s	SouthBou	nd	]					
				ļ	A: 3	336						
				E	B:	0						
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS	
		A:	437		Ť		A:	459		0.00 - 0.60	Α	
		B:	0		I		В:	0		0.61 - 0.70	В	
					NorthBou	nd 379				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume		3-	0				0.81 - 0.90	D	
* = ATSAC	C Benefit					•	J			0.91 - 1.00	Е	
Res	ults —											
	Nort	h/South C	ritical Mo	vements	= A(N/	/B) + B	(S/B)					
	West	t/East Crit	ical Move	ements	= A(W	/B) + B	(E/B)					
		V	/C = —	379	+ 0	+ 4	59 +	0	= 0.489	LO	S=A	
					*	1500						

#### Future without Project Conditions P.M. Peak Hour (Year 2020)

↑

| N

Ві	xel Street		
	35 	↓ 130 ← 695 ↓ 216	7th Stree
- 74 - 732 - 429 -		▲ ↓ ↓ 128 132 €	63
1) Lane Capacity for WB L Number of Lanes -	.efts -	900 vphpl 1	
WB Left V/C -		<u>216</u> 900	
	=	0.240	
Lane Capacity for EB T	hroughs -	1,500 vphpl	
Number of Lanes -		1	
EB Through V/C -		732 1,500	
	=	0.488	
Lane Capacity for EB R	ights -	900 vphpl	
Number of Lanes -		1	
EB Right V/C -		<u>429</u> 900	
Critical V/C -	= 0.240	0.477 + 0.488	
	=	0.728	
or			
Lane Capacity for EB L	efts -	1,500 vphpl	
Number of Lanes -		1	
EB Left V/C -		74 1,500	
	=	0.049	

Number of Lanes -

WB Through V/C -	{ <u>695</u>	+ 3,000	<u>130</u>		
	=	0.275			
Critical V/C -	0.049	+	0.275		
	=	0.324			
2) Lane Capacity for NB & S	B Directio	on -	1,500 v	phpl	
Number of Lanes -			1 left 1 through/right	t	
Critical V/C -	{ <u>128</u>	+	407 1,500	+	}
or	{ <u>85</u>	+	132 1,500	+	}
	=	0.415			
Intersection V/C = 1.143	_	0.100	=	1.043	LOS F

# CalcaDB

N/S:	Francis	co St		W/E:		7th	n St		I/S No:	1	8
AM/PM:	PM	Comm	nents: FU	TURE W	VITHOUT	PROJEC	T (YEAF	R 2020)			
COUNT D	ATE:		STU	DY DATE			C	GROWTH	FACTOR:		
volume	Lane/Signal Con		, 			·					
		IND RT		UTHBOU TH	ND RT		ESTBOUI TH	RT		STBOUN TH	RT
EXISTING	175 51	386	105	48	86	81	873	43	26	686	34
AMBIENT											
RELATED											
PROJECT											
TOTAL	175 51	386	105	48	86	81	873	43	26	686	34
	\$ <u>A</u> A A A A	ት የ	\$ <del>.</del>	4 <u>4</u> 4	⟨π} ⟨n ¢	ፋ 🕂	4 <u>6</u> 4	ት የተ	ፋ 슈 4	<u>ک</u> ۾ ۲	ᡩ᠇᠋ᡷ᠂ᡬ᠇
LANE		<b>1</b>	1	י _{ליי} א י 1		1	」 1     1		<b>1</b>	' (++) ' 1 / /	1
	Phasing	RTOR	Phasir		RTOR	Phasir	na l	RTOR	Phasin	a	RTOR
SIGNAL	Perm	Auto	Perm	ן ו	Auto	Pern	n	Auto	Perm		Auto
Critica	I Movements Diag	gram ——									
			S	outhBou	nd	]					
			A	: 1	34						
			В	: 1	05						
	East	Bound		Δ		Westl ∆·	Bound 458		V/C RATE	<u>o</u>	<u>LOS</u>
	B.	26		T		R.	81		0.00 - 0.6	0	A
	D.	20		 orthBour	ad ———		U1		0.61 - 0.7	0	В
			A	: 3	86				0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Through/Righ ted Left Volume	nt Volume	В	: 1	75				0.81 - 0.9	0	D
* = ATSAC	C Benefit					]			0.91 - 1.0	0	E
Resi	Jits North/South	Critical Ma	vomente	A/NI/	(B) . D	(S/B)					
	West/East Cr	itical Move	ments =	– A(N/ = A(W/	/B) + B	(E/B)					
			386	+ 105	+ 45	58 +	26	0 590		108-	Δ
		v/C =		*	1500			= 0.580		200 -	2

#### Future without Project Conditions P.M. Peak Hour (Year 2020)



N/S:		Flower	St		W/E:		7th	n St		I/S No:	20
AM/PM:	PM		Comm	nents: Fl	UTURE V	VITHOUT	PROJEC	T (YEAF	R 2020)		
COUNT D	ATE:			STL	JDY DATE	:		C	GROWTH	FACTOR:	
	e/Lane/Sig	gnal Conf	igurations	s —							
	NO	RTHBOU	ND	SC	UTHBOU	IND	W	ESTROUI	ND	FAS	TBOUND
	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT	TH RT
	U	0	U		2165	157	143	866	U	U	868 221
PROJECT											
TOTAL					0405	457	4 4 2	000			000 001
IUIAL	U	U	U	11	2105	15/	143	000	U	U	808 221
	₲ ᠿ	ት _ଚ ୁ ୍	ᡷ᠇᠋᠈ᡧᠯ	₲₯	수 🚓 수	ት ሳት ላ _ት	₲₯	ት 🚓 ና	ት ሳ _ት ላ	∮ ኇ ዯ	\$\$ \$\$ \$\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
LANE				1	2 1		1	2	·		1
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasir	ng I	RTOR	Phasing	RTOR
SIGNAL	<none< td=""><td><del>?</del>&gt; &lt;</td><td>none&gt;</td><td>Spl</td><td>it</td><td>Auto</td><td>Pern</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td>Auto</td></none<>	<del>?</del> > <	none>	Spl	it	Auto	Pern	n <	none>	Perm	Auto
— Critica	I Movem	ents Diag	ram ——		SouthBow	nd					
					A: 6	500					
				E	B:	77					
		East	Bound —		A		Westl	Bound —		<u>V/C RATIO</u>	LOS
		<b>A</b> :	545		4		A:	433		0.00 - 0.60	 A
		В:	0				<b>B:</b>	143		0.61 - 0.70	в
		L			NorthBou	nd	1			0.71 - 0.80	-
A = Adjus	ted Thro	ugh/Right	t Volume		<b>\:</b>	0				0.01 0.00	
B = Adjus * = ATSA0	ted Left V C Benefit	/olume		E	3:	0				0.01 - 0.90	-
	ults —									0.91 - 1.00	E
	Nort	h/South C	critical Mo	vements	= A(N/	′B) + A	.(S/B)				
	West	t/East Cri	tical Move	ments	= B(W/	/B) + A	(E/B)				
		v	/C = —	0	+ 600	+ 14	43 +	545	= 0.789	) L(	OS = C
		-			*	1500					

N/S:	Olive	Ave		W/E:		7ti	n St		I/S No:	21	
AM/PM:	PM	Comm	ents: FUT	URE WI	тноит	PROJE	CT (YEAR	R 2020)			
COUNT D	ATE:		STUDY	Y DATE:			(	GROWTH	FACTOR:		
Volume	e/Lane/Signal Co	nfigurations	;								
	NORTHBO	UND	SOUT	THBOUN	D	W	ESTBOU	ND	FAS	STROUND	)
FYISTING	LT TH	RT		TH	RT	LT	TH	RT		TH	RT
	100 1237	105	U	U	U	U	020	239	U	1055	U
RELATED											
PROJECT											
TOTAL	106 1257	165	0	0	0	0	828	239	0	1053	0
LANE				<b>♣</b> ♣	۹ <del>۱</del> ۹ ۹۱	ी की की कि	← 余 行 2	לקלי לז לקלי לז <b>1</b>	\$ & A	`∰ € !	ላተን ሳ <u>ገ</u>
	Phasing	RTOR	Phasing	R	TOR	Phasi	ng	RTOR	Phasing	g R	TOR
SIGNAL	Split	Auto	<none></none>	<n< td=""><td>one&gt;</td><td>Perr</td><td>n</td><td>Auto</td><td>Perm</td><td><n< td=""><td>ione&gt;</td></n<></td></n<>	one>	Perr	n	Auto	Perm	<n< td=""><td>ione&gt;</td></n<>	ione>
Critica	I Movements Dia	gram ——	Sou A: B:	uthBound 0	d 	]					
	Eas	tBound		٨		West	Bound		V/C RATIO	<u>) Lo</u>	<u> </u>
	A:	527		Ť		A:	414		0.00 - 0.60	) А	
	B:	0				В:	0		0.61 - 0.70	) В	
	L		Nor	rthBound	1 				0 71 - 0 90	- -	
A = Adjus	ted Through/Rig	ht Volume	A:	38	2				0.01 0.00	-	
B = Adjus * = ATSAC	ted Left Volume		B:	10	6				0.81 - 0.90	D	
Res	ults		L			J			0.91 - 1.00	) E	
i i con	North/South West/East C	Critical Mo ritical Move	vements = ments =	A(N/B B(W/B	) + A 3) + A	(S/B) (E/B)					
		V/C =	382 +	0 *1	+ (	) +	527	= 0.536	, I	LOS = /	4

# CalcaDB

N/S:		Alamed	a St		W/E:		7th	St		I/S No:	2	2
AM/PM:	PM		Comm	ents: FL	ITURE V	VITHOUT	PROJEC	T (YEAF	R 2020)			
COUNT D	ATE:			STU	DY DATE	:		(	GROWTH	FACTOR:		
Volume	/Lane/Si	gnal Conf	igurations	;								
	NC	RTHBOU	ND	SO	UTHBOU	IND	W	STBOU	ND	FA	STBOU	ND
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	82	811	93	115	956	9	108	655	82	116	1026	142
PROJECT												
TOTAL	82	811	93	115	956	9	108	655	82	116	1026	142
LANE SIGNAL	<ul> <li>I</li> <li>Phasi</li> <li>Perr</li> </ul>	수 슈 수 1   1 ng I n	♪ / [♪] 4/ [↓]       RTOR Auto	I → Phasin	↑ ∰ ↑ 1   1 ng	À r ∰ A TOR Auto		↑ ∰ ↑ 1   1 ng	À I ^A IIIÀ NTOR Auto		₽ ф 4 1   g	[▶] ♪ ↓ ↓ 1 RTOR Auto
Critica	l Movem	ents Diag	ram ——	S A B	outhBou : 4 : 1	nd 183						
		East	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS
		A.	564		T			309		0.00 - 0.6	D	A
		В:	116		I		В:	108		0.61 - 0.7	D	В
					orthBoui	nd 152				0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	t Volume	R	-	82				0.81 - 0.90	D	D
* = ATSAC	B = Adjusted Left Volume * = ATSAC Benefit 0.91 - 1.00 E											
Resi	ults —											
	Nort	h/South C	ritical Move	vements	= A(N/	/B) + B /B) + ^	(S/B) (E/B)					
	1162	V	/C =	452	+ 115	+ 1( 1425	)8 +	584	= 0.814		LOS =	D

N/S:		Soto	St	W/E: 7th St I/S No: 23									
AM/PM:	PM		Comm	ents: FL	JTURE V	VITHOUT	PROJEC	T (YEAI	R 2020)				
COUNT D	ATE:			STU	DY DATE			(	GROWTH	FACTOR:			
	e/Lane/Sig	gnal Conf	igurations	; <b></b>									
	NO	RTHBOU	ND	SO	UTHBOU		W	ESTBOU	ND	FASTB	OUND		
FXISTING	LT 554	TH 947	RT 34	LT 37	TH 743	RT 70	LT 6	TH 35	RT 12		H RT 3 68		
	554	547	34	57	743	70	0	- 55	12	05 5	5 00		
FROJECT													
TOTAL	554	947	34	37	743	70	6	35	12	83 5	3 68		
	ፋ 슈	<u> </u>	ሳተን ላካ <i>ያ</i>	ፋ 슈	ቀ ሐ ና	₩ ₩	ፋ 슈	ቀ ሐ 4	ት የ ት	<u>ዓ</u>	<u>,                                    </u>		
LANE	· (P	1 1		' (P 1	1 H		· &	' (₩) '   <b>1</b>		· · · · · · · · · · · · · · · · · · ·	₽ 4 <b>₽ '</b> '   <b>1</b>		
	Phasi	na	RTOR	Phasi	na	RTOR	Phasir	na	RTOR	Phasing	RTOR		
SIGNAL	Drot-E		Auto	Dorn		Auto	Soli	'9 •	Auto	Split	Auto		
SIGNAL	1100-1		Auto	I CIII		Auto	opin		Auto	Opin	Auto		
	l Movem	ents Diag	ram —										
		J		∟s	outhBou	nd	٦						
				A	- 4	107							
				в	:	37							
		East	Bound		٨		West	Bound		V/C RATIO	LOS		
		A:	136		Ц Т		A:	53		0.00 - 0.60	Α		
		B:	83				B:	6		0.61 - 0.70	в		
		L			lorthBou	nd	1		1	0.71 - 0 80	С		
A = Adjus	ted Thro	ugh/Righ	t Volume	A	.: 4	191				0.04 0.00	С Р		
B = Adjus * = ATSA0	ted Left V C Benefit	Volume		B		554				0.81 - 0.90	-		
	ults —									0.91 - 1.00	E		
	Nort	h/South C	Critical Mo	vements	= B(N/	/B) + A	(S/B)						
	Wes	t/East Cri	tical Move	ments	= A(W	/B) + A	(E/B)						
		V	//c	554	+ 407	+ 5	3 +	136	- 0.766	LOS	6= C		
		v	/0 -		*	1375			_ 0.700		-		



#### Future without Project Conditions P.M. Peak Hour (Year 2020)

Future without Project Conditions P.M. Peak Hour (Year 2020)



# CalcaDB

N/S:		Flower	St		W/E:		8th	n St		I/S No:	2	:6	
AM/PM:	PM		Comm	nents: Fl	JTURE W	VITHOUT	PROJEC	T (YEAR	R 2020)				
COUNT D	ATE:			STU	IDY DATE			G	ROWTH	FACTOR:			
Volume	/Lane/Sig	nal Conf	igurations	, ——									
	NO	RTHROU		SO			W	ESTROUM		FA	STROU		
	LT	TH	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT	
EXISTING	0	0	0	0	1892	497	102	1984	0	0	0	0	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	0	1892	497	102	1984	0	0	0	0	
	4 ^	$\wedge \wedge \wedge$	<u></u>	4 A	$\land \land \land$	<u> </u>	4 A	$\land \land \land$	<u> </u>	4 ^ /		<u>)                                    </u>	
4     4     1     1     3     4     1													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
Phasing RIOR Phasing RIOR Phasing RTOR Phasing RTOR SIGNAL <a center;"="" href="style=" text-align:="">SIGNAL <a center;"="" href="style=" text-align:="">signal</a></a>													
Critical Movements Diagram													
Critica	Critical Movements Diagram												
				A	.: 4	97							
				E	8:	0							
		East	Bound		٨		West	Bound		V/C RATI	<u>0</u>	<u>LOS</u>	
			0		Ť			522		0.00 - 0.60	D	Α	
		В:	0		I		В:	102		0.61 - 0.7	D	В	
				N A	lorthBour	nd 0				0.71 - 0.80	D	с	
A = Adjus B = Adjus	ted Throu ted Left V	igh/Righ /olume	Volume	E	8:	0				0.81 - 0.90	D	D	
* = ATSAC Benefit 0.91 - 1.00 E													
Results													
North/South Critical Movements = $A(N/B) + A(S/B)$													
West/East Critical Movements = A(W/B) + A(E/B)													
		v	/C = —	0	+ 497	+ 52	22 +	0	= 0.609	1	LOS =	В	
						1500							



N/S:		Figueroa	a St		W/E:	9th S	St/James	M Wood	Blvd	I/S No:	28
AM/PM:	PM		Comn	nents: Fl	UTURE V	VITHOUT	PROJEC	T (YEAF	R 2020)		
COUNT D	ATE:			STL	JDY DATE	E:		G	BROWTH	FACTOR:	
Volume	e/Lane/Si	gnal Conf	iguration	6							
	NC	RTHBOU	ND	SC	OUTHBOU	IND	WF	STROUM	ID	FASTBO	JUND
EXISTING		TH	RT 105			RT		TH	RT O	LT TH	i RT 77 0
	U	1309	195	U	U	U	U	U	U	113 101	
PROJECT											
TOTAL	0	1509	195	0	0	0	0	0	0	773 187	77 0
LANE	ी कि	수 슈 숙 3 1	γ ^β 4 ^γ λ	ी की €	个		ी ती थी। Sheein		фф ф 		,
SIGNAL	Spli	t	Auto	Phasi <non< td=""><td>ng e&gt; &lt;</td><td>none&gt;</td><td><pre>Phasin <none< pre=""></none<></pre></td><td>ig i :&gt; &lt; </td><td>none&gt;</td><td>Split</td><td><none></none></td></non<>	ng e> <	none>	<pre>Phasin <none< pre=""></none<></pre>	ig i :> <	none>	Split	<none></none>
Critica	I Movem	Easte A: B:	3ound		SouthBou A:	nd 0	WestE A: B:	Bound 0 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70	LOS A B
A = Adjus B = Adjus * = ATSAC	ated Thro ated Left C Benefit	ugh/Right Volume	Volume	E	A: 3:	426 0				0.81 - 0.90 0.91 - 1.00	D E
Kes	Nort Wes	h/South C t/East Crit V	ritical Mo tical Move /C = —	vements ements 426	= A(N/ = A(W/ + 0	/B) + A /B) + A + ( 1500	.(S/B) .(E/B) ) +	530	= 0.567	LOS	= A

N/S:	N/S:         Cherry St         W/E:         Pico Blvd         I/S No:         29           AM/PM:         PM         Comments:         FUTURE WITHOUT PROJECT (YEAR 2020)         I/S No:         29												
AM/PM:	PM ATE:		Comm	nents: FL STU	JTURE V		PROJEC	CT (YEAI	R 2020) GROWTH	FACTOR:			
				010									
Volume	/Lane/Sig	gnal Conf	igurations										
	NO	RTHBOU	ND	SO	UTHBOL	IND	W	ESTBOU	ND	FA	STBOU	ND	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	722	671	229	183	0	26	0	896	447	150	657	0	
AMBIENT								_					
RELATED													
PROJECT													
TOTAL	722	671	229	183	0	26	0	896	447	150	657	0	
	ፋ 슈	ት ሐ ዓ	ረተቅ ላካ	ፋ 슈	<u>م ۲</u>	ረት ላ ሂ	ፋ 슈	<u> </u>	∖ ₽₽ ₽₽	ፋ 슈 ረ	2 6 4	⟨᠇ᢩ᠈᠂ᢤ	
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL   Split   Auto   Split   Auto   Perm   OLA   Perm													
Critica	l Moveme	ents Diag	ram										
				S	outhBou								
						14							
				B		101							
		EastE	Bound		Δ		West ∆·	Bound 448		V/C RATI	<u>o</u>	LOS	
		B:	150				B:	0		0.00 - 0.6	0	Α	
					י IorthBou	nd				0.61 - 0.7	0	В	
A Adias	( <b></b>			A		464				0.71 - 0.8	0	С	
A = Adjus B = Adjus	ted Inrol ted Left V	olume	volume	В	: 4	464				0.81 - 0.9	0	D	
							J			0.91 - 1.0	0	E	
Kest	Results												
North/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$													
	West/East Critical Movements = A(W/B) + B(E/B) V/C = *1425 = 0.746 LOS = C												

N/S:	N/S:     Figueroa St     W/E:     Pico Blvd     I/S No:     30       AM/PM:     PM     Comments:     FUTURE WITHOUT PROJECT (YEAR 2020)												
	ATE:			STU	DY DATE	l:		(	GROWTH	FACTOR:			
Volume	/Lane/Sig	inal Conf	igurations										
	NO	RTHBOU	ND	SC	UTHBOL	IND	W	ESTBOU	ND	FA	STBOU	ND	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	160	1546	155	23	324	288	172	846	172	192	625	284	
FROJECT													
TOTAL	160	1546	155	23	324	288	172	846	172	192	625	284	
LANE $\begin{pmatrix} 4 \\ \psi \end{pmatrix} + \dot{\psi} \end{pmatrix} + \dot{\psi} + \dot{\psi} + \dot{\psi} \end{pmatrix} + \dot{\psi} + \dot{\psi} + \dot{\psi} + \dot{\psi} + \dot{\psi} \end{pmatrix} + \dot{\psi} $													
Critical Movements Diagram SouthBound A: 162 B: 23													
		EastE	Bound		٨		West	Bound		V/C RATI	0	LOS	
			313		Ť		A:	423		0.00 - 0.6	0	Α	
		B:	192		I		B:	172		0.61 - 0.7	0	в	
					lorthBou	nd 125				0.71 - 0.8	0	с	
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right ′olume	Volume	F	l: 7	160				0.81 - 0.9	0	D	
* = ATSAC Benefit 0.91 - 1.00 E													
Results													
North/South Critical Movements = A(N/B) + B(S/B)													
West/East Critical Movements = $A(W/B) + B(E/B)$ $V/C = \frac{425 + 23 + 423 + 192}{*1375} = 0.703$ LOS = C													

N/S:     Hoover St     W/E:     Alvarado St/Alvarado Ter     I/S No:     31       AM/PM:     PM     Comments:     FUTURE WITHOUT PROJECT (YEAR 2020)       COUNT DATE:     STUDY DATE:     GROWTH FACTOR:													
COUNT D	ATE:			STU	DY DATE	E:		(	GROWTH	FACTOR:			
Volume	/Lane/Si	gnal Conf	igurations	,									
	NC	RTHBOU	ND	SO	UTHBOL	IND	WF	STBOU	ND	FAS	STROU	ND	
EXISTING		TH	RT	LT	TH	RT	LT	TH	RT		TH	RT	
	U	1150	/19	31	957		110	U	U	U	U		
PROJECT													
TOTAL	0	1150	719	31	957	0	716	0	0	0	0	0	
Image: A start of the sta													
Critical Movements Diagram													
	Critical Movements Diagram SouthBound A: 572 B: 31												
		East	Bound		٨		West	Bound		V/C RATIO	<u>כ</u>	<u>LOS</u>	
		A:	0		Ĭ		A:	358		0.00 - 0.60	)	Α	
		В:	0				В:	358		0.61 - 0.70	)	в	
				A	lorthBou .: (	nd 623				0.71 - 0.80	)	с	
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right Volume	Volume	в	:	0				0.81 - 0.90	)	D	
* = ATSAC	* = ATSAC Benefit 0.91 - 1.00 E												
Results North/South Critical Movements = A(N/B) + B(S/B)													
West/East Critical Movements = $A(W/B) + A(E/B)$													
	West/East Critical Movements = A(W/B) + A(E/B) $V/C = \frac{623 + 31 + 358 + 0}{*1500} = 0.605  LOS = B$												

N/S:	N/S:         Flower St         W/E:         Venice Blvd         I/S No:         32           AM/PM:         PM         Comments:         FUTURE WITHOUT PROJECT (YEAR 2020)         I/S No:         32												
AM/PM:	PM		Comm	nents: F		VITHOUT	PROJEC	CT (YEAF	R 2020)				
COUNT D	ATE:			ST	JDY DATE			G	BROWTH	FACTOR:			
Volume	/Lane/Sig	nal Conf	igurations	s —									
	NOR	THROU		S		ND	W	ESTROUM		FAS	TROUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT		
EXISTING	0	0	0	36	1407	130	66	500	0	0	371 44		
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	36	1407	130	66	500	0	0	371 44		
<pre></pre>													
<													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL <none> <none>     Split     Auto     Perm     <none>     Perm     Auto</none></none></none>													
Critica	Critical Movements Diagram												
					A: 5	12							
					B•	36							
		EastE	Sound 208		Δ		West ∆·	Bound 316		V/C RATIO	LOS		
		ь.	200		T		ь.	66		0.00 - 0.60	Α		
		Р.	U				D.	00		0.61 - 0.70	В		
					NorthBour A:	nd O				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Throug	gh/Right olume	Volume		B:	0				0.81 - 0.90	D		
* = ATSAC Benefit 0.91 - 1.00 E													
Results													
North/South Critical Movements = $A(N/B) + A(S/B)$													
West/East Critical Movements = A(W/B) + B(E/B)													
		V	/C = —	0	+ 512	+ 31	16 +	0	= 0.482	. L	OS = A		
						1300							

N/S:	Grand Ave         W/E:         18th St         I/S No:         33											
AM/PM:	РМ		Comm	nents: FL		VITHOUT	PROJEC	T (YEAF	R 2020)			
COUNT D	ATE:			STU	DY DATE	:		C	GROWTH	FACTOR:		
Volume	e/Lane/Sig	nal Cont	figurations	s								
		THBOU	ND	SO		ND	W	STBOU		FAS	STROUN	
EXISTING		<u>ін</u> 0	178	1 392	1H 990	кі <b>О</b>		ін <b>О</b>	RI 0		1857	218
		v		002				•			1001	210
RELATED												
PROJECT												
TOTAL	0	0	178	392	990	0	0	0	0	0	1857	218
	<u>ዓ</u> ፈ ረ	<u>ት ሐ</u> ና	ላ _ተ ን ላ _ገ <i>Հ</i>	ፋ 슈	수 슈 수	ᡷ᠂ᡁ᠈᠂ᡧ	ፋ 슈	ት	ᡷ᠂ᡁ᠈᠂ᡧ	ፋ ጵ ና	<u>ት</u>	ሰት ሳ
LANE			2	1	3		· •		ν	2	2 1	1
	Phasin	g	RTOR	Phasi	ng I	RTOR	Phasir	ng l	RTOR	Phasing	g F	RTOR
SIGNAL	Perm		Auto	Prot-F	ix <	none>	<none< td=""><td><b>e&gt;</b> &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></none<>	<b>e&gt;</b> <	none>	Split		Auto
Critica	l Moveme	nts Diag	Iram ——									
				۲s	outhBou	nd	7					
				A	.: 3	30						
				В	3:	92						
		East	Bound		٨		West	Bound		V/C RATIO	<u> L</u>	<u>os</u>
			619		Ť		A:	U		0.00 - 0.60	) А	
		в:	U				в:	U		0.61 - 0.70	) В	
		_			IorthBour	nd 98				0.71 - 0.80	) с	
A = Adjus B = Adjus	ted Throu ted Left V	gh/Righ [.] olume	t Volume	B	B:	0				0.81 - 0.90	) D	
* = ATSAC	C Benefit				L					0.91 - 1.00	) Е	
Res	ults —				. /	(D) -	(0/D)					
	North West/	/South ( East Cri	Fritical Mo tical Move	vements	= A(N/ = A(W/	′в) + В /B) + Δ	(S/B) (E/B)					
	11030	V	//C =	98	+ 392	+ (	0 +	619	= 0.708	; I	LOS =	с

N/S:		Olive St         W/E:         6th St         I/S No:         34										
AM/PM:	PM		Comn	nents: FU		VITHOUT	PROJEC	T (YEAF	R 2020)			
	ATE:			STU	DY DATE	E:		G	ROWTH	FACTOR:		
	<u> </u>											
Volume	e/Lane/Si	gnal Conf	iguration	s								
	NC	RTHBOU	ND	SO	UTHBOU	IND	WE	STBOUN	D	FASTB	OUND	
FXISTING	LT	TH	RT 101	LT	TH	RT	LT	TH	RT	LT T	H RT	
AMBIENT		1400	131	U	U		U	U	U	029 12	54 0	
RELATED												
PROJECT												
TOTAL	0	1468	191	0	0	0	0	0	0	829 12	54 0	
		수 쇼 숙	ረ ተን ፈት	ᠳᢩᡒ᠂	ት	ት ቀ	<u>ዓ</u> ታ ·	ት	ረተን ላካ አ		አ ሰ ቀ	
LANE		4 1										
	Phasi	ng F	RTOR	Phasin	ıg	RTOR	Phasir	ng F	RTOR	Phasing	RTOR	
SIGNAL	Spli	t	Auto	<none< td=""><td>\$&gt; &lt;</td><td>none&gt;</td><td><none< td=""><td><b>e&gt;</b> &lt; </td><td>none&gt;</td><td>Split</td><td><none></none></td></none<></td></none<>	\$> <	none>	<none< td=""><td><b>e&gt;</b> &lt; </td><td>none&gt;</td><td>Split</td><td><none></none></td></none<>	<b>e&gt;</b> <	none>	Split	<none></none>	
	l Movem	ents Diag	ram —									
				S	outhBou	nd	1					
				A		0						
				B	:	0						
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS	
		А: В·	417		Ť		R.	0		0.00 - 0.60	Α	
			41/		 a#4bD=:	n d		U		0.61 - 0.70	В	
				A		332				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	В	:	0				0.81 - 0.90	D	
* = ATSA(	C Benefit						]			0.91 - 1.00	E	
Kes	Nort	h/South C	ritical Mo	vements :	= A(N/	/B) + A	(S/B)					
	Wes	t/East Crit	tical Move	ements =	= A(W	/B) + A	(E/B)					
		V	/C =	332 -	+ 0	+ (	) +	417	= 0.429	LOS	= A	
						1500						

N/S:	N/S:         Hope St         W/E:         7th St         I/S No:         35           AM/PM:         PM         Comments:         FUTURE WITHOUT PROJECT (YEAR 2020)         I/S No:         35												
AM/PM:	РМ	Comm	ents: FU	TURE V	VITHOUT	PROJEC	CT (YEAF	R 2020)					
COUNT DA			STU	DY DATE	E:		C	GROWTH	FACTOR:				
Volume	/Lane/Signal Cor	nfigurations											
			50			W	ESTROU		EAS				
	LT TH	RT	LT	TH	RT	LT	TH	RT	LT	TH I	RT		
EXISTING	105 338	138	14	324	29	0	929	90	0	775 1	02		
AMBIENT													
RELATED													
PROJECT													
TOTAL	105 338	138	14	324	29	0	929	90	0	775 1	02		
4 定 수 歳 気 ゆ 4 ゆ 수 歳 気 ゆ 4 ゆ 수 歳 気 ゆ 4 ゆ 수 歳 気 ゆ 4 ゆ 4 む 수 歳 気 ゆ 4 ゆ 4 む 수 歳 気 ゆ 4 ゆ 4 む 4 む 4 む 4 む 4 む 4 む 4 む 4 む 4													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto													
Critical	Critical Movements Diagram												
		5	_s	outhBou	nd	1							
			A	: 1	91								
			В	-	14								
	Eas	tBound		Δ		West	Bound 510		V/C RATIC	<u>LOS</u>	-		
	B	0				B:	0		0.00 - 0.60	Α			
				l arth Bau	nd		•		0.61 - 0.70	В			
			A	ortnboul : З	na 843				0.71 - 0.80	С			
A = Adjust B = Adjust	ed Through/Rigi ed Left Volume	ht Volume	В	: 1	105				0.81 - 0.90	D			
* = ATSAC	* = ATSAC Benefit 0.91 - 1.00 E												
Results													
West/East Critical Movements = $A(W/B) + B(E/B)$													
$V/C = \frac{343 + 14 + 510 + 0}{*1500} = 0.508$ LOS = A													

N/S:		Grand /	Ave		W/E:		7th	n St		I/S No:	36		
AM/PM:	PM		Comm	ents: F		VITHOUT	PROJEC	CT (YEAF	R 2020)				
COUNT D	ATE:			STU	JDY DATE			C	BROWTH	FACTOR:			
Volume	/Lane/Si	unal Conf	igurations										
							14/			FACT			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT		
EXISTING	0	0	0	191	1582	68	0	933	0	3 0	350 144		
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	191	1582	68	0	933	0	0 8	350 144		
	1 1	~ ^ ^		1 ^	~ ~ ^		1 0	~ ^ ^					
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL <none>     Split     Auto     Perm     <none>     Perm     Auto</none></none>													
Critica	I Movem	ents Diag	ram —		SouthBou	n d							
					SoutnBou 4: 3	na 96							
					2. 1	01							
			. <u> </u>		J. I	31							
		Easti ∆·	action and action and action a		Δ		West	467		V/C RATIO	LOS		
		в.					в.			0.00 - 0.60	Α		
		В:	U		I		В:	U		0.61 - 0.70	В		
					NorthBouı ∆.	nd N				0.71 - 0.80	С		
A = Adjus	ted Thro	ugh/Right	Volume		••	۰ ۰				0,81 - 0.90	D		
* = ATSAC	Benefit	oluille			J.	U				0.91 - 1.00	F		
— Resi	ults —									0.31 - 1.00			
	North/South Critical Movements = A(N/B) + A(S/B)												
West/East Critical Movements = A(W/B) + B(E/B)													
		v	/C =	0	+ 396	+ 46 1500	67 +	0	= 0.505	; LO	9S = A		

#### Future without Project Conditions P.M. Peak Hour (Year 2020)



= 0.191

Critical V/C -	0.055	+	0.191	=	0.246						
2) Lane Capacity for NB Lane Capacity for NB	Lane Capacity for NB Throughs - Lane Capacity for NB Left- and Right-turns -										
Number of Lanes -	Number of Lanes - 1 left-turn or 3 throughs 1 right-turn of										
Critical V/C -	<u>1,475</u> 2,700	or	<u>319</u> 1,425	or	<u>135</u> 1,425						
	=	0.546									
Intersection V/C = 1.084	_	0.100	=	0.984	LOS E						

N/S: Glendale Blvd W/E: Temple St I/S No: 38													
AM/PM: PM Comments: FUTURE WITHOUT PROJECT (YEAR 2020)													
COUNT D	COUNT DATE: GROWTH FACTOR:												
Volume	e/Lane/Si	gnal Conf	igurations										
												ND	
	LT	TH	RT	LT	TH	RT	LT TH RT			LT TH RT		RT	
EXISTING	65	1888	21	166	934	224	31	720	294	343	908	83	
FROJECT													
TOTAL	65	1888	21	166	934	224	31	720	294	343	908	83	
4													
	Phasi	ng F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasin	g	RTOR	
SIGNAL	Perr	n .	Auto	Pern	- 1	Auto	Prot-F	Fix	Auto	Prot-Fi	x	Auto	
Critica	l Movem	ents Diag	ram ——										
				<b>S</b>	outhBou	ind	]						
				A	: :	579							
				B		166							
		EastE	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS	
		A.	490		T		A.	507		0.00 - 0.6	D	A	
		Б.	343				В:	31		0.61 - 0.70	D	В	
						na 955				0.71 - 0.80	D	с	
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	в	:	65				0.81 - 0.90	D	D	
* = ATSAC	C Benefit	-			L					0.91 - 1.00	D	E	
Resi	ults —												
North/South Critical Movements = A(N/B) + B(S/B)													
	Wes	t/East Crit	ical Move	ments :	= A(W	/B) + B	(E/B)						
V/C = $\frac{955 + 166 + 507 + 343}{*1425}$ = 1.313 LOS = F													
*1425													

#### Future without Project Conditions P.M. Peak Hour (Year 2020)



Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights



Phase 2) Glendale Boulevard, 1st Street, and 2nd Street - Southbound Lefts, Throughs, and Rights, and
 a.) Westbound Rights on 1st Street
 b.) Westbound Rights on 2nd Street



Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights



I N



Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights



AMPM:       Email:       Comments: FUTURE WITHOUT PROJECT (YEAR 2020)         COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       SOUTHBOUND       EASTBOUND         LT       TH       RT       LT         LT       TH       RT       LT         AMBIENT       IT       TH       RT         RELATED       IT       IT       TH         PROJECT       IT       IT       11         TOTAL       39       589       91       54       429       89       109       1131       192       95       899       1         RELATED       IT       IT       TH       RT       IT       IT       12       1       1       12       1       1       12       1       1       12       1       1       12       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1 <th>N/S:</th> <th></th> <th>Lucas A</th> <th>Ave</th> <th></th> <th>W/E:</th> <th></th> <th>3rc</th> <th>d St</th> <th></th> <th>I/S No:</th> <th>40</th>	N/S:		Lucas A	Ave		W/E:		3rc	d St		I/S No:	40		
COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       SOUTHBOLIND       SOUTHBOLIND       EASTBOLIND       FASTBOLIND         LT       TH       RT       LT       TH       RT       LT       TH       RT         EXISTING       39       589       91       54       429       89       109       1131       192       95       899       1         AMBIENT       Image: State of the s	AM/PM:	РМ		Comm	nents: FL	JTURE V	VITHOUT	PROJEC	CT (YEAF	R 2020)				
Volume/Lane/Signal Configurations         NORTHBOUND         LT       TH       RT       CT       TH       RT         LT       TH       RT       LT       TH       RT       H       TT       H       RT       H       TT       H       RT       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H       H	COUNT D	ATE:			STU	DY DATE			C	GROWTH	FACTOR:			
NORTHROUND       WESTROUND       EASTROUND         EXISTING       SOUTHROUND       LT TH RT         LT TH RT       LT TH RT         LT TH RT       LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         LT TH RT         RELATED         Colspan="2">LT TH RT         LT TH RT </th <th></th> <th>/Lane/Si</th> <th>unal Conf</th> <th>igurations</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>		/Lane/Si	unal Conf	igurations										
LTTHRTLTTHRTLTTHRTLTTHRTAMBIENT395899154429891091131192958991RELATED9795899154429891091131192958991PROJECT901311929589911111111TOTAL395899154429891091131192958991LANE1211111121121LANE1211111121121PhasingRTORPhasingRTORPhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoPermAutoPermAutoPermAutoCritical Movements DiagramSouthBoundA:2590.00 - 0.60A0.61 - 0.70BA = Adjusted Through/Right VolumeB:390.81 - 0.90D0.91 - 1.00EMorth/South Critical Movements =A(W/B)+ B(S/B)0.91 - 1.00E0.91 - 1.00EMorth/South Critical Movements =A(W/B)+ B(S/B)West/East Critical Movements =A(W/B)+ B(E/B)			RTHBOU	ND	so	UTHBOU	ND	w	ESTBOU		FAS	FASTBOUND		
EXISTING 39 589 91 54 429 89 109 1131 192 95 899 1 AMBIENT RELATED PROJECT TOTAL 39 589 91 54 429 89 109 1131 192 95 899 1		LT TH RT				LT TH RT			ТН	RT	LT	TH RT		
AMBIENT       Image: constraint of the second consecond conseconstraint constraint of the second constrai	EXISTING	39	589	91	54	429	89	109	1131	192	95	899 11		
RELATED       Image: constraint of the second constrese conseconstraint on the second constraint on the s	AMBIENT													
PROJECT       Image: constraint of the state of the sta	RELATED													
TOTAL 39 589 91 54 429 89 109 1131 192 95 899 1 $4 a^{2} + a$	PROJECT													
LANE $4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 $	TOTAL	39	589	91	54	429	89	109	1131	192	95	899 11		
LANE $1 2 1 1 1 1 1 1 1 1 1 2 1 1 1 2 1 1$ Phasing RTOR Phasing RTOR		\$ ዯ	4 <u>6</u> 4	ረተው ላካ ረ	ፋ 순	<u> </u>	ት የ ት	ፋ 슈	<u> </u>	ላተን ላካ 🖌	ፋ 순 수			
Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       RTOR         SIGNAL       Perm       Auto       Perm       Auto       Perm       Auto       Perm       Auto         Critical Movements Diagram       SouthBound       A:       259       B:       54       U/C RATIO       LOS         A:       450       A:       566       0.00 - 0.60       A       0.61 - 0.70       B         B:       95       VorthBound       A:       295       0.71 - 0.80       C         A:       295       B:       33       0.91 - 1.00       E         * = Atjusted Through/Right Volume       B:       33       0.91 - 1.00       E         * = Atjusted Left Volume       A:       295       0.91 - 1.00       E         North/South Critical Movements =       A(N/B) + B(S/B)       0.91 - 1.00       E	LANE	· (+	· (++) + 2	<pre> ' '</pre>	' ( ⁴ )									
SIGNAL       Perm       Auto       Perm       Auto       Perm       Auto       Perm       Auto         Critical Movements Diagram		Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng l	RTOR	Phasing	RTOR		
Critical Movements Diagram       SouthBound         A:       259         B:       54         A:       450         B:       95         A:       566         0.00 - 0.60       A         B:       95         NorthBound       A:         A:       566         0.00 - 0.60       A         B:       109         0.61 - 0.70       B         A:       295         B:       0.71 - 0.80         C       A:         295       0.81 - 0.90         B:       39         * = ATSAC Benefit       0.91 - 1.00         Results       North/South Critical Movements = A(N/B) + B(S/B)         West/East Critical Movements = A(W/B) + B(E/B)       205	SIGNAL	Pern	n	Auto	Pern	n	Auto	Pern	n	Auto	Perm	Auto		
Critical Movements Diagram       SouthBound         A:       259         B:       54         A:       450         B:       95         A:       566         0.00 - 0.60       A         0.61 - 0.70       B         NorthBound       0.71 - 0.80         C       A:       295         B = Adjusted Through/Right Volume       B:       39         * = ATSAC Benefit       0.81 - 0.90       D         * = ATSAC Benefit       0.91 - 1.00       E         North/South Critical Movements =       A(W/B) + B(S/B)       0.91 - 1.00         West/East Critical Movements =       A(W/B) + B(E/B)       0.91														
A: $259$ B: $54$ A: $450$ B: $95$ V/C RATIOLOS0.00 - 0.60AB: $109$ 0.61 - 0.70B0.61 - 0.70BA: $295$ B: $39$ * = ATSAC Benefit $0.81 - 0.90$ North/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$	Critica	I Movem	ents Diag	ram	⊏s	outhBou	nd	7						
B: 54 $A: 450$ $B: 95$ $B: 95$ $B: 95$ $B: 95$ $B: 109$ $C$					A	.: 2	259							
EastBoundWestBoundV/C RATIOLOSA:450A:5660.00 - 0.60AB:95B:1090.61 - 0.70BO.61 - 0.70BA:2950.71 - 0.80CA = Adjusted Through/Right VolumeB:390.81 - 0.90D* = ATSAC Benefit0.91 - 1.00EMorth/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$					В		54							
A = Adjusted Through/Right Volume B = Adjusted Left Volume B: 39 * = ATSAC Benefit North/South Critical Movements = A(N/B) + B(S/B) West/East Critical Movements = A(W/B) + B(E/B) $A = A(W/B) + B(E/B)$			East	Bound		٨		West	Bound		V/C RATIO	LOS		
B:95B:109 $0.61 - 0.70$ BA = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC BenefitNorthBound A: $0.71 - 0.80$ CB:39 $0.81 - 0.90$ D $0.91 - 1.00$ ENorth/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$			A:	450		Ť		A:	566		0.00 - 0.60	А		
A = Adjusted Through/Right Volume       NorthBound       0.71 - 0.80       C         A = Adjusted Through/Right Volume       A: 295       0.81 - 0.90       D         B: 39       0.91 - 1.00       E         Results       North/South Critical Movements = A(N/B) + B(S/B)       0.91 - 1.00       E			B:	95		1		В:	109		0.61 - 0.70	В		
A = Adjusted Through/Right Volume       B: 39       0.81 - 0.90       D         * = ATSAC Benefit       0.91 - 1.00       E         Results       North/South Critical Movements =       A(N/B)       + B(S/B)         West/East Critical Movements       = A(W/B)       + B(E/B)						lorthBou	nd 295				0.71 - 0.80	С		
* = ATSAC Benefit 0.91 - 1.00 E — Results North/South Critical Movements = A(N/B) + B(S/B) West/East Critical Movements = A(W/B) + B(E/B)	A = Adjusted Through/Right Volume B = Adjusted Left Volume				B	B: []	39				0.81 - 0.90	D		
Results North/South Critical Movements = A(N/B) + B(S/B) West/East Critical Movements = A(W/B) + B(E/B)	* = ATSA(	C Benefit				L					0.91 - 1.00	Е		
West/East Critical Movements = $A(W/B) + B(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$		ults —	h/South C		vomente	A / N /	(D) . P							
		Wes	t/East Crit	tical Move	ments	= A(N/ = A(W/	/B) + B /B) + B	(S/B)						
$\frac{295 + 54 + 566 + 95}{-0.603} = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.003 = 0.0$			v		295	+ 54	+ 50	66 +	95	- 0 603		OS = B		

N/S:		Lucas A	Ve		W/E:		6tł	n St		I/S No:	41	
AM/PM:	РМ		Comm	nents: FL	JTURE V	VITHOUT	PROJEC	CT (YEAF	R 2020)			]
COUNT D	ATE:			STU	DY DATE	E:		C	GROWTH	FACTOR:		
Volume	e/Lane/Sig	gnal Conf	igurations	;								
	NO	RTHBOU	ND	SO	SOUTHBOUND			ESTBOU	ND	FAST	BOUND	
EXISTING	LT 61	TH 370	RT 68	LT 29	TH 259	RT 114	LT 70	TH 1038	RT 68	LT	TH RT 026 63	
AMBIENT			00	20	200			1000			020 00	
RELATED												
PROJECT												
TOTAL	61	370	68	29	259	114	70	1038	68	170 1	026 63	;
	ፋ 순	<u>ት                                   </u>	ረተ የ	ፋ 슈	<u> </u>	ᡬ᠇᠈ᡧᠯ	ፋ 슈	수 슈 수	ረተን ላካ 🖌	ፋ 슈 수	~ 4 分 余	₲₽₽
LANE		1		- v	1		1	2	<b>1</b>	1 1	<b>1</b>	
	Phasii	ng F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	RTOR	
SIGNAL	Pern	n /	Auto	Pern	n	Auto	Perr	n	Auto	Perm	Auto	
	l Movem	ents Diag	ram —									
		J		۲s	outhBou	nd	]					
				A	.: 4	102						
				B		29						
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS	
		A:	545		Ť		A:	519		0.00 - 0.60	Α	
		B:	170				B:	70		0.61 - 0.70	В	
					lorthBou	nd	1			0.71 - 0.80	С	
A = Adjus	ted Thro	ugh/Right	Volume			+33				0.81 - 0.90	П	
B = Adjus * = ATSA	C Benefit	volume		E		01				0.01 4.00	F	
Res	ults —									0.91 - 1.00	E	
	Nort	h/South C	ritical Mo	vements	= A(N/	/B) + B	(S/B)					
	West	t/East Crit	tical Move	ments	= A(W	/B) + B	(E/B)					
		V	/C = —	499	+ 29	+ 51	19 +	170	= 0.741	LC	DS = C	
					*	1500						

N/S: Lucas Ave W/E: Wilshire Blvd I/S No: 42													
AM/PM: PM Comments: FUTURE WITHOUT PROJECT (YEAR 2020)													
COUNT D	COUNT DATE: GROWTH FACTOR:												
Volume	/Lane/Sig	gnal Conf	igurations										
	NO			50			W	STROUM		EAST			
	LT	ТН	RT	LT	ТН	RT	LT TH RT			LT TH RT			
EXISTING	72	279	56	51	327	75	149	1048	86	70 1	003 76		
AMBIENT													
RELATED													
PROJECT													
TOTAL	72	279	56	51	327	75	149	1048	86	70 1	003 76		
	\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$												
LANE													
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
SIGNAL	SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto												
Critical	Moveme	ents Diag	ram ——										
				s	SouthBou	nd	7						
				A		453							
				E	3:	51							
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS		
		A:	712		Ť		A:	971		0.00 - 0.60	Α		
		B:	70		I		B:	149		0.61 - 0.70	В		
					lorthBou	nd 107				0.71 - 0.80	С		
A = Adjust B = Adjust	ed Throu	ugh/Right /olume	Volume		 3:	72				0.81 - 0.90	D		
* = ATSAC	Benefit	June				.e.:				0.91 - 1.00	E		
Resi	ilts —												
	North/South Critical Movements = B(N/B) + A(S/B)												
	West/East Critical Movements = A(W/B) + B(E/B)												
	$V/C = \frac{72 + 453 + 971 + 70}{*1500} = 0.974 \qquad LOS = E$												

# ALTERNATE FUTURE WITH PROJECT CONDITIONS

(YEAR 2020)
N/S:		Grand A	ve		W/E:		US 101 N	B Ramp	S	I/S No:	1
AM/PM:	AM		Comr	nents: F	UTURE V		JECT (YI	EAR 202	20)		
COUNT D	ATE:			STU	JDY DATE			C	GROWTH	FACTOR:	
Volume	e/Lane/Sig	gnal Confi	iguration	s ——							
	NO	RTHBOU	ND	S	OUTHBOU	IND	WE	STBOU	D	FASTE	BOUND
EVISTING	LT	TH	RT	LT	TH	RT		TH	RT		TH RT
	090	212	U	U	1200	531	U	U	U	29	0 719
RELATED											
PROJECT											
TOTAL	696	212	0	0	1268	531	0	0	0	29	0 719
	ፋ 🕁	ት 🚓 🕁	ሳተን ላካ	ፋ ፚ	수	ት የነ <del>(</del>	<u>ዓ</u> ታ 4	ት 🚓 ና	ት የ ¹	<u>ላ</u>	<u>ት</u> ር ሰ ቀን
LANE		2			2	1					
	Phasir	ng F	RTOR	Phas	ing	RTOR	Phasin	ig l	RTOR	Phasing	RTOR
SIGNAL	Prot-F	™ <r< td=""><td>none&gt;</td><td>Per</td><td>m</td><td>OLA</td><td><none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td>Auto</td></none<></td></r<>	none>	Per	m	OLA	<none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td>Auto</td></none<>	> <	none>	Split	Auto
Critica	l Movem	ents Diagi	ram —								
		-		۲	SouthBou	nd	]				
					A: 6	34					
					B:	0					
		EastE	Bound -		Λ		WestE	Bound		V/C RATIO	LOS
		р.	20		T		р.	v 0		0.00 - 0.60	Α
		D.	29					U		0.61 - 0.70	В
					NorthBoui	nd				0.71 - 0.80	С
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume		B: 6	96				0.81 - 0.90	D
* = ATŠA(	C Benefit						J			0.91 - 1.00	E
Res	ults —	h/South C	ritical Ma	Vomonto		(B) · ^	(S/B)				
	West	t/East Crit		ements	= D(N/ = Δ(W/	/B) + A	(3/B) (E/B)				
	1103	V/	/C = -	696	+ 634	+ (	(_,_,_, ) +	29	= 0.884	LO	S = D
					~	1423					

#### January 25, 2011 ,Tuesday 12:50:42 PM

# CalcaDB

N/S:	Hope S	t/US 101	SB Ram	ps	W/E:		Temp	ole St		I/S No:	2	
AM/PM:	AM		Comn	nents: FU	JTURE V		JECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	DY DATE	:		C	GROWTH	FACTOR:		
	/l ano/Si	anal Conf	iguration									
Volume				, 			· · · · ·					
		RTHBOU TH	ND RT		UTHBOU TH	ND RT		ESTBOU TH	ND RT		STBOUN	D RT
EXISTING	69	381	105	170	462	44	403	595	218	277	513	266
AMBIENT												
RELATED												
PROJECT												
TOTAL	69	381	105	170	462	44	403	595	218	277	513	266
	∮ ፚ	ት _ጨ	\$ fÞ 4 _T Þ	५ ुि	ት 🚓 ና	^አ ሌ ላተ	ᠳ᠊ᢩᡒ	ት 🚓 ና	⊾ ≩_rፆ 4₸ጶ	ᡧᢩᡒ᠘	Ŷ ∰ Ĝ	۹ _ד ه ۹ _۲
LANE	1	1 1		1	1 1		1	2	1	1	1 1	
	Phasi	ng l	RTOR	Phasir	ng	RTOR	Phasir	ng	RTOR	Phasin	g l	RTOR
SIGNAL	Perr	n	Auto	Pern	<b>n</b>	Auto	Prot-F	ix	Auto	Prot-F	ix	Auto
	l Movem	ente Diag	ram									
Ontica	i woveni	ents blag	am	∟s	outhBou	nd	7					
				A	.: 2	253						
				В		70						
		EastE ∆·	Bound 390		Δ		Westl ∆·	Bound 298		V/C RATI	<u>o L</u>	<u>.0S</u>
		B.	277		T		B.	403		0.00 - 0.6	0 A	A
			211		l Iarrih Davu	l				0.61 - 0.7	0 E	3
				A		243				0.71 - 0.8	o c	;
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	В	:	69				0.81 - 0.9	0 [	)
* = ATSAC	C Benefit						]			0.91 - 1.0	0 E	E
Res	ults —				A /P 1		(0/D)					
	Nort	n/South C	ritical Mo	vements	= A(N/	′в) + В /B) ⊥ ∆	(5/B) (F/B)					
	1103	V	/C =	243	+ 170	+ 40	)3 +	390	= 0.776	i	LOS =	с





Lane Capacity for SB Rights -

1,425 vphpl

Number of Lanes -		2				
SB Right V/C -	{ <u>1,135</u>	x 1,425	<u>0.55</u> }			
	=	0.438				
Critical V/C -	0.061	+	0.438	=	0.499	
or						
Lane Capacity for NB T	hroughs & I	Rights -	1,425	vphpl		
Number of Lanes -		2 1	throughs through/rig	ht		
NB Through/Right V/C -		{ <u>991</u>	+ 4,275	184	or	<u>184</u> 1,425
	=	0.275				
Intersection V/C = 0.743	_	0.100	=	0.643	LOS	В

AM/PM:       Image: Minimized Through Right Volume       Comments:       FUTURE WITH PROJECT (YEAR 2020)         COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       Study DATE:       GROWTH FACTOR:         LT       TH       RT       LT       TH         LT       TH       RT       LT       TH         ABIENT       LT       TH       RT       State	N/S:	FI	ower St		W/E:		3rc	d St		I/S No:		4
COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations         IT       TH       RT         LT       TH       RT         RELATED       Image: Composition of the strength of the strengh of the strength of the strength of the	AM/PM:	AM	Com	nents: F			DJECT (Y	EAR 202	20)			
Volume/Lane/Signal Configurations         SOUTHBOLIND       WESTBOLIND         LT       TH       RT       LT       TH       RT         AMBIENT       I       26       0       1153       137       526       1043       108       0       0       473         AMBIENT       I       I       26       0       0       1153       137       526       1043       108       0       0       473         RELATED       I       I       26       0       0       1153       137       526       1043       108       0       0       473         INT       I       26       0       0       1153       137       526       1043       108       0       0       473         INT       I       26       0       0       1153       137       526       1043       108       0       0       473         LANE       I       2       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I </td <td>COUNT D</td> <td>ATE:</td> <td></td> <td>STU</td> <td>JDY DATE</td> <td>::</td> <td></td> <td>C</td> <td>GROWTH</td> <td>FACTOR:</td> <td></td> <td></td>	COUNT D	ATE:		STU	JDY DATE	::		C	GROWTH	FACTOR:		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		/Lane/Signal	Configuration	s —								
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		NORTH	BOUND	sc	DUTHBOU	ND	W	ESTBOU	ND	FA	STBOU	ND
EASING 1 26 0 0 1153 137 526 1043 108 0 0 473 AMBIENT RELATED 1 1 26 0 0 1153 137 526 1043 108 0 0 473 total 1 26 0 0 1153 137 526 1043 108 0 0 473 total 1 2 1 1 2 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1	EVICTING		TH RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Ambient       Image: Constraint of the second		1	26 0	U	1153	137	526	1043	108	U	U	473
RELATED       Image: constraint of the second state of the second												
TOTAL 1 26 0 0 1153 137 526 1043 108 0 0 473 (4) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2												
TOTAL 1 26 0 0 1153 137 526 1043 108 0 0 473 $4 \stackrel{a}{\phi} \stackrel{a}{\phi} \stackrel{b}{\phi} \stackrel{b}$	FROJECT											
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	TOTAL	1 3	26 0	0	1153	137	526	1043	108	0	0	473
LANE 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		ፋ 슈 수	ት ት ት <del>የ</del>	ፋ 슈	4 <u>6</u> 4	ት ሳት ት	ፋ 슈	<u> </u>	<u></u> ₩	ፋ 순 ሩ		ት ቀ ት
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Perm <a 4"="" href="https://www.energy.com/particular.com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second-com/second&lt;/td&gt;&lt;td&gt;LANE&lt;/td&gt;&lt;td&gt;1 2&lt;/td&gt;&lt;td&gt;&lt;u&gt;(++) +) + + + + + + + + + + + + + + + + &lt;/u&gt;&lt;/td&gt;&lt;td&gt;· 4&lt;/td&gt;&lt;td&gt;2&lt;/td&gt;&lt;td&gt;₽ ' '&lt;br&gt; &lt;b&gt;1&lt;/b&gt;    &lt;/td&gt;&lt;td&gt;' (₽'&lt;br&gt;□ &lt;b&gt;1&lt;/b&gt; □ □&lt;/td&gt;&lt;td&gt;3 1&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;&lt;u&gt;4&lt;/u&gt;} ' '&lt;br&gt; &lt;b&gt;1&lt;/b&gt;   ]&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;PhasingRTORPhasingRTORPhasingRTORPhasingRTORSIGNALPerm&lt;none&gt;PermAutoSplitAuto&lt;none&gt;FreeCritical Movements DiagramSouthBound&lt;br/&gt;A: 577&lt;br/&gt;B: 0EastBound&lt;br/&gt;A: 577&lt;br/&gt;B: 0Atto SPlitV/C RATIO&lt;br/&gt;A: 288&lt;br/&gt;B: 526OUDNorthBound&lt;br/&gt;A: 288&lt;br/&gt;B: 526OUDAttick StressAdjusted Through/Right Volume&lt;br/&gt;B = Adjusted Left Volume&lt;br/&gt;* = ATSAC BenefitNorth/South Critical Movements =B(N/B) + A(S/B)&lt;br/&gt;West/East Critical Movements =B(N/B) + A(S/B)&lt;br/&gt;V/C =V/C =1 + 577 + 526 + 0&lt;br/&gt;*1500Colspan=">Colspan="4"&gt;Clospan="4"&gt;Critical Movements =B(N/B) + A(S/B) West/East Critical Movements =B(N/B) + A(S/B) West/East Critical Movements =B(W/B) + A(S/B) West/East Critical Movements =B(W/B) + A(S/B) *1500</a>					<u> </u>			•     ·				
SIGNAL       Perm       Auto       Split       Auto        Free         Critical Movements Diagram		Phasing	RTOR	Phasi	ing	RTOR	Phasi	ng	RTOR	Phasing	9	RTOR
Critical Movements Diagram $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	SIGNAL	Perm	<none></none>	Peri	m	Auto	Spli	t	Auto	<none:< td=""><td>&gt;</td><td>Free</td></none:<>	>	Free
Critical Movements Diagram           SouthBound           A:         577           B:         0           A:         0           B:         0           A:         0           B:         0           WestBound         V/C RATIO         LOS           0.00 - 0.60         A           B:         0         A:         288           0.00 - 0.60         A           0.61 - 0.70         B           0.61 - 0.70         B           0.71 - 0.80         C           A:         13         B:         526           0.61 - 0.70         B           0.71 - 0.80         C           0.81 - 0.90         D           0.91 - 1.00         E           Results         0.91 - 1.00         E           North/South Critical Movements =         B(N/B) +         A(S/B)           West/East Critical Movements =         B(W/B) +         A(E/B)           V/C =         1 + 577 + 526 + 0         =         0.666         LOS =         B												
A = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC Benefit North/South Critical Movements = $B(N/B) + A(S/B)$ $V/C = \frac{1 + 577 + 526 + 0}{*1500} = 0.666$ V/C = B	Critica	I Movements	Diagram		SouthBou	nd	7					
$B: 0$ $A: 288$ $B: 526$ $V/C RATIO LOS$ $0.00 - 0.60 A$ $B: 526$ $0.61 - 0.70 B$ $0.91 - 1.00 E$ $V/C = \frac{1 + 577 + 526 + 0}{*1500} = 0.666 LOS = B$					а: 5	77						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					<b>D.</b>	•						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					5.	U		_				
$A = Adjusted Through/Right VolumeB = Adjusted Left Volume* = ATSAC BenefitNorth/South Critical Movements = B(N/B) + A(S/B)West/East Critical Movements = B(W/B) + A(E/B)V/C = \frac{1 + 577 + 526 + 0}{*1500} = 0.666 LOS = B$		Γ	EastBound — ∆·		Λ		West 	Bound 288		V/C RATION	<u>0</u>	LOS
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$					T			200		0.00 - 0.60	)	Α
A = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC Benefit0.71 - 0.80CB:130.71 - 0.80CB:10.81 - 0.90D0.91 - 1.00E0.91 - 1.00EMorth/South Critical Movements =B(N/B) + A(S/B)North/South Critical Movements =B(W/B) + A(E/B)V/C = $\frac{1 + 577 + 526 + 0}{*1500}$ = 0.666LOS =B			в: 0		I		В:	526		0.61 - 0.70	)	в
$A = Adjusted Through/Right VolumeB = Adjusted Left Volume* = ATSAC Benefit B: 1 B: 1 0.81 - 0.90 0.91 - 1.00 E 0.91 - 1.00 E V/C = \frac{1 + 577 + 526 + 0}{*1500} = 0.666 LOS = B$				<u>י</u> ן	NorthBou	nd	Ī			0.71 - 0.80	)	с
$B = Adjusted Left Volume * = ATSAC Benefit B: 1 0.81 - 0.90 D 0.91 - 1.00 E 0.91 - 1.00 E North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = B(W/B) + A(E/B) V/C = \frac{1 + 577 + 526 + 0}{*1500} = 0.666 LOS = B$	A = Adjus	ted Through	/Right Volume		4:	13				0.04 0.04		-
$\frac{0.91 - 1.00 \text{ E}}{0.91 - 1.00 \text{ E}}$ North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = B(W/B) + A(E/B) $\frac{1 + 577 + 526 + 0}{*1500} = 0.666 \text{ LOS} = B$	B = Adjus * = ATSA0	ted Left Volu C Benefit	ime	E	B:	1				0.81 - 0.90	J	U
North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = B(W/B) + A(E/B) $V/C = \frac{1 + 577 + 526 + 0}{*1500} = 0.666$ LOS = B	Doo	ulte		L			_1			0.91 - 1.00	)	E
West/East Critical Movements = B(W/B) + A(E/B) $V/C = \frac{1 + 577 + 526 + 0}{*1500} = 0.666$ LOS = B	Resi	North/Sc	outh Critical Mo	ovements	= B(N/	′B) + ∆	(S/B)					
$V/C = \frac{1 + 577 + 526 + 0}{*1500} = 0.666$ LOS = B		West/Fa	st Critical Mov	ements	= B(W	_, ∓ ^ /B) + ∆	(E/B)					
$V/C = \frac{1}{1500} = 0.666$ LOS = B				1	+ 577	+ 5	26 +	0				_
			V/C = -	-	*	1500		-	= 0.666	;	LOS =	В

N/S:	Grand	l Ave		W/E:		3rd	l St		I/S No:	5	•
AM/PM:	AM	Comm	nents: Fl	JTURE W		JECT (Y	EAR 202	20)			
COUNT D	ATE:		STU	IDY DATE	:		C	GROWTH	FACTOR:		
	/Lane/Signal Co	nfigurations									
	NORTHBO	UND	SC	UTHBOU	ND	W	ESTROU	ND	FAS	STROUM	D
		RT	LT	TH	RT	LT	тн	RT	LT	TH	RT
EXISTING	1/ 68	0	0	1233	163	0	U	0	23	0	88
TOTAL				4000							
IOTAL	17 68	0	0	1233	163	0	0	0	23	0	88
	<u>ዓ</u>	ᡩᡁ᠙ᡪ	∮ ፚ	ት 🚓 🕁	стр «Нъ	<u>ዓ</u> ታ	ት 🚓 ና	<u>ት</u> የት ላ _ገ &	∮ ኇ ኆ	<u>ት</u> 🚓 ጎ	ᡷ᠇᠈ᡧᠯ
LANE	1 2			1 1					1		2
	Phasing	RTOR	Phasi	ng l	RTOR	Phasir	ng	RTOR	Phasing	1	RTOR
SIGNAL	Perm	Auto	Perr	n .	Auto	<none< td=""><td><b>&gt;</b> &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></none<>	<b>&gt;</b> <	none>	Split		Auto
Critical	l Movements Dia	agram ——	S A	SouthBour	nd 98	]					
			E	3:	0						
	Eas	stBound		Δ		Westl	Bound 0		V/C RATIO	<u>2</u>	LOS
	Б.			Ĺ		P.	0		0.00 - 0.60	)	A
	D:	23		 		D.	U		0.61 - 0.70	)	В
				NorthBour	nd	]			0.71 - 0.80	) (	С
A = Adjust B = Adjust	ted Through/Rig	ht Volume		<u>·</u>	7				0.81 - 0.90	)	D
* = ATSAC	Benefit			-		]			0.91 - 1.00	)	E
— Resu	ılts										
	North/South	Critical Mo	vements	= B(N/	B) + A	(S/B)					
	West/East C	ritical Move	ments	= A(W/	B) + A	(E/B)					
			47			_	40				





N/S:		Flower	St		W/E:		5th	n St		I/S No:		7
AM/PM:			Comm	ents: FL פדוו		VITH PRC	JECT (Y	EAR 202	20) SROWTH	FACTOR		
				310	DI DAIL							
Volume	e/Lane/Sig	gnal Conf	igurations									
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOUN	ND DI	FA	STBOU	ND
	LT	TH	RT	LT	ТН	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	0	1404	316	262	1380	0	0	0	0
RELATED PROJECT												
	L	[										
TOTAL	0	0	0	0	1404	316	262	1380	0	0	0	0
LANE	∯ ∯ Phasir			∯ ∯ Phasiu	수 ∰ 수 3   1	▶ / [●] 4 ↓ ┃ ┃ ■ 1	ी ूर्म 1     Phasir	수 ∰ 수 5	È /Ì (†) (†) │	∯ A A	≥ ∰ ∠	ቪ ሶ ጥ
SIGNAL			nones	Soli		Auto	Soli	• · · · · ·	nones		9	
SIGNAL				Shi		Auto	Spin					
Critica	l Moveme	ents Diag	ram ——	S A B	outhBour : 3	nd 51 0						
		East	Bound		٨		West	Bound		V/C RATION	<u>0</u>	<u>LOS</u>
		A:	0		Ť		A. B.	210		0.00 - 0.60	0	Α
		Б.	U		l a na		В.	202		0.61 - 0.70	0	В
					iorthBour	nd 0				0.71 - 0.80	0	с
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right /olume	Volume	В	:	0				0.81 - 0.90	)	D
* = ATSAC	Benefit						J			0.91 - 1.00	D	E
Resi	ults	10 I			. /		(0/D)					
	North West	/South C	tical Mov	vements ments :	= A(N/ = A(W/	в) + А /B) + А	(5/B) (E/B)					
		V	/C =	0	+ 351	+ 27	/6 +	0	= 0.348		LOS =	A



Future with Project Conditions A.M. Peak Hour (Year 2020)

N/S:		Flower	St		W/E:		6th	St		I/S No:	9	
AM/PM:	AM		Comn	nents: FL	JTURE W	/ITH PRC	JECT (YI	EAR 202	20)			
COUNT D	ATE:			STU	DY DATE	:		G	ROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	iguration	s —								
	NO	RTHBOU	ND	SO	UTHBOU	ND	WF	STBOUN	ND	FAS	STBOUN	D
	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	269	1060	0	0	0	0	0	1799	666
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	269	1060	0	0	0	0	0	1799	666
	ፋ 슈	<u>ት                                   </u>	ላተን ላገ ረ	ፋ 슈	ት	ላተን ላካ ;	ᡩ᠋ᢓ᠇᠊ᡝ	ት <u>ሕ</u> ት	ላተን ላነ ረ	ፋ ጵ ና	<u>ት</u>	ሳተን ላነ
LANE		· ••• •		2	<b>4</b>			· ••• •		3	3 1	1
	Phasir	ng F	RTOR	Phasi	ng F	RTOR	Phasin	ng F	RTOR	Phasing	g l	RTOR
SIGNAL	<none< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Spli</td><td>t &lt;</td><td>none&gt;</td><td><none< td=""><td>\$&gt; &lt; </td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></none<></td></none<>	e> <	none>	Spli	t <	none>	<none< td=""><td>\$&gt; &lt; </td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></none<>	\$> <	none>	Split		Auto
Critica	I Movem	ents Diag	ram —	S A	outhBour .: 2	nd 65						
				B	: 1	48						
		EastE	Bound		Λ		WestE ∆·	Bound		V/C RATIO	<u>1 C</u>	<u>.0S</u>
					T			v		0.00 - 0.60	) A	<b>\</b>
		в:	U		I		в:	U		0.61 - 0.70	) E	8
				N	lorthBour	nd	1		<b>I</b>	0 71 - 0 90		
A = Adius	ted Thro	uah/Riaht	Volume	A		0				0.71-0.00	, (	,
B = Adjus	ted Left \	/olume		В	:	0				0.81 - 0.90	) [	)
	Benefit						]			0.91 - 1.00	) E	:
Resi	Nortl	h/South C	ritical Mo	vements	= A(N/	B) + A	(S/B)					
					A ()A()	· · ·	· · ·					
	West	t/East Crit	tical Move	ements :	= A(W/	B) + A	(E/B)					

N/S:	Δ	lvarado	o St		W/E:		Wilshi	re Blvd		I/S No:	1	0
AM/PM:	AM		Comn	nents: F	UTURE W	/ITH PRC	JECT (Y	EAR 202	:0)			
COUNT D	ATE:			STL	JDY DATE	•		G	ROWTH	FACTOR:		
Volume	/Lane/Sigr	nal Conf	iguration	s ——								
	NOR	THBOU	ND	SC	DUTHBOU	ND	W	ESTBOUN	D	FA	STBOU	
	LT	TH	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT
EXISTING	0	886	154	0	1024	191	76	1012	64	111	1262	39
PROJECT												
TOTAL	0	886	154	0	1024	191	76	1012	64	111	1262	39
LANE SIGNAL		À ↔ 4 2   1 3 F	} I ⁰ III 	ी ॄे Phasi	↑     ↓     ↓       2     1       ing     1       n	r) f) f) ↓ ↓ ↓ RTOR Auto			RTOR		Ŷ ∰ Ŷ 1   _ ^ g 	》 ∲ ∯ I RTOR Auto
Critica	l Movemer	nts Diag	ram ——	5 / E	SouthBour A: 4 3:	nd 05 0	]					
	[	EastE	Bound		٨		West	Bound		V/C RATI	0	LOS
		A:	651		Ť		A:	538		0.00 - 0.6	0	A
		Б:	111		 		р.	70		0.61 - 0.7	0	в
				Γ,	NorthBour A: 3	1d 47				0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Throug ted Left Vo	gh/Right olume	Volume	E	3:	0				0.81 - 0.9	0	D
* = ATSAC	Benefit						Ţ			0.91 - 1.0	0	E
Resi	ults North/ West/I	/South C East Crit	ritical Mo tical Move	vements ments	= B(N/ = B(W/	B) + A B) + A	(S/B) (E/B)					
		V	/C =	0	+ 405	+ 7 1500	6 +	651	= 0.685		LOS =	В

AM/PM:       AM       Comments:       FUTURE WITH PROJECT (YEAR 2020)         COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       SOUTHBOUND       WESTBOUND         LT       TH       RT       LT       TH         LT       TH       RT       LT       TH         EXISTING       10       0       25       818       31       741       5       614       0       0       1129	RT 6
COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations	RT 6
Volume/Lane/Signal Configurations         Westbound         NORTHBOUND       Westbound         LT       TH       RT       LT       RT       LT<	RT 6
NORTHBOUND         SOUTHBOUND         WESTBOUND         EASTBOUND           LT         TH         RT         RT	RT 6
LT       TH       RT       LT       RT       LT       RT       LT       RT       LT       RT       LT       RT       LT       RT       RT <th< td=""><td>RT 6</td></th<>	RT 6
EXISTING       10       0       25       818       31       741       5       614       0       0       1129         AMBIENT	6
RELATED	1
PROJECT	
TOTAL 10 0 25 818 31 741 5 614 0 0 1129	6
	ት የተያ
	1
Phasing RTOR Phasing RTOR Phasing RTOR Phasing R	UR
SIGNAL Split Auto Split Auto Perm <none> Perm A</none>	πο
A: 530	
B: 530	
EastBound WestBound V/C RATIO LC	S
A:         565         Δ         A:         322         0.00 - 0.60         A	
B: 0 B: 5 0.61 - 0.70 B	
NorthBound 0.71 - 0.80 C	
A = Adjusted Through/Right Volume B = Adjusted Left Volume B: 10 0.81 - 0.90	
* = ATSAC Benefit 0.91 - 1.00 E	
Results	
North/South Critical Movements = A(N/B) + A(S/B)	
West/East Critical Movements = B(W/B) + A(E/B)	
$V/C = \frac{35 + 530 + 5 + 565}{*1425} = 0.726$ LOS = C	

N/S:	F	ranciso	o St		W/E:		Wilshir	e Blvd		I/S No:	12	2
AM/PM:	AM		Com	nents: Fl	JTURE V		JECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	IDY DATE	E:		(	GROWTH	FACTOR:		
Volume	e/Lane/Sig	nal Con	figuration	s —								
	NO	RTHBOU	ND	SC	UTHBOL	IND	W	STBOU	ND	FAS	TBOUN	D
EVICTING	LT	TH	RT		TH	RT	LT	TH	RT		TH	RT
	36	14	127	9	1	10	194	546	57	75	1367	594
FROJECT												
TOTAL	36	14	127	9	1	10	194	546	57	75	1367	594
	6 ↔ 4	4 4 4	ላ ተ	<b>6</b> φ	$A \neq 4$	4+) 4+ <i>4</i>	<u>к</u> ф.	4 4 4	4	6 A A		ላተን ላካ
		<u>и фри</u>		Ч Ч				」(小)( 1)			<u>++++</u> ++	
								•     •				
	Phasin	g	RTOR	Phasi	ng	RTOR	Phasir	ng	RTOR	Phasing		RTOR
SIGNAL	Perm		Auto	Perr	n	Auto	Perm	١	Auto	Perm		Auto
Critica	I Moveme	nts Diag	ram —									
				S	SouthBou	nd						
				<i>,</i>	A:	20						
				E	3:	9						
		East	Bound		٨		West	Bound		V/C RATIC	<u>) L</u>	<u>.0S</u>
		A:	981		Ϋ́		A:	302		0.00 - 0.60	Å	4
		В:	75				B:	194		0.61 - 0.70	F	3
		L			lorthBou	nd	1			0.74 0.00	-	-
A = Δdius	ted Throu	ah/Riah	t Volume	A		127				0.71 - 0.80	C	•
B = Adjus	ted Left V	olume		E	3:	36				0.81 - 0.90	0	)
^ = AISA(	Benefit						J			0.91 - 1.00	E	
Res	ults —	0				(D) -	(0/5)					
	North	/South C	critical Mo	vements	= A(N/	/B) + B	(S/B)					
	West	r⊨ast Cri	tical Move	ements	= B(W	/B) + A	(E/B)	004				
		v	//C = —	127	+ 9	+ 19	94 +	981	= 0.804	L	.OS =	D
						1500						

#### Future with Project Conditions A.M. Peak Hour (Year 2020)







AM/PM: AM Comments: FUTURE WITH PROJECT (YEAR 2020)		
COUNT DATE: GROWTH FACTO	OR:	
Volume/Lane/Signal Configurations		
	FASTBOUND	-
LT TH RT LT TH RT LT TH RT L	LT TH RT	
EXISTING         0         0         64         1133         276         10         11         0         0	0 44 32	6
TOTAL 0 0 0 64 1133 276 10 11 0	0 44 32	6
	<i>₹</i> ⁺ <del>₩</del> [₩]	чµ 
Phasing RTOR Phasing RTOR Phasing RTOR Pl	hasing RTOR	
SIGNAL <none> <none> Split Auto Perm <none> F</none></none></none>	Perm Auto	
A: 368		
B: 64		
EastBound WestBound V/C	RATIO LOS	
	0-0.60 A	
	I - 0.70 B	
NorthBound 0.71	l - 0.80 C	
A = Adjusted Through/Right Volume	l - 0.90 D	
* = ATSAC Benefit	I-1.00 F	
Results		
North/South Critical Movements = A(N/B) + A(S/B)		
West/East Critical Movements = B(W/B) + A(E/B)		
$V/C = \frac{0 + 368 + 10 + 185}{*1500} = 0.305$	LOS = A	

N/S:		Alvarado	o St		W/E:		7tř	n St		I/S No:	16
AM/PM:	AM		Comm	ents: Fl	JTURE V		JECT (Y	EAR 202	20)		
COUNT D	ATE:			STU	IDY DATE	E:		C	GROWTH	FACTOR:	
Volume	/Lane/Si	anal Conf	igurations								
, eranie							14/			FACTO	
	LT	TH	RT	LT	ТН	RT	LT	TH	RT		TH RT
EXISTING	0	958	66	0	995	80	0	466	70	0 72	29 32
AMBIENT											
RELATED											
PROJECT											
TOTAL	0	958	66	0	995	80	0	466	70	0 72	29 32
	1 1	~ ~ ~			~ ~ ~		1 1	~ ^ ^			
	м Ф		<u>ч</u> руј	Ч Ф		עדעיין <del>(</del>	Ч ф П		עד <i>ו</i> י אין <u>א</u>		
LANE		2 1			2 1			1 1			1
	Phasi	ng F	RTOR	Phasi	ng	RTOR	Phasi	ng l	RTOR	Phasing	RTOR
SIGNAL	Perr	n	Auto	Perr	n	Auto	Pern	n	Auto	Perm	Auto
Critica	l Movem	ents Diag	ram ——								
				S	SouthBou	nd					
				A	4:	358					
				E	3:	0					
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	381		Ť		A:	268		0.00 - 0.60	Α
		В:	0				В:	0		0 61 - 0 70	в
					NorthBou	nd	1			0.74 0.00	-
A = Adius	ted Thro	uah/Riaht	Volume	A	A: 3	841				0.71 - 0.80	C
B = Adjus	ted Left	Volume		E	8:	0				0.81 - 0.90	D
" = AISAC	, Benefit						J			0.91 - 1.00	E
Resi	ults —	h/Cauth C		10 m c = 1 -		(D) · •	(C/D)				
	Nort	n/South C		vements	= B(N/	/D) + A /R) · ^	(3/B) (E/B)				
	wes	vEast Un		0	- D(VV/	א דין טו י בי	(E/D) ) +	381			
		V	/C = —	U	+ 300 *	1500	, +	501	= 0.423	s LOS	6 = A

#### Future with Project Conditions A.M. Peak Hour (Year 2020)

Ν



WB Through V/C -	$\left\{\frac{370}{}\right\}$	+ 3,000	<u>_63</u> }		
	=	0.144			
Critical V/C -	0.023	+	0.144		
	=	0.167			
2) Lane Capacity for NB & S	SB Directio	on -	1,500 v	rphpl	
Number of Lanes -			1 left 1 through/righ	t	
Critical V/C -	{ <u>79</u>	+	572 1,500	+	86_}
or	{ <u>112</u>	+	166 1,500	+	}
	=	0.491			
Intersection V/C = 0.875	_	0.100	=	0.775	LOS C

N/S:	F	rancisc	o St		W/E:		7th	St		I/S No:	1	8	
COUNT D	AM ATE:			STL	JDY DATE			EAR 202	20) GROWTH	FACTOR:			
Volume	/Lane/Sig	nal Conf	igurations	, <u> </u>									
			ND					-STBOU	ND PT		STROUI	ND PT	
EXISTING AMBIENT RELATED	41	11	<b>79</b>	53	269	73	150	599	485	66	555		
PROJECT													
TOTAL	TOTAL       41       11       79       53       269       73       150       599       485       66       555       143         4 $\phi$												
LANE SIGNAL	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$												
Critica	l Moveme	nts Diag	ram —										
				E	SouthBou A: :	nd 342 53							
		East	Bound		٨		West	Bound		V/C RATIO	<u>0</u>	LOS	
		A:	349		Т Т		A:	542		0.00 - 0.60	0	A	
		B:	66		I		В:	150		0.61 - 0.70	)	В	
				1	NorthBou	nd				0.71 - 0.80	)	с	
A = Adjus	ted Throu	gh/Right	Volume		A:	/9				0.81 - 0.90	- 1	- D	
B = Adjus * = ATSAC	B = Adjusted Left Volume * = ATSAC Benefit 0.91 - 1.00 E												
— Resi													
North/South Critical Movements = $B(N/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$													
	North/South Critical Movements = $B(N/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + B(E/B)$ $V/C = \frac{41 + 342 + 542 + 66}{*1500} = 0.591$ LOS = A												

#### Future with Project Conditions A.M. Peak Hour (Year 2020)



N/S:	N/S:     Flower St     W/E:     7th St     I/S No:     20       AM/PM:     AM     Comments:     FUTURE WITH PROJECT (YEAR 2020)												
AM/PM:	MA		Comme	ents: FU	ITURE W	VITH PRC	JECT (Y	EAR 202	20)				
COUNT DA	ATE:			STU	DY DATE			C	GROWTH	FACTOR:			
Volume	/Lane/Sigr	nal Conf	igurations										
		THROU		50			W/F	STROU		EAS	TROUN		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	0	0	74	1009	190	116	880	0	0	430	162	
AMBIENT													
RELATED					1								
PROJECT													
TOTAL	0	0	0	74	1009	190	116	880	0	0	430	162	
	የ ማ ት ት ት ም ም ት ት ት ት ም ም ም ት ት ት ም ም ም ት ት ት ት ም												
	4 分 수 歲 後 ሶ ጥ 4 分 수 歲 後 ሶ ጥ 4 分 수 歲 後 ሶ ጥ       1 2 1												
	Phasing	g F	RTOR	Phasir	ng l	RTOR	Phasir	ng l	RTOR	Phasing	F	RTOR	
SIGNAL	<none></none>	> <	none>	Split	t	Auto	Perm	ר <	none>	Perm		Auto	
Critical	Movemer	nts Diag	ram ——										
				S	outhBoui	nd	]						
				A		18							
				B	: 7	74							
	[	EastE	Bound		٨		West	Bound		V/C RATIO	<u> </u>	<u>os</u>	
		A:	296		Ť		A:	371		0.00 - 0.60	А		
		B:	0				B:	116		0.61 - 0.70	В		
	L			N	orthBour	nd	1			0.74 0.90	- -		
A = Adiust	ed Throug	ah/Riaht	Volume	A		0				0.71-0.80	C		
B = Adjust	A = Adjusted Infolgit/Right Volume       B = Adjusted Left Volume       B:       0												
	* = ATSAC Benefit 0.91 - 1.00 E												
Resu													
	North/South Critical Movements = $A(N/B) + A(S/B)$ West/East Critical Movements = $B(W/B) + A(F/B)$												
	West/East Critical Movements = $B(W/B) + A(E/B)$												
		V	/C =	•	*	1500			= 0.417	· L	.OS =	Α	

N/S:	Oliv	ve Ave	v	V/E:	7th St		I/S No:	21
AM/PM:	AM	Comm	ents: FUTU	RE WITH PRO	DJECT (YEAF	R 2020)		
COUNT D	ATE:		STUDY	DATE:		GROWTH	FACTOR:	
Volume	e/Lane/Signal (	Configurations						
	NORTHE	ROUND	SOUTH	BOUND	WEST	BOUND	FASTB	OUND
FXISTING		H RT	LT	TH RT		TH RT		H RT
AMBIENT	130 10	13 102	0		0 7	02 230		
RELATED								
PROJECT								
TOTAL	190 10 ⁻	13 102	0	0 0	0 7	82 238	0 60	0 8
	<u> </u>	ት ወቅ	ፋ 슈 수	<u>ሐ ሐ ሶ ም</u>	<u> </u>	£; €; €; €; €; €; €; €; €; €; €; €; €; €;		ት ሳ <i>ት</i> :
LANE		1	. 4		2		2	
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	<none></none>	<none></none>	Perm	Auto	Perm	<none></none>
Critica	I Movements [	Diagram						
		0	Sout	hBound	1			
			A:	0				
			B: [	0				
		astBound	<b>!</b>	Λ	WestBou	nd	V/C RATIO	LOS
		304		T	р. Г		0.00 - 0.60	Α
	B	U		 	В:	U	0.61 - 0.70	в
			A:	1Bound 326			0.71 - 0.80	С
A = Adjus B = Adjus	ted Through/R ted Left Volum	ight Volume Ie	B: [	190			0.81 - 0.90	D
* = ATSA(	C Benefit				]		0.91 - 1.00	Е
Res	ults	th Critical Mar	iomonto -	۸ (NI/D)	(C/D)			
	West/Fast	Critical Move	ments =	A(W/R) + P	(5/B)			
			326 +	0 + 3	91 + 0	<u> </u>	LOS	= A
		v/C =		*1500		= 0.400	200	

N/S:	Ala	meda St		W/E:		7th	St		I/S No:	2	2		
AM/PM:	۹M	Comm	nents: FU	ITURE V	VITH PRC	JECT (Y	EAR 202	20)					
COUNT D			STU	DY DATE	:		C	GROWTH	FACTOR:				
Volume	/Lane/Signal	Configurations	,										
	NORTH		SO	UTHBOU		W	STROU		FA	STROUI			
	LT 1	rh rt	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	153 6	73 62	128	931	105	146	922	60	86	528	110		
AMBIENT													
RELATED													
PROJECT													
TOTAL	153 6	73 62	128	931	105	146	922	60	86	528	110		
	የት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት												
LANE	4 分 会 会 命 师 所 会 会 会 命 师 所 会 会 会 命 师 所 会 会 会 命 师 所 会 会 会 命 师 所 会 会 会 命 师 所 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 会 命 师 所 の 会 会 命 师 所 の 会 会 命 师 所 の 会 会 会 你 你 命 会 会 命 师 你 会 会 会 你 你 命 会 会 会 你 你 命 会 会 会 你 你 命 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 会 你 你 你 会 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 你 会 会 会 你 你 你 你 会 会 会 你 你 你 你 会 会 会 你 你 你 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 你 会 会 会 你 你 你 会 会 你 你 你 会 会 会 你 你 你 会 会 会 你 你 你 你 会 会 会 你 你 你 你 会 会 你 你 你 你 会 会 会 你 你 你 你 会 会 你 你 你 你 会 会 会 你 你 你 你 会 会 你 你 你 你 会 会 你 你 你 你 会 会 你 你 你 你 会 会 你 你 你 你 会 会 你 你 你 你 会 会 你 你 你 你 会 会 你 你 你 你 会 会 你 你 你 你 你 你 你 你 你 你 你 你 你 你 你 你 你 你 你 你												
	Phasing	RTOR	Phasir	าต	RTOR	Phasir	na	RTOR	Phasin	a	RTOR		
SIGNAL	Perm	Auto	Prot-F	ix	Auto	Perm	יש ו	Auto	Perm	, 	Auto		
	Movements	Diagram											
Ontical	Movements	Diagram	∟s	outhBou	nd	1							
			A		518								
			В	: 1	28								
	Г	EastBound		٨		West	Bound		V/C RATION	<u>0</u>	LOS		
		A. 319		T		A.	431		0.00 - 0.60	0	Α		
	E	3: 86		I		В:	146		0.61 - 0.70	0	В		
	<u> </u>			orthBou	nd				0.71 - 0.80	)	с		
A = Adjust	ed Through/	Right Volume			52				0.81 - 0.90	)	D		
* = ATSAC	* = ATSAC Benefit												
— Resi													
	North/South Critical Movements = B(N/B) + A(S/B)												
	West/Eas	st Critical Move	ments :	= A(W	/B) + B	(E/B)							
		V/C =	153	+ 518	+ 49	91 +	86	= 0.806	<b>j</b>	LOS =	D		

N/S:		Soto S	St		W/E:		7th	n St		I/S No:	2	3	
COUNT D	AM ATE:			STU	DY DATE			EAR 202	20) GROWTH	FACTOR:			
Volume	e/Lane/Sig		igurations				10/1	ESTROUM		EAG	STROUM		
		TH	RT		ТН	RT		TH	RT		TH	RT	
EXISTING AMBIENT	490	771	31	58	648	88	28	113	41	50	55	22	
RELATED PROJECT													
TOTAL	GTAL       490       771       31       58       648       88       28       113       41       50       55       22         4       分       会       冷       会       冷       4       6       771       31       58       648       88       28       113       41       50       55       22         4       分       会       冷       4       分       会       6       6       6       6       6       6       6       6       6       6       7       6       6       7       6       7       6       7       6       7       6       6       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7       7												
	IOTAL4907713158648882811341505522												
SIGNAL	PIOI-P		Auto	Feili		Auto	Spill		Auto	Split		Auto	
Critica	Critical Movements Diagram  Critical Movements Diagram  SouthBound  A: 368  B: 58												
		EastE A:	Bound 105		Ą		Westl	Bound 182		V/C RATIO	2	<u>LOS</u>	
		В:	50				В:	28		0.00 - 0.60	)	A B	
		L			orthBoui	nd 101	1			0.71 - 0.80	)	с	
A = Adjus B = Adjus	ted Throu ted Left V	ıgh/Right /olume	Volume	В	: 4	90				0.81 - 0.90	)	D	
= ATSAC	* = ATSAC Benefit 0.91 - 1.00 E												
Results North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = A(W/B) + A(E/B)													
	North/South Critical Movements = $B(N/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + A(E/B)$ $V/C = \frac{490 + 368 + 182 + 105}{*1375} = 0.763$ LOS = C												

#### **Bixel Street** 1,061 68 390 638 317 8th Street SR 110 SB On-Ramp 1) Lane Capacity for WB Lefts -750 vphpl Number of Lanes -2 WB Left V/C -317 1,500 0.211 = or Lane Capacity for WB Throughs and Rights -1,500 vphpl 2 throughs Number of Lanes -Number of Lanes -1 right-turn only WB Through/Right V/C -638 390 or 3,000 1,500 0.260 = 1,500 vphpl 2) Lane Capacity for SB Rights -Number of Lanes -1 SB Right V/C -68 1,500 0.045 = or Lane Capacity for SB Throughs -750 vphpl Number of Lanes -2 WB Through/Right V/C -1,061 1,500 0.707 = Intersection V/C = LOS D 0.967 0.100 0.867 =

#### Future with Project Conditions A.M. Peak Hour (Year 2020)

Ν

Future with Project Conditions A.M. Peak Hour (Year 2020)



N/S:		Flower	St		W/E:		8th	n St		I/S No:	2	:6	
AM/PM:	AM		Comm	ents: FU	JTURE V		DJECT (Y	EAR 202	20)				
COUNT D	ATE:			STU	DY DATE	:		G	BROWTH	FACTOR:			
Volume	/Lane/Sig	nal Conf	igurations										
	NO	RTHBOU	ND	SO	UTHBOU		w	ESTBOUN		FA	STBOU	ND	
	LT	TH	RT	LT	ТН	RT	LT	ТН	RT	LT	TH	RT	
EXISTING	0	0	0	0	740	332	79	1532	0	0	0	0	
PROJECT													
TOTAL	0	0	0	0	740	332	79	1532	0	0	0	0	
	• · · · · · · · · · · · · · · · · · · ·												
LANE	▲ANE (13) (13) (10) (10) (10) (10) (10) (10) (10) (10												
	-ANEANEANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANEAANE AANE												
SIGNAL	<none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td>t</td><td>Auto</td><td>Spli</td><td>t &lt;</td><td>none&gt;</td><td><none:< td=""><td>&gt;</td><td><none></none></td></none:<></td></none<>	> <	none>	Split	t	Auto	Spli	t <	none>	<none:< td=""><td>&gt;</td><td><none></none></td></none:<>	>	<none></none>	
Critica	l Moveme	ents Diag	ram ——										
				S	outhBou	nd	]						
				A	.:	332							
				В	:	0							
		East	Bound		٨		West	Bound		V/C RATIO	<u>0</u>	LOS	
		A:	U		Ť		A.	403		0.00 - 0.60	)	Α	
		в:	0				В:	79		0.61 - 0.70	)	в	
					iorthBoui	nd 0				0.71 - 0.80	)	с	
A = Adjus B = Adjus	ted Throu ted Left \	ıgh/Right /olume	Volume	В		0				0.81 - 0.90	)	D	
* = ATSAC	* = ATSAC Benefit 0.91 - 1.00 E												
Resi	- Results -												
	North/South Critical Movements = $A(N/B) + A(S/B)$												
	West	/⊨ast Cri	lical Mover	nents : 0	= A(W/	ив) + А 	(Ľ/Ľ) )3 ·	0					
		v	/C =	U	т <u></u> 332 *	1500	JJ +	0	= 0.420	)	LOS =	Α	



N/S:		Figueroa	a St		W/E:	9th S	st/James	M Wood	l Blvd	I/S No:	28		
AM/PM:	AM		Comm	nents: FL	JTURE V		JECT (YI	EAR 202	20)				
COUNT D	ATE:			STU	DY DATE	:		C	GROWTH	FACTOR:			
Volume	e/Lane/Si	gnal Conf	igurations	s —									
		RTHBOU	ND					ESTROUI	ND PT				
EXISTING	0	1699	158	0	0	0	0	0	0	1133 18			
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	1699	158	0	0	0	0	0	0	1133 18 ⁷	10 0		
LANE		3	1							1 1 3			
	Phasi	ng F	RTOR	Phasi	ng	RTOR	Phasin	ng l	RTOR	Phasing	RTOR		
SIGNAL	Spli	t i	Auto	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td><none< td=""><td>?&gt; &lt;</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<></td></non<>	e> <	none>	<none< td=""><td>?&gt; &lt;</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<>	?> <	none>	Split	<none></none>		
Critica	Critical Movements Diagram												
		┌── FastF	Sound			•	West	Sound			1.05		
		A:	589		Ą		A:	0			<u>LU3</u>		
		B:	589				В:	0		0.00 - 0.60	A		
					lorthBou	nd			_	0.61 - 0.70	В		
				A		566				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Thro ted Left \	ugh/Right Volume	Volume	В	B:	0				0.81 - 0.90	D		
* = ATSA0	C Benefit						]			0.91 - 1.00	E		
North/South Critical Movements = A(N/B) + A(S/B) West/East Critical Movements = A(W/B) + A(E/B)													
		V	/C =	300	+ U *	+ ( 1500	· +	103	= 0.700	LOS	= B		

N/S:	(	Cherry	St		W/E:		Pico	Blvd		I/S No:	2	9	
AM/PM:	AM		Comm	ents: Fl	UTURE \	WITH PRC	DJECT (Y	'EAR 202	20)				
COUNT D	ATE:			STU	JDY DATI	E:		(	GROWTH	FACTOR:			
	/l ane/Sign	al Conf	igurations										
volume				, 			144						
		тн	RT			RT	L W	ESTROU TH	ND RT		STBOU TH	ND RT	
EXISTING	567	542	237	229	0	8	0	406	330	234	600	0	
AMBIENT													
RELATED													
PROJECT													
TOTAL	567	542	237	229	0	8	0	406	330	234	600	0	
	······································												
LANE	4												
	LANE 1 1 1 1 2 2 1 1 1 1 1 3 Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
SIGNAL	Split		Auto	Spli	it	Auto	Pern	n	OLA	Perm	J     •	<none></none>	
		]											
Critica	I Movemen	ts Diag	ram ——									1	
				٦s	SouthBou	Ind							
				4	A:	4							
				E	B:	126							
	Γ	EastE	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS	
		A. B.	200		T		B.	0		0.00 - 0.6	0	Α	
		р.	234		 North Bou	un d		U		0.61 - 0.7	0	В	
				A A	чогшвой 4:	370				0.71 - 0.8	0	с	
A = Adjus B = Adjus	ted Throug ted Left Vol	h/Right Iume	Volume	E	B: :	370				0.81 - 0.9	0	D	
* = ATSAC	* = ATSAC Benefit 0.91 - 1.00 E												
Resi	Results												
	North/South Critical Movements = A(N/B) + B(S/B) West/East Critical Movements = A(W/B) + B(E/B)												
		V	ic	370	+ 126	+ 24	45 +	234	_ 0 614	I	1 08 =	в	
		V				*1425			= 0.014		200 -	2	

N/S:		Figueroa	a St		W/E:		Pico	Blvd		I/S No:	3	0
AM/PM:	AM		Comm	nents: Fl	JTURE V	VITH PRO	DJECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	IDY DATE	:		(	GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations	s ——								
	NO	RTHBOU	ND	SC	UTHBOU	IND	W	ESTBOU	ND	FA	STBOU	
	LT	ТН	RT	LT	ТН	RT	LT	TH	RT	LT	TH	RT
EXISTING	256	2055	146	10	158	120	59	397	118	208	700	141
RELATED												
PROJECT												
TOTAL	256	2055	146	10	158	120	59	397	118	208	700	141
	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$											
LANE	4     分     合     命     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     合     白     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日     日 </td											
	Phasir			Phasi	na		Phasi			Phasin		PTOP
SIGNAL	Drot-E			Dorr	ny n		Pilasii	ng		Prot-Ei	y iv	
SIGNAL	1101-1		Auto	I CII		ULA	I em		Auto	1100-11		ULA
	Maxam	anto Diag										
Critica	INOVEIN	ents Diag	an	_s	outhBou	nd	7					
				A	A:	79						
				E	3:	10						
		EastE	Bound		٨		West	Bound		V/C RATI	<u>o</u>	<u>LOS</u>
		A:	300		Ť		А: В.	50		0.00 - 0.6	0	Α
		В.	200		 		В.	33		0.61 - 0.7	0	В
				A		50				0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Throi ted Left \	ugh/Right /olume	Volume	E	3: 2	256				0.81 - 0.9	0	D
* = ATSAC	* = ATSAC Benefit 0.91 - 1.00 E											
Resu	Results											
North/South Critical Movements = A(N/B) + B(S/B) West/Fast Critical Movements = B(W/B) + A(F/B)												
	1103			550	+ 10	+ 5	<u>.(_,_</u> ) <u>(9 + _</u> )	350	0 605		1 08 -	в
		V			*	1375			= 0.035		200 -	5

N/S:		Hoover St W/E: Alvarado St/Alvarado Ter I/S No: 31 Comments: FUTURE WITH PROJECT (YEAR 2020)												
AM/PM:	AM		Comr	nents: FL	JTURE V		JECT (YE	EAR 202	20)					
COUNT D	ATE:			STU	DY DATE	E:		C	GROWTH	FACTOR:				
	e/Lane/Sig	nal Conf	iguration	s										
	NOF	RTHBOU	ND	SO	UTHBOL	IND	WE	STBOU	ND	FASTB	OUND			
FYISTING		TH	RT	LT	TH 975	RT	LT	TH	RT		H RT			
	U	990	040	13	075	U	494	U	U					
PROJECT														
TOTAL	0	998	648	13	875	0	494	0	0	0 0	) 0			
	ዓ ፚ 4	2 🚓 4	ሰት ፋ _ገ እ	ት የነ <del>የ</del>	<u>ላ</u> ድ ት ፹	<u>አ</u> ሰ ቀ								
LANE														
	Phasing	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
SIGNAL	Perm		Free	Pern	n <	none>	Split		Auto	<none></none>	<none></none>			
Critica	Critical Movements Diagram SouthBound A: 477 B: 13													
		East	Bound —		٨		WestB	Bound		V/C RATIO	LOS			
		А: Б.	U		Ť			247		0.00 - 0.60	Α			
		D:	U		 	<u>.                                    </u>		247		0.61 - 0.70	В			
					lorthBou	nd 549			_	0.71 - 0.80	С			
A = Adjus B = Adjus	ted Throu	gh/Right olume	Volume	B	··	0				0.81 - 0.90	D			
* = ATSAC	C Benefit						J			0.91 - 1.00	E			
Resi	ults North West/	/South C East Crit	critical Mo tical Move	ovements ements	= A(N = A(W	/B) + B /B) + A	(S/B) (E/B)							
	V/C = $\frac{549 + 13 + 247 + 0}{*1500}$ = 0.469 LOS = A													

N/S:		Flower	St		W/E:		Venic	e Blvd		I/S No:	32		
AM/PM:	AM		Comr	nents: Fl	JTURE V		JECT (Y	EAR 202	20)			]	
COUNT D	DATE:			STL	IDY DATE	<b>:</b>		C	BROWTH	FACTOR:		]	
Volume	e/Lane/Si	gnal Confi	iguration	s —									
	NC	RTHBOU	ND	sc	UTHBOL	IND	W	ESTBOU	ND	FAST	BOUND	_	
EVISTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT	_	
	U	U	U	10	544	31	49	342	U	0 4	412 57		
PROJECT													
TOTAL	0	0	0	10	544	31	49	342	0	0	412 57		
	4 Δ		ት የተ	4 Δ	2 -13 ( <del>-1</del> 3	<u>κ</u> Δ Δ		4-10					
LANE		1											
	Phasi	na F	RTOR	Phasi	na	RTOR	Phasi	na l	RTOR	Phasing	RTOR		
SIGNAL	<non< td=""><td>e&gt; <r< td=""><td>none&gt;</td><td>Spli</td><td>it</td><td>Auto</td><td>Pern</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td>Auto</td><td></td></r<></td></non<>	e> <r< td=""><td>none&gt;</td><td>Spli</td><td>it</td><td>Auto</td><td>Pern</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td>Auto</td><td></td></r<>	none>	Spli	it	Auto	Pern	n <	none>	Perm	Auto		
Critica	al Movem	ents Diagr	ram 🚃										
					SouthBou	na 192							
						40							
					5:	10							
		EastB	Sound		Λ		West	Bound 220		V/C RATIO	LOS		
			200		T			220		0.00 - 0.60	Α		
		в:	U		I		в:	49		0.61 - 0.70	В		
					NorthBou	nd n				0.71 - 0.80	С		
A = Adjus	sted Thro	ugh/Right	Volume		·· ≳·	0				0.81 - 0.90	D		
* = ATSA	C Benefit	- oranie			-	v	]			0.91 - 1.00	E		
— Res	ults —												
	Nort	h/South C	ritical Mo	vements	= A(N	/B) + A	(S/B)						
	Wes	t/East Crit	ical Move	ements	= B(W	/B) + A	(E/B)						
		V/	/C =	0	+ 192	+ 4	9 +	235	= 0.247	, LC	DS = A		
					3	1500							

N/S:	G	Grand A	Ave		W/E:		18tl	n St		I/S No:	33		
AM/PM: AM Comments: FUTURE WITH PROJECT (YEAR 2020)													
COUNT D	COUNT DATE: GROWTH FACTOR:												
Volume	/Lane/Sign	al Conf	igurations	, —									
	NOR.	THROLL		50							EASTROUND		
	LT	ТН	RT	LT	T TH RT LT TH RT			RT	LT TH RT				
EXISTING	0	0	122	412	503	0	0	0	0	0	1067	138	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	122	412	503	0	0	0	0	0	1067	138	
LANE	「「「」」」2」「1」3」」」「「」」」」「」」」「」」2」「1」3」												
	Phasing	ı F	RTOR	Phasi	na	RTOR	Phasir	na	RTOR	Phasing	R	RTOR	
SIGNAL	Perm		Auto	Prot-F	ix <	none>	<none< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></none<>	e> <	none>	Split		Auto	
	l Movemen	ts Diad	ram —										
ontica		no Diag	lan	∟s	outhBou	nd	1						
				A	: 1	68							
				В	: 4	12							
	Γ	EastE	Bound		٨		West	Bound		V/C RATIO	<u>) L</u>	<u>os</u>	
		д. В.	000		T T			0		0.00 - 0.60	Α		
	L	Ы.	U		  arthDau	n d		U		0.61 - 0.70	В		
				A	:	6 <b>7</b>				0.71 - 0.80	С		
A = Adjusted Through/Right Volume B = Adjusted Left Volume					:	0				0.81 - 0.90	D		
* = ATSAC	Benefit						J			0.91 - 1.00	E		
Resi	ults	Courte C			A /P1		(0/D)						
	North/S	South C	tical Move	vements ments	= A(N/ = A(W	′в) + В /B) + Δ	(5/B) (E/B)						
		V	/C =	67	+ 412	+ (	) +	356	= 0.516	L	.OS = .	A	

N/S:		Olive	St		W/E:		6th	I/S No:	34				
AM/PM:	AM		Comm	ents: FL			JECT (Y	EAR 202	20)				
COUNT D	ATE:			STU	STUDY DATE: GROWTH FACTOR:								
	e/Lane/Si	gnal Conf	igurations	;									
		RTHBOU	ND	SO					ND	FAS	FASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
	U	1009	175	U	U	U	U	U	U	464	1045	U	
PROJECT													
TOTAL	0	1009	175	0	0	0	0	0	0	464	1045	0	
	1 1			1 1			1			1 ^ ^			
LANE		千 孫 年 <b>4</b>   1		л Ф. □		ц, ги чи		十	אדי אין א	Ч ₍ , т 1   1   3	<u> </u>	יזע יז וויי	
	Phasi	na l	RTOR	Phasi		RTOR	Phasir		RTOR	Phasing	R	TOR	
SIGNAL	Spli	t	Auto	<none< td=""><td>9 &gt; &lt;</td><td><none></none></td><td><none< td=""><td></td><td>none&gt;</td><td>Split</td><td></td><td>ione&gt;</td></none<></td></none<>	9 > <	<none></none>	<none< td=""><td></td><td>none&gt;</td><td>Split</td><td></td><td>ione&gt;</td></none<>		none>	Split		ione>	
										•			
Critica	l Movem	ents Diag	ram ——										
				S	SouthBound								
				B		0							
		EastE	Bound		٨		WestBound			V/C RATIO	<u>L(</u>	<u> 25</u>	
		А.	202								Α		
		В:	302		 		D:	U		0.61 - 0.70	В		
				N	lorthBou	nd 237				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	t Volume			0				0.81 - 0.90	D		
* = ATSA	C Benefit				-	•	]			0.91 - 1.00	Е		
— Res	ults —												
	Nort	h/South C	Critical Mov	vements	= A(N	/B) + A	(S/B)						
	Wee				A /\A		/ F / F \						
	1163	t/East Cri	tical Move	ments :	= A(W	1/B) + A	(E/B)						

N/S: Hope St W/E: 7th St I/S No: 35													
AM/PM: AM Comments: FUTURE WITH PROJECT (YEAR 2020)													
COUNT D	COUNT DATE: GROWTH FACTOR:												
Volume	/Lane/Si	gnal Conf	igurations	,									
	NO			SO			W	ESTROLI		FAST			
	LT	TH	RT	LT	TH	RT	LT TH RT			LT TH RT			
EXISTING	41	263	146	10	250	26	0	993	113	0	440 73		
AMBIENT													
RELATED													
PROJECT													
TOTAL	41	263	146	10	250	26	0	993	113	0	440 73		
LANE	N 伊 午 孫 孫 序 师 N 伊 午 孫 孫 序 师 N 伊 午 孫 孫 序 师 N 伊 午 孫 孫 序 师 N       LANE     1     1     1     1     1     1     1												
	Phasi	na l	RTOR	Phasir	na	RTOR	Phasi	na	RTOR	Phasing	RTOR		
SIGNAL	Pern	n 🗌	Auto	Perm	יש ו	Auto	Pern	n	Auto	Perm	Auto		
	l Moyom	onte Diag	ram —										
Critica	INOVEIN	ents blag	lan	∟s	outhBou	nd	T						
				A	: 1	148							
				В	-	10							
		East	Bound		٨		West	Bound		V/C RATIO	LOS		
		A:	237					355		0.00 - 0.60	Α		
		B:	0		I		В:	0		0.61 - 0.70	В		
					orthBou	nd 225				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	В		41				0.81 - 0.90	D		
* = ATSAC	Benefit	-								0.91 - 1.00	Е		
Resi	ults —												
	Nort	h/South C	ritical Mo	vements	= A(N/	/B) + B	(S/B)						
	wes	veast Cri		225	= A(W/ ⊥ 10	/D) + B + 54	(⊏/¤) 53 ⊥	0					
	V/C = $\frac{225 + 10 + 553 + 0}{*1500} = 0.455$ LOS = A												

N/S:         Grand Ave         W/E:         7th St         I/S No:         36													
AM/PM: AM Comments: FUTURE WITH PROJECT (YEAR 2020)													
COUNT D	COUNT DATE: GROWTH FACTOR: GROWTH FACTOR:												
	Volume/Lane/Signal Configurations												
	NO			6			W/	TROUM					
	LT	ТН	RT	LT	ТН	TH RT LT TH RT			RT	LT TH RT			
EXISTING	0	0	0	101	1311	79	0	1008	0	0	495	120	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	101	1311	79	0	1008	0	0	495	120	
		$\wedge \wedge \wedge$			$\wedge \wedge \wedge$			~ ~ ~		1 ^ ^			
LANE	N 存 午 毎 毎 序 ㎡ 幣 初 存 午 毎 毎 序 ㎡ 幣 初 存 午 毎 毎 6 ㎡ ㎡ LANE											ערייק ערי <b>1</b>	
	Phasir			Phasi	na		Phasi	na l		Phasing		PTOP	
SIGNAL	riiasii			C Coli	ing +	Auto	Pliasi			Plasing	, [	Auto	
OIGNAL				Opi		Auto	I CII			I CIIII		Auto	
	Mayam	nto Dian											
Critica	i woverne	ents Diag	ram	⊏s	outhBou	nd	1						
				A	N: 3	328							
				E	3: 1	01							
		East	Bound		٨		West	Bound		V/C RATIC	<u>)</u>	LOS	
		A:	248					504		0.00 - 0.60	)	A	
		В:	0		I		В:	0		0.61 - 0.70	)	В	
					lorthBoui	nd 0				0.71 - 0.80	) (	с	
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	E	3:	0				0.81 - 0.90	)	D	
* = ATSAC	* = ATSAC Benefit									0.91 - 1.00	)	E	
Resi	ults —												
	Nortl	h/South C	ritical Mov	vements	= A(N/	/B) + A	(S/B)						
	West	/East Crit	lical Move	ments	= A(W/	/B) + B	(E/B)	0					
		v	/C =	U	+ 328	+ 50	J4 +	<u> </u>	= 0.485	L	_OS =	Α	
#### Future with Project Conditions A.M. Peak Hour (Year 2020)



= 0.203

Critical V/C -		0.035	+	0.203	=	0.238
2) Lane Capaci	ty for NB	Throughs -	_		900	vphpl
Lane Capaci	ty for NB	Left- and Rig	ht-turns -		1,425	vphpl
Number of La	anes -		1	l left-turn on	ly	
			3	3 throughs	.1	
				i right-turn o	niy	
Critical V/C -		1,660	or	262	or	197
		2,700		1,425		1,425
		=	0.615			
Intersection V/C =	0.947	—	0.100	=	0.847	LOS D

N/S:	(	Glendale	Blvd		W/E:		Tem	ole St		I/S No:	3	8	
AM/PM:	AM		Comm	nents: F		/ITH PRC	JECT (Y	EAR 202	20)				
COUNT D	ATE:			STL	JDY DATE	:		(	GROWTH	FACTOR:			
Volume	/Lane/Si	gnal Conf	igurations	s —									
	NO			S			W	ESTROU		FA	STROUI		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	ТН	RT	
EXISTING	58	629	14	252	1850	152	65	607	184	202	657	143	
AMBIENT													
RELATED													
PROJECT													
TOTAL	58	629	14	252	1850	152	65	607	184	202	657	143	
	€	4 <u>6</u> 6	ላ ተን ላ ተ	€	$   \Delta \Delta 4 $	የተን ፋካ •	♠ ↔	4 4 4 4	⟨π) ⟨π) ⊱	<u>ፋ</u> ራ 4	ے <u>ب</u>	÷ r≯ 4π≯	
LANE	1 1	' (++) - 4 1   1		1	1 1		1	· (平) [ 1   1		1	анр и 1 (1) (1)	-} ¹ 1	
	LANE     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1 <th1< th="">     1     1     1&lt;</th1<>												
SIGNAL	PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoProt-FixAutoProt-FixAuto												
Critica	l Movem	ents Diag	ram ——										
				۲٤	SouthBou	nd							
					A: 10	001							
				E	3: 2	52							
		EastE	Bound		٨		West	Bound		V/C RATI	<u>o</u>	<u>LOS</u>	
		B.	202		Ť		B.	65		0.00 - 0.6	D	Α	
		В.	202					00		0.61 - 0.7	D	В	
					NorthBour A: 3	1d 22				0.71 - 0.8	D	с	
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	E	3:	58				0.81 - 0.90	D	D	
* = ATSAC	Benefit									0.91 - 1.0	D	E	
Kest	uits Nort	h/South C	ritical Mo	vomente	- R/N/	R) ⊥ ^	(S/B)						
	Wes	t/East Crit	tical Move	ments	= A(W/	'B) + B	(E/B)						
		V	/C =	58	+ 1001	+ 39	96 +	202	= 1.093	i	LOS =	F	

#### Future with Project Conditions A.M. Peak Hour (Year 2020)



Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights



Phase 2) Glendale Boulevard, 1st Street, and 2nd Street - Southbound Lefts, Throughs, and Rights, and a.) Westbound Rights on 1st Street
 b.) Westbound Rights on 2nd Street



Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights



I N



Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights



N/S:		Lucas A	Ve		W/E:		3rc	d St		I/S No:	40	
AM/PM:	AM		Comm	nents: FL	JTURE V		JECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	DY DATE			(	GROWTH	FACTOR:		
	/I ane/Sid	unal Conf	igurations									
Volume				, 			W	ESTROIN		EAS		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	140	323	124	131	636	139	74	887	90	171	1200	106
AMBIENT												
RELATED												
PROJECT												
TOTAL	140	323	124	131	636	139	74	887	90	171	1200	106
	<b>ά</b> Α	4 <u>4</u> 4	ላ ተን	ፋ 🔶	4 <u>4</u> 4	⟨π⟩ ⟨η <i>έ</i>	ፋ 🔶	4 <u>4</u> 4	∢} ∢}	<u> </u>	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	ሰት ላት
LANE	1	'(++) 4 2	) ' '   1   _	' ∉' 1	1 1		' ∉' 1	2	<pre></pre>		(++) +)   1	
	Phasir	ng F	RTOR	Phasir	ng	RTOR	Phasi	ng	RTOR	Phasing	j F	RTOR
SIGNAL	Perm	<b>۱</b>	Auto	Pern	n	Auto	Pern	n	Auto	Perm		Auto
Critica	l Moveme	ents Diag	ram —									
				S	outhBou	nd	]					
				A		888						
				В	: 1	131						
		EastE	Bound 653		٨		Westl ∧	Bound		V/C RATIO	<u>2</u>	<u>.OS</u>
		B:	171		T		B:	74		0.00 - 0.60	Δ (	<b>N</b>
					l IorthBou	nd				0.61 - 0.70	B	5
				A	: 1	162				0.71 - 0.80	) C	;
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right /olume	Volume	В		40				0.81 - 0.90	0 0	)
	, Benetit						J			0.91 - 1.00	) E	<u> </u>
Kest	Norti	NSouth C	ritical Mo	vemente	= R/N	/B) + ∆	(S/B)					
	West	/East Crit	ical Move	ments :	= B(W)	/B) + A	(E/B)					
		V	/C = —	140	+ 388	+ 7	4 +	653	= 0.767	· I	_OS =	с

AM/PM:       AM       Comments:       FUTURE WITH PROJECT (YEAR 2020)         COUNT DATE:       STUDY DATE:       GROWTH FACTOR:													
Volume/Lane/Signal Configurations													
Volume/Lane/Signal Configurations													
	ASTBOUND												
LT TH RT LT TH RT LT TH RT LT	TH RT												
EXISTING         55         205         19         58         360         210         63         801         41         184	1161 204												
TOTAL 55 205 19 58 360 210 63 801 41 184	1161 204												
	2 1												
Phasing RTOR Phasing RTOR Phasing RTOR Phas	ng RTOR												
SIGNAL Perm Auto Perm Auto Perm Auto Per	n Auto												
Critical Movements Diagram													
SouthBound													
A: 628													
B: 58													
EastBound WestBound V/C RA	<u>10 LOS</u>												
B: 184 0.00-0	60 A												
0.61 - 0	70 B												
A: 279 0.71 - 0	80 C												
A = Adjusted Through/Right VolumeB = Adjusted Left VolumeB:55	90 D												
* = ATSAC Benefit 0.91 - 1	00 E												
Results													
North/South Critical Movements = $B(N/B) + A(S/B)$ West/East Critical Movements = $B(W/B) + A(F/B)$													
$V/C = \frac{55 + 628 + 63 + 581}{*1500} = 0.815$	LOS = D												

N/S:		Lucas A	Ave		W/E:		Wilshi	re Blvd		I/S No:	42	2
AM/PM:	AM		Comm	ents: Fl	JTURE V	VITH PRO	DJECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	IDY DATE	:		C	GROWTH	FACTOR:		
Volume	/Lane/Si	anal Conf	igurations	;								
							14/1	ESTROU		EAG		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	59	169	71	72	278	77	106	658	99	56	1088	72
AMBIENT												
RELATED												
PROJECT												
TOTAL	59	169	71	72	278	77	106	658	99	56	1088	72
	1	^ ^ ^	N 4 N	1 1	~ ~ /		1 ^	~ ~ ^				
	Ч Д Г		אדוי יין ל	Л Ф			м ф Г	ት _{ቆር} ነ	4 10 4∏0 2 10 4∏0	ሻ <mark>ፈን</mark> ና ፲ <b>1</b> 4 1 4		אדא אן 🐧
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasir	ng	RTOR	Phasing	J	RTOR
SIGNAL	Pern	n .	Auto	Perr	n	Auto	Pern	n	Auto	Perm		Auto
Critica	I Movem	ents Diag	ram ——									
				<b>∏</b> s	outhBou	nd	7					
				<u> </u>		427						
				E	3:	72						
		East	Bound		٨		West	Bound		V/C RATIO	<u>1 2</u>	LOS
		A:	656		Ť		A:	647		0.00 - 0.60		4
		В:	56				В:	106		0.61 - 0.70	) F	3
		L		N	lorthBou	nd	1		]	0.74 0.00		-
A = Adius	ted Thro	uah/Riaht	Volume	A	A: 2	299				0.71 - 0.80	, (	
B = Adjus	ted Left	/olume		E	8:	59				0.81 - 0.90	) [	D
= AISAC							1			0.91 - 1.00	) [	E
Resi	lits	h/South C	vitical Ma	uomont-	_ D/N	/D) · •						
	Most	/East Crit		monte	= B(N/	/B) + A	(3/D)					
	west	Last Un		59	- D(VV	, b) + A + 11	(C/D) 06 ±	656				
		V	/C =	55	+ 421	1500 °1500	υυ <b>τ</b>		= 0.762	2 1	_OS =	С
		•.			ł	[•] 1500			•			

					W/E:		US 101 N	B Ramp	S	I/S No:	1
AM/PM:	M		Comn	nents: Fl			JECT (Y	EAR 202	20)		
COUNT DA	TE:			STL	JDY DATE			G	ROWTH	FACTOR:	
Volume/	Lane/Sig	gnal Confi	guration	s							
L	NO	RTHBOUI		SC		ND	W	STROUM		FASTR	
	1107	1053	0		755	386		0 0	RT 0	120 (	H RI ) 680
AMBIENT			•								
PROJECT											
TOTAL	1107	1053	0	0	755	386	0	0	0	120 (	) 680
	\$ ቆ	ት 🚓 🕏	ሳተን ላገ	ፋ 🕁	수 슜 수	ት ሳ _ት ላ	ᠳᢩᡒ	ት 🚓 ና	ል ተቅ ላ _ተ እ	ላ ፚ 수 ፚ	ᡷ᠊ᠿ᠂ᡥᡧ
LANE	1	2			2	1					
	Phasir	ng F	RTOR	Phasi	ng	RTOR	Phasir	ng l	RTOR	Phasing	RTOR
SIGNAL	Prot-F	ïx <r< td=""><td>none&gt;</td><td>Perr</td><td>n</td><td>OLA</td><td><none< td=""><td><b>?&gt;</b> &lt;</td><td>none&gt;</td><td>Split</td><td>Auto</td></none<></td></r<>	none>	Perr	n	OLA	<none< td=""><td><b>?&gt;</b> &lt;</td><td>none&gt;</td><td>Split</td><td>Auto</td></none<>	<b>?&gt;</b> <	none>	Split	Auto
Critical	Moveme	ents Diagi	ram —								
				_s	SouthBou	nd	]				
				4	A: 3	78					
				E	B:	0					
		EastB	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	0		Ť		A:	0		0.00 - 0.60	Α
		В:	120		I		в:	U		0.61 - 0.70	В
		_		N	NorthBoui	nd				0.71 - 0.80	С
A = Adjuste B = Adjuste	ed Throu ed Left V	ugh/Right /olume	Volume	F	3: 1	107				0.81 - 0.90	D
* = ATSAC	Benefit						]			0.91 - 1.00	Е
Resul	ts —										
	North	n/South C	ritical Mo	vements	= B(N/	′B) + A	(S/B)				
	West	/East Crit	ical Move	ements	= A(W/	/B) + B	(E/B)	100			
		V/	C =	1107	+ 378	+ ( 1425	) +	120	= 1.056	LOS	= F

#### January 25, 2011 ,Tuesday 12:50:55 PM

# CalcaDB

N/S:	Hope S	t/US 101	SB Ram	ps	W/E:		Temp	ole St		I/S No:	2	
AM/PM:	PM		Comm	nents: FL	JTURE V		JECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	DY DATE	<b>:</b>		C	GROWTH	FACTOR:		
Volume	e/Lane/Sig	gnal Conf	igurations	;								
	NO	RTHBOU	ND	SO	UTHBOL	IND	W	ESTBOU	ND	FA	STROUN	D
EVICTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	232	410	214	130	551	1/	147	995	259	567	899	78
PROJECT												
TOTAL	232	410	214	130	551	17	147	995	259	567	899	78
	4 ^	$\land \land \land$	<u> </u>	4 A	$\wedge \wedge Z$		<u>د</u> ۸	$\wedge \wedge \land$	<u> </u>	4 ^	$\wedge \wedge \land$	
LANE	ਾ ਦਾ 1	<u>⊤ स प</u> 1   1		ਾ _ਦ ਾ [1]	⊤ ⊕ ⊺ 1 III1		[¶] ∉ੋ  1	⊤	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	ਾ ਦਾ 1	⊤ स≽ फ 1   1	, IN AIN
	Bhasir			Bhasi			Phasir			Phasin		
SIGNAL	Dorn			Pilasii	iy n	Auto	Prot-E	iy liv		Prot E	iy i	Auto
SIGNAL	I CIII		Auto	I CIII		Auto	1100-1		Auto	1101-1		Auto
	Movem	ante Diag	ram —									
Ontica		ents blag	am	∟s	outhBou	nd	1					
				A		284						
				В	: 1	130						
		East	Bound		٨		West	Bound		V/C RAT	<u>IO L</u>	<u>_OS</u>
		A:	489		Ť		А. 	490		0.00 - 0.6	60 A	4
		Ь.	507		 		<u>р</u> .	147		0.61 - 0.7	'O E	3
				A		312				0.71 - 0.8	60 C	2
A = Adjus B = Adjus	ted Throuted Left	ugh/Right /olume	Volume	В	- 2	232				0.81 - 0.9	0 C	)
* = ATSAC	Benefit						J			0.91 - 1.0	0 E	E
Kesi	Nortl	h/South C	ritical Mo	vements	= B(N	/B) + 4	(S/B)					
	West	/East Crit	tical Move	ments	= A(W	/B) + B	(E/B)					
		V	/C = —	232	+ 284	+ 49	98 +	567	= 1.039	)	LOS =	F





Lane Capacity for SB Rights -

1,425 vphpl

	Number of Lanes -		2				
	SB Right V/C -	{ <u>721</u>	x 1,425	0.55			
		=	0.278				
	Critical V/C -	0.391	+	0.278	=	0.669	
	or						
	Lane Capacity for NB Th	roughs & R	lights -	1,425	vphpl		
	Number of Lanes -		2 1	throughs through/rig	ght		
	NB Through/Right V/C -		{ <u>2,746</u>	<del>6 +</del> 4,275	80	or	<u>80</u> 1,425
		=	0.661				
Intersect	ion V/C = 1.090	_	0.100	=	0.990	LOS	E

N/S:		Flower	St		W/E:		3r	d St		I/S No:	4	1
AM/PM:	PM		Comn	nents: Fl	JTURE V		JECT (Y	(EAR 202	20)			
COUNT D	ATE:			STL	IDY DATE	E:		C	GROWTH	FACTOR:		
Volume	e/Lane/Sig	gnal Conf	igurations	s —								
	NO	RTHBOU	ND	SC	UTHBOL	IND	W	/ESTBOUI	ND	FAS	TBOU	ND
EVICTINO	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	146	226	0	0	526	512	127	1330	67	0	0	156
FROJECT												
TOTAL	146	226	0	0	526	512	127	1330	67	0	0	156
	ፋ 슈	4 4 4	⟨ _T } ⟨ ₁ ⟨	ፋ 슈	4 6 4	ላተ የሳ	ፋ 슈	<u> </u>	₩ ₩	ፋ 순 수	<u> </u>	ላተን ላካ 🖌
LANE	· (+	<u>'</u> (++) + 2		· (P	2		1	· (中) · 3   1			- (H)	-> ' '   <b>1</b>   ]
					<u> </u>							
	Phasir	ng l	RTOR	Phasi	ng	RTOR	Phasi	ing I	RTOR	Phasing		RTOR
SIGNAL	Pern	1 <	none>	Perr	n	Auto	Spl	It	Auto	<none></none>		Free
Critica	I Moveme	ents Diag	ram	<b>⊢</b> s	SouthBou	nd	1					
				Å		512						
				E	3:	0						
		East	Bound —				West	Bound		V/C RATIC	)	LOS
		A:	0		Ą		<b>A</b> :	349		0.00 - 0.60	-	
		В:	0				В:	127		0.00 - 0.00		~
					lorthBou	nd	1			0.61 - 0.70		в
			Vale	ļ	A: 1	113				0.71 - 0.80		С
A = Adjus B = Adjus	ted Left	lgn/Right /olume	voiume	E	B: /	146				0.81 - 0.90		D
* = ATSA	C Benefit						J			0.91 - 1.00		E
Res	ults —	-				(m.)						
	Norti	h/South C	ritical Mo	vements	= B(N/	/B) + A	(S/B)					
	West	/East Crit	lical Move	ements	= A(W	/B) + A	(E/B)	0				
		V	/C = —	146	+ 512	+ 34	19 +	<u> </u>	= 0.601	L	.OS =	В
						1000						

N/S:	Gra	nd Ave	W	//E:	3rd	St	I/S No:	5
AM/PM:	РМ	Comm	ents: FUTU		OJECT (YE	EAR 2020)		
COUNT D	ATE:		STUDY	DATE:		GROW	TH FACTOR:	
	/Lane/Signal	Configurations	;					
	NORTH	BOUND	SOUTH	BOUND	WF	STROUND	FAS	TBOUND
EVICTING		H RT			LT	TH RT		TH RT
	23 33	53 U	0 9	69 75	U	0 0	103	0 127
PROJECT								
TOTAL	23 33	33 0	09	69 75	0	0 0	163	0 127
						~ ^ ^ ·		
			ᠳᡒᡩᢤ		_¶_{↓ ↓ ↓		<u>ም ዓ</u> ታ ተ	
LANE	1 2		1	1			1	2
	Phasing	RTOR	Phasing	RTOR	Phasin	g RTOR	Phasing	RTOR
SIGNAL	Perm	Auto	Perm	Auto	<none< td=""><td><none< td=""><td>&gt; Split</td><td>Auto</td></none<></td></none<>	<none< td=""><td>&gt; Split</td><td>Auto</td></none<>	> Split	Auto
Critica	I Movements	Diagram	⊂ South	Bound				
			A:	522				
			B:	0				
		FastBound		-	WastB	Bound		
	A	.: 70		Д	A:	0	V/C RATIC	<u>, 105</u>
	В	163			в:	0	0.00 - 0.60	Α
				Round		-	0.61 - 0.70	В
			A:	167			0.71 - 0.80	С
A = Adjus B = Adjus	ted Through/F ted Left Volun	Right Volume ne	B:	23			0.81 - 0.90	D
* = ATSAC	Benefit						0.91 - 1.00	E
Res	ults							
	North/Sou	uth Critical Mov	vements =	B(N/B) + A	A(S/B)			
	West/Eas	t Critical Move	ments =	A(W/B) + E	B(E/B)	400		
		V/C =	23 +	522 +	0 +	$\frac{163}{2} = 0$	.402 l	_OS = A
				"15UU				





N/S:		Flower	St		W/E:		5th	St		I/S No:	7	<b>,</b>
AM/PM:	РМ		Comr	nents: Fl	JTURE W	/ITH PRC	JECT (Y	EAR 202	0)			
COUNT D	ATE:			STU	IDY DATE	:		G	ROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	iguration	s —								
	NO	RTHBOU	ND	sc	UTHBOU	ND	W	ESTBOUN	D	FA	STBOU	D
	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	U	U	0	0	1329	5/4	229	1629	U	U	0	0
TOTAL												
IOTAL	0	0	0	0	1329	574	229	1629	0	0	0	0
	∮ ፚ	<u>ት                                    </u>	<u> የ</u> ቅ ፋተቅ	∮ ኇ	ት 🚓 🖞	ላተን ላነ 🖞	∮ ፚ	ት 🚓 🕁	, ቦ ፋኮ	<u>ዓ</u> ታ ረ	۲ ۲ کی ۲	ት ሳ _ት እ
LANE					3 1	1	1	5				
	Phasii	ng F	RTOR	Phasi	ng F	RTOR	Phasir	ng R	RTOR	Phasin	g	RTOR
SIGNAL	<none< td=""><td>e&gt; <r< td=""><td>none&gt;</td><td>Spli</td><td>it .</td><td>Auto</td><td>Split</td><td>t <r< td=""><td>none&gt;</td><td><none< td=""><td>&gt;</td><td><none></none></td></none<></td></r<></td></r<></td></none<>	e> <r< td=""><td>none&gt;</td><td>Spli</td><td>it .</td><td>Auto</td><td>Split</td><td>t <r< td=""><td>none&gt;</td><td><none< td=""><td>&gt;</td><td><none></none></td></none<></td></r<></td></r<>	none>	Spli	it .	Auto	Split	t <r< td=""><td>none&gt;</td><td><none< td=""><td>&gt;</td><td><none></none></td></none<></td></r<>	none>	<none< td=""><td>&gt;</td><td><none></none></td></none<>	>	<none></none>
Critica	I Movem	ents Diagi	ram —	۲.	SouthBour	nd	]					
				E	4: <u>3</u> 3:	81 0						
		EastE	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS
		<b>A</b> :	0		Ц Т		A:	326		0.00 - 0.6	D	A
		D.										
		В.	0		I		В:	229		0.61 - 0.7	0	В
		В.	0		ا NorthBour	nd	В:	229		0.61 - 0.70 0.71 - 0 <i>.</i> 80	0 D	B C
A = Adjus B = Adjus	ted Thro	ugh/Right	0 Volume		ا NorthBour A:	nd 0	B:	229		0.61 - 0.70 0.71 - 0.80 0.81 - 0.90	0 D D	B C D
A = Adjus B = Adjus * = ATSA(	ted Thro ted Left \ Benefit	ugh/Right Volume	0 Volume	N A E	I NorthBour A:	nd 0 0	B:	229		0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	D D D	B C D E
A = Adjus B = Adjus * = ATSAC —— Resi	ted Throi ted Left V C Benefit ults —	ugh/Right /olume	0 Volume	P	I NorthBour A: 3:	nd 0	B:	229		0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	D D D	B C D E
A = Adjus B = Adjus * = ATSAG — Res	ted Throi ted Left \ Benefit ults — Nort	ugh/Right /olume h/South C	0 Volume	E Svements	 NorthBour A: B: = A(N/	nd 0 0 B) + A	(S/B)	229		0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	0 0 0	B C D E
A = Adjus B = Adjus * = ATSA( — Rest	ted Throu ted Left V C Benefit ults — Nort West	ugh/Right /olume h/South C t/East Crit	0 Volume ritical Move	Dvements	 NorthBour A: B: = A(N/ = A(W/	nd 0 0 B) + A B) + A	(S/B) (E/B)	229		0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	D D D	B C D E



#### Future with Project Conditions P.M. Peak Hour (Year 2020)

N/S:		Flower	St		W/E:		6tl	h St		I/S No:	9	
AM/PM:	PM		Comn	nents: Fl	JTURE V		DJECT (Y	(EAR 202	20)			
COUNT D	ATE:			STU	IDY DATE	:		(	GROWTH	FACTOR:		
Volume	e/Lane/Sig	gnal Conf	igurations	s ——								
	NO	RTHBOU	ND	SC	UTHBOU	IND	W	ESTBOU	ND	FAS	STROUN	D
EVICTING	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	U	U	U	300	1260	U	U	U	U	U	1547	/16
PROJECT												
TOTAL	0	0	0	365	1260	0	0	0	0	0	1547	716
	ቁ ፚ	<u>ት ሐ</u> ና	ላተቅ ላካ	ቁ 🕁	ት 🚓 ና	ት የት የነ	ፋ 🕁	<u>ት</u>	ት የካ <del>(</del>	∮ ኇ ኆ	- <u>A</u> 4	, _በ ን ላ _ገ ,
LANE				2	4					3	3 1	1
	Phasir	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	g I	RTOR
SIGNAL	<none< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Spli</td><td>t &lt;</td><td>none&gt;</td><td><non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></non<></td></none<>	e> <	none>	Spli	t <	none>	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></non<>	e> <	none>	Split		Auto
Critica	I Movem	ents Diag	ram —		outhBou	nd						
				A	A: 3	815						
				E	3: 2	201						
		East	Bound		٨		West	Bound		V/C RATIO		<u>.0S</u>
		A:	453		Ť			U		0.00 - 0.60	) 4	N N
		В:	0				в:	U		0.61 - 0.70	) E	3
					NorthBour	nd 0				0.71 - 0.80	) (	;
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	E	3:	0				0.81 - 0.90	) [	)
* = ATŠA(	C Benefit				L		J			0.91 - 1.00	) Е	<u>.</u>
Res	ults —				A /b1/	(D) - A	(C/D)					
	Norti	/Fast Crit	ritical Move	vements	= Α(N/ = Δ(W/	′¤) + A /B) + ∆	(5/B)					
	1163	V	/C =	0	+ 315	+ (	) +	453	= 0.442		LOS =	A
					*	1500						

N/S:		Alvarado	o St		W/E:		Wilshi	re Blvd		I/S No:	10	0
AM/PM:	РМ		Comm	ents: FL	JTURE	WITH PRC	JECT (Y	EAR 202	20)			
	ATE:			STU	DY DATI	E:		C	GROWTH	FACTOR:		
<u> </u>												
Volume	/Lane/Si	gnal Conf	igurations									
				SO			U WI	ESTBOUI		FA:		
EXISTING	0	1175	99	0	951	124	117	1276	105	100	1170	57
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1175	99	0	951	124	117	1276	105	100	1170	57
	4 ↔	4 <u>4</u> 4	ላ ተን ላተ ላ	6 A	4 <u>4</u> 4	<b>4</b> ⊕ <b>4</b> ₀ <i>4</i> ,	<b>ά</b> Α	4 4 4 4	ረተት ላካ ሩ	<u>ፋ                                   </u>	ے <u>ب</u>	ᢤ᠇ᡕ᠙᠇᠅
LANE		<u>'</u> (₩) 4 2   1		<u>ч</u>	<u>'</u> (4) 2   '	1	1	·			(₩)        1	
	Phasi	na F	RTOR	Phasi	na	RTOR	Phasir	na l	RTOR	Phasin	 n	RTOR
SIGNAL	Perr	n l	Auto	Pern	n	Auto	Perm	n l	Auto	Perm	9	Auto
Critica	l Movem	ents Diag	ram ——									
				s	outhBou	Ind	]					
				A	.: ;	358						
				B		0						
		EastE	Bound		٨		West	Bound		V/C RATION	<u>o</u> <u>i</u>	LOS
			014		Ť		A.	091		0.00 - 0.60	<b>)</b>	A
		В:	100		I		В:	117		0.61 - 0.70	<b>)</b>	в
					iorthBou	nd 425				0.71 - 0.80	0	с
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	B	l:	0				0.81 - 0.90	<b>)</b>	D
* = ATSAC	Benefit				L	~	J			0.91 - 1.00	<b>)</b>	E
— Resi	ults —											
	Nort	h/South C	ritical Mov	vements	= A(N	/B) + B	(S/B)					
	Wes	t/East Crit	tical Move	ments	= A(W	//B) + B	(E/B)	100				
		V	/C =	425	+ 0	+ 69	91 <b>+</b>	100	= 0.741		LOS =	с
		V	/C =		1	*1500			= 0.741		LU3 =	C

N/S:	Be	eaudry	Ave		W/E:		Wilshi	re Blvd		I/S No:	11	
AM/PM:	РМ		Comm	ents: F	UTURE V	VITH PRO	DJECT (Y	EAR 202	20)			
COUNT D	ATE:			ST	UDY DATE	:		G	BROWTH	FACTOR:		
Volume	/Lane/Sign	al Conf	igurations	,								
							W/	ESTROUM		EAS		
	LT	TH	RT	LT	ТН	RT	LT	ТН	RT	LT	TH R	т
EXISTING	5	0	35	255	50	619	9	864	0	0	1031 32	2
AMBIENT												
RELATED												
PROJECT												
TOTAL	5	0	35	255	50	619	9	864	0	0	1031 32	2
		~ ~	N 4 N	1 ^	~ ~ ^	N N A N	1 ^	~ ^ ^			$\land$	4 N
		<u> </u>	יידייין (	л Г		עראיז <del>(</del>	л ф ∎		איזי אין א			νην Γ
										<b>Z</b>		
	Phasing	F	RTOR	Phas	sing	RTOR	Phasi	ng I	RTOR	Phasing	RTOF	R
SIGNAL	Split		Auto	Sp	lit	Auto	Pern	n <	none>	Perm	Auto	)
Critica	l Movemen	ts Diag	ram ——									
						na 135						
					D. 0	55						
					D. 2	200						
	Γ		Bound 516		٨		West	Bound 459		V/C RATIO	LOS	
		~·	510		T			-55		0.00 - 0.60	Α	
		в:	0				В:	9		0.61 - 0.70	В	
	L				NorthBou	nd 40	Ī			0.71 - 0.80	С	
A = Adjus	ted Throug	h/Right	Volume		A:	40				0.91 0.00	-	
B = Adjus * = ATSAC	ted Left Vo C Benefit	lume			В:	5				0.01 - 0.90	-	
	ults ——									0.91 - 1.00	E	
	North/S	South C	ritical Mo	vement	s = A(N/	/B) + A	(S/B)					
	West/E	East Crit	ical Move	ments	= B(W	/B) + A	(E/B)					
			10	40	+335	+ 9	<del>)</del> +	516	0 500	, ı	08 - 1	
		V	/C =		*	1425			= 0.562	. L	03 = A	

N/S:	F	ranciso	o St		W/E:		Wilshir	e Blvd		I/S No:	12	
AM/PM:	PM		Com	nents: FL	JTURE V		JECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	DY DATE	<b>:</b>		(	GROWTH	FACTOR:		
	e/Lane/Sig	nal Con	figuration	s								
	NOF	THBOU	ND	SO	UTHBOL	IND	W	STBOU	ND	FAS		)
EXISTING	LT 164	<u>тн</u> О	RT 475	LT 55	10	RT 30	LT 44	TH 770	RT	LT 14 '	1196	RT 140
AMBIENT		•										1.0
RELATED												
PROJECT												
TOTAL	164	0	475	55	10	30	44	770	11	14	1196	140
	₲₯₹	ک _{کل} (	} ₽ ₽	₲ ᠿ		<u>}</u> p 4p	₲ ᠿ		չ ԲՒ գեջ	<u>ቁ</u> ፚ		_[ ዮ ላ _ተ ዮ
LANE	1		1		1		1	1 1		1 1	1	
	Phasin	g	RTOR	Phasir	ng	RTOR	Phasir	ng	RTOR	Phasing	R	TOR
SIGNAL	Perm		Auto	Pern	n	Auto	Perm	1	Auto	Perm	<b>A</b>	uto
Critica	l Moveme	nts Diag	iram —	S A	outhBou	nd 95						
				B		55						
		East	Bound 668		Ą		Weste A:	Bound 391		V/C RATIO	<u>LC</u>	<u> </u>
		B: 「	14				B:	44		0.00 - 0.60	Α	
					ا IorthBou	nd				0.61 - 0.70	В	
				A	: 2	475				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Throu ted Left V	gh/Righ olume	t Volume	В		164				0.81 - 0.90	D	
* = ATSA0	C Benefit						J			0.91 - 1.00	Е	
Res	ults North	South (	Critical Mo	vemente	- Δ/N	/R) + P	(S/B)					
	West/	East Cri	tical Move	ements	= B(W	/B) + A	(E/B)					
		V	//C =	475	+ 55	+ 4	4 +	668	= 0.758	L	OS = (	•

#### Future with Project Conditions P.M. Peak Hour (Year 2020)







N/S:		Grand A	Ave		W/E:		Wilshir	e Blvd		I/S No:	15	
AM/PM:	РМ		Comm	nents: F	UTURE W	/ITH PRC	DJECT (Y	EAR 202	20)			
COUNT D	ATE:			ST	UDY DATE	:		(	GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations	s —								
	NO	RTHROU		S			WE	STROU		FAS	TROUN	
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING AMBIENT	0	0	0	5	1440	173	42	49	0	0	6	585
RELATED PROJECT												
TOTAL	0	0	0	5	1440	173	42	49	0	0	6	585
LANE SIGNAL	€ ← ← ← ← ← ← ← ← ← ←	↑     ↓       ng     I       >>     <	ि ि भी तिराहर none>	ी ्री Phas	↑     ↓     ↓       2     1       sing     I       lit	小小 下 RTOR Auto		Ŷ ∰ Ŷ     ng n   <	À r ↔ A RTOR none>	୩ ନୁ 수 Phasing Perm	↔ ↔ → 1 - 1 	∳ ∳∱ 1 1 RTOR Auto
Critica	ii wovem	ents Diag	ram		SouthBour A: 4 B:	nd 05 5						
		EastE A:	Bound 296		Ą		WestE A:	Bound 91		V/C RATIO	<u>) L</u>	<u>os</u>
		В:	0				B:	42		0.00 - 0.60	A B	
		L			NorthBour	nd				0.71 - 0.80	с	
A = Adjus B = Adjus	ted Throuted Left	ugh/Right /olume	Volume		B:	0				0.81 - 0.90	D	1
= AISA(										0.91 - 1.00	E	
Kesi	Nort	h/South C	ritical Mo	vement		B) + 4	(S/B)					
	West	t/East Crit	ical Move	ments	= B(W/	_, . ^ B) + A	(E/B)					
		V	/C = —	0	+ 405	+ 4 1500	2 +	296	= 0.425	; L	.0S =	A

N/S:		Alvarado	o St		W/E:		7th	n St		I/S No:	16
AM/PM:	PM		Comm	nents: Fl	JTURE V		JECT (Y	EAR 202	20)		
COUNT D	ATE:			STU	DY DATE			0	GROWTH	FACTOR:	
Volume	/Lane/Si	gnal Conf	igurations	s —							
	NC	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOU	ND	FAS	TBOUND
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH RT
EXISTING	0	1058	80	0	938	69	0	843	109	0	763 115
PROJECT											
TOTAL	0	1058	80	0	938	69	0	843	109	0	763 115
	<b>ң</b> ф	个      合	ሳተን ላካ 	<u>ቁ</u> ፚ		47P 41	₲ ढ़ॖॖॗॖ		ት ሳት ፋ	<u>ላ</u> ታ 수	
LANE		2 1			Z 1			1 1		1	
	Phasi	ng F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	RTOR
SIGNAL	Perr	n /	Auto	Perr	n	Auto	Pern	n	Auto	Perm	Auto
Critica	l Movem	ents Diagi	ram	s	outhBou	nd	7				
				4	A: 3	36					
				E	3	0					
		EastE	Bound		Λ		West	Bound		V/C RATIC	<u>) LOS</u>
		B:	433		T		B:	0		0.00 - 0.60	Α
					l IorthBou	nd		•		0.61 - 0.70	В
				4	A: 3	i79				0.71 - 0.80	С
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	E	B:	0				0.81 - 0.90	D
							]			0.91 - 1.00	E
Kesl	Nort	h/South C	ritical Mo	vements	= A(N/	′B) + B	(S/B)				
	Wes	t/East Crit	ical Move	ments	= A(W/	/B) + B	(E/B)				
		V	/C = —	379	+ 0	+ 47 1500	/6 +	0	= 0.500	) L	.OS = A

#### Future with Project Conditions P.M. Peak Hour (Year 2020)

↑ N

Biy	cel Street				
88 407 8	5	<b>▲</b>	- 130 - 762 - 269		7th Stree
74 - 736 - 429 -	<b>↓</b>	128	132	63	
1) Lane Capacity for WB L Number of Lanes -	efts -	900	vphpl		
WB Left V/C -		269 900			
	=	0.299			
Lane Capacity for EB Th	nroughs -	1,500	vphpl		
Number of Lanes -		1			
EB Through V/C -		736 1,500			
Lane Capacity for FB R	= iahts -	<b>0.491</b> 900	vohol		
Number of Lanes -	9	1			
EB Right V/C -		429 900			
	=	0.477			
Critical V/C -	0.299	+	0.491		
	=	0.790			
or					
Lane Capacity for EB Le	efts -	1,500	vphpl		
Number of Lanes -		1			
EB Left V/C -		74 1,500			
	=	0.049			

Number of Lanes -

WB Through V/C -	{ <u>762</u>	+ 3,000	<u>130</u> }		
	=	0.297			
Critical V/C -	0.049	+	0.297		
	=	0.346			
2) Lane Capacity for NB & S	B Directio	on -	1,500 v	phpl	
Number of Lanes -		1 1	left through/right	t	
Critical V/C -	{ <u>128</u>	+	407 1,500	+	}
or	{ <u>85</u>	+	132 1,500	+	}
	=	0.415			
Intersection V/C = 1.205	_	0.100	=	1.105	LOS F

N/S:	Francis	sco St		W/E:		7th	n St		I/S No:	18
AM/PM:	PM	Comm	nents: FUT	TURE V	VITH PRC	JECT (Y	EAR 202	20)		
COUNT D	ATE:		STUD	Y DATE	E:		C	GROWTH	FACTOR:	
Volume	/Lane/Signal Co	nfigurations	, <b>—</b> —							
	NORTHBO	UND	SOU	ITHBOU	IND	W	FSTBOU	ND	FAS	TBOUND
	LT TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT
	175 51	386	301	48	184	81	895	117	25	691 34
PROJECT										
TOTAL	175 51	386	301	48	184	81	895	117	25	691 34
LANE SIGNAL	<ul> <li>५ ☆ 수 ☆     <li>1 ○</li> <li>Phasing</li> <li>Perm ○</li> </li></ul>	行。 小 仲 1 RTOR Auto	ी d ते 1 Phasing Perm	-	À IP IIP ATOR Auto	ঀ ৄ 1 Phasir Pern	수 슈 슈 1 1 1 ng 1	À r [≬] fr∳ RTOR Auto	り 日 日 日 日 日 日 日 日 日 日 日 日 日	
	Movements Dia	aram —								
			So A: B:	outhBou	nd 232 301					
	Eas	tBound		٨		West	Bound		V/C RATIO	LOS
	A:	363		Ť		A:	506		0.00 - 0.60	А
	B:	25				B:	81		0.61 - 0.70	В
			No A:	orthBou	nd 386				0.71 - 0.80	С
A = Adjust B = Adjust	ted Through/Rig ted Left Volume	ht Volume	B:	1	175				0.81 - 0.90	D
* = ATSAC	Benefit					]			0.91 - 1.00	E
Resu	llts	<b>.</b>			<b>(</b> ) -	(0/F)				
	North/South West/Fast C	Critical Mo	vements = ments =	A(N/	/B) + B /B) + R	(S/B) (E/B)				
		V/C =	386 +	301	+ 50	) <u>6</u> +	25	= 0.742	Ŀ	OS = C

#### Future with Project Conditions P.M. Peak Hour (Year 2020)



N/S:		Flower	St		W/E:		7th	St		I/S No:	20	)
AM/PM:	PM		Comm	ents: FL			DJECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	DY DATE			G	BROWTH	FACTOR:		
	/Lane/Sig	gnal Conf	igurations	,								
	NO			50			W	ESTROUM		ΕΔ	STROUM	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	86	2193	208	143	902	0	0	1005	254
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	86	2193	208	143	902	0	0	1005	254
	1	~ ^ ^		1	~ ^ ^	N N A N	1 0	~ ^ ^		1 ~ /	~ ^ ^	
	м ф Г		אדאיאן א	Ч ф П Т Т Т		אדא אז א	Ч ф Г		אדא אז 🕴	ЧД		אדא אן 🔇
					2			2				
	Phasir	ng l	RTOR	Phasi	ng l	RTOR	Phasir	ng l	RTOR	Phasin	g	RTOR
SIGNAL	<none< td=""><td><b>&gt;</b> &lt;</td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Pern</td><td>1 &lt;</td><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></none<>	<b>&gt;</b> <	none>	Spli	t	Auto	Pern	1 <	none>	Perm		Auto
Critica	I Moveme	ents Diag	ram ——									
				S	outhBou	nd						
				A	•	22						
				B	: 8	86						
		East	Bound		٨		West	Bound		V/C RATI	<u>o i</u>	LOS
		A:	630		Ť		A:	451		0.00 - 0.6	0 /	4
		B:	0		I		B:	143		0.61 - 0.7	0 1	В
		L			orthBour	nd	1		]	071-08	0 4	c.
A = Adjus	ted Throu	ugh/Right	Volume	A		U				0.01 - 0.0		
B = Adjus * = ATSAC	ted Left \ C Benefit	/olume		B	:	0				0.81 - 0.9	U I	J
- Res	ults —			<u>L</u>			-			0.91 - 1.0	0 1	Ξ
1,631	Nortl	h/South C	ritical Mov	vements	= A(N/	'B) + A	(S/B)					
	West	/East Cri	tical Move	ments	= B(W/	/B) + A	(E/B)					
			10	0	+ 622	+ 14	43 +	630	0.000		1 08 -	Р
		v	/C =		*	1500			= 0.860		103 =	J

N/S:	Olive	Ave		W/E:	7t	h St		I/S No:	21
AM/PM:	PM	Comm	ents: FUTU	JRE WITH PF	ROJECT (	YEAR 202	20)		
COUNT D	ATE:		STUDY	DATE:		(	GROWTH	FACTOR:	
Volume	e/Lane/Signal Con	figurations	;						
	NORTHBOL	IND	SOUT	HBOUND	v v	VESTBOU	ND	FASTE	BOUND
EXISTING	LT TH	RT		TH RT		TH	RT 220		TH RT
	121 1257	105	U	0 0		037	239		29 0
RELATED									
PROJECT									
TOTAL	121 1257	165	0	0 0	0	837	239	0 11	29 0
LANE	♠ ☆ 수 ☆ ∠ 1 2 2 2	ት ሳ ት I			▶ [€] ∯	수 ∰ 4   <b>2</b>	ት ካ ት 1		τς, τς, η ^ο (η
	Phasing	RTOR	Phasing	RTOR	Phas	ing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	<none></none>	<none></none>	Per	m	Auto	Perm	<none></none>
Critica	l Movements Diag	gram ——	Sour A: B:	thBound 0					
	East	Bound		٨	Wes	tBound		V/C RATIO	LOS
	A:	565		Ť	A:	419		0.00 - 0.60	Α
	B:	0			B:	0		0.61 - 0.70	в
	L		Nort	hBound	1			0 71 - 0 80	C
A = Adjus	ted Through/Righ	t Volume	A:	386				0.04 0.00	5
B = Adjus * = ATSAC	ted Left Volume C Benefit		B:	121				0.81 - 0.90	U
- Resi	ults ———							0.91 - 1.00	E
i i e si	North/South ( West/East Cr	Critical Mov itical Move	vements = ments =	A(N/B) + B(W/B) +	A(S/B) A(E/B)				
	١	//C =	386 +	0 + *1500	0 +	565	= 0.564	LOS	6 = A

N/S:		Alamed	a St		W/E:		7th	St	20)	I/S No:	2	2
COUNT D				STU	DY DATE			EAR 202	20) GROWTH	FACTOR:		
Volume	/Lane/Si	gnal Conf	igurations	,							070.01	
		TH	ND PT		тн	ND PT		-STROU	ND PT		SIBOU TH	ND PT
EXISTING AMBIENT RELATED	87	811	93	115	956	9	108	657	82	116	1041	180
PROJECT												
TOTAL	87	811	93	115	956	9	108	657	82	116	1041	180
LANE SIGNAL		↑     ↓↓     ↑       1     1       ng     1       n	À I ^A IIIÀ RTOR Auto	I ↓ Phasin Prot-F	↑ ↔ ↑ 1   1 ng ïix	À I ^A IIA Atto	भ ्म 1 Phasir Pern	수 ↔ 수 1   1 ng n	À r ⁰ 4r ⁰ RTOR Auto	ी ्री [∠] 1 Phasin Perm	Ŷ ∰ 4 1 g	b r ↔ 1 RTOR Auto
Critica	l Movem	ents Diag	ram ——	S A B	outhBou : 4 : 1	nd 183						
		East	Bound		٨		West	Bound		V/C RATI	0	LOS
		A:	611		Ť		A:	370		0.00 - 0.6	0	A
		B:	116		I		B:	108		0.61 - 0.7	0	В
				N	orthBou	nd				0.71 - 0.8	0	С
A = Adjus	ted Thro	ugh/Right	t Volume	A	.: 4	152				0.91 0.0	0	- D
B = Adjus * = ATSAC	ted Left \ C Benefit	Volume		В		87				0.01 - 0.9	U	-
	ults —			L			-			0.91 - 1.0	0	E
	Nort Wes	h/South C t/East Cri ⁻ V	Critical Moventical Moventical Moventical	vements ments = 87	= B(N/ = B(W/ + 483	/B) + A /B) + A <u>+ 1(</u> 1425	(S/B) (E/B) 08 +	611	= 0.835	i	LOS =	D

AM/PM:       PM       Comments:       FUTURE WITH PROJECT (YEAR 2020)         COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       SOUTHBOUND       EASTE         LT       TH       RT       EXISTING       SOUTHBOUND       EASTE         LT       TH       RT       AMBIENT       EXISTING       EASTE         AMBIENT       I       TH       RT       EXISTING       EASTE         RELATED       I       I       I       I       I         PROJECT       I       I       I       I       I       I         TOTAL       556       947       34       37       743       70       6       35       12       83       5         QANE       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       <	)UND   RT   68
COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       SOUTHBOUND       WESTBOUND       FASTE         LT       TH       RT       LT       TH       RT         EXISTING       556       947       34       37       743       70       6       35       12       83       5         AMBIENT	)UND   RT   68
Volume/Lane/Signal Configurations         SOUTHBOUND         WESTBOUND         FASTE           LT         TH         RT         RT         LT         TH         RT	NUND RT 68
NORTHBOLINDSOUTHBOLINDWESTBOLINDFASTELTTHRTLTTHRTLTTHRTEXISTING55694734377437063512835AMBIENTImage: constraint of the state of the	RT 68
LT       TH       RT       LT       TT       T         AMBIENT	RT 68
EAISTING55694734377437063512835AMBIENTIIIIIIIIIIIIRELATEDIIIIIIIIIIIIPROJECTIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII <th>68</th>	68
AmblentImage: constraint of the second constr	
RELATEDImage: constraint of the systemRELATEDImage: constraint of the systemPROJECTImage: constraint of the systemImage: constraint of the systemImage: constraint of the systemTOTAL55694734377437063512835Image: constraint of the systemImage: constraint of the system <td></td>	
PROJECTImage: constraint of the systemProduct of the systemProduct of the systemProduct of the systemTOTAL55694734377437063512835 $(1,1)$ $(1,1)$ $(1,1)$ $(1,1)$ $(1,1)$ $(1,1)$ $(1,1)$ $(1,1)$ $(1,1)$ $(1,1)$ LANE1111111111PhasingRTORPhasingRTORPhasingRTORPhasingSIGNALProt-FixAutoPermAutoSplitAutoSplitCritical Movements DiagramEastBound A: 407 B: 37NorthBound A: 407 B: 37NorthBound A: 407 B: 37NorthBound A: 491NorthBound A: 491Auto SplitWestBound A: 53 B: 6NorthBound A: 491Auto NorthBound A: 491	
TOTAL       556       947       34       37       743       70       6       35       12       83       5         h       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	68
LANE       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	ት ሳ ት
Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       Store         SIGNAL       Prot-Fix       Auto       Perm       Auto       Split       Auto       Split         Critical Movements Diagram	1
SIGNAL       Prot-Fix       Auto       Perm       Auto       Split       Auto       Split         Critical Movements Diagram	RTOR
Critical Movements Diagram         SouthBound           A:         407           B:         37           EastBound         A:         53           A:         136         A:         53           B:         83         B:         6         0.00 - 0.60           B:         83         NorthBound         0.61 - 0.70         0.61 - 0.70           A = Adjusted Through/Right Volume         A:         491         0.71 - 0.80	Auto
SouthBound A:407 B:B:37A:136 B:B:83V/C RATIO A:Control B:A:136 B:B:83Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control B:Control <br< td=""><td></td></br<>	
B:       37         EastBound       A:       53         A:       136       A:       53         B:       83       B:       6       0.00 - 0.60         0.61 - 0.70       0.61 - 0.70       0.71 - 0.80         A = Adjusted Through/Right Volume       A:       491       0.71 - 0.80	
EastBound       A:       136       A:       53       0.00 - 0.60         B:       83       B:       6       0.61 - 0.70         A:       491       0.71 - 0.80	
A.     130     A.     53     0.00 - 0.60       B:     83     B:     6     0.61 - 0.70       NorthBound     A:     491     0.71 - 0.80	LOS
B:     83     B:     6       NorthBound     0.61 - 0.70       A = Adjusted Through/Right Volume     0.71 - 0.80	
A = Adjusted Through/Right Volume	A
A: 491 A = Adjusted Through/Right Volume	A B
	A B C
B = Adjusted Left Volume B: 556 0.81 - 0.90	A B C
0.91 - 1.00	A B C D
North/South Critical Movements = B(N/B) + A(S/B)	A B C D E
West/East Critical Movements = $A(W/B) + A(E/B)$	A B C D E
$V/C = \frac{556 + 407 + 53 + 136}{*1375} = 0.768$ LOS	A B C D E

#### **Bixel Street** 61 816 403 1,003 1,013 8th Street SR 110 SB On-Ramp 1) Lane Capacity for WB Lefts -750 vphpl Number of Lanes -2 WB Left V/C -1,013 1,500 0.675 = or Lane Capacity for WB Throughs and Rights -1,500 vphpl 2 throughs Number of Lanes -Number of Lanes -1 right-turn only WB Through/Right V/C -1,003 403 or 3,000 1,500 0.269 = 1,500 vphpl 2) Lane Capacity for SB Rights -Number of Lanes -1 SB Right V/C -61 1,500 0.041 = or Lane Capacity for SB Throughs -750 vphpl Number of Lanes -2 WB Through/Right V/C -816 1,500 0.544 = Intersection V/C = LOS F 1.219 0.100 1.119 =

#### Future with Project Conditions P.M. Peak Hour (Year 2020)

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Future with Project Conditions P.M. Peak Hour (Year 2020)



N/S:		Flower	St		W/E:		8th	I/S No: 26				
AM/PM: PM Comments: FUTURE WITH PROJECT (YEAR 2020)												
COUNT DATE: GROWTH FACT												
	/l ane/Sic	unal Conf	iguration									
Volum								ESTROU		FΔ	STROUM	
	LT				ТН	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	0	1953	497	102	1984	0	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	0	1953	497	102	1984	0	0	0	0
	₲ ᠿ	ት 🚓 ና	ላተን ላነ ረ	ፋ ፊ	수 歳 숙	ት  ሳ _ት ፋ	ፋ ታ	수 歳 순	ት የካ ሰ	ፋ 순 ና	·	ሳተን ላነ <i>3</i>
LANE												
	Phasir	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng l	RTOR	Phasing	ł	RTOR
SIGNAL	<none< td=""><td><b>*&gt;</b> &lt;</td><td>none&gt;</td><td>Spli</td><td>it</td><td>Auto</td><td>Spli</td><td>t &lt;</td><td>none&gt;</td><td><none></none></td><td>&gt; &lt;</td><td>none&gt;</td></none<>	<b>*&gt;</b> <	none>	Spli	it	Auto	Spli	t <	none>	<none></none>	> <	none>
Critica	l Moveme	ents Diag	ram —									
					SouthBou	nd 97	]					
				E	3:	0						
		East	Bound		٨	Δ WestBound				V/C RATIO	<u>2</u>	<u>_OS</u>
		A:	0		Ť		A: 522			0.00 - 0.60	) /	4
		В:	0		I			B: 102			)	3
					NorthBoui	nd				0.71 - 0.80	) (	C
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	E	B: 0						) I	C
* = ATŠA(	C Benefit						J			0.91 - 1.00	)	E
Res	ults —	South C	ritical Ma	vomanta	A / N/	(D) . A	(C/D)					
	West	/East Crit	tical Move	ements	= A(N/ = A(W/	B) + A /B) + A	(S/B)					
		V	/C =	0	+ 497	+ 5	22 +	0	= 0.609	)	_OS =	в
					*	1500						



N/S:		Figueroa	a St		W/E:	9th S	St/James	M Wood	Blvd	I/S No:	28		
AM/PM: PM Comments: FUTURE WITH PROJECT (YEAR 2020)													
COUNT D	ATE:			STL	STUDY DATE: GROWTH FACTOR:								
Volume	/Lane/Si	gnal Conf	iguration	s —									
								STBOUN	ID PT				
EXISTING	0	1517	195	0	0		0	0	0	787 18	77 0		
AMBIENT													
RELATED													
PROJECT													
TOTAL	AL 0 1517 195				0	0				787 1877 0			
LANE	4												
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasin	ng F	RTOR	Phasing	RTOR		
SIGNAL	Spli	t	Auto	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td><none< td=""><td>i&gt; &lt;ا</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<></td></non<>	e> <	none>	<none< td=""><td>i&gt; &lt;ا</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<>	i> <ا	none>	Split	<none></none>		
Critica	Critical Movements Diagram												
		EastE	Bound —		•		WestE	Bound		V/C RATIO	LOS		
		<b>A</b> :	533		Д Т		A:	0		0.00 - 0.60	А		
		B:	533				B: 0			0.61 0.70	B		
					NorthBou	nd	1			0.01 - 0.70	D		
۰ ۸ ـــ ۸ ــــــ	tod Thee	uah/D:~h4	Volume	4		428				0.71 - 0.80	С		
B = Adjus	ted Left	Volume	volume	E	B:	0				0.81 - 0.90	D		
* = ATSAC	C Benefit						J			0.91 - 1.00	E		
Resi	ults — Nort Wes	h/South C t/East Crit V	critical Mo tical Move /C = —	evements ements 428	= A(N/ = A(W + 0	/B) + A //B) + A + ( *1500	(S/B) (E/B) ) +	533	= 0.571	LOS	= A		

N/S: Cherry St W/E: Pico Blvd I/S No: 29														
COUNT DATE: STUDY DATE: GROWTH FACTOR:														
		THBOU			SOUTHBOUND WESTBOUND									
EXISTING AMBIENT RELATED	722	671	232	183	0	<b>26</b>	0	896	447	150	657			
PROJECT														
TOTAL	722	671	232	183	0	26	0	896	447	150	657	0		
h 分 分 分 分 か か か 分 分 分 分 か か か か か か か か														
Critica	l Movemer	its Diag	ram —		SouthBou	Ind	1							
					A: B:	14 101								
	ſ	EastE	Bound		Λ		West	Bound		<u>V/C RATI</u>	<u>o</u>	LOS		
		А. В:	150						0.00 - 0.6	0	A			
			100		l NorthBou	und		•		0.61 - 0.7	0	В		
					A:	464				0.71 - 0.8	0	с		
A = Adjus B = Adjus	ted Throug ted Left Vo	jh/Right Jume	Volume		B: 4	464				0.81 - 0.9	0	D		
* = ATSAC	Benefit						]			0.91 - 1.0	0	E		
Resi	ults North/	South C	ritical Mo	vements	6 = A(N	/B) + B	(S/B)							
	West/E	East Crit	ical Move	ements	= A(W	//B) + B	(E/B)							
	$V/C = \frac{464 + 101 + 448 + 150}{*1425} = 0.746$ LOS = C													

N/S:     Figueroa St     W/E:     Pico Blvd     I/S No:     30       AM/PM:     PM     Comments:     FUTURE WITH PROJECT (YEAR 2020)													
	COUNT DATE: GROWTH FACTOR:												
Volume	Volume/Lane/Signal Configurations												
	NO	RTHBOU	ND	SO	UTHBOL		WESTBOUND			FA	STBOU		
	LT TH RT				TH	RT	LT TH RT			LT	RT		
EXISTING	160	1551	155	23	324	288	172	846	172	195	625	284	
AMBIENT													
RELATED													
PROJECT													
TOTAL	160	1551	155	23	324	288	172	846	172	195	625	284	
					~ ~ /			~ ~ ^			~ ~ ^		
	<u> </u>												
LANE	LANE     1     3     1     1     2     1     1     2     1												
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasir	ng	RTOR	Phasin	g	RTOR	
SIGNAL	Prot-F	ix	Auto	Perr	n	OLA	Pern	n	Auto	Prot-F	ix	OLA	
		J /					L			<u></u>			
	l Movem	ents Diag	ram ——										
				s	outhBou	nd	1						
				4	<b>\:</b> 1	162							
				E	8:	23							
		East	Bound		٨		West	Bound		V/C RATI	0	<u>LOS</u>	
		A.	313		A: 423				0.00 - 0.6	0	Α		
		B:	195		I		B:	172		0.61 - 0.7	0	в	
					lorthBou	nd 427				0.71 - 0.8	0	с	
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	E	3: 1	160				0.81 - 0.9	0	D	
* = ATSAC	Benefit									0.91 - 1.0	0	E	
— Resi	ults —												
	Nort	h/South C	ritical Mov	vements	= A(N	/B) + B	(S/B)						
	West	t/East Crit	tical Move	ments	= A(W	/B) + B	(E/B)						
		V	/C =	427	+ 23	+ 42	23 +	195	= 0.707		LOS =	с	
	*1375												
N/S:     Hoover St     W/E:     Alvarado St/Alvarado Ter     I/S No:     31       AM/PM:     PM     Comments:     FUTURE WITH PROJECT (YEAR 2020)													
---------------------------------------------------------------------------------------------------------------------------------------------------	----------------------	---------------------	-------------	-----------	----------------	--------------------	----------------	-----------	----------	-----------------------------------------------------------------------	-------------	---------------	
AM/PM:			Comn	nents: FL	JTURE V		DJECT (YI	EAR 202	20)				
COUNT D				STU	DY DATE			(	GROWIN	FACTOR:			
	/l ana/Si	anal Conf	iguration										
volume				» 			10/5						
		TH	RT		ТН	RT		TH	RT		TH	RT	
EXISTING	0	1150	719	31	957	0	716	0	0	0	0	0	
AMBIENT													
PROJECT													
TOTAL	0	1150	719	31	957	0	716	0	0	0	0	0	
			ረተን ላካ	ዓ 슈	ት ሐ ና	ᡧᠯᡐᡧᠯ	ፋ 슈 4	ት ሒ ና	ረት የ	ፋ ጵ ና	ے م	ᡷ᠂ᡁ᠈ᡧᠯ᠈	
LANE		1 1	1	1	1		1	· •••	<u>1</u>		44		
	Phasi	na F	RTOR	Phasi	าต	RTOR	Phasin	a	RTOR	Phasing	3	RTOR	
SIGNAL	Perr	n	Free	Pern		none>	Split		Auto	<none:< td=""><td>, &gt;   [·</td><td><none></none></td></none:<>	, >   [·	<none></none>	
Critica	l Movem	ents Diag	ram ——										
				<b>S</b>	outhBou	nd							
				A	.: 5	572							
				B	-	31							
		EastE	Bound		٨		WestE	Bound 358		V/C RATIO	<u>כ</u>	<u>LOS</u>	
		л.	0		T		р.	250		0.00 - 0.60	)	Α	
		р.	U		 		В	330		0.61 - 0.70	)	В	
						623				0.71 - 0.80	)	с	
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right Volume	Volume	В	:	0				0.81 - 0.90	)	D	
* = ATSAC	Benefit						]			0.91 - 1.00	)	E	
	ults —					<b>()</b> -	(0/5`)						
	Nort	h/South C	Fritical Mo	vements	= A(N/	′B) + B ∕B) · ∧	(S/B) (E/B)						
	wes	veasi Uni		623	– A(W/ + 31	+ 35 + 35	58 +	0					
		V	/C = —		*	1500	•		= 0.605		LOS =	В	

N/S:		Flower	St		W/E:		Venic	e Blvd		I/S No:	32	
AM/PM:	PM		Comn	nents: F		/ITH PRC	JECT (Y	EAR 202	20)			
COUNT D	ATE:			STL	JDY DATE	•		G	BROWTH	FACTOR:		
Volume	e/Lane/Sig	nal Conf	iguration	s —								
	NOF	THBOU	ND	SC	OUTHBOU	ND	W	ESTBOUN		FAS	TBOUND	]
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT	
EXISTING	0	0	0	36	1468	130	66	500	0	0	371 44	
PROJECT												
TOTAL	0	0	0	36	1468	130	66	500	0	0	371 44	
IOTAL00361468130665000037144 $\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensuremath{\psi}\ensure$												
Critica	l Moveme	nts Diag	ram ——		SouthBour A: 5 3: 3	nd 33 36	]					
		EastE	Bound		٨		West	Bound		V/C RATIO	<u>LOS</u>	
		A:	208		Ť		А:	316		0.00 - 0.60	Α	
		р.	U	_	I		D:	00		0.61 - 0.70	В	
				Γ,	NorthBour	nd O				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	Volume	E	3:	0				0.81 - 0.90	D	
" = AISAC	Benetit						1			0.91 - 1.00	E	
Results  North/South Critical Movements = A(N/B) + A(S/B)  North/South Critical Movements = A(N/B) - D(D(D))												
West/East Critical Movements = A(W/B) + B(E/B) V/C = $\frac{0 + 533 + 316 + 0}{*1500}$ = 0.496 LOS = A												

N/S:		Grand /	Ave		W/E:		18th	n St		I/S No:	33	
AM/PM:	РМ		Comn	nents: FU			JECT (YE	EAR 202	0)			
COUNT D	ATE:			STU	DY DATE	:		G	ROWTH	FACTOR:		
— Volume	/Lane/Sig	gnal Con	figuration									
	NO	RTHBOU	IND	SO	UTHBOU	ND	WF	STBOUN	D	FA	STBOUN	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	178	453	1028	0	0	0	0	0	1860	218
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	178	453	1028	0	0	0	0	0	1860	218
	♠ ↔	4 4 4 4	÷ ₽ 4₽	ፋ 슈	4 <u>4</u> 4	ረተት ላካ ቀ	\$ <del>\</del>	수 <i>슈</i> 수	ረተት ላካ	\$	<u>ب</u> د د	ሰላ
LANE	· (+	<u>' (+) '</u>	₽ ' '''   <b>2</b>	' ∜   <b>1</b>	<u>'</u> (44) 4 3 1			<u>' (++)                                  </u>	<b>) 1 1</b>		'	1
					-					Dhash		
	Phasir		RIUR	Phasir	ng r	RIOR	Phasin		RIOR	Phasing	g r	RIUR
SIGNAL	Pern	n	Auto	Prot-F	Fix <	none>	<none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></none<>	> <	none>	Split		Auto
	1 84											
Gritica	i woverno	ents Diag	ji dili	⊏s	outhBour	nd	1					
				A	.: 3	43						
						<b>F</b> 0						
				I B	. 4	33						
		East	Bound		٨		WestE	Bound		V/C RATIO	<u>o L</u>	<u>os</u>
		Eastl	Bound 620		Ą		WestE	Bound 0		<u>V/C RATIO</u>		<u>os</u>
		Easti A: B:	Bound 620 0		Δ Γ		WestE A: B:	Bound 0 0		<u>V/C RATI(</u> 0.00 - 0.60	<u>0 L</u> 0 A	<u>os</u>
		East A:	Bound 620 0			od	WestE	Bound 0 0		<u>V/C RATI(</u> 0.00 - 0.6( 0.61 - 0.7(	<u>о L</u> р А р в	<u>OS</u>
		East A: B:	Bound 620		A IorthBour	nd	WestE	Bound 0 0		<u>V/C RATI(</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80	O L D A D B	<u>OS</u>
A = Adjus B = Adjus	ted Throuted Left \	East A: [ B: [ ugh/Righ	Bound 620 0 t Volume	N N N	A IorthBour	nd 98 0	WestE	Bound 0 0		<u>V/C RATI(</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90	O L D A D B D C	<u>OS</u>
A = Adjus B = Adjus * = ATSA0	ted Throi ted Left \ C Benefit	East A:	Bound 620 0 t Volume	N N N	A IorthBour	nd )8 0	WestE	Bound 0 0		<u>V/C RATI(</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	O L D A D B D C D C D C	OS S
A = Adjus B = Adjus * = ATSA( — Res	ted Thron ted Left \ C Benefit ults —	East A: [ B: [ ugh/Right /olume	Bound 620 0 t Volume	N N B	A IorthBour	nd 98 0	WestE	Bound 0 0		<u>V/C RATH</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	O         L           D         A           D         B           D         C           D         C           D         C           D         C           D         C           D         C           D         C	<u>OS</u>
A = Adjus B = Adjus * = ATSA( — Rese	ted Thron ted Left \ C Benefit ults — Norti	East A: [ B: [ ugh/Right /olume	Bound 620 0 t Volume	N A B vements	A lorthBour :: :: = A(N/	nd )8 0 B) + B	WestE A: B:	Bound 0 0		<u>V/C RATH</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	0 L 0 A 0 B 0 C 0 D	<u>OS</u>
A = Adjus B = Adjus * = ATSAC — Res	ted Throo ted Left V Benefit ults — Nortl West	East A:	Bound 620 0 t Volume	vements	 lorthBour .: :: :: = A(N/ = A(W/	nd )8 0 B) + B B) + A	WestE A: B: (S/B) (E/B)	Bound 0 0		<u>V/C RATI(</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	O L D A D B D C D C	<u>OS</u>
A = Adjus B = Adjus * = ATSAC — Res	ted Throi ted Left \ S Benefit ults — Norti West	East A: [ B: [ ugh/Righ /olume h/South C	Bound — 620 0 t Volume Critical Mo tical Move	Vements 98	A lorthBour :: :: :: = A(N/ = A(W/ + 453	nd )8 0 B) + B B) + A + (	WestE A: B: B: (S/B) (E/B) ) +	3ound 0 620	_ 0.752	<u>V/C RATI(</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	<u>0  </u> 0 A 0 C 0 C 0 E	OS C

N/S:	0	live St		N/E:	6th	St	I/S No:	34
AM/PM:	PM	Comm	ents: FUTU	IRE WITH PRO	OJECT (YE	AR 2020)		
COUNT D	ATE:		STUDY	DATE:		GROWT	H FACTOR:	
	e/Lane/Signal	Configurations						
	NORTH	BOUND	SOUT	HBOUND	WE	STROUND	FAST	BOUND
EVICTING		TH RT	LT	TH RT	LT	TH RT		TH RT
	0 14	191	U	0 0	U	0 0	867 14	254 0
PROJECT								
TOTAL	0 14	l68 191	0	0 0	0	0 0	867 12	254 0
	<u></u>		<u>κ</u> Δ Δ		<u></u>		• • • •	· مه م ک
LANE	Ψ ₄ ∓ δ	西	╵┎╶╴╴		г Тум ППП		╯╹ _┩ ┚⊤嶺 ┐ <mark>┃┃┃3</mark>	
	Phasing	RTOR	Phasing	RTOR	Phasine	g RTOR	Phasing	
SIGNAL	Split	Auto	<none></none>	<none></none>	<none:< td=""><td>&gt; <none></none></td><td>Split</td><td><none></none></td></none:<>	> <none></none>	Split	<none></none>
Critica	I Movements	Diagram ——		bBound				
			A:	0				
			в:	0				
		EastBound		٨	WestB	ound	V/C RATIO	LOS
		A: 418		Ť	A:	0	0.00 - 0.60	Α
		3: 477		I	В:	0	0.61 - 0.70	В
			Nort ∆·	hBound 332			0.71 - 0.80	С
A = Adjus B = Adjus	ted Through/	Right Volume me	B:	0			0.81 - 0.90	D
* = ATSAC	C Benefit			-			0.91 - 1.00	E
Res	ults			A /N/D)				
	West/Eas	uth Critical Moves	ments =	A(N/B) + A	(5/B) B(E/B)			
		V/C	332 +	0 +	0 +	477 _ 0.4	69 LO	S = A
		v/0 =		*1500				

N/S:         Hope St         W/E:         7th St         I/S No:         35           AM/PM:         PM         Comments:         FUTURE WITH PROJECT (YEAR 2020)         I/S No:         35												
AM/PM:	PM	Comm	ents: FU	TURE V		JECT (Y	EAR 202	20)				
COUNT DA	ATE:		STU	DY DATE	:		C	GROWTH	FACTOR:			
Volume	/Lane/Signal Con	figurations										
			50			W	ESTROUT		EA			
	LT TH	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT	
EXISTING	105 338	138	14	324	29	0	965	90	0	921	102	
AMBIENT												
RELATED												
PROJECT												
TOTAL	105 338	138	14	324	29	0	965	90	0	921	102	
	4 A A A A	2 A (H)	4 Δ A		2 -12 (H2)	4 Δ		ላ ግ የተያ	4 Δ Δ		ት ሞን	
4 分 수 歲 兌 ሶ ŵ 術 分 수 歲 兌 ሶ ŵ 術 分 수 歲 兌 ሶ ŵ 術 分 수 歲 兌 ሶ ŵ       LANE     1     1     1     1     1												
	Phasing	RTOR	Phasir	ng	RTOR	Phasii	ng l	RTOR	Phasing	a Rī	FOR	
SIGNAL	Perm	Auto	Perm	- 1	Auto	Pern	n	Auto	Perm	Α	uto	
Critical	Movements Diag	gram ——										
		-	_s₀	outhBou	nd	1						
			A	: 1	91							
			В	•	14							
	East	Bound		Λ		West	Bound		V/C RATIO	<u> </u>	<u>s</u>	
	А. В.	512		Т		р.	0		0.00 - 0.60	A (		
	В.	U		 a mth D a u		<u>.</u>	U		0.61 - 0.70	B		
			A	: 3	B43				0.71 - 0.80	c c		
A = Adjust B = Adjust	ed Through/Righ ed Left Volume	t Volume	В	: 1	105				0.81 - 0.90	D		
* = ATSAC	Benefit					J			0.91 - 1.00	) Е		
Resu	llts				/ <b>_</b> _	(0/5)						
	North/South	Critical Mov	vements :	= A(N/	/B) + B /B) · P	(S/B) (E/B)						
	West/East Critical Movements = $A(W/B) + B(E/B)$ 343 + 14 + 528 + 0											
	١	//C =		*	1500			= 0.520	)	LOS = A		

N/S:		Grand A	Ave		W/E:		7th	n St		I/S No:	30	6	
AM/PM:	PM		Comm	nents: F		VITH PRO	)JECT (Y	'EAR 202	20)				
COUNT D	ATE:			STU	JDY DATE			C	BROWTH	FACTOR:			
Volume	/Lane/Sig	nal Conf	igurations	s —									
				6			14/1	ESTROUM					
	LT	TH	RT	LT	ТН	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	0	0	193	1632	79	0	957	0	0	924	216	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	193	1632	79	0	957	0	0	924	216	
	4 <i>A A</i>	4 4 4	ላ ተት ላካ	♠ ↔	4 4 4 4	የተን ፋካ •	4 ↔	4 4 4 4	ረተት ላካ ሩ	ፋ 수 ሩ	ے م	ት የተ	
LANE													
	Phasin	ig l	RTOR	Phasi	ing	RTOR	Phasi	ng l	RTOR	Phasing	3	RTOR	
SIGNAL	<none< td=""><td></td><td>none&gt;</td><td>Spl</td><td>it</td><td>Auto</td><td>Pern</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></none<>		none>	Spl	it	Auto	Pern	n <	none>	Perm		Auto	
	L												
	l Moveme	ents Diag	ram —										
		into Diag	. uni	٦	SouthBou	nd	1						
				1	A: 4	08							
				E	B: 1	93							
		East	Bound		٨		West	Bound		V/C RATIO	<u>ı c</u>	LOS	
		B.	402		Ĩ		А. В·	479		0.00 - 0.60	)	A	
		μ.	V		 North Bow	a d		U		0.61 - 0.70	)	В	
					чогшвой 4:	0				0.71 - 0.80	) (	c	
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right /olume	Volume		3:	0				0.81 - 0.90	)	D	
	, Benefit									0.91 - 1.00	)	E	
Resi	North	/South C	ritical Mo	vements	= A(N/	B) + ∆	(S/B)						
	West	/East Crit	tical Move	ments	= A(W/	_, · ^ /B) + B	(E/B)						
	$V/C = \frac{0 + 408 + 479 + 0}{*1500} = 0.521$ LOS = A												

#### Future with Project Conditions P.M. Peak Hour (Year 2020)



= 0.191

Critical V/C -	0.055	+	0.191	=	0.246
2) Lane Capacity for NB Lane Capacity for NB	Throughs - Left- and Rig	ht-turns -		900 1,425	vphpl vphpl
Number of Lanes -			1 left-turn onl 3 throughs 1 right-turn or	y nly	
Critical V/C -	<u>1,483</u> 2,700	or	<u> </u>	or	<u>135</u> 1,425
	=	0.549			
Intersection V/C = 1.087	—	0.100	=	0.987	LOS E

N/S:	(	Glendale	Blvd		W/E:		Tem	ple St		I/S No:	3	8
AM/PM:	PM		Comm	nents: Fl	JTURE V		)JECT (Y	'EAR 202	20)			
COUNT D	ATE:			STU	DY DATE	:		C	GROWTH	FACTOR:		
Volume	/Lane/Si	gnal Conf	igurations	. —								
	NO			50			W	ESTROIII		EA	STROU	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	65	1903	21	166	934	224	31	720	294	343	908	83
AMBIENT												
RELATED												
PROJECT												
TOTAL	65	1903	21	166	934	224	31	720	294	343	908	83
	4 A		h (h	6 Δ		ረት የተ	<b>6</b> Δ		ላት ሌ	4 Δ Z		ረት የተ
LANE	י _ו 1	└		י ע 1	1 (44) 1   1		י _ל ו 1	1 (↓) 1		י _ל ו 1	「    ∰	→
	Phasi	ng F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasin	g	RTOR
SIGNAL	Pern	n	Auto	Perr	n	Auto	Prot-F	-ix	Auto	Prot-Fi	ix 🗌	Auto
	I											
Critica	l Movem	ents Diag	ram —									
				∟s	outhBou	nd	1					
				A	\: <b>!</b>	579						
				E	<b>):</b>	166						
		EastE	Bound		Δ		West	Bound 507		V/C RATI	<u>o</u>	LOS
		B.	343		T		B.	31		0.00 - 0.60	0	Α
		υ.	545		 IorthBou	nd		01		0.61 - 0.70	0	В
	_			A		962				0.71 - 0.80	0	С
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	E	3:	65				0.81 - 0.9	0	D
* = ATSAC	Benefit						]			0.91 - 1.0	0	E
Resi	lits Nort	h/South C	ritical Mo	vomente	- A/N	/R) . P	(S/B)					
	Wes	t/East Crif	ical Move	ments	– A(N/ = A(W	/B) + B	(E/B)					
	West/East Critical Movements = A(W/B) + B(E/B) V/C = $\frac{962 + 166 + 507 + 343}{*1425}$ = 1.318 LOS = F											

#### Future with Project Conditions P.M. Peak Hour (Year 2020)



Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights



Phase 2) Glendale Boulevard, 1st Street, and 2nd Street - Southbound Lefts, Throughs, and Rights, and
 a.) Westbound Rights on 1st Street
 b.) Westbound Rights on 2nd Street



Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights



I N



Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights



N/S:		Lucas A	Ave		W/E:		3rd	l St		I/S No:	4	0
AM/PM:	PM		Comm	ents: FU	ITURE V		JECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	DY DATE	:		C	GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations	. —								
	NO	RTHBOU	ND	SO	UTHBOU	IND	W	ESTBOU	ND	FA	STBOU	ND
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	39	604	91	54	429	89	109	1131	192	95	899	116
PROJECT												
INCOLOI												
TOTAL	39	604	91	54	429	89	109	1131	192	95	899	116
	₲₽	<u>↑                                     </u>	የቅ ፋተቅ	₲₯		<u>∼</u> p q ₁ q	\${ }}	<u>ት </u>	\$  }  }  }  }	<u>ቁ</u> ፈን ና	<u>}</u>	לף לו קרף לו
LANE	1	2	1	1	1   1		1	2	1	1 2	2	1
	Phasi	ng l	RTOR	Phasir	ng	RTOR	Phasir	ng l	RTOR	Phasing	g	RTOR
SIGNAL	Pern	n	Auto	Pern	า	Auto	Pern	1	Auto	Perm		Auto
Critica	I Movem	ents Diag	ram —									
				S A	outhBou	nd	]					
					- 4	-33						
				В	-	54						
		EastE	Bound 450		Δ		Westl	Bound 566		V/C RATION	<u>0</u>	<u>LOS</u>
		р.			T		р.	100		0.00 - 0.60	)	Α
		р.	33		l l			103		0.61 - 0.70	)	В
				A		302				0.71 - 0.80	D	с
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	в	:	39				0.81 - 0.90	)	D
* = ATSAC	C Benefit						J			0.91 - 1.00	)	E
Resi	ults —											
	Nort	h/South C	ritical Mo	vements	= A(N/	/B) + B	(S/B)					
	wes	v∈ast Crit		ments : 302	= A(W) 1 54	/15) + B _ 54	(⊏/B) \$6 ±	95				
		V	/C = —	302	+ 54	+ 50 1500	ю т	33	= 0.608	<b>;</b>	LOS =	В

N/S:         Lucas Ave         W/E:         6th St         I/S No:         41           AM/PM:         PM         Comments:         FUTURE WITH PROJECT (YEAR 2020)         41												
AM/PM:	PM		Comm	nents: FL	JTURE V	WITH PRC	DJECT (Y	'EAR 202	20)			
COUNT D	ATE:			STU	DY DATE	<b>:</b>		C	BROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations	, —								
	NO	RTHBOU		SO	UTHBOL		w	FSTBOU		FA	STBOU	
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	92	385	68	29	259	114	70	1038	68	170	1031	62
AMBIENT												
RELATED												
PROJECT												
TOTAL	92	385	68	29	259	114	70	1038	68	170	1031	62
	1 1	$\wedge \wedge \wedge$		1. A	^ ^ /		1. A	~ ~ ^		$\Lambda \wedge I$	$\wedge \wedge \wedge$	
4       2       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4       4												
	Phasi	na l	RTOR	Phasi	na	RTOR	Phasi	na l	RTOR	Phasin	a	RTOR
SIGNAL	Pern	.g . n	Auto	Pern	n	Auto	Pern	n	Auto	Perm	9	Auto
OIOII/IL	T OT		luto	1 Unit		Auto	1 011	••	/1410	1 0111		/////
	Movom	onto Diag	rom —									
Chica	INOVEIII	ents Diay	lam	∟s	outhBou	ind	7					
				A	.: 4	402						
				В	5	29						
		East	Bound		٨		West	Bound		V/C RATI	<u>o</u>	LOS
		A:	547		Ĩ		A:	519		0.00 - 0.6	0.	Α
		B:	170		I		В:	70		0.61 - 0.7	0	в
		-			lorthBou	nd 545	ĺ			0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Thro	ugh/Right	Volume			92				0.81 - 0.9	0	D
* = ATSAC	Benefit	Juille			•	v£				0.91 - 1.00	0	E
— Resi	ults —										-	
	Nort	h/South C	ritical Mo	vements	= A(N	/B) + B	(S/B)					
	West	t/East Crit	tical Move	ments	= A(W	/B) + B	(E/B)					
		v	/C = —	545	+ 29	+ 51	19 +	170	= 0.772	2	LOS =	С
					7	1500						

N/S:		Lucas A	Ave		W/E:		Wilshi	re Blvd		I/S No:	42	
AM/PM:	PM		Comm	ents: Fl	JTURE V		JECT (Y	EAR 202	20)			
COUNT D	ATE:			STU	IDY DATE	<b>E:</b>		G	BROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations	;								
	NO	RTHBOU	ND	SC	UTHBOL	IND	W	ESTROUM	ND	FAST	BOUND	
	LT	ТН	RT	LT	ТН	RT	LT	ТН	RT	LT	TH RT	
EXISTING	72	312	56	50	327	75	149	1098	99	70 1	007 76	
RELATED												
PROJECT												
TOTAL	72	312	56	50	327	75	149	1098	99	<b>70</b> 1	007 76	
TOTAL7231256503277514910989970100776 $\begin{array}{c} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$												
	Movem	ente Diag	ram —									
Critica	Novem	ents Diag		S A E	SouthBou A: 3:	nd 452 50						
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS	
		A:	714		Ť		A:	996		0.00 - 0.60	Α	
		B:	70				B:	149		0.61 - 0.70	В	
		<u> </u>		<u> </u>	lorthBou	nd				0.71 - 0.80	С	
A = Adjust	ted Thro	ugh/Right	Volume		A:	+40				0.04 0.00	-	
B = Adjust * = ATSAC	ted Left V Benefit	Volume		E	3:	72				0.81 - 0.90	U	
- Resi	ulte —						<b>_</b>			0.91 - 1.00	E	
Results     North/South Critical Movements = B(N/B) + A(S/B)     West/East Critical Movements = A(W/B) + B(E/B)												
		V	/C =	72	+ 452	+ 99	96 +	70	= 0.990	) LC	DS = E	

#### ALTERNATE FUTURE WITH PROJECT WITH TDM PROGRAM CONDITIONS

(YEAR 2020)

N/S:		Grand A	Ave		W/E:		US 101 N	B Ramp	S	I/S No:	1
AM/PM:	AM		Comr	nents: F			JECT WI	TH TDM	(YEAR 2	2020)	
	ATE:			ST	UDY DATE	:		G	ROWTH	FACTOR:	
	<u> </u>										
Volume	e/Lane/Sig	gnal Conf	iguration	s —							
	NO	RTHBOU	ND	s	OUTHBOU	IND	WF	STBOUN	ID	FASTB	OUND
EVICTINO	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT TI	H RT
	696	212	0	0	1259	529	0	0	0	29 0	0 710
PROJECT											
TOTAL	696	212	0	0	1259	529	0	0	0	29 0	0 710
	ፋ 슈	4 <u>6</u> 6	ረተው ላካ ያ	ፋ 슈	<u> </u>	ት የ	ፋ ድ	<u>ት                                    </u>	ላተን ላካ :	<u>ዓ</u>	ት ሳ <i>ት</i> ረ
LANE	· (P	2		· 4	2	1	' (P	<u>' (++)                                  </u>			) 4) · · · 1 1
	Phasi	ng F	RTOR	Phas	sing	RTOR	Phasir	ng F	RTOR	Phasing	RTOR
SIGNAL	Prot-F	ix <	none>	Per	m	OLA	<none< td=""><td>e&gt; &lt; </td><td>none&gt;</td><td>Split</td><td>Auto</td></none<>	e> <	none>	Split	Auto
	Moyom	onto Diag	rom —								
Critica	II WOVEIII	ents Diag	an	Г	SouthBou	nd	Т				
					A: 6	630					
					В:	0					
		EastE	Bound		Λ		WestE	Bound		V/C RATIO	LOS
		B:	29		Ť		B:	0		0.00 - 0.60	Α
			20		l North Dow	n d		•		0.61 - 0.70	В
					A: 1	106				0.71 - 0.80	С
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right /olume	Volume		B: 6	<b>396</b>				0.81 - 0.90	D
* = ATSA	C Benefit									0.91 - 1.00	E
Kes	Nort	h/South C	ritical Mo	vement	s = B(N/	/B) + A	(S/B)				
	Wes	t/East Crit	tical Move	ements	= A(W	/B) + B	(E/B)				
		V	/C =	696	+ 630	+ (	) +	29	= 0.881	LOS	= D

N/S:	N/S: Hope St/US 101 SB Ramps W/E: Temple St I/S No: 2												
AM/PM:	AM		Comm	nents: FU	TURE V	VITH PRC			I (YEAR 2	2020)			
COUNT D	ATE:			STU	DY DATE	<b>:</b>		(	GROWTH	FACTOR:			
Volume	/Lane/Si	anal Conf	igurations										
				50			\ <b>\</b> /F	STROU		EAST			
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH RT		
EXISTING	69	381	105	170	438	44	403	595	218	275 5	<b>513</b> 266		
AMBIENT													
RELATED		1											
PROJECT													
TOTAL	69	381	105	170	438	44	403	595	218	275 5	513 266		
	<b>κ</b> Δ	$\land \land \land$	_ ₽ ( <del>+</del> )	6 Δ.	4 4 4	ረት ላት	<b>κ</b> Δ.	4 4 4 4	ላት ላት ረ	6 A A	۵ ↔ ↔		
LANE	י _ל י 1	· ↔ 4 1   1		יי 1	· ↔		י _ל י   1	י _ל ווי נ	1		<u>₩</u> 1		
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR												
SIGNAL	PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoProt-FixAutoProt-FixAuto												
Critica	I Movem	ents Diag	ram 🚃				_						
				S A	outhBou	nd 241							
						170							
				В		170							
		Easti	30und 390		Δ		West	298		V/C RATIO	LOS		
		B:	275				B:	403		0.00 - 0.60	Α		
			2.0		ا orthRou	nd				0.61 - 0.70	В		
				A	олпвои :	243				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	В	:	69				0.81 - 0.90	D		
* = ATSAC	* = ATSAC Benefit 0.91 - 1.00 E												
Resi	Results												
	North/South Critical Movements = A(N/B) + B(S/B)												
	vvest	reast Cfl		243 ·	= в(w + 170	/¤) + A + 40	(E/B) )3 +	390					
		V	/C =		k	1425			= 0.776		S = C		



Future with Project with TDM Conditions A.M. Peak Hour (Year 2020)

1,425 vphpl

Number of Lanes -		2				
SB Right V/C -	{ <u>1,135</u>	x 1,425	<u>0.55</u> }			
	=	0.438				
Critical V/C -	0.060	+	0.438	=	0.498	
or						
Lane Capacity for NB Th	nroughs & I	Rights -	1,425	vphpl		
Number of Lanes -		2 1	throughs through/rig	Iht		
NB Through/Right V/C -		{ <u>    983</u>	+ 4,275	<u>184</u>	or	<u>184</u> 1,425
	=	0.273				
Intersection V/C = 0.742	_	0.100	=	0.642	LOS	В

N/S:	Fl	ower St	W/E: 3rd St I/S No: 4								
AM/PM:	AM	Comn	nents: FU	TURE W	ITH PRC	JECT W		I (YEAR 2	2020)		
COUNT D	ATE:		STUI	DY DATE	:		C	GROWTH	FACTOR:		
Volume	/Lane/Signal	Configuration	6								
	NORTH	BOUND	SO	JTHBOU	ND	W	ESTBOU	ND	FAS	TBOUN	D
	LT	TH RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING		26 0	0	1113	137	526	1043	108	0	0	473
AMBIENT											
RELATED											
PROJECT											
TOTAL	1	26 0	0	1113	137	526	1043	108	0	0	473
	ፋ 슈 수	<u>ት ት ት ት</u>	\$ ኯ 4	ት <u>ኡ</u> ት	ረጉዖ ላገ :	ፋ 슈	<u> </u>	ᢤ᠇᠌᠈ᡧᠯ	ዓ 순 수		ላተን ላነ
LANE	1 2		. 4	2	1	1	3 1	<b>v</b> · ·		442 4	1
	Phasing	RTOR	Phasin	ig F	RTOR	Phasi	ng	RTOR	Phasing		RTOR
SIGNAL	Perm	<none></none>	Perm		Auto	Spli	t	Auto	<none></none>	•	Free
	I Movements	Diagram									
		g	S	outhBour	nd	1					
			A	5	57						
			B	: (	0						
	Γ	EastBound		٨		West	Bound		V/C RATIC	<u>)</u> <u>L</u>	<u>.os</u>
		A: 0		Ť		A:	288		0.00 - 0.60	Å	4
		в: 0		I		В:	526		0.61 - 0.70	E	3
	L		N	orthBoun	ld				0.71 - 0.80	C	2
A = Adjus	ted Through	/Right Volume	A	: 1	3				0.01 0.00	-	- \
B = Adjus * = ATSA0	ted Left Volu C Benefit	ime	B		1				0.01 - 0.90	L _	-
	ults ——					-			0.91 - 1.00	E	
	North/Sc	outh Critical Mo	vements =	= B(N/6	B) + A	(S/B)					
	West/Ea	st Critical Move	ements =	= B(W/	B) + A	(E/B)					
		V/C =	1 -	- 557	+ 52	26 +	0	= 0.653	; L	.OS =	в
				*1	1500						

N/S:		Grand A	Ave	W/E:         3rd St         I/S No:         5								
AM/PM:	AM		Comn	nents: Fl			JECT WI	TH TDM	I (YEAR 2	:020)		
COUNT D	ATE:			STL	JDY DATE	:		C	GROWTHI	ACTOR:		
Volume	e/Lane/Sig	gnal Conf	iguration	s								
	NO	RTHBOU	ND	SC	DUTHBOU	ND	WF	STBOU	ND	FAST	BOUN	
FYISTING	LT	TH	RT		TH	RT		тн	RT		TH	RT 00
	17	00	U	U	1212	103	U	U	U	23	U	00
PROJECT												
TOTAL	17	68	0	0	1212	163	0	0	0	23	0	88
	ᡩᢩᢓ	<u>ት ሒ</u> ቲ	ላተን ላነ <u>‹</u>	ፋ ፚ	ት 🚓 ት	ላተ የሳ	५ ॑ ∕	ት 🚓 ና	չ լծ գրծ	\$ ኯ ኯ		የት ላ
LANE	1	2			1 1					1		2
	Phasir	ng F	RTOR	Phasi	ing	RTOR	Phasin	ig l	RTOR	Phasing	F	TOR
SIGNAL	Perm	<b>ו</b> א	Auto	Peri	n	Auto	<none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></none<>	> <	none>	Split		Auto
Critica	I Moveme	ents Diag	ram	<b>–</b> s	SouthBou	nd	1					
					A: 6	88						
				E	B:	0						
		EastE	Bound		٨		WestE	Bound		V/C RATIO	<u>L</u>	<u>os</u>
		A:	48		Ť		A:	0		0.00 - 0.60	Α	
		B:	23				B:	0		0.61 - 0.70	В	
		-		<u> </u>	NorthBour	nd	1			0.71 - 0.80	с	
A = Adjus	ted Throu	ugh/Right	Volume		·· _ ·	رم ال				0.81 - 0.90	D	
* = AUJUS * = ATSA	C Benefit	Juille			-		J			0.91 - 1.00	F	
— Res	ults —										-	
	North	n/South C	ritical Mo	vements	= B(N/	B) + A	(S/B)					
	West	/East Crit	tical Move	ements	= A(W/	′B) + A	(E/B)					
		V	/C = —	17	+ 688	+ (	) +	48	= 0.432	LC	<b>DS</b> =	A
					*	1500						

Future with Project with TDM Conditions A.M. Peak Hour (Year 2020)



N/S:		Flower	St	W/E: 5th St I/S No: 7								
AM/PM:	AM		Comn	nents: Fl	UTURE V		JECT W		(YEAR 2	2020)		
COUNT D	ATE:			STL	JDY DATE			G	BROWTH	FACTOR:		
Volume	e/Lane/Sig	nal Conf	iguration	s —								
	NO	RTHBOU	ND	sc	OUTHBOU	ND	w	ESTBOUN	D	FAS	STBOU	ND
EVISTING		TH	RT	LT	TH	RT 216	LT	TH	RT	LT	TH	RT
		U	U	U	1301	016	202	1380	U	U	U	U
PROJECT												
TOTAL	0	0	0	0	1361	316	262	1380	0	0	0	0
	<u>क</u>		ላተቅ ላገ	<u>ቁ</u> ፊ	ት _ቆ ት	È ſ₽ ₫Ţ₽	<b>क्ष</b> क्व	ት _ጨ ቲ	<u>а</u> гр фтр	<u> </u>		д г ^р фр
LANE					3 1	1	1	5				
	Phasin	g F	RTOR	Phasi	ng	RTOR	Phasi	ng l	RTOR	Phasing	9	RTOR
SIGNAL	<none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Spli</td><td>it</td><td>Auto</td><td>Spli</td><td>t &lt;</td><td>none&gt;</td><td><none:< td=""><td>&gt;</td><td><none></none></td></none:<></td></none<>	> <	none>	Spli	it	Auto	Spli	t <	none>	<none:< td=""><td>&gt;</td><td><none></none></td></none:<>	>	<none></none>
Critica	I Moveme	nts Diag	ram —	E	SouthBour A: 3 3:	nd 40 0						
		EastE	Bound —		٨		West	Bound		V/C RATIO	<u>0</u>	LOS
		А:   р.	-		Ť		А:   р.	2/0		0.00 - 0.60	)	Α
		в:	U				в:	262		0.61 - 0.70	)	В
					NorthBoui	nd O				0.71 - 0.80	)	С
A = Adjus B = Adjus	ted Throu ted Left V	gh/Right olume	Volume	Ē	B:	0				0.81 - 0.90	)	D
* = ATSAC	C Benefit				L		J			0.91 - 1.00	)	E
Resi	ults —				A /b 1/		(0/D)					
	West	/South C	ritical Mo	vements	= A(N)	ם) + A (R) ⊥ ∧	(5/B) (F/B)					
	11630	V/	/C = -	0	+ 340 *	+ 27 1500	( <u>-</u> , <del>-</del> , ) /6 +	0	= 0.341		LOS =	A





N/S:		Flower	St	W/E: 6th St I/S No:								
AM/PM:	AM		Comn	nents: Fl	JTURE V		DJECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	DY DATE	:		(	GROWTH	FACTOR:		
Volume	e/Lane/Sid	anal Conf	iguration									
	NO	RTHBOU		SO	UTHBOU		w	FSTBOU		FAS	STBOUN	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	269	1017	0	0	0	0	0	1798	664
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	269	1017	0	0	0	0	0	1798	664
	ፋ 순	수 쇼 숙	ላተን ላገ <i>አ</i>		수	ᡷ᠂ᡁ᠈ᡧᠯ		今 余 分	ᢤ᠇᠈ᡧᠯ	ፋ 순 ና	<u>ት</u>	ሳት ላ
LANE				2	4						v v 3 1	1
	Phasir	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	<b>)</b>	RTOR
SIGNAL	<none< td=""><td><b>&gt;</b> &lt;</td><td>none&gt;</td><td>Spli</td><td>t &lt;</td><td>none&gt;</td><td><non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></non<></td></none<>	<b>&gt;</b> <	none>	Spli	t <	none>	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></non<>	e> <	none>	Split		Auto
Critica	l Movem	ents Diag	ram —									
		-		S	outhBou	nd	]					
				E	. <u> </u>	48						
			Bound -		L	-		Bound			<b>.</b> .	<b>0</b> 0
		A:	492		Ą		A:	0		<u>V/C RA FIO</u>	<u>י ו</u>	.05
		B:	0				B:	0		0.00 - 0.60	) 4	<b>N</b>
			•	╧┷┷╻	l IorthPo:··	ad ———		•		0.61 - 0.70	) E	3
						0				0.71 - 0.80	) (	;
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	t Volume	В	B: [	0				0.81 - 0.90	) [	)
* = ATSA	C Benefit									0.91 - 1.00	) E	£
Res		h/South (	ritical Mo	vemente	- Δ/N/	′R) ⊥ ^	(S/B)					
	West	/East Cri	tical Move	ments	– A(W)	/B) + 4	(E/B)					
	1100	. <u></u>		0	+ 254	+ (	0 +	492	_ 0 497		LOS =	А
		v	/ <b>J</b> =		*	1500			_ 0.427			-

N/S:	AI	varado	o St	W/E: Wilshire Blvd I/S No: 10								
AM/PM:	AM		Comm	nents: Fl		VITH PRC	JECT W		(YEAR 2	2020)		
COUNT D	ATE:			STL	JDY DATE			C	ROWTH	FACTOR:		
	e/Lane/Signa	al Confi	igurations	s ——								
	NORT	HBOUI	ND	SC	DUTHBOU	ND	W	ESTBOU	ND	FAS	TBOUN	D
EVISTING		TH	RT		TH	RT		TH	RT	LT	TH	RT
	U	882	154	U	1024	191	76	1010	63	111	1253	39
												]
PROJECT												
TOTAL	0	885	154	0	1024	191	76	1010	63	111	1253	39
LANE		☆	ф Ф ₁	₲ ढ़ॖॖॖ		ት የ ሳተን ሳ	ঀ _৾ ৄ		ት የ ሳተን ሳ		· 슈 숙	, <mark>የት ሳ</mark> ገ ,
		-			N I					<u> </u>		
	Phasing	۲ 	RIOR	Phase	ing	RIOR	Phase	ng	RIOR	Phasing		RIOR
SIGNAL	Perm		Auto	Peri	n	Auto	Perr	n	Auto	Perm		Auto
Critica	I Movement	ts Diagi	ram 📃		SouthBou	nd	7					
					A: 4	05						
					ą.	0						
			· · · · · · · · · · · · · · · · · · ·	`		-						
		EastE ∆·	646		Δ		West	Bound 537		V/C RATIO	<u>)</u>	<u>.0S</u>
		~.			Т					0.00 - 0.60	A (	•
		В:	111		1		В:	76		0.61 - 0.70	) E	3
	Ŀ				NorthBour	nd	1			0.71 - 0 80	, r	2
A = Adjus	ted Throug	h/Right	Volume		A: 3	46					_	
B = Adjus * = ΔΤSΔ(	ted Left Vol	ume		E	B:	0				0.81 - 0.90		)
							J			0.91 - 1.00	E	
Kes	uits North/S	South C	ritical Ma	vomonto	_ D/N/	B) · ^	(S/B)					
	Wast/E	act Crit		monte	– D(IN/	⊔j + A /R) ⊥ ∧	(5/B)					
	WESU/E	uət UII		0	- D(VV/	א ד <i>ו</i> ט ד ד	() 6	646				
		V/	'C = —	U	+ 403	+ / 1500	v +	040	= 0.681	L	_OS =	В
						1300						

N/S:		Beaudry	Ave	W/E: Wilshire Blvd I/S No: 11							11
AM/PM:	AM		Comn	nents: FU			JECT W		(YEAR 2	2020)	
COUNT D	ATE:			STU	DY DATE	:	Wilshire Blvd       I/S No:       11         JECT WITH TDM (YEAR 2020)       GROWTH FACTOR:				
— Volume	e/Lane/Sig	gnal Conf	igurations	s —							
	NO	RTHBOU	ND	SO	UTHBOU	IND	W	ESTROUN	D	FASTB	OUND
	LT	тн	RT	LT	TH	RT	LT	TH	RT		H RT
EXISTING	10	U	25	791	31	/41	5	611	0	0 11	10 6
RELATED											
PROJECT											
TOTAL	10	0	25	791	31	741	5	611	0	0 11	10 6
	ቁ 🕁	ት 🔬 ቲ	ሳተን ላ	<u> </u>	ት	ᡷᠾ᠈ᡧᠯ	∮ ፹	수	ᡷ᠇᠈ᡧᠯ	ላ 순 수 삶	<u>ት</u> ት ት
LANE			1	1	1	1		1		2	
	Phasii	ng F	RTOR	Phasin	g	RTOR	Phasi	ng F	RTOR	Phasing	RTOR
SIGNAL	Spli	t /	Auto	Split		Auto	Perr	n <1	none>	Perm	Auto
Critica	I Movem	ents Diag	ram —								
					outhBou	nd	]				
				A		)21					
				B	: 5	521					
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	555		Ц Т		A:	321		0.00 - 0.60	A
		В:	0				B:	5		0.61 - 0.70	В
		<u>.</u>		N	orthBou	nd				0.71 - 0.80	C
A = Adjus	ted Thro	ugh/Right	Volume	A		35				0.71 - 0.00	-
B = Adjus * = ATSA	ted Left VC Benefit	/olume		B		10				0.81 - 0.90	D
Res	ults —						<u> </u>			0.91 - 1.00	Е
	Nort	h/South C	ritical Mo	vements :	= A(N/	/B) + A	(S/B)				
	West	t/East Crit	ical Move	ements =	= B(W/	/B) + A	(E/B)				
		V	'C =	35 -	F 521	+ 5	5 +	555	= 0.713	LOS	s = C
			-		*	1425					

N/S:	Fra	ancisco S	St	W/E: Wilshire Blvd I/S No: 12								
AM/PM:	AM		Commen	ts: FUT	URE V		JECT WI		I (YEAR 2	2020)		
COUNT D	ATE:			STUD	Y DATE	:		C	GROWTH	FACTOR:		
	//											
voiume	/Lane/Signa			0011	TUDOU					540		
				500	THROU	PT		-STROUI	D DT			) PT
EXISTING	33	14 1	105	9	1	10	142	546	57	75	1365	550
AMBIENT												
RELATED												
PROJECT												
TOTAL	33	14 1	105	9	1	10	142	546	57	75	1365	550
	ፋ 순 수		լծ գլծ գլ		· ፹	ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት	ᡩᢩᢓ	ት	\$_f\$_{T}\$	ፋ 순 수	· <u></u>	የት ላነ
LANE			1	N	1	<i>v</i>	1 1	1 1	<i>v</i>	1	1	
	Phasing	RTO	OR	Phasing	<b>j</b>	RTOR	Phasir	ng l	RTOR	Phasing	j F	RTOR
SIGNAL	Perm	Au	to	Perm		Auto	Perm	1	Auto	Perm		Auto
Critica	I Movement	ts Diagran	n ———									
				Sοι	uthBou	nd	1					
				A:		20						
				В:		9						
	Γ	EastBou	ind 958	_	Δ		WestE	Bound 302		V/C RATIC	<u> L</u>	<u>os</u>
		B:	75		T		B:	142		0.00 - 0.60	A	
		L			 	n d				0.61 - 0.70	В	
				A:	1 InBoul	05				0.71 - 0.80	С	:
A = Adjus B = Adjus	ted Throug	h/Right Vo ume	olume	В:		33				0.81 - 0.90	D	)
* = ATSA(	Benefit						]			0.91 - 1.00	E	
Res	North/S	South Criti	cal Move	ments =	A(N/	′B) + B	(S/B)					
	West/Ea	ast Critica	I Moveme	ents =	B(W/	/B) + A	(E/B)					
		V/C :	1	05 +	9	+ 14	42 +	958	= 0.739	L	.OS =	с
		4/0	_		*	1500			_ 0.100			







#### Future with Project with TDM Conditions A.M. Peak Hour (Year 2020)

N/S:		Grand A	Ave	W/E: Wilshire Blvd							1	5
AM/PM:	AM		Comn	nents: Fl			DJECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	IDY DATE			(	GROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	igurations	s —								
	NO	RTHBOU	ND	SC	UTHBOU	ND	W	ESTBOU	ND	FAS	STROUM	ID
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	64	1132	256	10	11	0	0	44	323
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	64	1132	256	10	11	0	0	44	323
	ፋ	<u>ት                                   </u>	ረተ <u></u> የ	ፋ 슈	수 슈 수	ᡷ᠂ᡗ᠈ᡧᠯ	∮		ᡷ᠇᠈᠂ᡎ		[、]	የተን ላ _ገ ,
LANE				1	2 1		1		ν		1	1
	Phasii	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	g	RTOR
SIGNAL	<none< td=""><td><b>≥&gt;</b> &lt; </td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Perr</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></none<>	<b>≥&gt;</b> <	none>	Spli	t	Auto	Perr	n <	none>	Perm		Auto
Critica	l Movem	ents Diag	ram —									
				s	outhBou	nd	1					
				-	· ·	105						
				E	8: (	64						
		EastE	Bound —		٨		West	Bound		V/C RATIO	<u>o i</u>	LOS
		А:   .	184		Ť		A:	21		0.00 - 0.60	0	4
			U					IV		0.61 - 0.70	) I	В
					iorthBour	nd O				0.71 - 0.80	) (	C
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	E	8:	0				0.81 - 0.90	) I	D
* = ATSA(	C Benefit				<u> </u>					0.91 - 1.00	D I	E
	ults —	h/South C	ritical Ma	vomonto	A/NI/	(B) . •	(S/P)					
	West	t/East Crit	tical Move	ements	= A(N/ = B(W/	B) + A (B) + A	(E/B)					
	_	v	/C =	0	+ 363	+ 1	0 +	184	= 0.301		LOS =	A
		v,			*	1500			_ 0.001			

N/S:		Alvarad	o St	W/E:         7th St         I/S No:         16								
AM/PM:	AM		Comn	nents: Fl	JTURE V		JECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	IDY DATE	E:		(	GROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	igurations	s —								
	NO	RTHBOU	ND	SC	UTHBOU	IND	W	/FSTBOU	ND	FAS	TBOUN	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	958	66	0	995	80	0	464	69	0	720	32
PROJECT												
TOTAL	0	958	66	0	995	80	0	464	69	0	720	32
	\$ 🕂	4 <u>6</u> 4	ረተን ላካ	ፋ 순	4 <u>6</u> 4	ረተን ላጉ ረ	ፋ 순	<u> </u>	÷ ₼ ↔	4 <i>6 6</i>		ሰት ላከ
LANE		<u>'</u> (₩) 4 2 1		· &	2 1		· 4'				¥ 1	<b>,</b> , ,
	Phasir	ng l	RTOR	Phasi	ng	RTOR	Phas	ing	RTOR	Phasing	 [	RTOR
SIGNAL	Pern	1	Auto	Perr	n	Auto	Per	m	Auto	Perm		Auto
Critica	I Movem	ents Diag	ram —		outhBou	nd						
				A	.:	358						
				F	8.	0						
						U		D a un d —				
		A:	376		Ą		A:	267		<u>V/C RATIC</u>	<u>) L</u>	<u>.0S</u>
		R.	<u>^</u>				B.	•		0.00 - 0.60	4	A
			U	<u> </u>	la arth D			U		0.61 - 0.70	E	3
					iortnBou	na 341				0.71 - 0.80	C	)
A = Adjus B = Adjus	ted Throut	ugh/Right	Volume			0				0.81 - 0.90	[	)
* = ATSA(	C Benefit	Juille			-	V				0 91 - 1 00	F	-
Res	ults —									0.01 - 1.00		-
	Nort	n/South C	ritical Mo	vements	= B(N/	/B) + A	(S/B)					
	West	/East Crit	tical Move	ements	= B(W	/B) + A	(E/B)					
		v	/c = —	0	+ 358	+ (	) +	376	- 0.419	) L	.OS =	A
		v			*	1500			_ 0.410			



Ν



WB Through V/C -	{ <u>366</u>	+ 3,000	}			
	=	0.143				
Critical V/C -	0.023	+	0.143			
	=	0.166				
2) Lane Capacity for NB & S	B Directio	on -	1,500 v	phpl		
Number of Lanes -			1 left 1 through/right			
Critical V/C -	{	+	572 1,500	+	86	}
or	{ <u>112</u>	+	166 1,500	+	27	}
	=	0.491				
Intersection V/C = 0.866	_	0.100	=	0.766		LOS C

N/S:	F	rancisc	o St		W/E:		7th	n St		I/S No: 18				
AM/PM: AM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)														
COUNT D	ATE:			STU	GROWTH FACTOR:									
	/l ano/Sic	unal Conf	iguration											
Volume				s S				ESTROLI						
	LT TH RT				LT TH RT			ТН	RT	LT TH RT				
EXISTING	41	11	79	43	269	69	150	597	370	57	555	143		
AMBIENT														
RELATED														
PROJECT														
TOTAL	41	11	79	43	269	69	150	597	370	57	555	143		
	ዓ ፚ	ት 🚓 ና	ላተቅ ላካ 🗧	ቁ 🕁	· ٩ ፊ ፚ 수 ጜ ዞ  ₩ ٩ ፚ ፚ 수 ጜ ι						r 4 分 수 쇼 수 40			
LANE	1		1	1	1 1									
	Phasin	ig l	RTOR	Phasi	Phasing RTOR			Phasing RTOR			F	RTOR		
SIGNAL	Perm		Auto	Pern	n	Auto	Pern	n	Auto	Perm		Auto		
Critica	l Moveme	ents Diag	ram —											
		-		s	outhBou	nd	1							
				4	A: 338									
				E	B: 43									
		East	Bound		1			WestBound			<u>) L</u>	<u>os</u>		
			349		Ť		A:	484		0.00 - 0.60	А			
		в:	57					В: 150			0.61 - 0.70 B			
					lorthBou	nd 79				0.71 - 0.80	С			
A = Adjus B = Adjus	ted Throu ted Left V	ıgh/Right /olume	Volume		8:	41					0.81 - 0.90 D			
* = ATSAC	C Benefit						J				0.91 - 1.00 E			
Res	ults —													
	North	n/South C	ritical Mo	vements	= B(N/	′B) + A ∕⊳) - ⊃	(S/B)							
	vvest			41	= A(W) + 338	ив) + В + 48	( ² / ^b ) 34 +	57			08 -	^		
$V/C = \frac{41}{100} + \frac{330}{100} + \frac{404}{100} + \frac{37}{100} = 0.543$ LOS = A														





N/S:		Flower	St		W/E:	I/S No: 20							
AM/PM: AM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)													
COUNT D	ATE:				G	ROWTH	FACTOR:						
Volume	e/Lane/Sid	gnal Conf	igurations										
	NO			S				STROUM		EASTROUND			
	LT	TH	RT	LT	LT TH RT			TH	RT	LT	RT		
EXISTING	0	0	0	73	1007	177	116	818	0	0	423	161	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	73	1007	177	116	818	0	0	423	161	
	ል አል ት ሌ ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት ት												
LANE													
	Phasir	ng l	RTOR	Phasi	ing	RTOR	Phasir	ng F	RTOR	Phasing		RTOR	
SIGNAL	<none< td=""><td><b>&gt;</b> &lt;</td><td>none&gt;</td><td>Spl</td><td>it</td><td>Auto</td><td>Perm</td><td>) <i< td=""><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></i<></td></none<>	<b>&gt;</b> <	none>	Spl	it	Auto	Perm	) <i< td=""><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></i<>	none>	Perm		Auto	
Critica	I Movemo	ents Diag	ram —		SouthBou	nd	7						
					A: 3	i14							
				E	B:	73							
		East	Bound		٨		West	Bound		V/C RATIO	<u>) L</u>	<u>.0S</u>	
		А. В.	292		Ť					0.00 - 0.60	Å	A Contraction of the second seco	
		D:	U		 		в: 116			0.61 - 0.70		3	
					NorthBoui	nd O				0.71 - 0.80	C	;	
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	E	B:	0				0.81 - 0.90		)	
* = ATSA(	C Benefit						]			0.91 - 1.00	E	E	
Res	ults —	h/South C	rition Ma	vomente	A/NI	(D) . A	(C/D)						
	Wost	/Fast Crit	tical Move	mente	= A(N/	⊡) + A /R) ⊥ ^	(3/D) (F/B)						
	11031	V	/C =	0	+ 314	+ 11	( <u> </u>	292	= 0.411	L	.OS =	A	
		v			*	1500			_ 0.411				

N/S:		Olive A	ve		W/E:		7tł	n St		I/S No:	21		
AM/PM:	AM/PM: AM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)												
COUNT D	ATE:			STU	STUDY DATE: GROWTH FACTOR:								
Volume	/Lane/Sig	gnal Conf	iguration	s ——									
NORTHBOUND				SO	UTHBOU	IND	W	ESTBOU	ND	FASTBOUND			
EXISTING	LT 153	тн 1013	RT 102		тн 0	RT 0		TH 758	RT 238		тн RT 03 0		
AMBIENT				•									
RELATED													
PROJECT													
TOTAL	153	1013	102	0	0	0	0	758	238	0 6	03 0		
	ፋ ፹	<u>ት                                   </u>	ሳተቅ ላነ	ନ	수	ላተን ላካ <i>ፈ</i>	ዓ 순	수	ᡷ᠂ᡗ᠈ᡧᠯ	<u> </u>	ራ ሌ ሌ ላቀ		
LANE		2 1						2	1	2			
	Phasi	ng F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	RTOR		
SIGNAL	Spli	t /	Auto	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Pern</td><td>n</td><td>Auto</td><td>Perm</td><td><none></none></td></non<>	e> <	none>	Pern	n	Auto	Perm	<none></none>		
Critica	l Movem	ents Diag	ram —										
		· ·		_s	SouthBou	nd							
				A		0							
				E	3:	0							
		EastE ⊿ ·	Bound 302		Δ		WestBound			V/C RATIO	LOS		
		B.	002		T		R: 0			0.00 - 0.60	Α		
			U		lerthDe:	n d		U		0.61 - 0.70	В		
				A		na 817				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	E	3: 1	53				0.81 - 0.90	D		
* = ATSAC	C Benefit						]			0.91 - 1.00	E		
Kesi	uits Nort	h/South C	ritical Mo	vements	= A(N/	/B) + A	(S/B)						
	West	t/East Crit	ical Move	ements	= A(W/	_, . , /B) + B	(E/B)						
		V	/C =	317	+ 0	+ 37	79 +	0	= 0.394	LOS	S = A		
					*	1500							

N/S: Alameda St W/E: 7th St I/S No: 22													
AM/PM: AM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)													
COUNT D	COUNT DATE: GROWTH FACTOR:												
Volume	Volume/Lane/Signal Configurations												
	NORTHBOL		SO	SOUTHBOUND			STBOU	ND	FASTBOUND				
	LT TH	LT	LT TH RT			LT TH RT			LT TH RT				
EXISTING	142 673	62	128	931	105	146	917	60	86	527	108		
PROJECT													
TOTAL	142 673	62	128	931	105	146	917	60	86	527	108		
LANE		1	' (P 1	1 1		1	1   1		1	· (++) · · 1 1			
	Phasing	RTOR	Phasir	ng	RTOR	Phasir	ng I	RTOR	Phasing	g	RTOR		
SIGNAL	Perm	Auto	Prot-F	ix	Auto	Perm	<b>1</b>	Auto	Perm		Auto		
Critica	i Movements Diag	gram	⊏s	outhBou	nd	1							
			A	-	518								
			в	: 1	28								
	East ∆·	Bound 318	<b>I</b>	Δ		WestE	Bound 489		V/C RATI	<u>o i</u>	LOS		
	B: [	86		I T			B: 146			0 /	A		
				orthBou	nd				0.61 - 0.70	D I	В		
			A	: 3	68				0.71 - 0.80	0 (	C		
A = Adjus B = Adjus * - ΔτοΛΩ	ted Inrough/Righ ted Left Volume Benefit	it volume	В	: 1	42				0.81 - 0.90	0 I	D		
- AIGAC						J			0.91 - 1.00	D I	E		
Rest	North/South	Critical Mov	ements :	= B(N/	′B) + A	(S/B)							
	West/East Cr	itical Mover	nents =	= A(W/	/B) + B	(E/B)							
	$V/C = \frac{142 + 518 + 489 + 86}{*1425} = 0.797$ LOS = C												

N/S:		Soto S	St		W/E:		7th St I/S No: 23						
AM/PM: AM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)													
COUNT D	ATE:			STU	DY DATE	:		(	GROWTH	FACTOR:			
Volume	e/Lane/Sig	nal Conf	igurations	;									
	SO	SOUTHBOUND			ESTBOU	ND	FAS	TROUM	D				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
	485	//1	31	58	648	88	28	113	41	50	55	22	
					<u> </u>								
FROJECT													
TOTAL	485	771	31	58	648	88	28	113	41	50	55	22	
										∮ ቍ ቍ	<u>余</u> 순	እ የት ላ _ገ እ	
LANE	1 1	1		1	1 1 1								
	Phasing	g I	RTOR	Phasii	Phasing RTOR			Phasing RTOR			Phasing RTOR		
SIGNAL	Prot-Fi	X	Auto	Pern	m Auto Split Auto						Split Auto		
Critica	I Moveme	nts Diag	ram —										
				S	SouthBound A: 368								
				в	3:	58							
		EastE	Bound		٨		West	Bound		V/C RATIC	<u>)</u> <u>I</u>	LOS	
		A.	105		T			102		0.00 - 0.60	1	A	
		в:	50					B: 28			0.61 - 0.70 H		
					lorthBou	nd				0.71 - 0.80	(	С	
A = Adjus	ted Throu	gh/Right	Volume		·· 4	HU I						n	
B = Adjus * = ATSA	ted Left V C Benefit	olume			B: 485								
	ults —						_			0.91 - 1.00		E	
	North	/South C	ritical Mo	vements	= B(N/	/B) + A	(S/B)						
	West/	East Crit	tical Move	ments	= A(W	/B) + A	(E/B)						
		V	/C = —	485	+ 368	+ 18	32 +	105	= 0.759	L	.OS =	с	
						13/3							


#### Future with Project with TDM Conditions A.M. Peak Hour (Year 2020)

#### Future with Project with TDM Conditions A.M. Peak Hour (Year 2020)



N/S:		Flower	St		W/E:	8th St //S No: 26						
AM/PM:	AM		Comn	nents: Fl	JTURE V		JECT W	/ITH TDM	(YEAR 2	2020)		
COUNT D	ATE:			STU	IDY DATE	<b>E:</b>		G	ROWTH	FACTOR:		
	e/Lane/Sig		iguration	s					ю		TRAU	
			DT						D DT			DT
EXISTING	0	0	0	0	737	332	79	1532	0	0	0	0
AMBIENT											-	
RELATED												
PROJECT												
TOTAL	0	0	0	0	737	332	79	1532	0	0	0	0
	ፋ 슈	ት ኡ ት	«ተን «ካ <i>"</i>	ፋ 슈		ᡷ᠂᠋᠕᠊ᡧ	ፋ 슈	<u>ት ሕ</u> ት	ረተን ላካ ነ	ፋ ጵ ና	· 슈 イ	ላተን ላነ <i>Հ</i>
LANE	· (Fi	· (+) ·		. 4	4	1	· (P	3				
	Phasir	ng l	RTOR	Phasi	ng	RTOR	Phasi	ing F	RTOR	Phasing	I	RTOR
SIGNAL	<none< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Spl</td><td>it &lt;</td><td>none&gt;</td><td><none></none></td><td></td><td><none></none></td></none<>	e> <	none>	Spli	t	Auto	Spl	it <	none>	<none></none>		<none></none>
Critica	l Movem	ents Diag	ram —									
		-		S	outhBou	nd	]					
				E	·· · · · · · · · · · · · · · · · · · ·	0						
		East	Bound —				West	Bound		V/C RATIO	)	105
		A:	0		Ą		A:	403		0.00 - 0.60	<u> </u>	<u></u>
		В:	0				B: [	79		0.61 - 0.70	· .	R
		L			lorthBou	nd			]	0.01 - 0.70		
A = Δdius	ted Thro	uah/Riah	t Volume	A		0				0.71 - 0.80		G
B = Adjus	ted Left \ C Benefit	/olume	eranic	E	3:	0				0.81 - 0.90		D
- Res	ults —						J			0.91 - 1.00		Ε
	Nort	h/South C	ritical Mo	vements	= A(N	/B) + A	(S/B)					
	West	t/East Cri	tical Move	ements	= A(W	/B) + A	(E/B)					
		v	/C =	0	+ 332	+ 40	)3 +	0	= 0.420	) [	.0S =	А
						`1 <b>500</b>						



N/S:	Figuer	oa St	W/E	: 9th \$	St/James	M Wood Blvd	I/S No:	28
AM/PM:	AM	Comm	ents: FUTURE	E WITH PRO	DJECT WI	TH TDM (YEAR	2020)	
COUNT D	ATE:		STUDY DA	TE:		GROWTH	FACTOR:	
Volume	/Lane/Signal Co	nfigurations						
	NORTHBO	UND	SOUTHB	OUND	WE	STBOUND	FASTBO	DUND
FXISTING	LT TH	RT	LT TH	RT		TH RT	LT TH	
AMBIENT	0 1000	150			U	0 0		
RELATED								
PROJECT								
TOTAL	0 1680	158	0 0	0	0	0 0	1098 181	0 0
	<u>ቁ</u>	የት ላ ନ	<u>ዓ</u>	ት ቀ	ፋ 슈 4	ት ሐ ት ሎ	<u>ዓ</u>	ᡬ᠂᠋ᡎᡧ
LANE	3	1			· «	· (++) +> · ·		4) · ·
	Phasing	RTOR	Phasing	RTOR	Phasin	ng RTOR	Phasing	RTOR
SIGNAL	Split	Auto	<none></none>	<none></none>	<none< td=""><td>e&gt; <none></none></td><td>Split</td><td><none></none></td></none<>	e> <none></none>	Split	<none></none>
	l Movements Dia	aram —						
Cinica		gram	SouthB	ound				
			A:	0				
			B:	0				
	Eas	tBound		Λ	WestE	Bound	V/C RATIO	LOS
		582		Ť			0.00 - 0.60	Α
	В:	582		I	в:	U	0.61 - 0.70	В
			A:	560			0.71 - 0.80	С
A = Adjus B = Adjus	ted Through/Rig ted Left Volume	ht Volume	B:	0			0.81 - 0.90	D
* = ATSA(	C Benefit			-			0.91 - 1.00	E
	ults							
	North/South	Critical Move	vements = A	(N/B) + A	(S/B)			
	west/cast C		$\frac{560}{560} + 0$	) + ( ⁴ , ⁴ , ⁴ )	(, , , , , , , , , , , , , , , , , , ,	582	1 109	= B
		v/C =		*1500		= 0.69		

N/S:	N/S:         Cherry St         W/E:         Pico Blvd         I/S No:         29           AM/PM:         AM         Comments:         FUTURE WITH PROJECT WITH TDM (YEAR 2020)         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2         1/2													
COUNT D	AM ATE:		ments: FL STU	JTURE V		DJECT W		I (YEAR 2 GROWTH	2020) FACTOR: [					
Volume	/Lane/Signal	Configuratior	is											
			L SO			W I	FSTBOU			STBOUI				
EXISTING AMBIENT RELATED	567 5	42 230	229	0	8 8		406	330	234	600				
PROJECT														
TOTAL	567 5	42 230	229	0	8	0	406	330	234	600	0			
LANE $1 1 1 1 1 2 2 2 1 1 1 1 1 3$ Phasing RTOR Phasing														
Critica	Critical Movements Diagram SouthBound A: 4 B: 126													
	Γ	EastBound		Δ		West	Bound 245		V/C RATI	<u>o</u>	<u>LOS</u>			
	E	B: 234				B:	0		0.00 - 0.6	0	A			
			N	IorthBou	nd				0.61 - 0.7	0	В			
A = Adjus	ted Through/	Right Volume	4	:	370				0.71 - 0.8	0	С			
B = Adjus * = ATSAC	ted Left Volu Benefit	me	E	3: ;	370				0.81 - 0.9	0	D			
- Resi	ults ——					_			0.91 - 1.0	U	<b>E</b>			
	North/So West/Eas	uth Critical Most Critical Mov	ovements ements 370	= A(N = A(W + 126	/B) + B //B) + B + 24	(S/B) (E/B) 15 +	234							
		V/C = -	-		*1425			= 0.614		LOS =	В			

N/S:		Figueroa	a St		W/E:		Pico	Blvd		I/S No:	3	0
AM/PM:	AM		Comn	nents: FL	JTURE V		DJECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	DY DATE	:		(	GROWTH	FACTOR:		
Volume	e/Lane/Sig	gnal Conf	igurations	s ——								
	NO	RTHBOU	ND	SO	UTHBOL	IND	W	FSTBOU	ND	FAS	TBOUN	D
EVISTING	LT	TH	RT	LT	TH	RT	LT 50	TH	RT	LT	TH	RT
	230	2044	140	10	150	120	- 59	391	110	201	700	141
PROJECT												
TOTAL	256	2044	146	10	158	120	59	397	118	201	700	141
	ቁ 🕁	ት 🔉 ቲ	ሪ ተቅ	ቁ 🕁	ት ሒ ና	ላተን ላ ^ታ ኛ	ፋ 순	수	ት የ		·	_እ г  4т
LANE		3 1		1	2	1	1	2	1	1 2		1
	Phasii	ng l	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	I	RTOR
SIGNAL	Prot-F	ix	Auto	Pern	n	OLA	Perr	n	Auto	Prot-Fix	(	OLA
Critica	I Movem	ents Diag	ram —									
				S	outhBou	nd 79						
				B		10						
		East	Bound				West	Bound		V/C RATIO	<u>)</u>	LOS
		A:	350		Ϋ́		A:	199		0.00 - 0.60		A
		B:	201				B:	59		0.61 - 0.70		В
					lorthBou	nd				0.71 - 0.80		С
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume			256				0.81 - 0.90		D
* = ATSAC	C Benefit									0.91 - 1.00		E
Res	ults —											
	Nort	h/South C	critical Mo	vements	= A(N/	/B) + B	(S/B)					
	west			548	= в(W + 10	/B) + A + 5	(е/в) 9 +	350	- 0633	I	.OS =	в
		v.	/ <b>U</b> =		*	1375			= 0.033			

N/S:     Hoover St     W/E:     Alvarado St/Alvarado Ter     I/S No:     31       AM/PM:     AM     Comments:     FUTURE WITH PROJECT WITH TDM (YEAR 2020)														
COUNT D				STU	DY DATE			(	GROWTH	FACTOR:				
Volume	/Lane/Si	gnal Conf	igurations	;										
								STBOU			STBOU	ND		
EXISTING AMBIENT RELATED	0	998	648	13	875		494	0			0			
PROJECT														
TOTAL	0	998	648	13	875	0	494	0	0	0	0	0		
Image: A point of														
Critica	Critical Movements Diagram SouthBound A: 477 B: 13													
		East	Bound —		٨		West	Bound		V/C RATIO	<u>כ</u>	<u>LOS</u>		
		A:	0		Ĩ		А:	247		0.00 - 0.60	)	Α		
		В:	U				Б:	247		0.61 - 0.70	)	В		
				A	iortnBou	nd 549				0.71 - 0.80	)	с		
A = Adjus B = Adjus	ted Thro ted Left '	ugh/Right Volume	Volume	в	:	0				0.81 - 0.90	)	D		
* = ATSAC	Benefit						J			0.91 - 1.00	)	E		
Resu	ults —													
	Nort Wes	h/South C t/East Cri	ritical Mo tical Move	vements ments :	= A(N/ = A(W	/B) + B //B) + A	(S/B) (E/B)							
		V	/C =	549	+ 13	+ 24 1500	17 +	0	= 0.469		LOS =	A		

N/S:		Flower	St		W/E:		Venic	e Blvd		I/S No:	32	
AM/PM:	AM		Com	nents: Fl	JTURE V		JECT W	ITH TDM	(YEAR 2	2020)		
COUNT D	ATE:			STU	IDY DATE	<b>:</b>		G	ROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	iguration	s —								
	NO	RTHBOU	ND	SC	UTHBOU	IND	W	ESTBOUN	ID	FAS	STROUN	
	LT	тн	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	U	0	10	541	31	49	342	0	U	412	5/
RELATED												
PROJECT												
TOTAL	0	0	0	10	541	31	49	342	0	0	412	57
		ት	ረጉ የካ	ፋ ፹	수	ላተን ላነ 🖞		<u>ት                                   </u>	<	∮ ኇ ኆ	<u>ት</u> ድ ረ	የት ፋተን
LANE				1	2 1			1			1	
	Phasir	ng F	RTOR	Phasi	ng	RTOR	Phasii	ng F	RTOR	Phasing	j F	TOR
SIGNAL	<none< td=""><td><b>≥&gt;</b> &lt; </td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Pern</td><td>n <i< td=""><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></i<></td></none<>	<b>≥&gt;</b> <	none>	Spli	t	Auto	Pern	n <i< td=""><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></i<>	none>	Perm		Auto
Critica	l Moveme	ents Diag	ram —	S A	SouthBour	nd 191	]					
				E	B: '	10						
		EastE	Bound		٨		West	Bound		V/C RATIO	<u> L</u>	<u>os</u>
		A:	235		Ť		A:	220		0.00 - 0.60	) А	
		B:	0		I		В:	49		0.61 - 0.70	) В	
				N	lorthBou	nd 0	]			0.71 - 0.80	) c	
A = Adjus B = Adjus	ted Throuted Left V	ugh/Right /olume	Volume		·· 3:	0				0.81 - 0.90	) D	
* = ATSA(	C Benefit					~				0.91 - 1.00	) Е	
Res	ults —											
	Nortl	h/South C	ritical Mo	vements	= A(N/	′B) + A	(S/B)					
	West	/East Crit	ical Move	ements	= B(W/	/B) + A	(E/B)					

N/S:		Grand /	Ave		W/E:		18tl	h St		I/S No:	33	
AM/PM:	AM		Comn	nents: FL			JECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	DY DATE	E:		(	GROWTH	FACTOR:		
Volume	/Lane/Sig	inal Conf	iguration	s —								
	NO	RTHBOU	ND	SO	UTHBOL	IND	W	ESTBOU	ND	FAST	BOUND	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH I	RT
	U	U	122	409	501	U	U	U	U	0 1	1060 1	38
PROJECT												
TOTAL	0	0	122	409	501	0	0	0	0	0	1060 1	38
		^ ^ ^						~ ~ /				
	<u>ሻ</u> 🖓	<u>т ф т</u>		Ч Д		τ <mark>β Γ^ρ ΥΤΡ</mark>	м ф ⁻					о «Ть
LANE			2	1	3					2	1 1	
	Phasin	g I	RTOR	Phasir	ng	RTOR	Phasir	ng	RTOR	Phasing	RTC	DR
SIGNAL	Perm		Auto	Prot-F	ix <	<none></none>	<none< td=""><td><b>e&gt;</b> &lt;</td><td>none&gt;</td><td>Split</td><td>Aut</td><td>to</td></none<>	<b>e&gt;</b> <	none>	Split	Aut	to
	I Maxana											
Critica	i woverne	ents Diag	ram	∟s	outhBou	Ind	1					
				A	.:	167						
				в		409						
		East	Bound		٨		West	Bound		V/C RATIO	LOS	
		A:	353		Ť		A:	0		0.00 - 0.60	Α	
		В:	0				В:	0		0.61 - 0.70	В	
				N	lorthBou	nd 67				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Throu ted Left V	igh/Righ ′olume	t Volume	B	:	0				0.81 - 0.90	D	
* = ATSAC	C Benefit	-					J			0.91 - 1.00	Е	
Resi	ults —											
	North	/South C	Critical Mo	vements	= A(N	/B) + B	(S/B)					
	west	r∈ast Cri		ernents : 67	= A(W + ⊿∩⊆	א (סוי + A	(⊏/¤) ) ⊥	353				
		v	/C = —	01	+ 403	*1425	, т 		= 0.512	L	DS = A	

N/S:		Olive	St		W/E:		6th	St		I/S No:	34
AM/PM:	AM		Comm	ents: Fl	JTURE V		JECT W		I (YEAR 2	2020)	
COUNT D	ATE:			STU				C	GROWTH	FACTOR:	
Volume	e/Lane/Si	gnal Conf	igurations	;							
	NO	RTHBOU	ND	SO	UTHBOL	IND	W	STBOU	ND	FAST	BOUND
FXISTING		TH	RT 175		TH	RT 0		TH	RT O	LT 1	TH RT
AMBIENT	0	1005	175	0						402 1	040 0
RELATED											
PROJECT											
TOTAL	0	1009	175	0	0	0	0	0	0	462 1	045 0
	ፋ	<u> </u>	ᡷ᠇ᡗᡧ᠇	ፋ 슈	<u> </u>	ት የ ት	ፋ 순	ት <u>ኡ</u> ፋ	ላተን ላካ ረ	ፋ 순 수	↔ ↔ ↔
LANE		· (++) + 4   1		· 4							
	Phasi	ng l	RTOR	Phasi	ng	RTOR	Phasir	ng l	RTOR	Phasing	RTOR
SIGNAL	Spli	t	Auto	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td><none< td=""><td><b>?</b>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<></td></non<>	e> <	none>	<none< td=""><td><b>?</b>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<>	<b>?</b> > <	none>	Split	<none></none>
	l Movem	ents Diag	ram —								
		U		۲s	outhBou	nd	]				
				4		0					
				E	B:	0					
		East	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	301		Ť		A:	U		0.00 - 0.60	Α
		В:	301		 		в:	U		0.61 - 0.70	В
					lorthBou	nd 237				0.71 - 0.80	С
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	t Volume		······································	0				0.81 - 0.90	D
* = ATSA	C Benefit						J			0.91 - 1.00	Е
	ults —					( <b>n</b> ) -	(0/F)				
	Nort	h/South C	Fritical Move	vements	= A(N)	/B) + A	(S/B) (E/B)				
	4462	vLast UII		237	- A(W + 0	, , , , , , , , , , , , , , , , , , ,	(L,D) ) +	301			<b>c</b>
		V.	/C =		<del>ار</del>	1500			= 0.289		5 = A

AM/PM: AM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)												
COUNT DATE: GROWTH FACTOR:												
COUNT DATE: GROWTH FACTOR: GROWTH FACTOR:												
Volume/Lane/Signal Configurations												
LT TH RT LT TH RT LT TH RT LT	TH RT											
EXISTING         41         263         146         10         250         26         0         931         113         0	432 73											
TOTAL 41 263 146 10 250 26 0 931 113 0	432 73											
ፍ ም ም ም ም ም ም ም ም ም ም ም ም ም ም ም ም ም ም • • • •	今      余      冷      ゆ											
	1 1											
Phasing RTOR Phasing RTOR Phasing RTOR Phasi	ng RTOR											
SIGNAL Perm Auto Perm Auto Perm Auto Perm	n Auto											
Critical Movements Diagram												
SouthBound												
A: 140												
B: 10												
EastBound V/C RA	<u>10 LOS</u>											
A: 253 A: 522 0.00 - 0.	60 A											
B: 0 B: 0 0.61 - 0	70 B											
NorthBound 0.71 - 0	80 C											
A: 225												
B = Adjusted Left Volume B: 41 0.81 - 0.	90 D											
0.91 - 1.	00 E											
North/South Critical Movements = A(N/B) + B(S/B)												
West/East Critical Movements = $A(W/B) + B(E/B)$												
$V/C = \frac{225 + 10 + 522 + 0}{*1500} = 0.435$	LOS = A											

N/S:		Grand A	Ave		W/E:		7th	n St		I/S No:	36
AM/PM:	AM		Comm	ents: Fl	JTURE W		JECT W		I (YEAR 2	2020)	
COUNT D	ATE:			STU	IDY DATE			C	GROWTH	FACTOR:	
	/Lane/Sig	gnal Conf	igurations	, —							
	NO	RTHBOU		SO	UTHBOU	ND	w	FSTBOU		FAST	BOUND
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH RT
EXISTING	0	0	0	101	1308	78	0	947	0	0	491 116
		1									
RELATED											
PROJECT											
TOTAL	0	0	0	101	1308	78	0	947	0	0	491 116
	<b>φ</b>		ላ ት የተ	<b>6</b> Δ		ላት ሌ	4 Δ		ላ ት ላት	<b>6</b> Δ Δ	
LANE		<u> </u>		י _ו 1	1 d4 l	)  / \// 1	· ↓	1 di li 2		יו _ל טיי 2	
	Phasir	na l	RTOR	Phasi	na	RTOR	Phasi	na	RTOR	Phasing	RTOR
SIGNAL	<none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Perr</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td>Auto</td></none<>	> <	none>	Spli	t	Auto	Perr	n <	none>	Perm	Auto
Critica	l Movem	ents Diag	ram ——								
		sino Biag		۲s	outhBou	nd	]				
				A	: 3	27					
				E	3: 1	01					
		EastE	Bound		Δ		West ∆·	Bound 474		V/C RATIO	LOS
		р.	240		T		р.			0.00 - 0.60	Α
		р.	U				В.	U		0.61 - 0.70	В
					iorthBour	nd O				0.71 - 0.80	С
A = Adjus B = Adjus	ted Throuted Left	ugh/Right /olume	Volume	E	3:	0				0.81 - 0.90	D
* = ATSAC	C Benefit						]			0.91 - 1.00	Е
	ults —										
	Nort	h/South C	ritical Move	vements	= A(N/	′B) + A ∕B) - P	(S/B) (E/B)				
	west	Last Un		0	- A(W/ + 327	+ 47 + 47	(Ľ/B) 74 +	0			
		V	/C =		*	1500			= 0.464		DS = A

#### Figueroa Street Ν 189 713 50 **Olympic Boulevard** ♠ 110 868 67 262 1,641 197 1) Lane Capacity for EB Lefts -900 vphpl Number of Lanes -1 EB Left V/C -110 900 0.122 = Lane Capacity for WB Throughs -1,425 vphpl Lane Capacity for WB Rights -900 vphpl 3 throughs Number of Lanes -1 right-turn only WB Through/Right V/C -713 189 or 4,275 900 0.210 = Critical V/C -0.122 0.210 0.332 + = or Lane Capacity for WB Lefts -1,425 vphpl Number of Lanes -1 WB Left V/C -50 1,425 0.035 = Lane Capacity for EB Throughs/Rights -1,425 vphpl Number of Lanes -3 throughs 1 right-turn only

Future with Project with TDM Conditions A.M. Peak Hour (Year 2020)

 EB Through/Right V/C 868
 or
 67

 4,275
 1,425

= 0.203

Critical V/C -	0.035	+	0.203	=	0.238
2) Lane Capacity for NE Lane Capacity for NE	3 Throughs - 3 Left- and Rig	ht-turns -		900 1,425	vphpl vphpl
Number of Lanes -			1 left-turn on 3 throughs 1 right-turn o	ly nly	
Critical V/C -	<u>1,641</u> 2,700	or	<u>    262</u> 1,425	or	<u>    197                                </u>
	=	0.608			
Intersection V/C = 0.940	_	0.100	=	0.840	LOS D

N/S:	N/S:     Glendale Blvd     W/E:     Temple St     I/S No:     38       AM/PM:     AM     Comments:     FUTURE WITH PROJECT WITH TDM (YEAR 2020)													
AM/PM:	AM		Comm	nents: F		VITH PRC	JECT W		I (YEAR 2	2020)				
COUNT D	ATE:			STI	JDY DATE			(	GROWTH	FACTOR:				
Volume	/Lane/Si	gnal Conf	igurations	. —										
	NO	RTHBOU	ND	S	DUTHBOU	ND	W	ESTBOU	ND	FA	STBOU	ND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	58	628	14	252	1850	152	65	607	184	202	657	143		
AMBIENT														
RELATED														
PROJECT														
TOTAL	58	628	14	252	1850	152	65	607	184	202	657	143		
					~ ~ ^			~ ~ ^			· · · ·			
	Ч ф Г		<u>, ць «Ць </u>	<u>ዛ</u> ቻ			Ч ф Г			ሻ ፚ ፞		с <mark>у г</mark> у «ту		
LANE	1	1 1		1	1   1		1	1   1		1	1	1		
	Phasi	ng F	RTOR	Phasi	ing I	RTOR	Phasi	ng	RTOR	Phasin	g	RTOR		
Phasing     RTOR     Phasing     RTOR     Phasing     RTOR       SIGNAL     Perm     Auto     Perm     Auto     Prot-Fix     Auto														
										L				
Critica	l Movem	ents Diag	ram ——											
				۲٤	SouthBou	nd	1							
					A: 10	D01								
				6	B: 2	52								
		EastE	Bound		<u> </u>		West	Bound		V/C RATI	0	LOS		
		A:	400		Ą		A:	396			_			
		B:	202				В: Г	65		0.00 - 0.6	U	A		
					VorthBou	nd				0.61 - 0.7	D	В		
					4: 3	21				0.71 - 0.8	D	с		
A = Adjus	ted Thro	ugh/Right /olume	Volume		3.	58				0.81 - 0.9	0	D		
* = ATSAC	Benefit	Juille		Ľ	-		J			0 01 - 1 0	n	F		
	ults —									0.91 - 1.0	0	L		
	Nort	h/South C	ritical Mo	vements	= B(N/	B) + A	(S/B)							
	Wes	t/East Crit	tical Move	ments	= A(W/	′B) + B	(E/B)							
			10	58	+ 1001	+ 39	96 +	202	4 000		1.06 -	F		
		V	/0 =		*	1425			= 1.093	•	203 =	'		



Glendale Boulevard 74 855 1,101 - 29 Beverly Boulevard 1st Street 247 167 150-~204 45 2nd Street 370 29 Lucas Avenue

Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights



Phase 2) Glendale Boulevard, 1st Street, and 2nd Street - Southbound Lefts, Throughs, and Rights, and
 a.) Westbound Rights on 1st Street
 b.) Westbound Rights on 2nd Street



Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights



I N



Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights



N/S:	N/S:     Lucas Ave     W/E:     3rd St     I/S No:     40       AM/PM:     AM     Comments:     FUTURE WITH PROJECT WITH TDM (YEAR 2020)													
AM/PM:	AM ATE:		Comm	ents: FU STU	ITURE V	VITH PRC	JECT W	ITH TDN	I (YEAR 2 GROWTH	2020) FACTOR: [				
Volume	/Lane/Sig	gnal Conf	igurations	, —										
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOU	ND	FAS	STROUM	D		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
EXISTING	140	322	124	131	636	139	74	887	90	171	1200	106		
PROJECT														
TOTAL	140	322	124	131	636	139	74	887	90	171	1200	106		
4														
LANC     I     Z     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I     I <thi< th="">     I     I&lt;</thi<>														
SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto														
Critical Movements Diagram														
				A		888								
				В	: 1	31								
		Easte	Bound 600		Ą		West	Bound 444		V/C RATIO	<u>0 i</u>	LOS		
		в:	171				B:	74		0.00 - 0.60	)	A		
				N	orthBou	nd				0.61 - 0.70	)	В		
				A	: 1	61				0.71 - 0.80	) (	C		
A = Adjus B = Adjus	ted Throu ted Left \ Secofit	igh/Right /olume	Volume	В	-	40				0.81 - 0.90	)	D		
= ATSAC							]			0.91 - 1.00	)	E		
Rest	North	n/South C	ritical Mo	vements	= B(N/	′B) + A	(S/B)							
	West	/East Crit	tical Move	ments :	= B(W	/B) + A	(E/B)							
		v	/C = —	140	+ 388	+ 7	4 +	600	= 0.731		LOS =	С		

N/S:		Lucas A	ve		W/E:	:: 6th St I/S No: 41						
AM/PM:	AM		Comm	nents: FL	JTURE W		JECT W		(YEAR 2	2020)		
COUNT D	ATE:			STU	DY DATE	:		C	BROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	igurations	s —								
	NO	RTHBOU	ND	SO	UTHBOU	ND	w	ESTBOU	D	FAS	TROUN	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	53	204	19	58	360	210	63	801	41	184	1161	195
PROJECT												
TOTAL			40		0.00	010		0.04			4404	405
TOTAL	53	204	19	58	360	210	63	801	41	184	1161	195
	ቁ ፚ		<u>г</u> р фр	∮ ፚ	ት _🚓 ት	ት የካ	ᠳ	수 🚓 수	ት የ ት	∮ ቆ 수	- 🚓 🕏	₼ 4
LANE		1			1		1	2	1	1 1	1	
Phasing RTOR Phasing RTOR Phasing RTOR Phasing R ⁻												RTOR
SIGNAL	Pern	n /	Auto	Pern	n	Auto	Perr	n	Auto	Perm		Auto
		ents Diag	ram —									
Ontion				∟s	outhBou	nd	1					
				Δ	.: 6	28						
				В	3: 4	58						
		EastE	Bound		٨		West	Bound		V/C RATIC	<u>) L</u>	<u>os</u>
		A:	678		Ť		A:	401		0.00 - 0.60	А	
		B:	184				B:	63		0.61 - 0.70	В	
		L			lorthBour	nd	1			0 71 - 0 80	ſ	
A = Adjus	ted Thro	ugh/Right	Volume	A	.: 2	76				0.01 - 0.00	-	
	ted Left	Volume		B		53				0.81 - 0.90	D	
B = Adjus * = ATSA(	> Dement						-			0.91 - 1.00	E	
B = Adjus * = ATSA(	ults —											
B = Adjus * = ATSA( —— Res	ults — Nort	h/South C	ritical Mo	vements	= B(N/	B) + A	(S/B)					
B = Adjus * = ATSA( Res	ults — Norti West	h/South C t/East Crit	ritical Mo ical Move	vements	= B(N/ = B(W/	B) + A /B) + A	(S/B) (E/B)					
B = Adjus * = ATSA( —— Res	ults — Norti West	h/South C t/East Crit	ritical Mo ical Move	vements ments 53	= B(N/ = B(W/ + 628	B) + A /B) + A + 6	(S/B) (E/B) 3 +	678	- 0.878			 D

N/S:	Lucas Ave     W/E:     Wilshire Blvd     I/S No:     42											
AM/PM:	AM		Comn	nents: FL			JECT WI		I (YEAR 2	2020)		
COUNT D	ATE:			STU	DY DATE	<b>:</b>		(	GROWTH	FACTOR:		
	/Lane/Sig	nal Conf	igurations	s ——								
	NOF	RTHBOU	ND	SO	UTHBOL	IND	WE	STBOU	ND	FAS	TBOUN	
EVISTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	59	107	/ 1	03	2/0		100	000	90	30	1079	12
PROJECT												
TOTAL	59	167	71	63	278	77	106	655	98	56	1079	72
	₲₯∠		ር የ ፋተን	₲₯			₩ £ 4	ት _ጨ ና	<u>↓</u> [⊅ 4]↓	<u>ዛ</u> ፚ ት	<u>\$</u> \$	ф ф
LANE												
	Phasin	g F	RTOR	Phasi	ng	RTOR	Phasin	ng	RTOR	Phasing	F	TOR
SIGNAL	Perm		Auto	Pern	n	Auto	Perm	<b>ו</b>	Auto	Perm		Auto
Critica	l Moveme	nts Diag	ram —									
				۲s	outhBou	Ind						
				A		418						
				В	:	63						
		EastE	Bound		٨		West	Bound		V/C RATIO	<u> </u>	<u>os</u>
		A:	652		Ť		A:	646		0.00 - 0.60	A	
		B:	56				B:	106		0.61 - 0.70	В	
		•			lorthBou	nd				0.71 - 0.80	С	
A = Adjus	ted Throu	gh/Right	Volume			LJ/				0.81 - 0.90	- D	
* = AUJUS * = ATSAC	Benefit	olume			В: 59					0.91 - 1 00	F	
— Resi	ults —										E	
	North	/South C	ritical Mo	vements	= B(N	/B) + A	(S/B)					
	West/	East Crit	ical Move	ements	= B(W	/B) + A	(E/B)					
		V	/C = —	59	+ 418	+ 10	06 +	652	= 0.753	L	.OS =	с

N/S:	Grand	l Ave	W/E:	: 7	US 101 NF	B Ramps	I/S No:	1
AM/PM:	РМ	Comm	ents: FUTURE		JECT WI	TH TDM (YEAF	R 2020)	
COUNT D			STUDY DAT	ſE:		GROWT	H FACTOR:	
Volume	June/Signal Co	nfigurations	;					
	NORTHBO	UND	SOUTHBO	UND	WE	STROUND	FASTB	OUND
FYISTING	LT TH	RT	LT TH	RT	LT	TH RT		H RT
			U IJZ	3/4	V	υυ		011
RELATED		ļ ļ						
PROJECT								
TOTAL	1107 1053	<b>0</b>	0 752	374	0	0 0	120 0	677
LANE					୩ ୁୁୁୁୁୁୁୁୁୁୁ Phasin		♦ ∯ ∯ 수 ∰ Depasing	
SIGNAL	Prot-Fix	<none></none>	Perm	OLA	<none< td=""><td>&gt; <none></none></td><td>Split</td><td>Auto</td></none<>	> <none></none>	Split	Auto
	- Marramanto Die							
	ו Movements וע	igram —	SouthBo	und 376 0				
	Eas	stBound	$\neg$ $\downarrow$ /	۸	WestB	Bound	V/C RATIO	LOS
	A:	U	⁺	ſ	A:	U	0.00 - 0.60	Α
	B:	120		l	В:	0	0.61 - 0.70	В
	L		NorthBo	und	1	J	0.71 - 0.80	-
A = Adjus	ted Through/Rig	ht Volume	A:	527			0.71-0.00	L.
B = Adjus	ted Left Volume		B:	1107			0.81 - 0.90	D
= A10A			L				0.91 - 1.00	E
Res	ults				(C/D)			
	North/Sour		$\frac{1}{2} = \frac{1}{2} $	₩/¤) + ~	(5/B)			
	W650Last 0	V/C =	<u>1107 + 37</u>	<u>6 + (</u> *1425	) +	<u>120</u> = 1.0	55 LOS	= F

N/S:	N/S: Hope St/US 101 SB Ramps W/E: Temple St I/S No: 2													
AM/PM:	PM		Comn	nents: FL	JTURE V	VITH PRC	JECT W	ITH TDN	I (YEAR 2	2020)				
COUNT D	ATE:			STU	DY DATE	:		C	GROWTH	FACTOR:				
Volume	/Lane/Sig	gnal Conf	iguration	3										
	NO	RTHBOU	ND	SO	UTHBOU	IND	W	ESTBOU	ND	FA	STROUN	D		
EXISTING	LT 232	тн 410	RT 214	LT 130	TH 545	RT 17	LT 147	TH 995	RT 259	LT 557	TH 899	RT 78		
AMBIENT	LUL	410	217		0+0		177	000	200		000			
RELATED														
PROJECT														
TOTAL	232	410	214	130	545	17	147	995	259	557	899	78		
	ፋ 🕁	<u>ት 🚓                                   </u>	ት ሳ  በ	ቁ 🕁	ት 🚓 ና	ት ሳ _ት ረ	<u>ዓ</u>	수 🚓 ና	ት ሳ _ት ቆ	ᡩᢩᡒ᠂	ት 🚓 🕀	לדף לק		
	Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
PhasingRTORPhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoProt-FixAutoProt-FixAuto														
	SIGNAL Perm Auto Prot-Fix Auto Prot-Fix Auto													
Critical Movements Diagram														
		U		۲s	outhBou	nd	1							
				A		281								
				В	6: 1	30								
		East	Bound		٨		West	Bound		V/C RAT	<u>IO L</u>	<u>.0S</u>		
		А.	403 667		T		А. 	430		0.00 - 0.6	60 A	4		
		В.	997		 		В.	147		0.61 - 0.7	'0 E	3		
				A	iortnBou	na 312				0.71 - 0.8	60 C	:		
A = Adjus B = Adjus	ted Throi ted Left \	ugh/Right /olume	Volume	в		232				0.81 - 0.9	00 E	)		
* = ATSAC	C Benefit						J			0.91 - 1.0	00 E	Ē		
Resi	ults —					-								
	Nort	h/South C	Fritical Mo	vements	= B(N/	/B) + A /B) · P	(S/B) (E/B)							
	WEST	V	/C = -	232	- A(W) + 281	+ 49 1425	)8 +	557	= 1.030	)	LOS =	F		



Future with Project with TDM Conditions P.M. Peak Hour (Year 2020)

1,425 vphpl

Number of Lanes -		2				
SB Right V/C -	{ <u>721</u>	x 1,425	<u>0.55</u> }			
	=	0.278				
Critical V/C -	0.387	+	0.278	=	0.665	
<u>or</u>						
Lane Capacity for NB T	hroughs & I	Rights -	1,425	vphpl		
Number of Lanes -		2 1	throughs through/rig	ht		
NB Through/Right V/C	-	{ <u>2,701</u>	+ 4,275	80 }	or	<u>80</u> 1,425
	=	0.651				
Intersection V/C = 1.086	_	0.100	=	0.986	LOS	E

AM/PM: EXAMPLE: Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)         COUNT DATE: GROWTH FACTOR:         Volume/Lane/Signal Configurations         WESTBOUND       EASTBOUND         LT       TH       RT         Volume/Lane/Signal Configurations         EXISTING       Idd 226       O       5114       512       127       TH       RT         NORTHBOUND       WESTBOUND       EASTBOUND         LT       TH       RT         NORTHBOUND       EASTBOUND       EASTBOUND         LT       TH       RT         NORTHBOUND       EASTBOUND       EASTBOUND         LT       TH       RT         RT       RT       RT         Contract Movements Diagram       WestBound       V/C RATIO       LOS         Critical Movements Diagram       V/C RATIO       LOS         Adjusted Through/Right Volume <th>N/S:</th> <th>Flow</th> <th>er St</th> <th></th> <th>W/E:</th> <th></th> <th></th> <th>I/S No:</th> <th>4</th> <th></th>	N/S:	Flow	er St		W/E:			I/S No:	4				
COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       SOUTHBOUIND       WESTBOUIND       FASTBOUIND         LT       TH       RT       LT       TH       RT         LT       TH       RT       LT       TH       RT         EXISTING       146       226       0       0       514       512         PROJECT       Image: Configuration in the image: Configuratio	AM/PM:	РМ	Comn	nents: FU			JECT W		I (YEAR 2	2020)			
Volume/Lane/Signal Configurations         NORTHEOUND       SOUTHEOUND       WESTBOUND         LT       TH       RT       LT       TH       RT       LT       TH       RT         LX       TH       RT       0       514       512       127       1330       67       0       0       15         AMBIENT	COUNT D	ATE:		STU	DY DATE	:		C	GROWTH	FACTOR:			
<td colu<="" th=""><th></th><th>/l ane/Signal Co</th><th>onfiguration</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td>	<th></th> <th>/l ane/Signal Co</th> <th>onfiguration</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>		/l ane/Signal Co	onfiguration									
LT       TH       RT       RT       LT       TH       RT       RT       LT       TH       RT       RT <t< th=""><th>Voluni</th><th></th><th></th><th>SO</th><th>UTHBOU</th><th>ND</th><th>w</th><th>FSTBOU</th><th></th><th>FAST</th><th>BOUND</th><th>, L</th></t<>	Voluni			SO	UTHBOU	ND	w	FSTBOU		FAST	BOUND	, L	
EXISTING       146       226       0       0       514       512       127       1330       67       0       0       154         AMBIENT       Image: constraint of the state of the		LT TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
AMBIENT	EXISTING	146 226	0	0	514	512	127	1330	67	0	0	156	
RELATED       Image: constraint of the second	AMBIENT												
PROJECT       Image: constraint of the state of the sta	RELATED												
TOTAL 146 226 0 0 514 512 127 1330 67 0 0 15	PROJECT												
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	TOTAL	146 226	0	0	514	512	127	1330	67	0	0	156	
LANE 1 2		4 分 수 金	ት የ	\$ ፹ 4	수	ላተን ላ ¹ <i>Հ</i>	ፋ 순	今 余 分	ᡷ᠂ᡁ᠈ᡧᠯ	ፋ 순 수	<u>ሐ</u> ቲ	ሴ የት	
Phasing       RTOR       Phasing       RTOR       Phasing       RTOR       Phasing       RTOR         SIGNAL       Perm <none>       Perm       Auto       Split       Auto       <none>       Free         Critical Movements Diagram         SouthBound         A:       512       B:       0       V/C RATIO       LOS         B:       0       A:       349       0.00 - 0.60       A         0.81       0       A:       113       0.71 - 0.80       C         A = Adjusted Through/Right Volume       B:       146       0.91 - 1.00       E         Results         North/South Critical Movements =       B(N/B) + A(S/B)         West/East Critical Movements =       A(WB) + A(E/B)       146       + 0</none></none>	LANE	1 2	ν···		2	1	1	3 1				1	
SIGNAL       Perm       Auto       Split       Auto        Free         Critical Movements Diagram         Critical Movements Diagram       SouthBound       A:       512       B:       0       V/C RATIO       LOS         A:       0       A:       512       B:       0       A:       349       0.00 - 0.60       A         B:       0       A:       349       B:       127       0.61 - 0.70       B         A = Adjusted Through/Right Volume       A:       113       0.71 - 0.80       C         A = Adjusted Left Volume       B:       146       0.81 - 0.90       D         * = ATSAC Benefit       0.91 - 1.00       E         North/South Critical Movements =       B(N/B) + A(S/B)       West/East Critical Movements =       A(W/B) + A(E/B)         146       +       512       +       349       +       0		Phasing	RTOR	Phasin	ng l	RTOR	Phasi	ng	RTOR	Phasing	R	TOR	
Critical Movements Diagram       SouthBound         A:       512         B:       0         A:       0         B:       0         B:       0         B:       0         NorthBound       A:         B:       0         NorthBound       0.00 - 0.60         A:       113         B:       0.61 - 0.70         B:       113         B:       0.71 - 0.80         C       0.81 - 0.90         D       0.91 - 1.00         E       0.91 - 1.00         Results       0.91 - 1.00         North/South Critical Movements =       B(N/B) + A(S/B)         West/East Critical Movements =       A(W/B) + A(E/B)	SIGNAL	Perm	<none></none>	Perm	۱	Auto	Spli	it	Auto	<none></none>	F	ree	
SouthBound A: 512 B: 0 A: 0 B: 0 A: 0 B: 0 A: 349 A: 349 B: 127 A: 349 0.00 - 0.60 A: 349 0.00 - 0.60 A: 0.61 - 0.70 B: 127 0.61 - 0.70 A: 113 B: 146 A: 113 B: 146 A: 0.71 - 0.80 C A: 0.81 - 0.90 0.91 - 1.00 E North/South Critical Movements = $B(N/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + A(S/B)$ West/East Critical Movements = $A(W/B) + A(S/B)$	Critica	I Movements Di	agram ——										
A = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC Benefit North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = A(W/B) + A(E/B) 146 + 512 + 349 + 0					outhBou	nd 12	]						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						0							
EastBoundWestBoundW/C RATIOLOSA:0 $A:$ 3490.00 - 0.60AB:0 $B:$ 1270.61 - 0.70BA = Adjusted Through/Right VolumeA:1130.71 - 0.80CB = Adjusted Left VolumeB:1460.81 - 0.90D* = ATSAC Benefit0.91 - 1.00ENorth/South Critical Movements =B(N/B)+A(S/B)West/East Critical Movements=A(W/B)+A(S/B)146+512+349+0				D	•	U							
A:0 $4$ : $349$ $0.00 - 0.60$ AB:0 $4$ : $127$ $0.61 - 0.70$ BA = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC BenefitNorthBound A: $0.71 - 0.80$ CC $A$ : $113$ $0.71 - 0.80$ CB: $146$ $0.90 - 0.61$ DVest/East Critical Movements = $B(N/B) + A(S/B)$ $0.91 - 1.00$ E $146$ $+$ $512$ $+$ $349$ $+$ $0$		Ea	stBound		٨		West	Bound		V/C RATIO	<u>LC</u>	<u>DS</u>	
B:0B:127 $0.61 - 0.70$ BA = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC BenefitNorthBound A: $0.71 - 0.80$ CB:1460.81 - 0.90D•0.91 - 1.00EResults0.91 - 1.00ENorth/South Critical Movements =B(N/B)+ A(S/B)West/East Critical Movements =A(W/B)+ A(E/B)146+ 512+ 349+ 0		A:	0		Ť		A:	349		0.00 - 0.60	Α		
A = Adjusted Through/Right Volume B = Adjusted Left Volume * = ATSAC BenefitNorthBound A: 113 B: 1460.71 - 0.80 0.81 - 0.90 0.90 0.91 - 1.00CResults0.91 - 1.00 0.91 - 1.00ENorth/South Critical Movements =B(N/B) + A(S/B) West/East Critical Movements =A(W/B) + A(E/B)146+ 512+ 349+ 0		B:	0				B:	127		0.61 - 0.70	в		
A = Adjusted Through/Right Volume       A: 113       0.01 + 0.00 + 0         B = Adjusted Left Volume       B: 146       0.81 - 0.90 + 0         * = ATSAC Benefit       0.91 - 1.00 + E         Results       0.91 - 1.00 + E         West/East Critical Movements = B(N/B) + A(S/B)       West/East Critical Movements = A(W/B) + A(E/B)		L		N	orthBour	nd	_			0.71 - 0 80	C		
B = Adjusted Left Volume       B: 146       0.81 - 0.90       D         * = ATSAC Benefit       0.91 - 1.00       E         — Results	A = Adjus	ted Through/Rig	ght Volume	A	:1	13				0.01 0.00	- -		
Results North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = A(W/B) + A(E/B) 146 + 512 + 349 + 0	B = Adjus * = ATSA	ted Left Volume C Benefit	•	B	B: 146					0.01 - 0.90	-		
North/South Critical Movements = B(N/B) + A(S/B) West/East Critical Movements = A(W/B) + A(E/B) 146 + 512 + 349 + 0		ults								0.91 - 1.00	E		
West/East Critical Movements = A(W/B) + A(E/B)		North/South	n Critical Mo	vements :	= B(N/	'B) + A	(S/B)						
146 + 512 + 349 + 0		West/East (	Critical Move	ements =	= A(W/	/B) + A	(E/B)						
$V/C = \frac{140 + 012 + 043 + 0}{*1600} = 0.601$ LOS = B			V/C =	146 -	+ 512	+ 34	19 +	0	= 0.601	LC	DS = E	3	

N/S:	Grand Ave         W/E:         3rd St         I/S No:         5											
AM/PM:	PM		Comn	nents: Fl	JTURE V		JECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	IDY DATE	E:			GROWTH	FACTOR:		
Volume	e/Lane/Sigi	nal Conf	igurations	s —								
	NOR	THBOU	ND	SC	UTHBOU	IND	W	ESTBOU	ND	FAS	TROUM	D
EVISTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	23	333	U	U	903	75	U	U	U	103	U	127
PROJECT												
TOTAL	23	333	0	0	963	75	0	0	0	163	0	127
	4	<u>}</u>	ς _በ ን ላ _ተ ን	\$  ∲			₲ ढ़ॖॖॗॖ	Ŷ ∰ 4	<u>д</u> р фр	<u>ላ</u> ታ ት	· 🊓 ĉ	۲۶ ۹۱ ۱۹
LANE	1											2
	Phasing	g F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	ļ	RTOR
SIGNAL	Perm		Auto	Perr	n	Auto	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></non<>	e> <	none>	Split		Auto
Critica	l Movemei	nts Diagi	ram —	S A E	SouthBou A: 5 3:	nd 519 0						
	[	EastE	Bound		٨		West	Bound		V/C RATIC	<u>)</u>	LOS
		A:	70		Ť			U		0.00 - 0.60		A
		В:	163		I		В:	0		0.61 - 0.70	I	В
	-				lorthBou	nd 167				0.71 - 0.80	(	С
A = Adjus B = Adjus	ted Throug	gh/Right olume	Volume	F	··	23				0.81 - 0.90	I	D
* = ATSA	C Benefit			0.91 - 1.00 E						E		
Res	ults —											
	North/	South C	ritical Mo	vements	= B(N/	/B) + A	(S/B)					
	West/I	East Crit V/	ical Move /C =  —	ements 23	= A(W) + 519	/B) + B + ( 1500	(E/B) ) +	163	= 0.400	L	.0S =	A

Future with Project with TDM Conditions P.M. Peak Hour (Year 2020)



N/S:	N/S:         Flower St         W/E:         5th St         I/S No:         7           AM/PM:         PM         Comments:         FUTURE WITH PROJECT WITH TDM (YEAR 2020)         7													
AM/PM:	PM		Comm	ents: FL	JTURE W		JECT W	ITH TDM	(YEAR 2	2020)				
COUNT D	ATE:			STU	DY DATE			G	BROWTH	FACTOR:				
Volume	/Lane/Sig	gnal Conf	igurations											
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	ESTBOUN		FA	STBOU	ND		
	LT	тн	RT	LT	ТН	RT	LT	ТН	RT	LT	TH	RT		
EXISTING	0	0	0	0	1317	574	229	1629	0	0	0	0		
								1						
PROJECT														
TOTAL	0	0	0	0	1317	574	229	1629	0	0	0	0		
4 分 分 微 分 か 砂 り 分 分 微 分 か 砂 り 分 分 微 分 か 砂 り 分 分 微 分 か 砂 り 分 か 砂 り 分 か 砂 り か か か り か か か か か か か か か か か か か														
PhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none>SplitAutoSplit<none><none></none></none></none></none>														
SIGNAL <none> <none> Split Auto Split <none> <none> <none></none></none></none></none></none>														
												`		
Childa	Critical Movements Diagram SouthBound A: 378 B: 0													
		East	Bound		٨		West	Bound		V/C RATI	<u>o</u>	<u>LOS</u>		
		A:	0		Ť		A:	326		0.00 - 0.6	D	Α		
		В:	0			_	В:	229		0.61 - 0.70	ט	В		
					lorthBour	nd 0				0.71 - 0.80	0	с		
A = Adjus B = Adjus	ted Throuted Left \	ugh/Right /olume	Volume	в	:	0				0.81 - 0.90	0	D		
* = ATSAC	C Benefit						]			0.91 - 1.0	0	E		
Resi	ults —						(0/D)							
	Nortl West	h/South C t/East Cri	ritical Mov	vements ments	= A(N/ = A(W/	′в) + А /в) + А	(S/B) (E/B)							
		V	/C =	0	+ 378	+ 32	26 +	0	= 0.399	)	LOS =	A		





N/S:	N/S: Flower St W/E: 6th St I/S No: 9 AM/PM: PM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)													
AM/PM:	PM		Comm	ents: FL	JTURE W		JECT W		I (YEAR 2	2020)				
COUNT D	ATE:			STU	DY DATE			(	GROWTH	FACTOR:				
	l ana/Si	anal Conf	igurations											
volume				, 										
		TH	RT			RT		TH	RT		TH	RT		
EXISTING	0	0	0	365	1248	0	0	0	0	0	1535	714		
AMBIENT														
		1												
FROJECT														
TOTAL	0	0	0	365	1248	0	0	0	0	0	1535	714		
	ନ	<u>ት                                   </u>	ᡷ᠇᠈ᡧᠯ	ዓ 🕁	ት 🔬	ት ሳ ት	ቁ ዯ	ት 🕁 ና	ት ሳ ት	ፋ ፚ ∠	ት <u>ኡ</u> ና	ᡱ᠂ᡁ᠈ᡧᠯ		
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR														
SIGNAL														
Critical Movements Diagram														
				B	. v	001								
					- 2	.01		Deursel —			_			
		A:	450		Д		A:	600110 0		V/C RATI	<u>o</u>	LOS		
		B:	0				В:	0		0.00 - 0.6	0 .	Α		
				N	IorthBour	nd				0.61 - 0.7	0	В		
A Adius	ted Three	unde /Discha	Valuesa	A		0				0.71 - 0.8	0	С		
A = Adjus B = Adjus	ted Left \	olume	volume	В	:	0				0.81 - 0.9	0	D		
* = AISAC							J			0.91 - 1.0	0	E		
Kesi	uits Norti	h/South C	ritical Mov	vements	= A(N/	/B) + Δ	(S/B)							
	West	/East Crit	tical Move	ments :	= A(W/	_, . ^ /B) + A	(E/B)							
		v	/c	0	+ 312	+ (	) +	450	- 0439		LOS =	Α		
		v	io =		*	1500			= 0.430					

N/S:     Alvarado St     W/E:     Wilshire Blvd     I/S No:     10       AM/PM:     EM     Comments:     FUTURE WITH PROJECT WITH TDM (YEAR 2020)													
AM/PM:			Comn	nents: F		VITH PRC -	JECT W		YEAR 2	2020)			
COUNTE				SIL	JDY DATE			e	ROWIN	FACTOR.			
Volume	/Lane/Si	gnal Conf	igurations	s —									
		RTHBOU	ND	S	DUTHBOU	IND	W	ESTROUN	ND	FA	STROUN	ID	
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	1175	99	0	951	124	117	1266	98	100	1167	57	
RELATED PROJECT													
TOTAL					054			4000			4407		
TOTAL	0	1175	99	0	951	124	117	1266	98	100	1167	57	
4 分 分 錄 貸 內 翰 4 分 수 錄 貸 內 翰 4 分 수 錄 貸 內 翰 4 分 수 錄 貸 內 翰         LANE         9 分 分 錄 貸 內 翰 4 分 수 錄 貸 內 翰         1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto													
SIGNAL Perm Auto Perm Auto Perm Auto Perm Auto													
Critical Movements Diagram													
Critical Movements Diagram													
				1	A: 3	358							
				E	B:	0							
		EastE	Bound		Λ		West	Bound		V/C RATI	<u>o I</u>	<u>_OS</u>	
		B.	100		T		B.	117		0.00 - 0.6	D A	A	
		р.	100		 North Down	l		117		0.61 - 0.7	D E	3	
					чогшвоці 4: 4	125				0.71 - 0.80	0 0	2	
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right Volume	Volume	E	B:	0				0.81 - 0.9	D [	)	
* = ATSAC	Benefit						J			0.91 - 1.00	D E	Ē	
Resi	ults — Nort	h/South C	ritical Ma	vomonto	- A/NI	(R) . D	(S/B)						
	Wes	t/East Crit	ical Move	ments	= A(W	/B) + B	(E/B)						
		V	/C =	425	+ 0	+ 68 1500	32 +	100	= 0.735	;	LOS =	с	

N/S: Beaudry Ave W/E: Wilshire Blvd I/S No: 11 AM/PM: EM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)														
AM/PM:	PM		Comm	ents: F	UTURE V		DJECT W	ITH TDM	(YEAR 2	2020)				
COUNT D	ATE:			ST	UDY DATE			G	ROWTH	FACTOR:				
	/l ana/Signa		nurations											
volume	/Lane/Signa		gurations	, 			1.00							
		TH	RT		OUTHBOU TH	RT		TH	RT		TH	RT		
EXISTING	5	0	35	248	50	619	9	843	0	0	1026	32		
AMBIENT														
RELATED														
PROJECT														
TOTAL	5	0	35	248	50	619	9	843	0	0	1026	32		
	ፋ 슈 수	<u>슈</u> 슈	ላተን ላነ	ፋ 슈	<u>ት ሐ</u> ና	<u></u> круй	ቁ ቍ	<u> </u>	ላተን ላካ ታ	ፋ 순 ና	- <u></u>	ረተት ላካ		
	Phasing RTOR Phasi													
Phasing     RTOR     Phasing     RTOR     Phasing     RTOR       SIGNAL     Split     Auto     Split     Auto     Perm     Auto														
SIGNAL Split Auto Split Auto Perm <none> Perm Auto</none>														
Critical Movements Diagram														
Critical Movements Diagram														
					A: 3	335								
					B: 2	248								
	Γ	EastB	ound		٨		West	Bound		V/C RATIO	<u>o I</u>	LOS		
		A:	513		Ť			449		0.00 - 0.60	D /	4		
		В:	0		ا 		В:	9		0.61 - 0.70	D	В		
				Τ	NorthBou	nd 40			_	0.71 - 0.80	D (	c		
A = Adjus B = Adjus	ted Through	n/Right \ ume	Volume		B:	5				0.81 - 0.90	DI	D		
* = ATSAC	Benefit				-•	•				0.91 - 1.00	D E	E		
Resi	ults ——													
	North/S	outh Cr	itical Mov	vements	s = A(N/	/B) + A	(S/B)							
	West/Ea	ast Criti	cal Move	ments	= B(W	/B) + A	.(E/B)	540						
		V/0	C= —	40	+ 335	+ 9	+	513	= 0.559	<b>)</b>	LOS =	Α		
						1723								

N/S:	F	ranciso	co St		W/E:		Wilshir	e Blvd		I/S No:	12	
AM/PM: PM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)												
COUNT D	ATE:			STU	DY DATE	:		C	GROWTH	FACTOR:		
Volume	e/Lane/Sigr	nal Con	figuration	s ——								
NORTHBOUND			SO	SOUTHBOUND			STBOU	ND	FAST	FASTBOUND		
EVICTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	143	U	301	55	10	30	31	//0		14 1	195	129
PROJECT												
TOTAL	143	0	361	55	10	30	31	770	11	14 1	195	129
	ቁ ፚ ት ■ <b>1</b>	<b>全</b> 行	ךף לז קרף לז ב	₼ क़	↑	Å l⊅ ÅI	€ ₽		<u>↓</u> ↓ ↓	५		የት ላካ
								•     •				
	Phasing	]	RTOR	Phasir	ng	RTOR	Phasir	ng	RTOR	Phasing	RT	OR
SIGNAL	Perm		Auto	Pern	n	Auto	Perm	ו	Auto	Perm	Αι	ito
Critica	Critical Movements Diagram SouthBound A: 95											
	_			В		55						
		East	Bound 662		Ą		Weste A:	Sound 391		V/C RATIO	<u>L0</u>	<u>S</u>
		B• □	14				B·	31		0.00 - 0.60	Α	
		₽.	14		   arthDatt	n d		¥ 1		0.61 - 0.70	В	
				A		na 361				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Throug ted Left Vo	gh/Righ blume	t Volume	В		143				0.81 - 0.90	D	
* = ATSAC	C Benefit				L		]			0.91 - 1.00	Е	
	ults —											
	North/South Critical Movements = A(N/B) + B(S/B)											
West/East Critical Movements = B(W/B) + A(E/B) V/C = *1500 = 0.669 LOS = B												







#### Future with Project with TDM Conditions P.M. Peak Hour (Year 2020)

N/S:	DM	Grand A	lve	anto: FI	W/E:		Wilshir	re Blvd		/S No:	15	
COUNT DATE: STUDY DATE: GROWTH FACTOR:												
Volume	e/Lane/Sig	Inal Conf	igurations	SO	SOUTHBOUND			STBOU	ND	FASTBOUND		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH RT	
EXISTING AMBIENT	0	0	0	5	1439	169	42	49	0	0	6 571	
PROJECT												
TOTAL	0	0	0	5	1439	169	42	49	0	0	6 571	
Image: A point of the												
Critica	Critical Movements Diagram SouthBound A: 403 B: 5											
		EastE	Bound 289		Δ		WestE	Bound 91		<u>V/C RATIO</u>	LOS	
		В:	0				В:	42		0.00 - 0.60	A	
				N	orthBour	nd	<u> </u>			0.71 - 0.80	C	
A = Adjus B = Adjus	ted Throu ted Left V	igh/Right 'olume	Volume	B		0				0.81 - 0.90	D	
* = ATSA(	C Benefit						]			0.91 - 1.00	E	
Root	Results North/South Critical Movements = A(N/B) + A(S/B)											
West/East Critical Movements = B(W/B) + A(E/B) $V/C = \frac{0 + 403 + 42 + 289}{*1500} = 0.419  LOS = A$												

N/S:		Alvarado	o St		W/E:		7th	n St		I/S No:	10	3
AM/PM: PM Comments: FUTURE WITH PROJECT WITH TDM (YEAR 2020)												
COUNT DATE: GROWTH FACTOR:												
Volume/Lane/Signal Configurations												
volume				, 				ESTROLI				
	LT	TH	RT	LT	TH	RT	LT	TH	RT		TH	RT
EXISTING	0	1058	80	0	938	69	0	833	109	0	760	115
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	1058	80	0	938	69	0	833	109	0	760	115
	<b>4</b> Δ		ት ት	<b>6</b> Δ		ላት ሌ ረ	<b>ά</b> Δ	$\triangle \triangle \Delta$	ላት ላት ረ	6 Δ Δ		ላ ት የተ
LANE	י ע 	· 孙 玠 2   1		Ч (J)	」 2   1		" ∉	」 1     1			↓ ↓   _   1	
	Dhaci	na E		Phasi			Phasi			Phasing		PTOP
SIGNAL	Pliasi	ng r		Porn			Plasi	ng n		Plasing	<b>,</b>	
SIGNAL	Теп		-410	I CII		Auto	I CIII		Auto	i eiiii		Auto
	l Movem	ents Diag										
Ontica	i movem		um	∟s	outhBou	nd	1					
				A	.: 3	36						
				В	-	0						
		EastE	Bound		٨		West	Bound		V/C RATIO	<u>ı c</u>	<u>_OS</u>
		A. D.	430		Ĩ		А.	4/1		0.00 - 0.60	) /	4
		Б.	U				Б:	U		0.61 - 0.70	) I	3
					iorthBoui	nd 179				0.71 - 0.80	) (	c
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right Volume	Volume	В	:	0				0.81 - 0.90	) I	5
* = ATSAC	C Benefit						]			0.91 - 1.00	) I	E
Resu	ults —					-	(0/5)					
North/South Critical Movements = $A(N/B) + B(S/B)$ West/East Critical Movements = $A(W/B) = B(E/B)$												
	1103			379	(**/ + 0	+ 47	(_,_,_) 71 +	0				
V/C = = 0.497 LOS = A												



↑

| N

Biz	kel Street				
	35 		- 130 - 742 - 253		7th Street
74 - 733 - 429 -		▲ 128	132	63	
1) Lane Capacity for WB L	efts -	900	vphpl		
Number of Lanes -		1			
WB Left V/C -		<u>    253    </u> 900			
	=	0.281			
Lane Capacity for EB T	hroughs -	1,500	vphpl		
Number of Lanes -		1			
EB Through V/C -		733			
	=	0.489			
Lane Capacity for EB R	ights -	900	vphpl		
Number of Lanes -		1			
EB Right V/C -		429 900			
	=	0.477			
Critical V/C -	0.281	+	0.489		
	=	0.770			
or					
Lane Capacity for EB Lo	efts -	1,500	vphpl		
Number of Lanes -		1			
EB Left V/C -		<u>74</u> 1,500			
	=	0.049			
Lane Capacity for WB T	hroughs/R	ights -	1,50	0 vphpl	

WB Through V/C -	{ <u>742</u>	+ 3,000	<u>130</u>		
	=	0.291			
Critical V/C -	0.049	+	0.291		
	=	0.340			
2) Lane Capacity for NB & SE	3 Directio	n -	1,500 v	phpl	
Number of Lanes -		1	1 left 1 through/right	:	
Critical V/C -	{ <u>128</u>	+	407 1,500	+	}
or	{ <u>85</u>	+	132 1,500	+	<u></u> }
	=	0.415			
Intersection V/C = 1.185	_	0.100	=	1.085	LOS F

2

Number of Lanes -
N/S:	Francis	co St		W/E:		7th	n St		/S No:	1	8
COUNT D	PM ATE:		STUI	DY DATE				GROWTH	2020) FACTOR: [		
Volume	/Lane/Signal Cor	figurations	;								
			SO			W	ESTBOUI		FAS		
EXISTING AMBIENT RELATED	175 51	386	233	48	150	81	893	81	23	690	<b>34</b>
PROJECT											
TOTAL	175 51	386	233	48	150	81	893	81	23	690	34
LANE SIGNAL	<ul> <li>● ↓ ↓ ↓</li> <li>● ↓ ↓</li> <li>● ↓ ↓</li> <li>Phasing</li> <li>● Perm</li> </ul>	日本 中 中 中 中 中 中 中 中 中 中 中 中 中		Ŷ ∰ 4      1 ¤g	トレート トレート RTOR Auto	∯     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓  ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓     ↓	수 ₄ 수 1   1 ng   n	À IP III NTOR Auto		À ∰ ( 1   _   / 9	À r (†) 1 RTOR Auto
Critica	Movements Dia	gram ——		outhBou	nd 198	]					
			В		233						
	Eas	tBound		Δ		West	Bound 487		V/C RATIO	<u>o</u>	<u>LOS</u>
	B:	23				B:	81		0.00 - 0.60	D .	A
				' orthBou	nd	 			0.61 - 0.70	D	В
A Adius	ad Through/Digi		Α		386				0.71 - 0.80	D	с
A = Adjust B = Adjust	ted Left Volume	it volume	B	: 1	175				0.81 - 0.90	D	D
						]			0.91 - 1.00	D	E
Rest	North/South	Critical Mo	vements :	= A(N	/B) + B	(S/B)					
	West/East Cr	itical Move	ments =	= A(W	/B) + B	(E/B)					
		V/C = —	386 -	+ 233	+ 48 1500	37 +	23	= 0.683	•	LOS =	В

#### **Intersection 19**





N/S:		Flower	St		W/E:		7th	n St		I/S No:	2	0
AM/PM:	PM		Comm	ents: FL	JTURE V		JECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	DY DATE				GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations									
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	FSTBOU		FAS	STBOU	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	85	2186	200	143	883	0	0	958	242
PROJECT												
TOTAL	0	0	0	85	2186	200	143	883	0	0	958	242
	₲₽	ት 🚓 ና	չ լծ գ <del>լ</del> ծ	ቁ ở	ት 🚓 ና	չ լծ գ <del>լ</del> ծ	₲₯	수 🚓 ና	ት ስ ፈት	ቁ ፚ ና	<u>}</u>	ስ ላተ
LANE				1	2 1		1	2		1		1
	Phasir	ng l	RTOR	Phasir	ng	RTOR	Phasir	ng l	RTOR	Phasing	9	RTOR
SIGNAL	<none< td=""><td><b>&gt;</b> &lt;</td><td>none&gt;</td><td>Split</td><td>t</td><td>Auto</td><td>Perm</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></none<>	<b>&gt;</b> <	none>	Split	t	Auto	Perm	n <	none>	Perm		Auto
Critica	I Moveme	ents Diag	ram		outhBou	nd						
				A	: 6	i18						
				В	: 4	85						
		East	Bound		Λ		Westl	Bound		V/C RATIO	<u>.</u>	LOS
		A. B.	000		T		А. В.	1/2		0.00 - 0.60	) .	Α
		В.	0		  arthBau	a d	D.	143		0.61 - 0.70	)	В
				A		0				0.71 - 0.80	)	С
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	В	:	0				0.81 - 0.90	)	D
= AISAC							J			0.91 - 1.00	)	E
- Kesi	uits Norti	n/South C	ritical Mov	/ements	= A(N/	/B) + Δ	(S/B)					
	West	/East Crit	tical Mover	ments :	= B(W/	_, + A /B) + A	(E/B)					
		v	/C =	0	+ 618	+ 14 1500	13 +	600	= 0.837	, I	LOS =	D

N/S:	Oli	ve Ave		W/E:	7th St		I/S No:	21
AM/PM:	PM	Comm	ents: FUTI	JRE WITH PR	OJECT WITH	TDM (YEAR 2	2020)	
COUNT D	ATE:		STUDY	DATE:		GROWTH	FACTOR:	
Volume	e/Lane/Signal	Configurations						
	NORTH	BOUND	SOUT	HBOUND	WESTB	OUND	FASTR	OUND
EXISTING	LT T	H RT 57 165		TH RT		H RT 81 239		
AMBIENT		57 105						
RELATED								
PROJECT								
TOTAL	110 12	57 165	0	0 0	0 83	31 239	0 11	06 0
		ᡬ᠊ᠷ᠂᠋᠈ᡧᡟ	<u>ዓ</u>		· ዓ ጽ ዮ ቭ	ት ሳ <i>ት /</i>		: ት <b>ሶ</b> ቀን
LANE		1						
	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR	Phasing	RTOR
SIGNAL	Split	Auto	<none></none>	<none></none>	Perm	Auto	Perm	<none></none>
Critica	l Movements	Diagram ——						
			Sou	thBound				
			A:	0				
			В:	0				
		EastBound		Λ	WestBoun	d	V/C RATIO	LOS
	A	- 0		Ť	B. 41		0.00 - 0.60	Α
		. 0		I	D. (		0.61 - 0.70	В
			A:	anBound 383			0.71 - 0.80	С
A = Adjus B = Adjus	ted Through/F ted Left Volur	Right Volume ne	B:	110			0.81 - 0.90	D
* = ATSA0	C Benefit						0.91 - 1.00	E
Res	uits North/Sou	uth Critical Mov	/ements =	A(N/B) +	A(S/B)			
	West/Eas	t Critical Move	ments =	B(W/B) +	A(E/B)			
		V/C =	383 +	0 +	0 + 553	- = 0.554	LOS	= A
				*1500				

N/S:	Alamed	a St	,	W/E:		7th	n St		I/S No:	22	
AM/PM:	PM	Comme	nts: FUTI		I PRO	JECT W		I (YEAR 2	2020)		
COUNT D	ATE:		STUDY	DATE:			C	GROWTH	FACTOR:		
Volume	e/Lane/Signal Conf	figurations									
			SOUT			W	ESTBOU		EA:	STROUN	
EXISTING	83 811	93	115	956	9	108	656	82	116	1037	168
			110		•	100		02	110	1007	100
RELATED											
PROJECT											
TOTAL	83 811	93	115	956	9	108	656	82	116	1037	168
		᠈᠂ᡏᠨᡐ᠂ᡀ	ካ 순 수	1 分金	> ५₁>	ፋ 순	수	ሳተን ላ _ገ <i>Հ</i>		<u>ት</u> ፈ	የት ላነ
LANE			1 1			1	1		1	1 1	
	Phasing	RTOR	Phasing	RTO	R	Phasi	ng l	RTOR	Phasing	g F	RTOR
SIGNAL	Perm	Auto	Prot-Fix	Aut	0	Pern	n	Auto	Perm		Auto
Critica	I Movements Diag	ıram ———									
			Sou	thBound —		1					
			A:	483							
			В:	115							
	East	Bound	1	٨		West	Bound		V/C RATION	<u>0 L</u>	<u>os</u>
	A:	116	]	Ť		A:   B· □	309 109		0.00 - 0.60	) A	
	В.	110		 // <b>-</b> / -		<u></u> .	100		0.61 - 0.70	) В	
			Nort A:	thBound 452					0.71 - 0.80	b c	
A = Adjus B = Adjus	ted Through/Righ ted Left Volume	t Volume	В:	83					0.81 - 0.90	D (	)
* = ATSA(	C Benefit					J			0.91 - 1.00	) Е	
Res	ults North/South (	Critical Move	omente -	Δ(N/R)	т Р	(S/B)					
	West/East Cri	tical Movem	ients =	B(W/B)	+ A	(E/B)					
	v	//C =	452 +	115 +	- 10	)8 +	603	= 0.827		LOS =	D
				*1425	)						

N/S:	Sot	o St		W/E:		7th	n St		I/S No:	23	
AM/PM:	РМ	Comm	nents: FL			JECT W		I (YEAR 2	2020)		
COUNT D	ATE:		STU	DY DATE	:		C	GROWTH	FACTOR:		
	// ano/Signal C	onfigurations									
volume			, 			W	ESTROU		EAST	BOUNI	<u> </u>
		RT	LT	ТН	RT	LT	TH	RT	LT	TH	, RT
EXISTING	555 947	<b>'</b> 34	37	743	70	6	35	12	83	53	68
AMBIENT											
RELATED											
PROJECT											
TOTAL	555 947	<b>′</b> 34	37	743	70	6	35	12	83	53	68
	₲ 순 수 쇼	ኇዾ		수	ት የካ <i>ፈ</i>	ፋ 순	수	ት የ ¹ ረ	ፋ 순 수	金仓	የት ላገ
LANE		1	1	1 1			1		1		1
	Phasing	RTOR	Phasii	ng I	RTOR	Phasir	ng	RTOR	Phasing	R	TOR
SIGNAL	Prot-Fix	Auto	Pern	n	Auto	Split	t	Auto	Split		Auto
Critica	I Movements Di	agram —									
		•	S A	outhBou	nd	]					
			В		37						
	Ea	stBound				West	Bound		V/C RATIO	<u>L(</u>	<u>0S</u>
	A:	136		Å		A:	53		0.00 - 0.60	A	
	B:	83				B:	6		0.61 - 0.70	в	
	L			lorthBour	nd	1		I	0 71 - 0 80	r	
A = Adjus	ted Through/Rig	ght Volume		.: 4	91				0.81 - 0.00	о П	
B = Adjus * = ATSAC	ted Left Volume C Benefit	9	В	5	55				0.01 - 0.90	U F	
Resi	ults								0.91 - 1.00	<u>с</u>	
	North/Sout	h Critical Mo	vements	= B(N/	′B) + A	(S/B)					
	West/East (	Critical Move	ments	= A(W/	/B) + A	(E/B)					
		V/C =	555	+ 407	+ 5	3 +	136	= 0.767	LC	DS =	С

#### **Intersection 24**



#### Future with Project with TDM Conditions P.M. Peak Hour (Year 2020)

#### **Intersection 25**

#### Future with Project with TDM Conditions P.M. Peak Hour (Year 2020)



		Flower	St		W/E:		8th	n St		I/S No:	2	6
AM/PM:	PM		Comm	nents: Fl	JTURE W	/ITH PRC	JECT W	ITH TDM	(YEAR 2	2020)		
COUNT D	ATE:			STL	IDY DATE	:		G	ROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	igurations	<u> </u>								
	NO	RTHBOU	ND	sc	UTHBOU	ND	w	ESTBOUN	ID	FA	STROUM	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	0	1934	497	102	1984	0	0	0	0
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	0	1934	497	102	1984	0	0	0	0
	ፋ 슈	4 <u>6</u> 6	ረተን ላካ ነ	ፋ 슈	~ <u>~</u> ~	ረተን ላካ ረ	ፋ 순	~ <u>~</u> ~	ላተን ላካ	\$	ک چ	ት የ
LANE		<u>'</u> (++) +;			<b>4</b>		' ∉'   1	- (++) + 3				
	Phasin	ng F	RTOR	Phasi	ng l	RTOR	Phasi	ng F	RTOR	Phasing	g	RTOR
SIGNAL	<none< td=""><td>e&gt; &lt; </td><td>none&gt;</td><td>Spli</td><td>it</td><td>Auto</td><td>Spli</td><td>t <r< td=""><td>none&gt;</td><td><none:< td=""><td>&gt;</td><td>none&gt;</td></none:<></td></r<></td></none<>	e> <	none>	Spli	it	Auto	Spli	t <r< td=""><td>none&gt;</td><td><none:< td=""><td>&gt;</td><td>none&gt;</td></none:<></td></r<>	none>	<none:< td=""><td>&gt;</td><td>none&gt;</td></none:<>	>	none>
Critica	Il Moveme	ents Diag	ram —		SouthBour	nd 97						
					3:	0						
		EastE	Bound —		3:	0	West	Bound —		V/C RATI	<u>o</u>	LOS
		EastE	Bound 0		з: Д	0	West	Bound 522		<u>V/C RATI(</u> 0.00 - 0.60	<u>o i</u>	LOS A
		EastE A: B:	Bound 0 0		3: 	0	West A: B:	Bound		<u>V/C RATH</u> 0.00 - 0.60	<u>0</u>	LOS A
		EastE A: B:	Bound 0 0		3: A NorthBour	0	West A:	Bound 522 102		<u>V/C RATH</u> 0.00 - 0.60 0.61 - 0.70	<u>0</u> 0 /	LOS A B
		Easte	Bound 0 0		3: AnorthBour	0 nd 0	West A:	Bound 522 102		<u>V/C RATI(</u> 0.00 - 0.6( 0.61 - 0.7( 0.71 - 0.8(	<u>0</u> 0 /	LOS A B C
A = Adjus B = Adjus * - ATSA	ted Throu ted Left V	EastE A: B: ugh/Right /olume	Bound 0 0		3: AorthBour A: 3:	0 nd 0	West A:	Bound		<u>V/C RATH</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90	<u>o</u> 1 0 1 0 1 0 1	LOS A B C D
A = Adjus B = Adjus * = ATSAC	ted Throu ted Left V C Benefit	EastE A: B: ugh/Right /olume	3ound 0 0		A A A A A A A A A A A A A A A A A A A	0 nd 0	West A:	Bound		<u>V/C RATH</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00		LOS A B C D E
A = Adjus B = Adjus * = ATSAC — Rest	ted Throu ted Left V C Benefit ults — North	Easte A:	3ound 0 0 : Volume	vements	3:	0 nd 0 0 B) + A	West A: [] B: []	Bound 522 102		<u>V/C RATH</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00		LOS A B C D E
A = Adjus B = Adjus * = ATSAC — Rest	ted Throu ted Left V C Benefit ults — North West	EastE A:	Bound 0 0 Volume	vements	3:	0 nd 0 0 B) + A B) + A	(S/B) (E/B)	Bound 522 102		<u>V/C RATI</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	O D D D D D D	LOS A B C D E

#### **Intersection 27**



N/S:	Figue	eroa St	W/E	: 9th S	St/James	M Wood Blvd	I/S No:	28
AM/PM:	PM	Comm	nents: FUTURE		OJECT W	ITH TDM (YEAR :	2020)	
COUNT D	ATE:		STUDY DA	TE:		GROWTH	FACTOR:	
Volume	e/Lane/Signal C	onfigurations	s <u> </u>					
	NORTHB	OUND	SOUTHB	OUND	W	STBOUND	FASTBO	DUND
EXISTING	LT TH	RT 1 195		RT O		TH RT	LT TH	H RT
AMBIENT		1 133						
RELATED								
PROJECT								
TOTAL	0 151	1 195	0 0	0	0	0 0	777 187	77 0
	ቁ <i>ጉ</i> 수 ሒ	ᠿᢑ᠕ᡧ	₲ 굶 수 숣	<u>ዲ</u> ሶ ጥ	ፋ 👉	ት	<u>ላ</u> ድ 수 ፹	; - the second
LANE	3	1					1 1 3	
	Phasing	RTOR	Phasing	RTOR	Phasir	ng RTOR	Phasing	RTOR
SIGNAL	Split	Auto	<none></none>	<none></none>	<none< td=""><td>e&gt; <none></none></td><td>Split</td><td><none></none></td></none<>	e> <none></none>	Split	<none></none>
Critica	I Movements D	iagram ——						
		0	SouthB	ound	7			
			A:	0				
			B:	0				
	Ea	astBound		Λ	West	Bound	V/C RATIO	LOS
	A:	531		T	A:	0	0.00 - 0.60	Α
	B:	531		I	В:	0	0.61 - 0.70	В
			A:	ound			0.71 - 0.80	С
A = Adjus B = Adjus	ted Through/Ri ted Left Volum	ght Volume	B	0			0.81 - 0.90	D
* = ATSAC	C Benefit	-		v			0.91 - 1.00	Е
	ults							
	North/Sout	h Critical Mo	vements = A	(N/B) + A	(S/B)			
	West/East	V/C – –	ements = A 427 +	w/B) + A	а(Е/В) 0 +	531 _ 0.560	LOS	= A
		₩/0 =		*1500		= 0.308	, _30	

N/S:	C	herry	St		W/E:		Pico	Blvd		I/S No:	29	)
AM/PM:	РМ		Comm	nents: FL			JECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	DY DATI	E:		(	GROWTH	FACTOR:		
	e/Lane/Signa	I Conf	igurations	<u> </u>								
	NORT	HBOUI	ND	SO	UTHBOL	IND	W	ESTBOU	ND	FA	STROUN	D
EVISTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	122 0	0/1	230	183	U	20	U	896	447	150	657	U
PROJECT												
TOTAL	722	671	230	183	0	26	0	896	447	150	657	0
	५ _२ २२ 1111	<b>₩</b> 4	, _Γ Ϸ 4 _Τ Ϸ	ी कि भिरी भिरी	Ŷ ∰ 4	Ê, I [¢] 4∏¢	<u>ቁ</u> ፚ	← 余 イ 1 1 1	ַרַאַ לאַ בייר לייק בייר בייר בייר בייר בייר בייר בייר בייר	५ _द ि ४		_{, Γ} ን
					<u> </u>			•     !				
	Phasing	F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasing	g	RTOR
SIGNAL	Split		Auto	Spli	t	Auto	Perr	n	OLA	Perm	<	none>
Critica	I Movement	s Diagi	ram —									
				<b>S</b>	outhBou	ind	1					
				A		14						
				B		101						
	Г	EastE	Bound		٨		West	Bound		V/C RATIO	<u>o l</u>	<u>.0S</u>
		A:	219		Ť		A:	448		0.00 - 0.60	0 4	4
		B:	150		I		B:	0		0.61 - 0.70	D E	3
					lorthBou	nd				0.71 - 0.80	0 0	
A = Adjus	ted Through	n/Right	Volume			+04				0.81 - 0 9	о г	)
в = Aajus * = ATSAC	C Benefit	ume		В	4	+04				0.91 - 1.0	 N F	-
— Resi	ults ——									0.01 - 1.00	γ L	
	North/Se	outh C	ritical Mo	vements	= A(N	/B) + B	(S/B)					
	West/Ea	ast Crit	ical Move	ments	= A(W	//B) + B	(E/B)					
		V/	/C = —	464	+ 101	+ 44	48 +	150	= 0.746		LOS =	С

N/S:	DM	Figueroa	a St	onts: E	W/E:		Pico	Blvd		I/S No:	3	0
COUNT D				STI	JDY DATE			(	GROWTH	FACTOR:		
Volume	/Lane/Sig	Inal Conf	igurations									
	NO	RTHBOU	ND	S	OUTHBOU	IND	W	ESTBOU	ND	FA	STBOU	ND
EVICTING	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	160	154 <i>1</i>	155	23	324	288	1/2	846	1/2	193	625	284
RELATED												
PROJECT												
TOTAL	160	1547	155	23	324	288	172	846	172	193	625	284
						1]						
	५ क़॒ ४	ት 🚓 🕀	ላተቅ ላ	∮ ∱	<b>수</b> 歳	ት ሳ ፋ	∮ ∂ີ	ት 🚓 ና	ት ሳ ፋ	५ _ि ∱ 4	ት 🚓 ና	∖ ₩ ¶ 4
LANE		3   1		1	2	1	1	2	1	1	2	1
	<u> </u>	<u> </u>									I	
	Phasin	ng F	RTOR	Phas	ing	RTOR	Phasir	ng	RTOR	Phasin	g	RTOR
SIGNAL	Prot-F	ix /	Auto	Per	m	OLA	Pern	n	Auto	Prot-F	ix	OLA
Critica	l Moveme	ents Diag	ram ——									
					SouthBou	nd	7					
					A: 1	62						
					B:	23						
		EastE	Bound		٨		West	Bound		V/C RAT	0	LOS
		A:	313		Ť		A:	423		0.00 - 0.6	0	Α
		B:	193				В:	172		0.61 0.7	0	D
					NorthBou	nd				0.61 - 0.7	U	D
					A: 4	126				0.71 - 0.8	0	с
A = Adjus B = Adjus	ted Throu	igh/Right	Volume		B· 1	60				0.81 - 0.9	0	D
* = ATSAC	Benefit	Sidille								0.04 4.0	•	-
- Resi	ults —									0.91 - 1.0	U	<b></b>
1.050	North	South C	ritical Mo	vements	$\lambda = \Delta(N)$	/B) + P	(S/B)					
	Wost	/Fact Crit	ical Move	monte		/R) + P	(E/R)					
	west	Lasi Cill		400			(L/D) 	102				
		V	/C = —	426	+ 23	+ 4	23 +	193	= 0.705	;	LOS =	С
					Ŷ	13/5						

N/S:	Нос	over St	W/E	Alva	arado St/A	Ivarado -	Ter	I/S No:	31
AM/PM:	PM	Comm	ents: FUTURE	WITH PRO		TH TDM (	YEAR 2	020)	
COUNT D	ATE:		STUDY DA	TE:		GR	OWTH F	ACTOR:	
	/Lane/Signal (	Configurations							
	NORTHE	BOUND	SOUTHBO	UND	WF	STROUND	)	FAST	BOUND
EVICTING		H RT	LT TH	RT		тн	RT	LT	TH RT
	0 11:	50 719	31 957	U	716	U	U	U	0 0
PROJECT									
TOTAL	0 11	50 719	31 957		716	0	0	0	0 0
	<b>V</b> II	00 110	01 001	Ū	110	U	U	U	0 0
	역 슈 수 슈	<u>₩</u> ¶	५ ☆ 수 ☆	\$ ₱ \$	_ ୩ ቆጉ ኅ	A € €	ſ₽ ⟨Ţ₽	<u>¶</u> ∱ 수	
LANE	1	1 1	1 1		1		1		
	Phasing	RTOR	Phasing	RTOR	Phasing	g R1	OR	Phasing	RTOR
SIGNAL	Perm	Free	Perm	<none></none>	Split	Α	uto	<none></none>	<none></none>
Critica	Movements I	Diagram	SouthBc	und					
			A:	572					
			B:	31					
	L_ E	astBound —		•	WestB	ound		V/C RATIO	LOS
	Α	. 0		4	<b>A</b> :	358		0.00.0.00	^
	B	. 0			В:	358	]		~
			NorthBo	und	<u> </u>			0.61 - 0.70	В
A A	ad Thursday (2	)	A:	623				0.71 - 0.80	С
A = Aajus B = Adjus	ted Left Volum	ne	В:	0				0.81 - 0.90	D
* = ATSAC	Benefit		<u> </u>		1			0.91 - 1.00	Е
— Resi	Ilts		iomonto 📢		)(C/P)				
	North/Sou		vernents = $A($	N/B) + B W/B) ⊥ ^	5(5/B)				
	WESVEdSI		623 + 3'	1 + 3	58 +	0			
		V/C =		*4500	•• т		= 0.605	LC	DS = B

N/S:		Flower	St		W/E:		Venic	e Blvd		I/S No:	32	
AM/PM:	PM		Comm	nents: Fl	JTURE W	/ITH PRC	JECT W		(YEAR 2	2020)		
COUNT D	ATE:			STU	IDY DATE	:		C	BROWTH	FACTOR:		
Volume	e/Lane/Sig	gnal Conf	igurations	; <b>—</b>								
		RTHBOU					W	ESTBOU		FAS	TBOUN	
EXISTING		0	я 0	26	1449	кі 130	LI 66	500	RI 0		371	A1
AMBIENT			•								••••	••
RELATED												
PROJECT												
TOTAL	0	0	0	36	1449	130	66	500	0	0	371	44
	ፋ 슈	ት ኡ ኁ	የተ	ፋ 슈	<u>ት ሕ</u> ት	ላተቅ ላጊ ,	ፋ 슈	수 슈 수	ላ _ተ ን ላ _ገ <i>չ</i>	ፋ 슈 수	余会	ላተን ላነ
LANE		· ••• •		1	2 1		1	1		1	v+v +v 1	
	Phasir	ng l	RTOR	Phasi	ng l	RTOR	Phasi	ng l	RTOR	Phasing	F	RTOR
SIGNAL	<none< td=""><td>€&gt; &lt;</td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Perr</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></none<>	€> <	none>	Spli	t	Auto	Perr	n <	none>	Perm		Auto
Critica	l Movem	ents Diaq	ram —									
					outhBour	nd 26	]					
				E	3: 3	36						
		East	Bound —		L		West	Bound			) I	05
		A:	208		Ą		A:	316				<u></u>
		B:	0				В: Г	66		0.00 - 0.60	А	L
					lorthBour	nd				0.61 - 0.70	B	1
				A		0				0.71 - 0.80	C	;
A = Adjus B = Adjus	ted Throu ted Left \	ugh/Right /olume	Volume	E	8:	0				0.81 - 0.90	D	)
* = ATSA(	C Benefit									0.91 - 1.00	E	
Kes	Norti	h/South C	ritical Mo	vemente	- Δ/N/	B) ⊥ ^	(S/B)					
	West	t/East Crit	tical Move	ments	= A(W/	'B) + B	(E/B)					
		v	/C =	0	+ 526	+ 31	()  6 +	0	= 0.491	L	OS =	A
		•			*	1500						

N/S:		Grand A	Ave		W/E:		18th	n St		I/S No:	33	
AM/PM:	PM		Comn	nents: Fl	JTURE W	ITH PRC	JECT WI	TH TDM	(YEAR 2	2020)		
COUNT D	ATE:			STU	IDY DATE	:		G	BROWTH	FACTOR:		
	e/Lane/Sig	gnal Conf	iguration	s —								
	NO	RTHBOU	ND	SC	UTHBOU	ND	WE	STBOUN	ND	FAS	TROUN	D
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	178	434	1016	0	0	0	0	0	1858	218
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	178	434	1016	0	0	0	0	0	1858	218
	ፋ ፚ	수 쇼 습	ላተን ላ ¹ /	ନ	수 쇼 숙	ረተቅ ላካ	ዓ ፹ 4	ት <u>ሕ</u>	ᡬ᠇ᡗᡧ	ዓ ፚ ና	· 쇼 슋	ሰት ላካ
LANE			2	1	3						1 <b>1</b>	1
	Phasii	ng l	RTOR	Phasi	ng l	RTOR	Phasin	ig F	RTOR	Phasing	j F	RTOR
SIGNAL	Pern	n	Auto	Prot-	ix <	none>	<none< td=""><td>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td></td><td>Auto</td></none<>	> <	none>	Split		Auto
Critica	l Movem	ents Diag	ram —									
		U		∟s	outhBour	nd	1					
				4	: 3	39						
				E	3: 4	34						
		East	Bound		٨		WestE	Bound		V/C RATIO	<u> L</u>	<u>os</u>
			013		Ť			~		0.00 - 0.60	A	
		в:	0		 		в:	U		0.61 - 0.70	в	i
					IorthBour	nd			_	0.71 - 0.80	c	;
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	Volume	E	<b>`</b>	0				0.81 - 0.90	D	1
	C Benefit				L		J			0.91 - 1.00	E	
* = ATSA(												
* = ATSA(	ults —											
* = ATSA( Res	ults — Norti West	h/South C	critical Mo	vements	= A(N/	B) + B B) + ^	(S/B) (E/B)					
* = ATSA(	ults — Norti West	h/South C t/East Crit	Critical Mo tical Move	ovements ements 98	= A(N/ = A(W/ + 434	B) + B B) + A + (	(S/B) (E/B) ) +	619	0.700		08 -	C

N/S:		Olive	St		W/E:		6th	St		I/S No:	34
AM/PM:	PM		Comm	ents: Fl	UTURE V		JECT WI		I (YEAR 2	2020)	
COUNT D	ATE:			STL	JDY DATE	:		C	GROWTH	FACTOR:	
	e/Lane/Sig	gnal Conf	igurations								
	NO	RTHBOU	ND	SC			WE	STBOU		FASTB	
EXISTING		TH 1468	RT 191		TH O			TH 0	RT O	LT T 855 12	н RT 9 <b>54 О</b>
		1400	131	0	U		U	U		000 12	.54 0
PROJECT											
TOTAL	0	1468	191	0	0	0	0	0	0	855 12	254 0
				4 ^	~ ~ ^						
	Ч ф П			м ф ППП	イ 役 イ 	чтр v1 4 	м ф '	Ϋ́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́́	<u>чр лі (</u>	^ॴ ∯ े ∲	
		<u>·                                     </u>									
	Phasii		RIOR	Phasi	ng	RIOR	Phasir	ng i	RIOR	Phasing	RIOR
SIGNAL	Spli	t i	Auto	<non< td=""><td>e&gt; &lt;</td><td>none&gt;</td><td><none< td=""><td><b>}</b>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<></td></non<>	e> <	none>	<none< td=""><td><b>}</b>&gt; &lt;</td><td>none&gt;</td><td>Split</td><td><none></none></td></none<>	<b>}</b> > <	none>	Split	<none></none>
Critica	I Movem	ents Diag	ram ——								
		-		۲s	SouthBou	nd	]				
				4	A:	0					
				E	B:	0					
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS
		B·	410		Ť		R.	0		0.00 - 0.60	Α
		_ <u> </u>	- <i>1</i> V		ا د ، ، .			0		0.61 - 0.70	В
					NorthBou A: 3	nd 332				0.71 - 0.80	С
A = Adjus B = Adjus	ted Thro	ugh/Right /olume	t Volume	E	3:	0				0.81 - 0.90	D
* = ATSA0	C Benefit						]			0.91 - 1.00	E
	-11-										
Resi	ults — Norti	h/South C	Critical Mov	/ements	= A(N/	/B) + ∆	(S/B)				
Resi	ults — Norti West	h/South C t/East Crit	Critical Mov	vements ments	= A(N/ = A(W/	/B) + A /B) + B	(S/B) (E/B)				

N/S:	Норе	St		W/E:		7th	n St		I/S No:	35	j
AM/PM:	РМ	Comm	ents: FU	TURE V		JECT W		I (YEAR 2	2020)		
COUNT DA			STU	DY DATE			C	GROWTH	FACTOR:		
Volume	/Lane/Signal Con	figurations									
	NORTHBOL	IND	SO	UTHBOU	IND	W	ESTBOU	ND	FA	STROUN	D
	LT TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	105 338	138	14	324	29	0	946	90	0	873	102
PROJECT											
TOTAL	105 338	138	14	324	29	0	946	90	0	873	102
		· · · ·			· · · · ·			· · · ·			
LANE	④ ☆ 午 歳 4 Ⅰ ┃ Ⅰ Ⅰ Ⅰ 1		^९ । ∰ <b>1</b>	Ŷ₩, 1	→ IÞ 4₽	¶ ₽ 	イ 余 行 1 1 1	مله ما <del>(</del>	∜ ∯ ↑		, lb фb
	Phosing		Bhasin			Bhaciu			Dhacin	· · ·	
SIGNAL	Phasing	Auto	Phasin		Auto	Phasi			Phasing	y i	
SIGNAL	Pellii	Auto	Penn		Auto	Fern		Aulo	Ferm		Auto
	Movemente Diec										
Critical	Wovements Diag	jiani	<b>⊢</b> S∉	outhBou	nd	1					
			A	: 1	91						
			В		14						
	East	Bound		Λ		West	Bound 518		V/C RATIO	<u>o L</u>	<u>.os</u>
	B:	400		T		B:	0		0.00 - 0.60	D A	4
		•		l orthRow	nd		•		0.61 - 0.70	D E	3
		()/-1-	A	: 3	343				0.71 - 0.80	D C	;
A = Adjust B = Adjust	ted Inrough/Righ ted Left Volume	t volume	В	: 1	105				0.81 - 0.90	D C	)
									0.91 - 1.00	D E	E
Kest	North/South	Critical Mov	vements :	= A(N/	/B) + B	(S/B)					
	West/East Cr	itical Move	ments =	= A(W	/B) + B	(E/B)					
	١	//C =	343 -	+ 14	+ 51	18 +	0	= 0.513		LOS =	A
		-		*	1500						

N/S:		Grand A	Ave		W/E:		7tł	n St		I/S No:	30	6
AM/PM:	PM		Comm	ents: FL	JTURE W	VITH PRC	JECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	DY DATE			(	GROWTH	FACTOR:		
Volume	/Lane/Sig	gnal Conf	igurations									
	NO	RTHBOU	ND	SO	UTHBOU	ND	W	FSTBOU	ND	FAS	TBOUN	ND.
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	193	1619	78	0	940	0	0	901	191
PROJECT												
TOTAL	0	0	0	193	1619	78	0	940	0	0	901	191
			•			- •						
	<u>ላ</u> ብ	<u>^</u>	<u>አ</u> የቅ ላተቅ	ी कि ∎	수 _余		¶ ∲ 	← 余 行 <b>2</b>	ት ሳ ት		· 余 行	ት የት ዓተት 1
					<u>-    </u>			-			•	
	Phasir	ng l	RTOR	Phasi	ng I	RTOR	Phasi	ng	RTOR	Phasing	<b>)</b>	RTOR
SIGNAL	<none< td=""><td>\$&gt; &lt; </td><td>none&gt;</td><td>Spli</td><td>t</td><td>Auto</td><td>Perr</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td></td><td>Auto</td></none<>	\$> <	none>	Spli	t	Auto	Perr	n <	none>	Perm		Auto
Critica	I woveme	ents Diag	ram	⊏s	outhBou	nd	1					
				A	: 2	05						
				В	: 1	93						
		East	Bound		Λ		West	Bound		V/C RATIO	<u>)</u>	LOS
		А. В.	401		T		А. В.	470		0.00 - 0.60	)	A
		D.	V		  orthRou	ad	В.	U		0.61 - 0.70	)	В
				A	юнтвой .:	0				0.71 - 0.80	) (	С
A = Adjus B = Adjus	ted Throuted Left \	ugh/Right /olume	Volume	В	:	0				0.81 - 0.90	)	D
* = ATSAC	Benefit						]			0.91 - 1.00	) [	E
Resi	uits Norti	h/South C	ritical Mo	vemente	_ Δ/N/	′B) ⊥ ∆	(S/B)					
	West	/East Crit	tical Move	ments	= A(W/	_, + A /B) + B	(E/B)					
		V	/C = —	0	+ 405	+ 47 1500	70 +	0	= 0.513	; I	_OS =	Α

#### **Intersection 37**



#### Future with Project with TDM Conditions P.M. Peak Hour (Year 2020)

= 0.191

Critical V/C -	0.055	+	0.191	=	0.246
2) Lane Capacity for NE Lane Capacity for NE	3 Throughs - 3 Left- and Rig	ht-turns -		900 1,425	vphpl vphpl
Number of Lanes -			1 left-turn onl 3 throughs 1 right-turn or	y nly	
Critical V/C -	<u>1,477</u> 2,700	or	<u>319</u> 1,425	or	<u>135</u> 1,425
	=	0.547			
Intersection V/C = 1.085	—	0.100	=	0.985	LOS E

N/S:	(	Glendale	Blvd		W/E:		Tem	ple St		I/S No:	3	8
AM/PM:	PM		Comm	nents: FL	JTURE V		JECT W		I (YEAR 2	2020)		
COUNT D	ATE:			STU	DY DATE	<b>:</b>		(	GROWTH	FACTOR:		
Volume	/Lane/Si	anal Conf	igurations									
				50			10/	ESTROIN		EA	STROUM	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	65	1899	21	166	934	224	31	720	294	343	908	83
AMBIENT												
RELATED												
PROJECT												
TOTAL	65	1899	21	166	934	224	31	720	294	343	908	83
	ፋ 🔶		ረተት ላካ	ሌ 수	4 4 4	ረትን የተ	ሌ 수	$\varphi \varphi \zeta$	<u>∖</u> 4, 4, 4	<u>ፋ</u>	ے <u>د</u>	հ.թ.գ.թ.
LANE	· ↓ 1	'		·' ↓/	· ↔		· ℓ 1	· (小) 「 1   1		1	1 (1) (1)	1
	Phasi	ng F	RTOR	Phasi	ng	RTOR	Phasi	ng	RTOR	Phasin	g	RTOR
SIGNAL	Pern	n	Auto	Pern	n	Auto	Prot-F	Fix	Auto	Prot-Fi	x	Auto
	I											
Critica	l Movem	ents Diag	ram —									
• • • • • •				∟s	outhBou	nd	1					
				A	.: {	579						
				В		166						
		EastE	Bound	<b> </b>	Λ		West	Bound		V/C RATI	<u>o</u>	LOS
		B.	343		T		B.	31		0.00 - 0.60	D	Α
			0-10		l IorthBou	nd		01		0.61 - 0.70	D	В
				A		960				0.71 - 0.80	D	с
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	В		65				0.81 - 0.90	D	D
	, Benetit									0.91 - 1.0	D	E
Kest	uits Nort	h/South C	ritical Mo	vomente	_ Λ/Ν	/B) + P	(S/B)					
	Wes	t/East Crit	ical Move	ments	– A(N) – A(W	/B) + B	(E/B)					
		V	/C =	960	+ 166	+ 50 1425	)7 +	343	= 1.317	,	LOS =	F

#### **Intersection 39**





Phase 1) Glendale Boulevard and Lucas Avenue - North-South Throughs and Rights



Phase 2) Glendale Boulevard, 1st Street, and 2nd Street - Southbound Lefts, Throughs, and Rights, and
 a.) Westbound Rights on 1st Street
 b.) Westbound Rights on 2nd Street

a.) 
$$\frac{113}{1}$$
  
&  $\left\{\frac{534}{1} - 471\right\}$  &  $\left\{\frac{443}{2}\right\}$   
= **113**  
b.)  $\left\{\frac{443}{2} - 113\right\}$   
or  $\left\{\frac{534}{1} - 471 - 113\right\}$   
&  $\frac{992}{2}$   
= **109**

Phase 3) 2nd Street - Westbound Lefts, Throughs, and Rights



I N



Phase 4) Beverly Boulevard and 2nd Street - Westbound Lefts and Throughs, and Eastbound Throughs and Rights



N/S:		Lucas A	Ave		W/E: [		3rc	l St		I/S No:	4	0
			Comm	ents: FL		VITH PRC	JECT W			2020)		
				510					BROWIN	TACTOR.		
Volume	/Lane/Sig	gnal Conf	igurations									
	NO	RTHBOU	ND	SO	UTHBOL	IND	W	ESTBOU	ND	FAS	STROU	ND -
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
EXISTING	39	600	91	54	429	89	109	1131	192	95	899	116
AMBIENT					1							
RELATED												
PROJECT												
TOTAL	39	600	91	54	429	89	109	1131	192	95	899	116
	1. A	~ ~ ^		1 1	$\wedge \wedge /$		1. A	$\wedge \wedge \wedge$		$\Lambda \wedge \Lambda$		
LANE	। 1	工		ग∉ [1]	T 研 1 1   1		^भ ∉ 1	⊤ ∰ τ 2		ר ק וי 1   2	2	[₽] ^ℓ  ^ℓ  ^ℓ
	Phasi	na F	RTOR	Phasi	na	RTOR	Phasir	a	RTOR	Phasing	<u>г</u>	RTOR
SIGNAL	Pern			Pern	יש ר		Pern	n l	Auto	Perm	<b>,</b>	Auto
OIGHAL	T CIT		Auto	T CIT	•	Auto	I CIII		Auto			Auto
	Movom	onto Diag	rom —									
Critica	INOVEIN	ents Diag	lam	∟s	outhBou	nd	1					
				A	: 2	259						
				В	-	54						
		EastE	Bound 450		Δ		Westl	Bound 566		V/C RATIO	<u>.</u>	<u>LOS</u>
		B.	05				B.	109		0.00 - 0.60	) .	A
			33		l arth Daw	n d		100		0.61 - 0.70	)	В
				A		300				0.71 - 0.80	)	с
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	Volume	В	:	39				0.81 - 0.90	)	D
^ = AISAC	Benefit						]			0.91 - 1.00	)	E
Resi	ults —	h/South O	vitical Ma	uomont-	A /b1	<u>م</u> . (م/	(C/D)					
	West	t/East Crit	tical Move	ments :	= A(N/ = A(W	/B) + B	(3/B) (E/B)					
		V	/C =	300	+ 54	+ 56	6 +	95	= 0.607	,	LOS =	в
					*	1500						

N/S:		Lucas A	Ave		W/E: [		6th	n St		I/S No:	4′	1
COUNT D	PM ATE:		Comm	STU	JTURE V DY DATE		DJECT W	ITH TDM	ROWTH	2020) FACTOR: [		
Volume	/Lane/Sig	gnal Conf	igurations	s —	UTHBOI		W	ESTBOUN		FAS	STROUM	
	LT	ТН	RT	LT	ТН	RT	LT	ТН	RT	LT	TH	RT
EXISTING AMBIENT	82	381	68	29	259	114	70	1038	68	170	1030	60
RELATED PROJECT												
TOTAL	82	381	68	29	259	114	70	1038	68	170	1030	60
LANE	ी कि Phasii	수 슈 슈 1	} r [♪] f [↓]	අ දා Phasin	수 슈 イ 1	₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽ ₽	ी ट्रि 1 Phasin	↑ 余 ℃ 2     ng l	》	ी ∯ ी 1 1 Phasing	・ 分子 1 1 9	È ∯ I I RTOR
SIGNAL	Pern	n .	Auto	Pern	n	Auto	Pern	n .	Auto	Perm		Auto
Critica	l Movem	ents Diag	ram ——	S A B	outhBou .:	nd 402 29						
		EastE A:	Bound 545		Д		West A:	Bound 519		<u>V/C RATIO</u>	<u>) I</u>	LOS
		В:	170				В:	70		0.00 - 0.60	) /	B
					lorthBou	nd 531	1			0.71 - 0.80	) (	C
A = Adjus B = Adjus * – ATSAC	ted Thro ted Left \ Benefit	ugh/Right /olume	Volume	В		82				0.81 - 0.90	) I	D
							J			0.91 - 1.00	)	Ε
Kesi	Norti West	h/South C t/East Crit V	critical Mo tical Move /C = —	vements ments 531	= A(N/ = A(W + 29	/B) + B /B) + B + 5 ⁴	(S/B) (E/B) 19 +	170	= 0.763		LOS =	с

N/S:	Luca	as Ave		W/E:		Wilshi	re Blvd		I/S No:	42	
AM/PM:	PM	Comm	nents: Fl			JECT W		(YEAR 2	2020)		
	ATE:		STU	DY DATE	:		C	BROWTH	FACTOR:		
	/Lane/Signal C	Configurations	s —								
	NORTHE		SO	UTHBOU	IND	W	ESTROU	D	FAS	TBOUND	)
		I RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	12 30	2 36	48	321	75	149	1082	95	70	1004	10
PROJECT											
TOTAL	72 30	2 56	48	327	75	149	1082	95	70	1004	76
	4 ^ ^ ^		1			<u></u> Λ Λ			4 ^ ^		۷ ۷
			Ч Ф ПТП							<u> </u>	
LANE											
	Phasing	RTOR	Phasi	ng	RTOR	Phasi	ng l	RTOR	Phasing	R	TOR
SIGNAL	Perm	Auto	Perr	n	Auto	Pern	n	Auto	Perm	Α	uto
	Movomonte F	)iagram ===									
Citica		hagrann	∟s	outhBou	nd	]					
			4		150						
			E	B:	48						
	E	astBound		٨		West	Bound		V/C RATIO	LO	<u> 05</u>
	A:	712		Ť		A:	988		0.00 - 0.60	Α	
	B:	70				B:	149		0.61 - 0.70	в	
	<u> </u>			lorthBou	nd	1			0.71 - 0.80	С	
A = Adjus B = Adjus	ted Through/R	ight Volume		· 4	72				0.81 - 0.90	D	
* = ATSAC	Benefit			-	. 4				0.91 - 1.00	Е	
— Resi	ılts										
	North/Sou	th Critical Mo	vements	= B(N/	/B) + A	(S/B)					
	West/East	Critical Move	ments	= A(W)	/B) + B	(E/B)					

ATTACHMENT B

ANALYSIS OF ADDITIONAL INTERSECTIONS

INTERSECTION TURNING MOVEMENT COUNTS

Existing - A	M 		S	at Oc	t 15,	2005 1	1:50:	49			Page	e 8−1	
			Gran E	d Ave xistin	. Impl ng - A	lementa A.M Pea	tion 1 k Hou:	Plan r					
			Level			Comput							
	Circu	lar 2	12 Pla	nning	Metho	d (Bas	ación e Volι	керог me Al	ternat	ive)			
*******	**************************************												
<pre>intersection ************************************</pre>	. #500 *****	6 Hop	e St. *****	/ 1st *****	St. *****	*****	*****	*****	****	بالمراجعة المراجعة			
Cycle (sec):		10	0			Critic	al Vol	./Cap	(X):		0.7	****** 92	
Loss Time (s	ec):		0 (Y+R	- 4	sec)	Averag	e Dela	y (se	c/veh)	:	xxxx	xx	
Optimal Cycl	e:	9	0			Level	Of Ser	vice:				С	
Approach:	No	rth B	ound	***** Sc	***** 11th B	***** ound	* * * * * T	***** 'aat D	*****	*****	*****	*****	
Movement:	L	- т	- R	L	- T	– R	L	азс в - т	– R	т.	est B	ouna - P	
											* ~~~~~	K	
Control:		Permi	tted		Permi	tted		Permi	tted	Pr	ot+Pe	rmit	
Rights:		Ov1			Incl	ude		Incl	ude		Incl	ude	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	11	02	0 1	1	0 1	1 0	. 1	02	01	1	02	1 0	
Volume Module	e:			[ [									
Base Vol:	55	90	41	53	593	135	93	838	534	255	500		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1 00	1 00	1 00	
Initial Bse:	55	90	41	53	593	135	93	838	534	255	590	1.00	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1 00	
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1 00	
PHF Volume:	55	90	41	53	593	135	93	838	534	255	590	1.00	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	<b>۲</b> ۰ ۵	
Reduced Vol:	55	90	41	53	593	135	93	838	534	255	590	44	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Vol.:	55	90	41	53	593	135	93	838	534	255	590	44	
Saturation Fl									·				
Sat/Lane:	1425	1425	1125	1125	1425	1405	1405	1405					
Adjustment:	1.07	1 07	1 07	1 07	1 07	1425	1425	1425	1425	1425	1425	1425	
Lanes:	1.00	2.00	1.00	1 00	1 63	0.37	1 00	1.07	1.07	1.07	1.07	1.07	
Final Sat .:	1525	3050	1525	1525	2484	565	1525	2.00	1526	1.00	2.79	0.21	
							1			1525	4237	317	
Capacity Anal	ysis	Modul	.e:			•	,		1	1		·	
Vol/Sat:	0.04	0.03	0.03	0.03	0.24	0.24	0.06	0.27	0.35	0.17	0 14	0 14	
Crit Vol:	55				364		_	/	534	255		0 • ± 4	
Crit Moves:	****				****				****	****			
******	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	

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								_ ~ ~ ~ ~ ~ ~				
Grand Ave. Implementation Plan Existing - P.M Peak												
				EX1:	sting	- P.M	Peak					
			Level	Of Sou		Comm			·			
	Circu	ılar 2	212 Pla	nning	Metho	Comput d (Pag	ation	Repor	it .			
*******	****	*****	******	*****	******	******	e vor	me Al	ternat.	ive)		
Intersection	#500	)6 Hor	be St.	/ 1st	St				*****	*****	****	******
*******	****	*****	******	, *****	*****	*****	*****		ر باد باد باد باد باد باد			
Cycle (sec):		10	0			Critic			· · · · · · · · · · · · · · · · · · ·	*****	*****	******
Loss Time (s	ec):		0 (Y+R	= 4	sec)	Averag	ar voi a Dala	v (ao	(X):		0.6	01
Optimal Cycl	e:	4	7	-	200,	Level	Of Ser	vice.	c/ven)	:	XXXX	xx
*******	*****	*****	*****	*****	*****	******	******	*****	*****	******	* * * * * *	B
Approach:	No	orth B	ound	Sc	outh B	ound	म	last B	ound	E C C C C C C C C C C C C C C C C C C C		******
Movement:	$\mathbf{L}$	~ Т	– R	$\mathbf{L}$	- т	- R	т. –	арс р - т		T	ສະ ສ	ouna
							11	·		⊸ ⊔. 	- T	- K
Control:		Permi	tted		Permi	tted	• •	Permi	tted	Dre		
Rights:		Ovl			Incl	ude		Incl	ude	FIC	Thal	rmit
Min. Green:	0	0	0	0	0	0	0	0	uuc 0	0	THCT	ude
Lanes:	1	02	0 1	1	01	1 0	1	0 2	0 1	1 0	່ວິ	1 0
							11					I
Volume Module	e:								1	I		
Base Vol:	149	642	182	44	281	49	216	791	180	156	1033	00
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1 00	1 00
Initial Bse:	149	642	182	44	281	49	216	791	180	156	1033	1.00
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1 00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1 00	1 00
PHF Volume:	149	642	182	44	281	49	216	791	180	156	1033	1.00
Reduct Vol:	0	0	0	0	0	0	0	0		100	1000	09
Reduced Vol:	149	642	182	44	281	49	216	791	180	156	1033	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1 00	1 00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1 00	1.00
Final Vol.:	149	642	182	44	281	49	216	791	180	156	1033	2.00
									1			
Saturation Fl	.ow Mo	odule	:						•	,		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07
Lanes:	1.00	2.00	1.00	1.00	1.70	0.30	1.00	2.00	1.00	1.00	2.76	0.24
Final Sat.:	1525	3050	1525	1525	2597	453	1525	3050	1525	1525	4211	363
												1
Capacity Anal	ysis	Modul	e:						•			1
vol/Sat:	0.10	0.21	0.12	0.03	0.11	0.11	0.14	0.26	0.12	0.10 (	0.25	0.25
Crit Vol:		321		44				396		156		
Crit Moves:		****		****				****		****		
~ ~ ~ * * * * * * * * * * *	****	*****	*****	*****	*****	*****	*****	*****	*****	*****	****	*****

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## Intersection Turning Movement

National Data & Surveying Services

#### TMC Summary of S Olive St/W Olympic Blvd



AM PEAK HOUR	800 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	500 PM

CONTROL: Signalized

# Intersection Turning Movement

## National Data & Surveying Services

N-S STREET:	S Olive	e St			DATE:	07/16/	2008		LOCA	ATION:	City of l	os Ang	eles
E-W STREET:	W Olyr	npic Blvc	ł		DAY:	WEDNI	ESDAY		PRO.	JECT#	08-50	01-012	
	N	ORTHBO	UND	S	OUTHBO	UND	E	ASTBOU	ND	W	/ESTBOU	ND	
LANES:	NL 0	NT 4	NR <mark>0</mark>	SL 0	ST 0	SR 0	EL 1	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL
6:00 AM 6:15 AM 6:30 AM 7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM 9:30 AM 9:30 AM 9:45 AM 10:00 AM 10:15 AM 10:30 AM 10:45 AM 11:00 AM 11:15 AM	10 20 21 22 20 18 22 21	161 181 199 252 308 268 229 251	5 1 10 7 10 9 15 6				25 19 35 34 29 33 35 36	74 97 115 158 146 175 171 159			93 118 118 119 144 125 112 119	13 17 21 17 14 19 18 18	381 453 519 609 671 647 602 610
TOTAL VOLUMES =	NL 154	NT 1849	NR 63	SL 0	ST 0	SR 0	EL 246	ET 1095	ER 0	WL O	WT 948	WR 137	TOTAL 4492
AM Pe	ak Hr Be	egins at:	800	AM									
PEAK VOLUMES =	81	1056	40	0	0	0	133	651	0	0	500	69	2530
FACTOR:		0.871		l	0.000			0.942			0.900		0.943

CONTROL: Signalized

#### Intersection Turning Movement Prepared by:

Prepared by: National Data & Surveying Services

N-S STREET:	S Olive	St			DATE:	07/16/	2008		LOC	LOCATION: City of Los Angeles			
E-W STREET:	W Olympic Blvd			DAY: WEDNESDAY				PROJECT# 08-5001-012					
	NORTHBOUND			S	OUTHBO	UND	E	ASTBOU	ND	V	/ESTBOL	IND	
LANES:	NL 0	NT 4	NR 0	SL 0	ST 0	SR 0	EL 1	ET 2	ER 0	WL 0	WT 2	WR <mark>0</mark>	TOTAL
1:00 PM 1:15 PM 1:30 PM 2:00 PM 2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM 3:45 PM 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM 6:00 PM 6:15 PM 6:30 PM	10 12 17 22 20 19 20 28	149 124 181 189 194 210 251 220	14 14 22 11 20 19 7 8				20 25 26 26 28 30 30 29	89 123 151 139 143 162 140 164			174 172 198 199 237 261 264 205	17 19 21 30 19 11 32 20	473 489 616 616 661 712 744 674
TOTAL VOLUMES =	NL 148	NT 1518	NR 115	SL 0	ST 0	SR 0	EL 214	ET 1111	ER 0	WL O	WT 1710	WR 169	TOTAL 4985
PM Pe	ak Hr Be	egins at:	500	PM									
PEAK Volumes = Peak hr.	87	875	54	0	0	0	117	609	0	0	967	82	2791
FACTOR:		0.914			0.000			0.940			0.886		0.938

CONTROL: Signalized

## Intersection Turning Movement

#### **National Data & Surveying Services**

#### TMC Summary of N Grand Ave/W Olympic Blvd



AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	445 PM

CONTROL: Signalized

# Intersection Turning Movement Prepared by:

## National Data & Surveying Services

N-S STREET:	N Gran	d Ave			DATE:	07/16/2	2008		LOC	ATION:	City of I	Los Ang	eles	
E-W STREET:	W Olyr	npic Blvd	I		DAY:	WEDNE	SDAY		PRO.	JECT#	08-50	01-013		
	N	ORTHBO	JND	SC	DUTHBO	UND	E	ASTBOU	ND	W	/ESTBOU	STBOUND		
LANES:	NL 0	NT 0	NR 0	SL 1	ST 4	SR 1	EL 0	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	
6:00 AM 6:15 AM 6:30 AM 6:45 AM 7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM 9:30 AM 9:30 AM 9:45 AM 10:00 AM 10:15 AM 10:30 AM 11:15 AM 11:30 AM 11:45 AM				21 24 28 50 58 61 39 38	98 146 124 197 179 214 165 141	18 26 20 41 31 43 51 40		74 91 114 160 157 191 183 171	14 9 19 16 25 24 25 13	4 11 13 9 17 14 19 7	112 120 130 136 128 138 121 151		341 427 448 609 595 685 603 561	
TOTAL VOLUMES =	NL O	NT O	NR 0	SL 319	ST 1264	SR 270	EL O	ET 1141	ER 145	WL 94	WT 1036	WR 0	TOTAL 4269	
AM Pe	ak Hr Be	egins at:	745	AM										
PEAK VOLUMES =	0	0	0	208	755	166	0	691	90	59	523	0	2492	
PEAK HR. FACTOR:		0.000			0.888			0.908			0.957		0.909	

CONTROL: Signalized

#### Intersection Turning Movement Prepared by:

Prepared by: National Data & Surveying Services

N-S STREET:	N Grar	nd Ave			DATE:	07/16/2	2008		LOC	ATION:	N: City of Los Angeles			
E-W STREET:	W Olyr	npic Blvd	DAY: WEDNESDAY PROJECT# 08-5			08-50	5001-013							
	N	ORTHBO	JND	SOUTHBOUND			E	EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 0	NR 0	SL 1	ST 4	SR 1	EL 0	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	
1:00 PM 1:15 PM 1:30 PM 2:00 PM 2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM 3:45 PM 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM 6:00 PM 6:15 PM				14 21 30 32 23 17 22 17	244 257 305 321 367 401 378 282	48 35 57 48 49 48 60 47		130 137 149 150 151 140 147 181	25 20 21 19 20 21 26 33	23 20 31 34 26 25 45 27	184 181 203 212 219 242 236 222		668 671 796 816 855 894 914 809	
TOTAL VOLUMES =	NL O	NT O	NR 0	SL 176	ST 2555	SR 392	EL O	ET 1185	ER 185	WL 231	WT 1699	WR 0	TOTAL 6423	
PM Pe	ak Hr Be	egins at:	445	PM										
PEAK VOLUMES =	0	0	0	94	1467	205	0	588	86	130	909	0	3479	
PEAK HR. FACTOR:		0.000			0.947			0.974			0.924		0.952	

CONTROL: Signalized

#### TRAFFIC COUNT SUMMARY

City of Los Angeles Department of Transportation Count by Crain & Associates

XING N/L

North/South	_	Cou			
East/West	OLYMPIC BOU	ILEVARD			
Day: AM PM Hours:	Tuesday Tuesday 7-10 AM 3-6 PM	Date: JULY 22, 2008 JULY 22, 2008	Weather: <u>CLEAR</u>		
School Day:	NO	District: LOS ANGELES			
DUAL-	<u>N/B</u>	S/B	E/B	W/B	
WHEELED	N/A	N/A	N/A	N/A	
BIKES	N/A	N/A	N/A	N/A	
BUSES	N/A	N/A	N/A	N/A	
	N/B TIME	S/B TIME	E/B TIME	W/B	TIME
AM PK 15 MI	N 0 7:00	174 9:15	248 8:00	205	8:15
PM PK 15 Mil	N 0 3:00	460 5:00	256 5:45	386	5:45
	R 0 7:00	665 8:30	912 8:00	796	8:00
PM PK HOUR	0 3:00	1,691 4:45	930 5:00	<del>####</del>	5:00

#### NORTHBOUND Approach

STREET:

Hours	Lt	Th	Rt	Total	Hours	L.t	Th	Rt	Total	N-S	Ped Sch	Ped S
7 - 8	0	0	0	0	7-8	38	398	79	515	515	N/A N/A	N/A
8 - 9	0	0	0	0	8-9	75	450	107	632	632	N/A N/A	N/A
9 - 10	0	0	0	0	9 - 10	76	405	141	622	622	N/A N/A	N/A
3 - 4	0	0	0	0	3 - 4	44	905	136	1,085	1,085	N/A N/A	N/A
4 - 5	0	0	0	0	4 - 5	54	1,294	130	1,478	1,478	N/A N/A	N/A
5-6	0	0	0	0	5-6	53	1,471	160	1,684	1,684	N/A N/A	N/A I
TOTAL	0	0	0	0	TOTAL	340	4,923	753	6,016	6,016	N/A N/A	N/A
		•	v	•	10176		-1,020		0,010	0,010		

#### EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	638	62	700
8-9	0	822	90	912
9 - 10	0	748	67	815
3-4	0	753	81	834
4 - 5	0	762	116	878
5-6	0	817	113	930
TOTAL	0	4,540	529	5,069

#### SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total	N-S	Ped Sch	Ped Sch
7 - 8	38	398	79	515	515	N/A N/A	N/A N/A
8 - 9	75	450	107	632	632	N/A N/A	N/A N/A
9 - 10	76	405	141	622	622	N/A N/A	N/A N/A
3 - 4	44	905	136	1,085	1,085	N/A N/A	N/A N/A
4 - 5	54	1,294	130	1,478	1,478	N/A N/A	N/A N/A
5 - 6	53	1,471	160	1,684	1,684	N/A N/A	N/A N/A
TOTAL	340	4,923	753	6,016	6,016	N/A N/A	N/A N/A

TOTAL

XING S/L

WESTBOU	ND Approa	ch			TOTAL	XING W/L	XING E/L
Hours	Lt	Th	Rt	Total	E-W	Ped Sch	Ped Sch
7 - 8	46	621	0	667	1,367	N/A N/A	N/A N/A
8 - 9	38	758	0	796	1,708	N/A N/A	N/A N/A
9 - 10	52	609	0	661	1,476	N/A N/A	N/A N/A
3 - 4	60	906	0	966	1,800	N/A N/A	N/A N/A
4 - 5	54	921	0	975	1,853	N/A N/A	N/A N/A
5-6	71	1,305	0	1,376	2,306	N/A N/A	N/A N/A
TOTAL	321	5,120	0	5,441	10,510	N/A N/A	N/A N/A
#### VEHICLE TURNING MOVEMENT COUNT SUMMARY

Crain & Associates 2007 Sawtelle Blvd., Suite 4 Los Angeles, CA 90025 Tel: (310) 473-6508

 $\sum_{N}$ 

N/S STREET: UNION AVENUE PERIOD: AM PEAK HOUR **E/W STREET:** WILSHIRE BOULEVARD **DATE:** THURSDAY NOVEMBER 2, 2006

15-MINUTE	WES	STBOUN	ID DI	EAS	STBOUN	٨D	NOF	RTHBOL	IND	SOL	ITHBOU	IND	
TOTALS	L	т	R	L	Т	R	L	Т	R	L	Т	R	TOTAL
7:00 - 7:15	25	177	13	11	136	21	32	76	27	14	61	7	600
7:15 - 7:30	32	177	14	9	152	24	19	91	43	15	77	13	666
7:30 - 7:45	31	165	26	9	200	18	21	69	26	10	90	6	671
7:45 - 8:00	17	194	23	14	264	32	31	83	51	12	97	10	828
8:00 - 8:15	21	141	29	9	230	30	43	93	47	6	59	17	725
8:15 - 8:30	17	212	16	8	237	29	40	105	41	11	64	13	793
8:30 - 8:45	20	147	8	8	201	11	27	84	32	13	50	9	610
8:45 - 9:00	15	143	17	12	192	22	26	64	48	15	68	21	643

1-HOUR	WES	TBOUN	D	EAS	TBOUN	D	NOR	THBOUI	ND	SOU	THBOUN	VD	
TOTALS	L	Т	R	L	Т	R	L	Т	R	L	Т	R	TOTAL
7:00 - 8:00	105	713	76	43	752	95	103	319	147	51	325	36	2,765
7:15 - 8:15	101	677	92	41	846	104	114	336	167	43	323	46	2,890
7:30 - 8:30	86	712	94	40	931	109	135	350	165	39	310	46	3,017 *
7:45 - 8:45	75	694	76	39	932	102	141	365	171	42	270	49	2,956
8:00 - 9:00	73	643	70	37	860	92	136	346	168	45	241	60	2,771



PERIOD: PM PEAK HOUR

DATE: THURSDAY NOVEMBER 2, 2006

15-MINUTE	WES	STBOUN	ID	EAS	TBOUN	ID	NOF	THBOU	ND	SOU	THBOU	ND	
TOTALS	L	Т	R	L	Т	R	L	Т	R	L	т	R	TOTAL
4:00 - 4:15	46	222	13	7	191	24	27	97	28	12	81	9	757
4:15 - 4:30	57	280	22	15	235	37	32	96	18	10	80	9	891
4:30 - 4:45	49	200	14	15	164	29	26	72	24	15	80	7	695
4:45 - 5:00	62	295	18	12	179	26	33	108	29	15	94	9	880
5:00 - 5:15	46	274	13	9	173	27	31	97	44	20	86	22	842
5:15 - 5:30	76	304	14	13	173	31	31	70	40	23	97	23	895
5:30 - 5:45	65	284	12	14	199	36	29	98	39	8	79	13	876
5:45 - 6:00	51	250	8	8	163	31	34	102	48	22	75	11	803

1-HOUR	WE	STBOUN	D	EAS	TBOUN	D	NOR	THBOUI	ND	SOU.	THBOUI	٧D	
TOTALS	L	Т	R	L	т	R	L	Т	R	L	Т	R	TOTAL
4:00 - 5:00	214	997	67	49	769	116	118	373	99	52	335	34	3,223
4:15 - 5:15	214	1,049	67	51	751	119	122	373	115	60	340	47	3,308
4:30 - 5:30	233	1,073	59	49	689	113	121	347	137	73	357	61	3,312
4:45 - 5:45	249	1,157	57	48	724	120	124	373	152	66	356	67	3,493 *
5:00 - 6:00	238	1,112	47	44	708	125	125	367	171	73	337	69	3,416



# INTERSECTION LEVEL OF SERVICE WORKSHEETS

# FUTURE WITHOUT PROJECT CONDITIONS

(YEAR 2020)

AM/PM:       AM       Comments:       FUTURE WITHOUT PROJECT         COUNT DATE:       STUDY DATE:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       SOUTHBOUND       WESTBOUND         NORTHBOUND       SOUTHBOUND       WESTBOUND	
COUNT DATE:       GROWTH FACTOR:         GROWTH FACTOR:       GROWTH FACTOR:         Volume/Lane/Signal Configurations       GROWTH FACTOR:         NORTHBOUND       SOUTHBOUND         SOUTHBOUND       WESTBOUND	
Volume/Lane/Signal Configurations	
LT TH RT LT TH RT LT TH RT LT TH	RT
EXISTING         62         101         79         138         661         150         395         684         269         104         974	606
TOTAL         62         101         79         138         661         150         395         684         269         104         974	606
<u>*************************************</u>	ᡩ᠂ᡥ᠂ᡏᡟ
LANE 1 2 1 1 1 1 1 1 2 1 1 1 2 1	1
Phasing RTOR Phasing RTOR Phasing RTOR Phasing	RTOR
SIGNAL Prot-Fix OLA Perm Auto Prot-Fix Auto Perm	OLA
Critical Movements Diagram	
SouthBound	
B. 129	
$\begin{array}{c c} \text{EastBound} \\ \text{A:}  544 \end{array} \qquad \qquad$	LOS
B: 104 B: 395	Α
0.61 - 0.70	В
A: 51 0.71 - 0.80	С
A = Adjusted Through/Right VolumeB = Adjusted Left VolumeB:62	D
* = ATSAC Benefit 0.91 - 1.00	E
Results	
North/South Critical Movements = B(N/B) + A(S/B)	
$62 \pm 406 \pm 395 \pm 544$	
$V/C = \frac{02 + 400 + 333 + 544}{*1375} = 0.953$ LOS =	E

N/S:		Grand	Av		W/E:		Olymp	ic Blvd		I/S No:	10	)2
AM/PM:	AM		Comm	ents: Fl	JTURE V	VITHOUT	PROJEC	т				
COUNT D	ATE:			STU	IDY DATE	E:			GROWTH	FACTOR:		
Volume	/Lane/Sig	jnal Conf	igurations									
	NO	RTHROU		SO			W	ESTROUI		FAS	TROU	
	LT	TH	RT	LT	ТН	RT	LT	TH	RT	LT	TH	RT
EXISTING	0	0	0	227	1181	189	72	605	0	0	780	104
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	227	1181	189	72	605	0	0	780	104
	4. Δ.		ላ የተ	4 Δ		ላ ተን ላተን	4 Δ		ላ ት ላት	4 Δ Δ		2 -12 (F-12)
LANE	Ч Ч	「		ין _≬ ו 1	1 di l 4	)   ^r \  ^r	י _ק ו 1	т _ф ( 2		י _ל , י   1	<u>ф</u> ,	1
	Phasin	a f	RTOR	Phasi	na	RTOR	Phasi	na	RTOR	Phasing	1	RTOR
SIGNAL	<none< td=""><td>s &gt; &lt;</td><td>none&gt;</td><td>Perr</td><td>n</td><td>Auto</td><td>Pern</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td>,</td><td>Auto</td></none<>	s > <	none>	Perr	n	Auto	Pern	n <	none>	Perm	,	Auto
Critica	l Moveme	ents Diag	ram ——									
- Critica		into Diag	. uni	s	outhBou	nd	1					
				A	: 2	95						
				E	8: 2	27						
		East	Bound		٨		West	Bound		V/C RATIC	<u>2</u>	LOS
		A.	442		T		A.	303		0.00 - 0.60	)	Α
		В:	0		I		В:	12		0.61 - 0.70	)	В
					lorthBoui \:	nd 0				0.71 - 0.80	)	с
A = Adjus B = Adjus	ted Throu ted Left V	ıgh/Right ′olume	Volume	E	3:	0				0.81 - 0.90	)	D
* = ATSAC	C Benefit	-			L		J			0.91 - 1.00	)	E
	ults —											
	North	/South C	ritical Mov	vements	= A(N/	′B) + A	(S/B)					
	West	/East Crit	tical Move	ments	= B(W/	/B) + A	(E/B)					
		V	/C =	U	+ 295	+ 7 1500	2 +	442	= 0.469	) L	_OS =	Α

N/S:	Olive	St		W/E:		Olymp	oic Blvd		I/S No:	103	
AM/PM:	AM	Comm	ents: FUT	URE W	ITHOUT	PROJE	СТ				
COUNT D	ATE:		STUD	Y DATE			(	GROWTH	FACTOR:		
Volume	e/Lane/Signal Con	figurations									
	NORTHBOL		SOU	THBOU		W	ESTROU		FAS		)
EXISTING		51		0	0		567	76	151	731	0
AMBIENT				•	Ū						•
RELATED											
PROJECT				I							
TOTAL	111 1217	51	0	0	0	0	567	76	151	731	0
LANE SIGNAL	<ul> <li>●</li></ul>	À I ↓ III I ↓ ↓ RTOR Auto	भ ी ी Phasing <none></none>	F	,		↑     ↓     ↓       1     ↓     ↓       ng	À ी (Ì) À RTOR Auto	∯		小 小 TOR ione>
Critica	I Movements Diag	gram —	Sоц А: В:	uthBour	nd 0						
	East	Bound 366		Д		A:	Bound 322		<u>V/C RATIO</u>	<u>L(</u>	<u> </u>
	B.	151				_В . Г	٥		0.00 - 0.60	Α	
	<b>D</b> .	IVI	<u> </u>				v		0.61 - 0.70	В	
				TINBOUN	45				0.71 - 0.80	С	
A = Adjus B = Adjus	ted Through/Righ ted Left Volume	t Volume	B:	1	11				0.81 - 0.90	D	
* = ATSAC	C Benefit								0.91 - 1.00	Е	
e Res	ults North/South West/East Cr	Critical Mov itical Move //C =	vements = ments = 345 +	A(N/I A(W/I 0	B) + A B) + B + 32 1500	(S/B) (E/B) :2 +	151	= 0.475	L	DS = 1	<b>4</b>

N/S:		Flower	St		W/E:		Olymp	ic Blvd		I/S No:	10	)4
AM/PM:	AM		Comm	ents: FL		WITHOUT	PROJEC	т				
COUNT D	ATE:			STU	DY DATI	E:			GROWTH	FACTOR:		
	/Lane/Sig	gnal Conf	igurations	. —								
	NO			SO			W	ESTROUI		EAS	TROU	
	LT	ТН	RT	LT	TH	RT	LT	ТН	RT	LT	ТН	RT
EXISTING	0	0	0	82	557	143	41	874	0	0	914	99
AMBIENT												
RELATED												
PROJECT												
TOTAL	0	0	0	82	557	143	41	874	0	0	914	99
	4 \	$\wedge \wedge \wedge$	<u> </u>	4 A	$\wedge \wedge /$	<u></u>	4 A	$\wedge \wedge \wedge$	<u> </u>	4 ^ ^		
LANE		<u>т дъ</u> ч		יוּע   1	3	[] [] [] [] [] [] [] [] [] [] [] [] [] [	י קד [1]	十 _研 1 2		יקד⊤   2		
	Phasir	na l	RTOR	Phasir	าต	RTOR	Phasi	na	RTOR	Phasing	1	RTOR
SIGNAL	<none< td=""><td>s &gt; &lt;</td><td>none&gt;</td><td>Pern</td><td><b>n</b></td><td>Auto</td><td>Pern</td><td>n &lt;</td><td>none&gt;</td><td>Perm</td><td>,</td><td>Auto</td></none<>	s > <	none>	Pern	<b>n</b>	Auto	Pern	n <	none>	Perm	,	Auto
	Moveme	onte Diag	ram									
Ontica		into Diag	lam	∟s	outhBou	Ind	7					
				A		160						
				В	:	82						
		East	Bound		٨		West	Bound		V/C RATIO	<u>2</u>	<u>LOS</u>
		A: D.	457		Ĩ		А. 	437		0.00 - 0.60	) .	A
		В.	U		  arrth: Days		В.	41		0.61 - 0.70	)	В
				A		0				0.71 - 0.80		с
A = Adjus B = Adjus	ted Throu ted Left V	ugh/Right /olume	Volume	В	:	0				0.81 - 0.90	)	D
* = ATSAC	C Benefit						J			0.91 - 1.00	)	E
Resi	ults —					( <b>D</b> ) -	(0/2)					
	North West	1/South C	ritical Move	vements	= A(N = R/W	/B) + A	(S/B) (F/B)					
	11031	V	/C =	0	+ 160	+ 4	1 +	457	= 0.369	) [	_OS =	A
		-			4	*1500						

N/S:		Union A	Ave		W/E:		Wilshi	re Blvd		I/S No:	10	5
AM/PM:	AM		Comn	nents: F		VITHOUT	PROJE	СТ				
COUNT D	ATE:			ST	UDY DATE	E:		(	GROWTH	FACTOR:		
Volume	e/Lane/Si	gnal Conf	iguration	s —								
		RTHBOU		S			W	ESTBOU		FA	STROUN	
EXISTING AMBIENT	149	388	183	43	343	51	95	928	RT 104	44	1081	120
RELATED PROJECT												
TOTAL	149	388	183	43	343	51	95	928	104	44	1081	120
LANE SIGNAL	♦ ↓ 1 ↓ Phasin Pern	↑     ↓     ↓       1        ng     I       n	أبا∳  1  RTOR Auto	ी d 1 Phas Per	← 余 ← 1   _   ing m   [ _ ]	À I I I I RTOR Auto		수 슈 슈 1   1 ng n ] []	À r ^à ∰À I I I I I I RTOR Auto	<pre></pre>	↑ 余 代 1   1 g	rtor Auto
Critica	l Movem	ents Diag	ram —— 3ound —		SouthBou A: :	nd 343 43	West	Bound		V/C RATI	<u>o 1</u>	<u>_05</u>
		A: B:	601 44		Ĭ		A: B:	516 95		0.00 - 0.6	0 4	4
					' NorthBou	nd				0.61 - 0.7	0 E	3
		-			A: 3	388				0.71 - 0.8	0 0	2
A = Adjus B = Adjus	ted Thro	ugh/Right Volume	t Volume		B:	149				0.81 - 0.9	0 [	כ
* = ATSAC	C Benefit									0.91 - 1.0	0 E	E
Resi	uits — Nort Wes	h/South C t/East Crit	Critical Mo tical Move	vements ments 149	6 = B(N/ = B(W/ + 343	/B) + A /B) + A + 9	.(S/B) .(E/B) 25 +	601				
		V	/C = —		*	1500	- •		= 0.722	2	LOS =	С

N/S:		Hope	St		W/E:		1st	t St		I/S No:	10	1
AM/PM:	PM		Comm	nents: F		VITHOUT	PROJEC	T				
COUNT D	ATE:			ST	UDY DATE	E:		C	BROWTH	FACTOR:		
Volume	/Lane/Sig	inal Conf	igurations									
							W	ESTROUM		EAG		
	LT	TH	RT	LT	ТН	RT	LT	ТН	RT	LT	TH	RT
EXISTING	166	716	430	564	313	54	258	1198	250	240	1009	208
AMBIENT												
RELATED								1				
PROJECT												
TOTAL	166	716	430	564	313	54	258	1198	250	240	1009	208
		~ ^ ^			~ ~ /			$\wedge \wedge \wedge$				
LANE	「 「 」 「 」	་		ין עד ו	十		ין קד 1	⊤ ∰ τ 2     1		יקד ד 1 2	· 孫 4 2	
	Phasin	a f	RTOR	Phas	ina	RTOR	Phasir	na l	RTOR	Phasing	J	RTOR
SIGNAL	Prot-F	ix	OLA	Per	m	Auto	Prot-F	ix 🗌	Auto	Perm	, 	OLA
			_									
Critica	l Moveme	ents Diag	ram —									
- Critica		into Diag	. uni		SouthBou	nd	7					
					A: 1	184						
					B:	564						
		East	Bound		٨		West	Bound		V/C RATIO	<u>2</u>	<u>_OS</u>
		A:	505		Ť		A:	403		0.00 - 0.60		4
		B:	240		I		B:	258		0.61 - 0.70	) E	3
					NorthBou	nd				0.71 - 0.80	) (	<b>C</b>
A = Adjus	ted Throu	igh/Right	Volume							0.81 - 0.90	) Г	r
B = Adjus * = ATSAC	Cea Left V Benefit	oiume				00				0.01 4.00	, L , r	-
	ults —									0.91 - 1.00	, t	<b>_</b>
	North	/South C	ritical Mo	vements	s = A(N	/B) + B	(S/B)					
	West	/East Crit	tical Move	ments	= B(W	/B) + A	(E/B)					
		V	/C =	358	+ 564	+ 25 1375	58 +	505	= 1.155	; 1	_OS =	F

N/S:		Grand	Av		W/E:		Olymp	oic Blvd		I/S No:	102
AM/PM:	PM		Comm	ents: FL	JTURE W	VITHOUT	PROJEC	СТ			
COUNT D	ATE:			STU	DY DATE			C	GROWTH	FACTOR:	
Volume	e/Lane/Sig	nal Conf	igurations								
	NO	RTHBOU		so	UTHROU		w	ESTROUI		FAST	BOUND
	LT	TH	RT	LT	ТН	RT	LT	TH	RT	LT	TH RT
EXISTING	0	0	0	103	1918	231	46	280	992	0 7	'13 117
AMBIENT											
RELATED											
PROJECT											
TOTAL	0	0	0	103	1918	231	46	280	992	0 7	/13 117
		$\wedge \wedge \wedge$		1 \	$\wedge \wedge \wedge$		1. A	$\wedge \wedge \wedge$		4 ^ ^	
LANE	м ф . П	[᠇] ∰ ᠮ		ण ∉र [1]	イ 承 て <b>4</b> ┃ ┃	1	[¶]	Υ _∰ τ 2	ערייז <del>≬</del>	Ψ ₄ , Τ ,   <b>1</b>	新 広 IP ୩P
	Phasir	a F	RTOR	Phasi	na	RTOR	Phasi	na	RTOR	Phasing	RTOR
SIGNAL		·9 ·	none>	Pern	n	Auto	Pern	n <	none>	Perm	Auto
OIOII/IE				1 011		//////	1 011			1 0111	
	Mayama	unto Dia a									
Critica		ents Diag	ram	⊏s	outhBou	nd	1				
				A	4	80					
				В	3: 1	03					
		East	Bound		٨		West	Bound		V/C RATIO	LOS
		A:	415		Ť			140		0.00 - 0.60	Α
		В:	0		 		В:	46		0.61 - 0.70	В
					lorthBour	nd 0			_	0.71 - 0.80	с
A = Adjus B = Adjus	ted Throu ted Left V	ıgh/Right /olume	Volume	В	3:	0				0.81 - 0.90	D
* = ATSAC	C Benefit						J			0.91 - 1.00	Е
Resi	ults —				_						
	North West	n/South C	ritical Move	vements ments	= A(N/ = B(W/	′B) + A ′B) + ∆	(S/B) (F/B)				
	11031	V.	/C =	0	+ 480	-, + A + 4	6 +	415	= 0.557	, LO	S = A
					*	1500					

	Oliv	/e St		W/E:		Olymp	oic Blvd		I/S No:	10	3
AM/PM:	РМ	Comm	nents: FU	TURE WI	THOUT	PROJE	СТ				
COUNT D	ATE:		STUE	DY DATE:			G	ROWTH	FACTOR:		
— Volume	/Lane/Signal Co	onfigurations	;								
	NORTHB	OUND	SOL	ITHBOUN	D	W	ESTBOUN	D	FAS	STROUN	D
EVISTING		RT		TH	RT	LT	TH	RT	LT 166	TH	RT
	223 139	/ 02	U	U	U	U	1110	90	100	099	U
				I							
PROJECT											
TOTAL	223 139	7 62	0	0	0	0	1110	90	166	699	0
	220 100	. 02		•	•				100		•
	<u><u></u> </u>	<u>€</u> ₽ €₽	ी के ∠		የት ላካ	<u>¶</u> ₽	<u> </u>	<u>ና የቅ ዓተቅ</u>	<u>ላ</u> ቆ ታ ና	<u>}</u>	, _በ ን ላተን
LANE	1 2	1					1 1		1 2	2	
	Phasing	RTOR	Phasin	g R'	TOR	Phasi	ng F	RTOR	Phasing	g i	RTOR
SIGNAL	Perm	Auto	<none< td=""><td>&gt; <n< td=""><td>one&gt;</td><td>Perr</td><td>n</td><td>Auto</td><td>Perm</td><td>&lt;</td><td>none&gt;</td></n<></td></none<>	> <n< td=""><td>one&gt;</td><td>Perr</td><td>n</td><td>Auto</td><td>Perm</td><td>&lt;</td><td>none&gt;</td></n<>	one>	Perr	n	Auto	Perm	<	none>
	I Movements Di	iagram ——		th D a							
			A:		2						
			B	0							
			<u> </u>	0							
							<b>_</b>				
	Ea	stBound		Δ		West	Bound 600		V/C RATIO	<u>o L</u>	<u>.0S</u>
	Ea	istBound 350		Å		West	Bound 600		<u>V/C RATIO</u> 0.00 - 0.60	<u>0 L</u> ) A	<u>.05</u>
	Ea A: B:	nstBound 350		Δ 		West A: B:	Bound 600 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70	<u>0 L</u> ) A ) E	<u>.05</u> \ 3
	Ea A: B:	astBound 350 166		∆   orthBound	1	West A:	Bound 600 0		<u>V/C RATI(</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80	<u>D</u> <u>L</u> ) <i>A</i> ) E	<u>.os</u> \ 3
A = Adjus B = Adjus	ted Through/Rig	astBound 350 166 ght Volume	N(	DorthBound 42	1	West	Bound 600 0		<u>V/C RATI(</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90	<u>D</u> <u>L</u> D <i>A</i> D E D C	. <u>OS</u> A 3 5
A = Adjus B = Adjus * = ATSAC	ted Through/Rig Benefit	astBound 350 166 ght Volume ≩		CorthBound 42 22	1	West A:	Bound 600 0		<u>V/C RATI(</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	<u>0</u> <u>1</u> 0 <i>A</i> 0 E 0 C	<u>-OS</u> A 3 5
A = Adjus B = Adjus * = ATSAC — Resu	ted Through/Rig ted Left Volume Benefit	astBound 350 166 ght Volume	Na A: B:	CorthBound 42 22	13	West A:	Bound 600 0		<u>V/C RATI(</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	D L D A D E D C D C	<u>-OS</u> A B C D
A = Adjus B = Adjus * = ATSAC — Resu	ted Through/Rig ted Left Volume Benefit ults North/Sout	astBound 350 166 ght Volume e h Critical Mor	No A: B: vements =	CorthBound 42 22 = A(N/B	1 1 3 ) + A(	West A:	Bound 600 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	<u>D</u> <u>L</u> D A D E D C D E	<u>.os</u> A 3 5 5
A = Adjus B = Adjus * = ATSAC — Resu	ted Through/Rig ted Left Volume Benefit ults North/Sout West/East 0	astBound 350 166 ght Volume e h Critical Move Critical Move	vements =	A DorthBound 42 223 = A(N/B) A(W/B	1 1 3 ) + A( ) + B(	West A: B: (S/B) E/B)	Bound 600 0		<u>V/C RATIO</u> 0.00 - 0.60 0.61 - 0.70 0.71 - 0.80 0.81 - 0.90 0.91 - 1.00	<u>D</u> <u>L</u> D A D E D C D E	<u>-os</u> A 3 5 5

N/S:		Flower	St		W/E:		Olymp	oic Blvd		I/S No:	104		
AM/PM:	PM		Comm	ents: FL	JTURE V	VITHOUT	PROJEC	т					
COUNT D	ATE:			STU	DY DATE			G	ROWTH	FACTOR:			
	/Lane/Sig	gnal Conf	igurations										
	NO			SO			W	ESTROUM		ΕΔS			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH R	Т	
EXISTING	0	0	0	57	1735	212	78	1562	0	0	941 12	23	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	57	1735	212	78	1562	0	0	941 12	23	
	<b>ά</b> Α	4 <u>4</u> 4	√+) √h	ፋ 🕂	4 <u>4</u> 4	с. Ан} 4н ≤	ፋ 🔶	4 <u>4</u> 4	¢-τ) ⟨τ, γ	<u> </u>	÷ + ₽	€₽	
LANE     Image: Im													
PhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none>PermAutoPerm<none>PermAuto</none></none></none>													
		onte Diag	ram										
Ontica	i wovenik	into Diag	lan	∟s	outhBou	nd	1						
SouthBound     A:													
				В	: :	57							
		EastE	Bound		٨		West	Bound		V/C RATIO	LOS		
		A:	4/1		Ť		A:	781		0.00 - 0.60	Α		
		Ы.	U		 IorthBou	ad	В:	10		0.61 - 0.70	В		
				A		0				0.71 - 0.80	С		
A = Adjus B = Adjus	ted Throuted Left \	ign/Right /olume	volume	В	:	0				0.81 - 0.90	D		
							]			0.91 - 1.00	E		
Resi	North	n/South C	ritical Mov	/ements	= A(N/	′B) + A	(S/B)						
	West	/East Crit	ical Move	ments	= A(W/	/B) + B	(E/B)						
		V	/C =	0	+ 448 *	+ 78 1500	31 +	0	= 0.749	L	OS = C		

N/S:		Union A	Ave		W/E:		Wilshi	re Blvd		I/S No:	1(	05	
AM/PM:	PM		Comm	nents: FU	JTURE V	VITHOUT	PROJEC	т					
COUNT D	ATE:			STU	DY DATE	E:		G	BROWTH	FACTOR:			
Volume	/Lane/Sig	gnal Conf	igurations	, ——									
				50			W	ESTROUM		EA	STROU		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	137	412	168	73	394	75	276	1385	63	53	974	133	
AMBIENT													
RELATED													
PROJECT													
TOTAL	137	412	168	73	394	75	276	1385	63	53	974	133	
	1 1	$\wedge \wedge \wedge$			$\wedge \wedge /$		LΛ	$\wedge \wedge \wedge$		$\Lambda \wedge /$			
4													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
PhasingRTORPhasingRTORPhasingRTORSIGNALPermAutoPermAutoPermAuto													
	1												
Critica	l Movem	ents Diag	ram ——										
Critical Movements Diagram SouthBound													
A: 394													
				В	:	73							
		East	Bound		٨		West	Bound		V/C RATI	<u>0</u>	<u>LOS</u>	
		A:	554		Ť		A:	724		0.00 - 0.6	D	A	
		B:	53		I		B:	276		0.61 - 0.7	D	в	
					orthBou	nd				0.71 - 0.80	D	с	
A = Adjus	ted Thro	ugh/Right	Volume			127				0.81 - 0.9	)	D	
* = ATSAC	Benefit	Juille		В						0.91 - 1.0	נ	E	
— Resi	ults —										-		
	Nort	n/South C	critical Mo	vements	= B(N/	/B) + A	(S/B)						
	West	/East Cri	tical Move	ments :	= B(W	/B) + A	(E/B)						
		v	/C = —	137	+ 394	+ 27	76 +	554	= 0.837		LOS =	D	
					*	1500							

#### FUTURE WITH PROJECT WITH TDM PROGRAM CONDITIONS

(YEAR 2020)

N/S:		Hope	St		W/E:		1st	t St		I/S No:	10	)1	
AM/PM:	AM		Comm	ents: FU	ITURE V		JECT W		I PROGR	AM			
COUNT D	ATE:			STU	DY DATE			(	GROWTH	FACTOR:			
	/I ane/Si	anal Conf	igurations										
Volume				, 			\A/I	ESTROLI		EA	STROU		
	LT	ТН	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	62	101	79	138	710	150	395	684	269	104	975	606	
AMBIENT													
RELATED													
PROJECT													
TOTAL	62	101	79	138	710	150	395	684	269	104	975	606	
	ፋ 슈	4 <u>6</u> 4	ረተው ላካ ረ	ፋ 순	4 <u>6</u> 4	ት የ ት	ፋ 순	4 <u>6</u> 4	<hr/> <h} <hr=""><h} <hr=""><h< h=""><h< h=""><hr/><h< h=""><hr/><h<< hr=""><h><h<<hr><h><h<<hr><h<<hr><h<<hr><h<<h<<hr><h<<h<<hr<<hr< td=""><td><u>ፋ</u> ራ ረ</td><td>ے م د</td><td>ᡧ᠇᠌ᡷ᠂ᠳ</td></h<<h<<hr<<hr<></h<<h<<hr></h<<hr></h<<hr></h<<hr></h></h<<hr></h></h<<></h<></h<></h<></h<></h<></h<></h<></h<></h<></h<></h<></h<></h<></h<></h}></h}>	<u>ፋ</u> ራ ረ	ے م د	ᡧ᠇᠌ᡷ᠂ᠳ	
4													
Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
PhasingRTORPhasingRTORPhasingRTORSIGNALProt-FixOLAPermAutoProt-FixAutoPermOLA													
Critica	l Movem	ents Diag	ram ——										
SouthBound A: 430													
A: 430													
				В	: 1	38							
		East	Bound		٨		West	Bound		V/C RATIO	<u>o</u>	<u>LOS</u>	
		A:	544		Ť		A:	318		0.00 - 0.60	) .	A	
		В:	104		l n		В:	595		0.61 - 0.70	)	В	
				A	:	na 51				0.71 - 0.80	0	с	
A = Adjus B = Adjus	ted Thro ted Left	ugh/Right Volume	Volume	В	-	62				0.81 - 0.90	)	D	
* = ATSAC	C Benefit						]			0.91 - 1.00	)	E	
Resi	ults —	h/South C	ritical Ma	vomonto	_ D/N/	/R) . ^	(S/B)						
	Wes	t/East Cri	tical Move	ments :	= B(W	/B) + A	(E/B)						
		V	/C =	62	+ 430	+ 39	95 +	544	= 0.971	l	LOS =	E	

N/S:		Grand	Av		W/E:		Olymp	ic Blvd		I/S No:	10	2	
AM/PM:	AM		Comm	ents: Fl	JTURE W		JECT W		I PROGR	AM			
COUNT D	ATE:			STU	IDY DATE	:		C	GROWTH	FACTOR:			
	/l ane/Sid	onal Conf	igurations										
, oralle							W	ESTROU		EAS	TROUM		
	LT	ТН	RT	LT	ТН	RT	LT	ТН	RT	LT	ТН	RT	
EXISTING	0	0	0	227	1186	189	72	605	0	0	780	104	
AMBIENT													
RELATED													
PROJECT													
TOTAL	0	0	0	227	1186	189	72	605	0	0	780	104	
	<b>6</b> Δ	ΑΑΑ	ላ ት ላ ላ	6 A	$ \land \land$	ላት ሌ	6 Δ		ላት ላት	6 A A	4	ላ ዋ የተ	
4 分 수 歳 気 ゆ 柳 4 分 수 歳 気 ゆ 柳 4 分 수 歳 気 ゆ 柳       LANE     1     4     1     1     2     1     1     1													
LANE     I     I     I     I     I     I     I       Phasing     RTOR     Phasing     RTOR     Phasing     RTOR     Phasing     RTOR													
PhasingRTORPhasingRTORPhasingRTORSIGNAL <none><none>PermAutoPerm<none>PermAuto</none></none></none>													
Critica	l Moveme	ents Diag	ram ——										
Critical Movements Diagram													
				4	2	97							
				E	3: 2	27							
		East	Bound		٨		West	Bound		V/C RATIC	<u>)</u>	LOS	
		A:	442		Ĩ		A. D.	303		0.00 - 0.60		A	
		В:	U				В:	12		0.61 - 0.70		в	
					iorthBoui	nd 0				0.71 - 0.80	) (	С	
A = Adjus B = Adjus	ted Throuted ted Left \	ugh/Right /olume	Volume	E	8:	0				0.81 - 0.90		D	
* = ATSAC	C Benefit				L		J			0.91 - 1.00	. 1	E	
	ults —												
	North	h/South C	ritical Move	vements	= A(N/	′B) + A ∕B) . ∧	(S/B) (E/B)						
	west	Last Un		0	= ¤(₩/ + 297	-b) + A + 7	( ² / ^D ) 2 +	442					
		V	/C =	<u> </u>	*	1500	_ •		= 0.471	L	_OS =	Α	

N/S:		Olive S	St		W/E:		Olymp	oic Blvd		I/S No:	103
AM/PM:	AM		Com	nents: F	UTURE	WITH PRC	JECT W		I PROGR	AM	
COUNT D	DATE:			ST	UDY DAT	'E:		(	GROWTH	FACTOR:	
Volume	e/Lane/Sig	nal Confi	guration	s —							
	NOR	THBOUN	ID	S	OUTHBO	UND	W	ESTBOU	ND	FASTE	OUND
EVICTING	LT	TH	RT	LT	тн	RT	LT	TH	RT	LT 1	'H RT
	111	1296	51	0	U	0	0	567	76	151 /	31 0
FROJECT											
TOTAL	111	1296	51	0	0	0	0	567	76	151 7	31 0
	ፋ 순 ና	<u>ہ</u> ہ	ላተን ላነ	ፋ 슈	$\varphi \Leftrightarrow \varphi$	ት እ	ፋ 슈	4 <u>6</u> 4	х ₩	\$ <i>A A A</i>	ት ት ት <del>አ</del>
LANE	1 2	(++) 2   1		· 4			· 4·	· (平) · · 1   1		1 2	49 49 1 1 1 
	Dhasing			Dhaa			Dhaoi			Dhaaina	
	Phasing			Phas	sing	RIUR	Phase	ng	RIUR	Phasing	RIUR
SIGNAL	Perm	<i>F</i>	Auto	<nor< td=""><td>ne&gt;</td><td><none></none></td><td>Perr</td><td>n</td><td>Auto</td><td>Perm</td><td><none></none></td></nor<>	ne>	<none></none>	Perr	n	Auto	Perm	<none></none>
	Movomo	nto Diagr									
Critica		nts Diagr	dili	Г	SouthBo	und	1				
					A:	0					
					B:	0					
	г	 EastB	ound —				West	Bound		V/C RATIO	LOS
		A:	366		Ą	7	<b>A</b> :	322		0.00 - 0.60	<u> </u>
		B:	151				В:	0		0.00 - 0.00	A _
	l				NorthBou	und				0.61 - 0.70	В
					A:	365				0.71 - 0.80	С
A = Adjus B = Adjus	sted Throug sted Left Vo	gh/Right olume	Volume		B:	111				0.81 - 0.90	D
* = ATSA	C Benefit				L					0.91 - 1.00	E
Res	ults —										
	North/	South C	ritical Mo	ovement	s = A(N	N/B) + A	(S/B)				
	West/I	East Crit	ical Move	ements	= A(V	V/B) + B	(E/B)				
		V/	с= —	365	+ 0	+ 32	22 +	151	= 0.489	LOS	S = A
						1500					

N/S:		Flower	St		W/E:		Olymp	ic Blvd		I/S No:	10	94	
AM/PM:			Comm	ents: FU		VITH PRC	JECT W						
COUNTD				STU	DY DATE			(	BROWIN	FACTOR:			
Volume	e/Lane/Sig	gnal Conf	igurations										
	NO	RTHBOU	ND	SO	UTHBOU		W	ESTBOUI		FAS	STBOUN	ND	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
EXISTING	0	0	0	82	560	143	41	874	0	0	914	99	
PROJECT													
TOTAL	0	0	0	82	560	143	41	874	0	0	914	99	
	<b>б</b> Д	<u>ት                                    </u>	ላተን ላካ	ፋ 순	ት _ው	ት የተ	<u>ዓ</u>	<u> </u>	ት የ ት የ	ፋ 순 수	<u>ہ</u> د	ት ሌ ት	
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Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR Phasing RTOR													
SIGNAL <none> <pre> <none> Perm Auto Perm </none></pre></none>													
Critica	I Moveme	ents Diag	ram —	⊏s	outhBou	nd	٦						
A: 161													
				В	:	82							
		EastE	Bound		Δ		West	Bound 437		V/C RATIO	<u>)</u>	LOS	
		B:	0		T		B:	41		0.00 - 0.60	)	A	
				N	orthBou	nd				0.61 - 0.70	)	В	
			., .	A	:	0				0.71 - 0.80	) (	с	
A = Adjus B = Adjus	ted Ihrou ted Left \	igh/Right /olume	volume	В	•	0				0.81 - 0.90	)	D	
- ATSAC							J			0.91 - 1.00		E	
Resi	North	n/South C	ritical Mov	/ements	= A(N/	/B) + A	(S/B)						
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7TH STREET DROP-OFF

FIGURE 1

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FIGURE 2



INTERSECTION PEAK HOUR TRAFFIC VOLUMES

FIGURE 3 A



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INTERSECTION PEAK HOUR TRAFFIC VOLUMES

FIGURE 3 B





INTERSECTION PEAK HOUR TRAFFIC VOLUMES

FIGURE 3 C





ALTERNATE FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2020) INTERSECTION PEAK HOUR TRAFFIC VOLUMES FIGURE 3 D





ALTERNATE FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2020) INTERSECTION PEAK HOUR TRAFFIC VOLUMES



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INTERSECTION PEAK HOUR TRAFFIC VOLUMES

FIGURE 4 A



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INTERSECTION PEAK HOUR TRAFFIC VOLUMES

FIGURE 4 B



ALTERNATE FUTURE WITH PROJECT CONDITIONS, BEFORE MITIGATION (YEAR 2020) INTERSECTION PEAK HOUR TRAFFIC VOLUMES FIGURE 4 C





ALTERNATE FUTURE WITH PROJECT CONDITIONS, BEFORE MITIGATION (YEAR 2020) INTERSECTION PEAK HOUR TRAFFIC VOLUMES FIGURE 4 D





ALTERNATE FUTURE WITH PROJECT CONDITIONS, BEFORE MITIGATION (YEAR 2020) INTERSECTION PEAK HOUR TRAFFIC VOLUMES


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INTERSECTION PEAK HOUR TRAFFIC VOLUMES

5 A



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ALTERNATE FUTURE WITH PROJECT WITH TDM PROGRAM CONDITIONS (YEAR 2020) INTERSECTION PEAK HOUR TRAFFIC VOLUMES FIGURE 5 B



ALTERNATE FUTURE WITH PROJECT WITH TDM PROGRAM CONDITIONS (YEAR 2020) INTERSECTION PEAK HOUR TRAFFIC VOLUMES FIGURE 5 C





ALTERNATE FUTURE WITH PROJECT WITH TDM PROGRAM CONDITIONS (YEAR 2020) INTERSECTION PEAK HOUR TRAFFIC VOLUMES FIGURE 5 D





ALTERNATE FUTURE WITH PROJECT WITH TDM PROGRAM CONDITIONS (YEAR 2020) INTERSECTION PEAK HOUR TRAFFIC VOLUMES









INTERSECTION PEAK HOUR TRAFFIC VOLUMES

FIGURE 6 D





INTERSECTION PEAK HOUR TRAFFIC VOLUMES



INTERSECTION PEAK HOUR TRAFFIC VOLUMES

FIGURE 7 A



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INTERSECTION PEAK HOUR TRAFFIC VOLUMES

7 B



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INTERSECTION PEAK HOUR TRAFFIC VOLUMES

7 C





INTERSECTION PEAK HOUR TRAFFIC VOLUMES

FIGURE 7 D





EXISTING PLUS PROJECT WITH TDM PROGRAM CONDITIONS INTERSECTION PEAK HOUR TRAFFIC VOLUMES





Note: The existing columns within the 1000 Wilshire building would not be altered or moved.



FRANCISCO STREET ACCESS

Francisco Street

Existing Columns

# **APPENDIX B**

Memorandum, Wilshire Grand Redevelopment EIR – Response to Comment Letters, Acoustical Engineering Services to Thomas Properties Group February 11, 2010



22801 Crespi Street Woodland Hills, CA 91364 Tel: 818.239.4600 Fax: 818.239.4605 www.AESacoustics.com

February 11, 2011

Ayahlushim Hammond Thomas Properties Group 515 South Flower Street, Sixth Floor Los Angeles, California 90071

# Re: Wilshire Grand Redevelopment EIR – Response to Comment Letters

Dear Ms. Hammond:

This letter report provides responses to the comments related to noise submitted by Brookfield Properties on December 15, 2010 (Letter #1), Jeffer Mangels Butler & Mitchell LLP (JMBM) on November 12, 2010 (Letter #2), DLA Piper LLP on January 14, 2011 ("Letter 3"), and PBS&J Letter dated January 10, 2011 ("Letter 4") for the Wilshire Grand Redevelopment Project ("Project").

# LETTER #1 – Brookfield Properties Letter Dated December 15, 2010

# Comment #1-1: Letter #1, Comment 4 – "No Heliport", Page 7, Bullet 1

The heliport will create significant noise impacts because the flight path goes directly over our buildings; the heliport is less than 100 feet away; and the noise that will result will exceed the City's General Plan standards.

# **Response to Comment #1-1**

As shown on Figure 5, Helicopter Flight Tracks, in Appendix IV.C.1 of the Project Draft EIR, the proposed helicopter flight paths would not be directly over Brookfield's buildings. Figure 1 on page 2, shows the approximate locations of Brookfield's buildings (i.e., 601 S. Figueroa, 725 S. Figueroa, 333 S. Hope, and 735 S. Figueroa) in relation to the Project's proposed helicopter flight paths. In addition, the closest distances "Slant Distance" between the helicopter flight path and Brookfield's buildings are provided in Table 1 on page 3. The helicopter flight paths would be a minimum 385 feet from the top of the 615 S. Figueroa building, 581 feet from the top of the 725 S. Figueroa building. Furthermore, the helicopter would be flying at minimum 1090 feet elevation, which is minimum 355 feet higher than the roof line of the 333 S. Hope building (Brookfield's tallest building).



**Figure 1. Helicopter Flight Tracks** 

Building / Location	Nearest Draft EIR Noise Receptor Location	Longitudinal distance to flight path, feet (A)	Building Height, ^a feet (B)	"Slant Distance" to flight path, ^b feet
Figueroa at Wilshire Building / 601 S. Figueroa	R1	90	716	from ground level – 1089 from roof level – 385
Ernst & Young Plaza / 725 S. Figueroa	R3	170	534	from ground level – 1098 from roof level – 581
7th+Fig / 735 S. Figueroa	R3	330	50	from ground level – 1134 from roof level – 1091
Bank of America / 333 S. Hope	R8	1050	735	from ground level – 1510 from roof level – 1108

1 able 1. Distance from Helicopter Flight Path to Brookfield's Building Lo
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^a Source: <u>www.skyscraperpage.com</u>. Building height for 735 S. Figueroa is estimated.

⁷ The "Slant Distance" represents the actual distance between the building(at the roof level) and the helicopter flight path, which is calculated as follow. "Slant Distance" =  $[A^2 + (1090-B)^2]^{1/2}$ , for ground level B=5 feet.

Table 2 on page 4 reports the Project's predicted helistop operation noise levels at the exterior and interior of Brookfield's buildings. As reported in Table 2, the predicted exterior noise levels generated by the helistop operation would range from 37 dBA CNEL at the ground (street) level of the 333 S. Hope building to 53 dBA CNEL at the roof level of the 601 S. Figueroa building. These estimated exterior helistop operations noise levels in terms of CNEL would be well below the existing ambient noise levels (Table IV.C-9 of the Draft EIR, Page IV.C-21). With respect to the City's General Plan, the predicted helistop operation noise would be well below the City's General Plan standards (i.e., 65dBA CNEL).

As reported in Table 2, the estimated helistop operations noise levels at the interiors of Brookfield's buildings would range from approximately 2 dBA CNEL at the 333 S. Hope building (ground level) to 18 dBA CNEL at the 601 S. Figueroa building (roof level). These estimated interior noise levels would be well below the required maximum interior noise level of 45 dBA CNEL. The interior noise levels were estimated based on the calculated exterior noise levels and the buildings' estimated façade exterior-to-interior noise reduction. As reported in the Draft EIR, a typical high-rise office building façade (with fixed windows) would provide approximately 35 dBA exterior-to-interior noise reduction.¹

In addition, the single-event noise levels (as generated by the loudest type of helicopter) experienced at the interiors of Brookfield's buildings would range from approximately 30 dBA  $L_{max}$  at the 333 S. Hope building (ground level) to 44 dBA  $L_{max}$  at the 601 S. Figueroa building (roof level). These estimated maximum helicopter noise levels at the interiors of Brookfield's buildings would be consistent with typical office background noise levels, per the ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers).² ASHRAE recommends a Noise Criteria (NC) of 35 for office interior (Heating Ventilation and Air Conditioning) background noise environment. The NC 35

¹ Westfield Century City New Century Plan, Final EIR, 2008. <u>http://cityplanning.lacity.org/eir/CenturyPlan/FEIR/issues/</u>Vol._I_III._Response_to_Written_Comments.pdf

² American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 2003 ASHRAE Handbook.

rating is equates to approximately 44 dBA ( $L_{eq}$ ). The estimated interior SEL noise levels are provided for informational purposes only, as the SEL noise descriptor is used to evaluate sleep interference (for residential uses), whereas speech interference (for office or school uses) is best analyzed using  $L_{max}$ .³ With respect to speech interference levels, a maximum noise level of 55 dBA  $L_{max}$  is used as criteria for classroom environment, where speech interference is an important consideration.⁴

Therefore, the heliport operations would not result in significant noise impacts and would not generate noise in excess of the City's General Plan standards.

	Predicted Helistop Operations Noise Levels at the <u>EXTERIOR</u> of the Buildings, dBA			Predicted Helistop Operations Noise Levels at the <u>INTERIOR</u> of the Buildings, ^a dBA		
Location	CNEL	SEL	L _{max}	CNEL	SEL	L _{max}
601 S. Figueroa						
- Ground Level	45	91	73	10	56	38
- Roof Level	53	100	79	18	65	44
725 S. Figueroa						
- Ground Level	44	91	72	9	56	37
- Roof Level	49	96	77	14	61	42
735 S. Figueroa						
- Ground Level	44	90	72	9	55	37
- Roof Level	44	90	72	9	55	37
333 S. Hope						
- Ground Level	37	83	65	2	48	30
- Roof Level	39	84	68	4	49	33
^a Interior noise levels are estimated based on an outdoor-to-indoor noise reduction of 35 dBA.						

Table 2. Estimated Helistop Noise Levels at the Exterior and Interior of Brookfield's Buildings

Interior noise levels are estimated based on an outdoor-to-indoor noise reduction of 35 dBA. Source: Westfield Century City New Century Plan, Final EIR, 2008. <u>http://cityplanning.lacity.org/eir/</u> <u>CenturyPlan/FEIR/issues/</u>Vol._I_III._Response_to_Written_Comments.pdf

# Comment #1-2: Letter #1, Comment 4 – "No Heliport", Page 7, Bullet 2

The EIR states that the facility would be used on an on-demand basis, and this could create many more flights than assumed. Instead of the purported two flights-a-day (and it is not clear if these are two round-trips for four individual flights), considering the heavy street traffic that this Project will help create, there could be a much greater demand for helicopter travel than analyzed. If this occurs, then the impacts will be much more severe than described in the EIR.

# Response to Comment #1-2

As described in the Draft EIR (Section IV.C Noise, Page IV.C-44), it is difficult to predict the precise number of helicopter operations in a given day since this facility would be used on an on-demand

³ Federal Interagency Committee On Aviation Noise (FICAN), The Use of Supplemental Noise Metrics in Aircraft Noise Analyses, February 2002.

⁴ Wilshire Grand Redevelopment Project Draft EIR, Appendix IV.C.1, Noise Impact Study, Page 13.

basis and would not have regularly scheduled operations. Therefore, the helistop noise analysis was based upon an average of two flights (four operations - 2 arrivals and 2 departures) per day for an estimated 20 days in a 30 day month.⁵ A typical two-flight scenario would include the pilot flying in from a nearby airport to the Project helistop to pick up a passenger in the morning (two operations), then delivering a passenger in the evening to the Project helistop, and returning to the airport (two operations). As reported in the Draft EIR, the estimated noise exposure levels (CNEL) from the helicopter take-offs and landings during this 24 hour period are extremely low, far below the existing ambient background noise and the City's land use planning criteria. In the event that there would be more than two flights per day, the estimated CNEL noise levels would increase by 3 dBA CNEL for every doubling of the number of flights. That is, doubling the number of flight from 2 to 4 flights per day would increase the CNEL noise levels by 3 dBA CNEL and doubling the number of flight from 4 to 8 flights per day would increase the CNEL noise levels by another 3 dBA CNEL. For example, the estimated noise level of 45 dBA CNEL (based on 2 flights per day) at the 601 S. Figueroa building would increase to 48 and 51 dBA CNEL if the number of flights were increased to 4 and 8 flights per day, respectively. Although the helistop operations would be an average of two per day and would not reach 8 flights per day, the estimated CNEL noise levels would still be well below the existing ambient noise environment, which is approximately 72 dBA CNEL. It should be noted that the change in number of flights per day would only affect the calculated CNEL noise levels, not the single event noise analysis (i.e., SEL and L_{max}) as the single event noise analysis is based on a single flight (assuming the noisiest type of helicopter).

# Comment #1-3: Letter #1, Comment 4 - "No Heliport", Page 7, Bullet 3

We own two buildings in excess of 40 stories across the street from the heliport. Our buildings will be hundreds of feet closer to the noise source in combined height and distance than any other property. Consequently, there will likely be a huge noise increase heard by occupants of our buildings, and no mitigation is proposed. FAA Advisory Circular AC 91-32B also states that "it is good operating practice to include pertinent noise abatement procedures in the company operations manual," and that "[p]ilots should be trained in techniques to minimize noise and be aware of noise-sensitive areas." Id. The proposed conditions of approval and the EIR do not propose any mitigation measures to reduce noise impacts relating to helicopter operations.

# **Response to Comment #1-3**

See response to Comment #1-1 above with respect to the distances between Brookfield's buildings and the estimated helicopter noise inside Brookfield's offices.

As described in the Heliport Consultants analysis (Draft EIR Appendix IV.C.2), the helicopter flight paths were developed for noise abatement purposes, among other purposes. The flight paths were carefully designed and are consistent with the General Guidelines for noise abatement operation in accordance with the Fly Neighborly Guide.⁶ That is, the proposed flight paths would avoid overflying, to the extent possible, noise sensitive areas (residential) and would follow high ambient noise routes such as the freeway (i.e., Freeway I-110). Other noise abatement recommended by the Fly Neighborly Guide

⁵ Footnote "a" of Table IV.C-16 of the Draft EIR provides an explanation of the flights operations. As described by footnote "a", a helicopter flight includes one departure and one arrival, two operations.

⁶ Fly Neighborly Guide, produced by the Helicopter Association International, Fly Neighborly Committee, 2007.

specify that the pilot should not make sharp, abrupt maneuvers, but long sweeping curves when executing turns, fly normal cruising speed, and steeper takeoff and land profiles. In keeping with the FAA regulations, the pilot will take into consideration the flight paths, the wind direction and weather conditions before making his final approach and departure decisions. Furthermore, again, the proposed flight paths do not overfly Brookfield's buildings (i.e., 601, 725 and 735 S. Figueroa and 333 S. Hope buildings), as shown on Figure 1.

# LETTER #2 – JMBM Letter Dated November 12, 2010 (Exhibit A, JMBM Letter Dated August 23, 2010)

The JMBM letter dated November 12, 2010 includes Exhibit A, which reference JMBM letter dated August 23, 2010. Responses were prepared and were included in the Final EIR, dated October 2010.

# LETTER #3 – DLA Piper LLP Letter dated January 14, 2011

# Comment #1: Page Six, Item D.2

Add a condition limiting the heliport to no more than two flights (i.e., four flight operations) per day. This is the number of flights analyzed in the EIR.

# **Response to Comment #1**

See Response to Comment #1-2 in Letter #1 above.

# Comment #2: Page Six, Item D.5

Add a sound barrier wall at the rooftop level of proposed building A along the perimeter of the helipad constructed such that it attenuates to a minimum 30 dBA.

# **Response to Comment #2**

A helistop consists of the load bearing helipad where the helicopter lands and also the free, unobstructed airspace around this landing pad. All of this empty, unobstructed airspace is vital to creating a well-designed and safe helistop. Therefore, it would not be feasible for the helipad to be surrounded by a sound wall, or to be located behind fencing because it needs the unobstructed airspace for the safety of its operations, the flight paths and the transitional slopes. In addition, because the helicopter is a non-stationary noise source, a sound barrier wall at the rooftop level would not be effective in reducing the sound levels when the helicopter is in the air. Furthermore, the noise analysis provided in the EIR indicates that the noise levels associated with the helistop operations would not generate a significant noise impact.

# Comment #3: Page Six, Item D.6

Provide and maintain for the life of the heliport upper floor noise attenuation to the offices at 601 S. Figueroa Street and 725 S. Figueroa Street, including acoustically attenuating windows and additional rooftop and wall insulation, such that interior noise levels within these office buildings do not exceed 65 dBA SEL or 45 dBA CNEL. Installation and maintenance of noise attenuation features shall occur with verified testing, with testing results provided to the City of Los Angeles and Brookfield prior to commencement of any heliport operations and every two years thereafter. There shall be no heliport operations if interior noise levels within these office buildings exceed 65 dBA SEL or 45 dBA CNEL as a result of heliport operations.

#### **Response to Comment #3**

Table 2 on page 4 reports the estimated helistop operations noise levels at the exterior and the interior of Brookfield's buildings. The interior noise levels were estimated based on the calculated exterior noise levels and the buildings' estimated façade exterior-to-interior noise reduction. As reported in the Draft EIR, a typical high-rise office building façade (with fixed windows) would provide approximately 35 dBA exterior-to-interior noise reduction.⁷ Therefore, the estimated noise levels at the interior of Brookfield's building would range from approximately 2 dBA CNEL at the 333 S. Hope building (ground level) to 18 dBA CNEL at the 601 S. Figueroa building (roof level). These estimated interior noise levels would be well below the required maximum interior noise level of 45 dBA CNEL. In addition, the single-event noise levels in terms of  $L_{max}$  (as generated by the loudest type of helicopter) experienced at the interiors of Brookfield's buildings would range from approximately 30 dBA L_{max} at the 333 S. Hope building (ground level) to 44 dBA  $L_{max}$  at the 601 S. Figueroa building (roof level). These estimated maximum helicopter noise levels at the interiors of Brookfield's buildings would be consistent with typical office background noise levels, per the ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers).⁸ ASHRAE recommends a Noise Criteria (NC) of 35 for office interior (Heating Ventilation and Air Conditioning) background noise environment. The NC 35 rating is equates to approximately 44 dBA (Leq). The estimated interior SEL noise levels are provided for information only, as the SEL noise descriptor is used to evaluate sleep interference (for residential uses), whereas speech interference (for office or school uses) is best analyzed using L_{max}.⁹ With respect to speech interference levels, a maximum noise level of 55 dBA Lmax is used as criteria for classroom environment, where speech interference is an important consideration.¹⁰ As the estimated helicopter noise levels at the interior of Brookfield's office buildings would be consistent with the typical office building background noise level, and below the 55 dBA L_{max} criteria for speech interference, additional sound attenuation is not warranted.

#### Comment #4: Page Seven, Item E.3

Add a mitigation measures requiring a sound barrier wall at the ground level along the north and south perimeter of the construction site such that it attenuates to a minimum of 20 dBA.

⁷ Westfield Century City New Century Plan, Final EIR, 2008. <u>http://cityplanning.lacity.org/eir/ CenturyPlan/FEIR/issues/</u> Vol._I_III._Response_to_Written_Comments.pdf

⁸ American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 2003 ASHRAE Handbook.

⁹ Federal Interagency Committee On Aviation Noise (FICAN), The Use of Supplemental Noise Metrics in Aircraft Noise Analyses, February 2002.

¹⁰ Wilshire Grand Redevelopment Project Draft EIR, Appendix IV.C.1, Noise Impact Study, Page 13.

#### **Response to Comment #4**

The comment requested a sound barrier that "attenuates <u>to</u> a minimum of 20 dBA" is not technically feasible, given the typical noise levels generated by construction equipment. Therefore, the response assumed the requested sound barrier as to "attenuates <u>by</u> a minimum of 20 dBA".

As reported in Table IV.C-12 of the Project's Draft EIR (Section IV.C), construction activities would generate exterior noise levels up to 85 dBA ( $L_{eq}$ ) at receptor location R1 (at 915 Wilshire, which is adjacent to 601 S. Figueroa) and receptor location R3 (at 725 S. Figueroa), during the demolition phase. However, receptor location R1 is located approximately 80 feet from the Project's construction boundary, whereas the 601 S. Figueroa building is approximately 130 feet from the Project's construction boundary; therefore, adjusting for the distance between R1 and the 601 S. Figueroa building, the construction noise at the 601 S. Figueroa building would be reduced to approximately 81 dBA ( $L_{eq}$ ).

As previously explained in Response to Comment #3, a typical high-rise office building façade (with fixed windows) would provide approximately 35 dBA exterior-to-interior noise reduction.¹¹ Therefore, the construction noise levels experienced at the interior of the 601 S. Figueroa and 725 Figueroa buildings would be attenuated to approximately 46 dBA ( $L_{eq}$ ) and 50 dBA ( $L_{eq}$ ), respectively, during the Project demolition phase (which is the highest noise generating construction phase). Based on these assumptions, the Project-related construction noise levels at the interior (i.e., interior offices with the windows facing Project's construction activities) of the 601 S. Figueroa and 725 S. Figueroa office buildings would be approximately 2 dBA to 6 dBA above the ASHRAE recommended background noise level of approximately 44 dBA ( $L_{eq}$ ) for office environment (as described in the Project Noise Impact Study, Draft EIR, Appendix IV.C.1). During other construction phases (e.g., site excavation, garage and building construction), the construction-related noise levels would be 2 to 5 dBA lower than the demolition phase. Thus, the construction-related noise levels at the interior of the 601 S. Figueroa and 725 S. Figueroa and 725 S. Figueroa buildings during these phases would be reduced to maximum of 44 dBA ( $L_{eq}$ ) and 47 dBA ( $L_{eq}$ ), respectively.

A sound barrier providing a minimum of 20 dBA sound attenuation is not warranted. Office uses are not considered to be sensitive uses for noise impacts. As described in the Project's EIR, these maximum construction-related noise levels would be temporary and would be experienced only when construction activities are located at the perimeter of the Project Site closest to the 601 S. Figueroa and 725 S. Figueroa buildings. These maximum noise levels would be reduced as construction activities move toward the center of the Project Site. Furthermore, the soft demolition (interior materials) of the existing Wilshire Grand structures would strictly be internal (i.e., with the existing façade in place) to minimize noise transmission to the exterior. The hard demolition (building structure) would be implemented with exterior scaffolding system used for pedestrian protection. The hard demolition material generated would be staged in two main areas for loading, where a temporary sound barrier would be provided to reduce the noise transmitted to the exterior.

Implementing a condition to provide a temporary six-foot tall noise barrier along the north and south perimeter of the project site would reduce the construction noise to the 601 S. Figueroa and 725 S.

¹¹ Westfield Century City New Century Plan, Final EIR, 2008. <u>http://cityplanning.lacity.org/eir/ CenturyPlan/FEIR/issues/</u> Vol._I_III._Response_to_Written_Comments.pdf

Figueroa office buildings. The temporary noise barrier would be similar to the Project Design Features, PDF-2, as described in the Project Final EIR, Chapter V. Mitigation Monitoring Program, Section C. Noise, which would be placed on top of a two-foot tall K-rail that would increase the effective height of the noise barrier to eight feet. With the proposed mitigation measure, temporary sound barrier, the construction-related noise at the interior of the 601 S. Figueroa and 725 S. Figueroa buildings would be reduced to maximum 40 dBA ( $L_{eq}$ ) and 44 dBA ( $L_{eq}$ ), respectively.

#### Comment #5: Page Seven, Item E.4

Add a mitigation measure requiring upper floor construction of the two high-rise towers to include temporary sound barrier walls along the north and south sides of the high-rise towers as they are constructed to attenuate construction noise impacts at the upper floor offices of at 601 S. Figueroa Street and 725 S. Figueroa Street. These upper floor sound barriers need to be designed such that they attenuate minimum of 20 dBA.

#### **Response to Comment #5**

As reported in Table IV.C-12 of the Project's Draft EIR (Section IV.C), the estimated exterior noise levels generated during construction of the towers would be 82 dBA ( $L_{eq}$ ) at receptor location R1 (915 Wilshire, which adjacent to the 601 S. Figueroa building) and 81 dBA at receptor location R3 (725 S. Figueroa). As discussed previously (in Response to Comment #4), receptor location R1 is located approximately 80 feet from the Project's construction boundary, whereas the 601 S. Figueroa building is approximately 130 feet from the Project's construction boundary. Adjusting for the distance between receptor location R1 and the 601 S. Figueroa building, the construction noise at the 601 S. Figueroa building, therefore, would be reduced to approximately 78 dBA ( $L_{eq}$ ), during tower construction. Based on a 35 dBA exterior-to-interior sound attenuation provided by the building facades (as discussed previously), the noise levels at the interior of the upper floor offices at 601 S. Figueroa and 725 S. Figueroa would be approximately 43 dBA ( $L_{eq}$ ) and 46 dBA ( $L_{eq}$ ), respectively. Therefore, the construction would be below the typical office interior background noise levels of 44 dBA ( $L_{eq}$ ). At the interior of the 725 S. Figueroa building, the construction-related noise levels of 44 dBA ( $L_{eq}$ ).

In addition, construction activities at the upper floor of the Project's towers would involve mainly smaller construction equipment (i.e., hand tools), rather than the large earth moving equipment at the ground level. Furthermore, noise levels generated during construction at the interior of the upper floors of the proposed towers would be minimized by establishing a designated cutting area per floor surrounded by a temporary sound blanket/barrier, which would minimize the construction noise at the exterior of the towers. In addition to a designated cutting area, the structure will have an exterior OSHA (Occupational Safety and Health Administration) approved continuous rail system in place. Furthermore, the exterior skin will follow as the interior framing and rough-in is underway closing in the building which would minimize noise.

# Comment #6: Page Seven, Item E.5

Add a mitigation measure requiring the construction contractor to consult with Brookfield in order to coordinate noise intensive activities to avoid interruptions of office activities to the fullest extent feasible.

#### **Response to Comment #6**

The Project's Conditions of Approval, Condition 72, mitigation measures MM-34 and MM-35 (Page C-18) require the contractor to utilize construction equipment with state-of-the-art noise shielding and muffling devices; and to locate stationary sources (e.g., generators and compressors) as to maintain the greatest distance from sensitive land uses, and prohibit unnecessary idling of equipment. In addition, Condition 73, CM-1, requires the contractor to provide contact/complaint telephone numbers that provides contact to a live voice during all hours of construction.

# Comment #7: Page Seven, Item E.6

Add a mitigation measure requiring that, where health and safety are not compromised, additional temporary sound walls would be used in conjunction with noise intensive construction equipment that has limited mobility while in use (i.e., jackhammers, compressors, etc.).

#### Response to Comment #7

The Project's Conditions of Approval, Condition 72, mitigation measures MM-34 and MM-35 (Page C-18) require the contractor to utilize construction equipment with state-of-the-art noise shielding and muffling devices; and to locate stationary sources (e.g., generators and compressors) as to maintain the greatest distance from sensitive land uses, and prohibit unnecessary idling of equipment. Additional proposed conditions as previously described in Response to Comment #4 above (temporary sound barrier at the north and south perimeter of the project site) and in Response to Comment #5 above (sound curtain at upper floor construction) would provided additional noise reduction. These conditions will minimize the construction-related noise to the extent possible and are estimated to result in the interior noise levels at the 601 S. Figueroa and the 725 S. Figueroa buildings of 40 dBA ( $L_{eq}$ ) and 44 dBA ( $L_{eq}$ ), respectively.

#### **Comment #8: Page Twenty-five, Item O, first paragraph**

Response 4-1 of the Paul Hastings Letter dated December 16, 2010 states that the proposed flight path of the heliport would not be directly over the commented building. Considering wind, turbulence and the fact that the wingspan of a helicopter can be greater than 50 feet, there will be times when the helicopters would fly directly over Brookfield's buildings. This would cause the helicopters and their noise to be closer to the Project than analyzed. Further, the analysis in the EIR does not analyze helicopter noise impacts at the area most impacted – the roofline of the adjacent buildings – in CNEL – which would show much worse impacts.

#### **Response to Comment #8**

See Response to Comment #1-1 in Letter #1 above.

# Comment #9: Page Twenty-six, Item O.1

Add a condition limiting the heliport to no more than two flights (i.e., four flight operations) per day.

#### **Response to Comment #9**

See Response to Comment #1-2 in Letter #1 above.

# Comment #10: Page Twenty-six, Item 0.4

Add a sound barrier wall at the rooftop level of proposed building A along the perimeter of the helipad constructed such that it attenuates to a minimum 30 dBA.

#### **Response to Comment #10**

See Response to Comment #2 above.

#### Comment #11: Page Twenty-six, Item O.5

Provide and maintain for the life of the heliport upper floor noise attenuation to the offices at 601 S. Figueroa Street and 725 S. Figueroa Street, including acoustically attenuating windows and additional rooftop and wall insulation, such that interior noise levels within these office buildings do not exceed 65 dBA SEL or 45 dBA CNEL. Installation and maintenance of noise attenuation features shall occur with verified testing, with testing results provided to the City of Los Angeles and Brookfield prior to commencement of any heliport operations and every two years thereafter. There shall be no heliport operations if interior noise levels within these office buildings exceed 65 dBA SEL or 45 dBA CNEL as a result of heliport operations.

# **Response to Comment #11**

See Response to Comment #3 above.

#### Comment #12: Page Twenty-seven, Item P.2

There will be rooftop bars, a pool and outdoor restaurants that will create large amounts of noise both from music and from the sheer number of people in these outdoor areas. The EIR measures the sound of these outdoor uses at a sensitive receptor 500 feet away, across the freeway. There will be new significant impacts much closer, both at 601 S. Figueroa Street and at 7th and Figueroa. Law firms, accounting firms, and other professional tenants in offices buildings in the Financial Core District are sensitive uses and a large increase in noise for bars, nightclubs, a pool and other outdoor areas will create a significant impact on them. Further, even if there is a high ambient background noise level, the amplified sound from speakers can still be heard and this new source of noise can and will create a significant impact that has not been analyzed or disclosed with regard to 601 S. Figueroa Street and at 7th and Figueroa. Impacts need to be fully disclosed, analyzed and mitigated and that was not done with regard to the closet properties. Mitigation measures are required to reduce this impact to less than significant.

#### **Response to Comment #12**

The Project's noise analysis was prepared in accordance with the City of Los Angeles CEQA Threshold Guide (2006), which provides the threshold of significance for various noise sensitive uses; however, commercial property is not identified as a noise sensitive receptor. Nevertheless, the potential noise impact from the Project-related noise sources (including the rooftop pool/bar and the plazas) to commercial/office building adjacent to the Project site (i.e., receptor locations R0 through R3), were analyzed and summarized in Table IV.C-21 (Project Draft EIR Section IV.C. Noise, Page IV.C-52). As indicated therein, the estimated composite noise levels (from all project-related noise sources) would result in a maximum increase of 2.8 dBA CNEL at receptor location R1 (915 Wilshire Boulevard, which is adjacent to the 601 S. Figueroa and located closer to the Project Site) and at receptor location R3 (725 S. Figueroa). Receptors R1 and R3 are the closest receptors to the north and south of the Project site, respectively. The 7th and Figueroa building (i.e. 735 S. Figueroa) is located south of the receptor location, which is mostly shielded from the Project site by the 725 S. Figueroa building. Therefore, the Projectrelated noise at the 601 S. Figueroa building (based on analysis at receptor location R1), the 725 S. Figueroa building (receptor location R3), and at the 735 S. Figueroa building (7th+Fig, receptor location R3 and further shielded), would result in a maximum of 2.8 dBA CNEL increase or less. The estimated increased in ambient noise levels would be below the 3 dBA CNEL significance threshold for noise sensitive uses (although, commercial/office buildings are not considered noise sensitive).

#### Comment #13: Page Twenty-eight, Item P.3

Mitigation measure MM-27 to limit the noise from the Project's outdoor areas does not mitigate noise to a less than significant level. The noise level even with this mitigation measure would exceed the Normally Unacceptable noise level category contained in the City's General Plan for residential, hotel and office uses, yet there is not analysis of this impact. Therefore, there would be a new significant impact not disclosed by the EIR or appropriately mitigated and an inconsistency with the General Plan. This is not permissible. See 14 Cal Code Regs §15125(d).

# Response to Comment #13

Mitigation measures MM-27 and MM-28, as presented in the Project's Conditions of Approval Condition 72, provide the noise limits for the outdoor amplified sound system at the Project's outdoor areas. These noise limits were established based on the noise analysis to preclude noise impacts at the off-site noise-sensitive receptors. As presented in the Response to Comment #12 above, the Project-related noise would not result in significant noise impacts to the off-site receptors, including Brookfield building. With respect to the new on-site noise sensitive uses (i.e., residential and hotel), the Project's design feature (as presented in the Project's Draft EIR) requires that the building construction would provide the required sound insulation, as specified in the General Plan. In addition, the Project's Conditions of Approval Condition 73, CM-12, requires that the Project shall comply with the Noise Insulation Standards of Title 24 of the California Code Regulations, which would ensure an acceptable interior noise environment for the proposed development. Therefore, noise impacts from the outdoor uses would be mitigated to less than significant with mitigation measures MM-27, MM-28 and CM-12.

#### Comment #14: Page Twenty-eight, Item P.4

General Plan Inconsistencies. The Project proposes to place noise sensitive uses, such as dwelling units and hotel rooms in an area with high levels of existing ambient noise. According to Table IV.C-10 of the Draft EIR, existing noise levels along Figueroa Street and Wilshire Boulevard abutting the Project site exceed 70 dBA CNEL. According to the City of Los Angeles General Plan Noise Element, it is Conditionally Acceptable to place multi-family homes and hotel rooms in a 60 to 70 dBA CNEL noise environment. It is Normally Unacceptable to place them in a noise range of 70 to 75 dBA CNEL for residences, and 70 to 80 dBA CNEL for hotels. See Table IV.C-4 of the Draft EIR. The Project will worsen noise levels so that on Wilshire Boulevard across the street from the Project site, noise levels will even exceed 78.0 dBA CNEL, exceeding even the Clearly Unacceptable noise standards contained in the General Plan. The EIR does not analyze the General Plan inconsistency of exposing these sensitive uses to noise levels that exceeds the Conditionally Unacceptable or Clearly Unacceptable categories for noise sensitive uses. The General Plan states that in the Normally Unacceptable category, "New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design." See Table IV.C-4 of the Draft EIR. The Project will place on-site sensitive uses in the Clearly Unacceptable noise category, where according to the General Plan, "New construction or development should generally not be undertaken." Project cannot be approved that are inconsistent with the General Plan.

#### **Response to Comment #14**

The potential noise impact from off-site noise sources to the proposed development has been analyzed in the Project's Draft EIR, Section IV.C. Noise (Page IV.C-53). As indicated therein, the EIR estimated that exterior noise levels at the Project site due to off-site noise sources would exceed the City's normally acceptable noise standard for multi-family residential/hotel development. The proposed residential/hotel tower (Building B) would be located at the southwest corner of the Project site, along 7th Street (Project's Draft EIR, Chapter 2 Project Description). As reported in Table IV.C-9 of the Project's Draft EIR, the existing ambient noise along 7th Street (i.e., ambient measurement at Receptor Location R3) is 72.1 dBA CNEL. Thus, the exterior noise environment at the proposed residential/hotel tower fall within the City General Plan land use category of "normally unacceptable" for multi-family and hotel use. However, as presented in the Draft EIR, the Project's design features require that the building construction would provide the required sound insulation, to reduce noise levels at the interior of the residential units and hotel rooms to levels consistent with the General Plan. In addition, the Project's Conditions of Approval Condition 73, CM-12, requires that the Project shall comply with the Noise Insulation Standards of Title 24 of the California Code Regulations, which would insure an acceptable interior noise environment for the proposed development. Therefore, the Project is consistent with the City's General Plan requirements.

#### Comment #15: Page Twenty-eight, Item P.5

Other Noise Inadequacies.

The EIR claims that there is no significance Lmax noise threshold for commercial property and it is absurd to argue that the Financial Core District has no noise thresholds. Noise impacts of up to 96

SEL (dBA) will be a significant impact and those are the levels that will be heard by individuals in Brookfield Properties' buildings. The LAMC states that "it is hereby declared to be the policy of the City to prohibit unnecessary, excessive and annoying noise from all sources subject to its power. At certain levels noise levels detrimental to the health and welfare of the citizenry and in the public interests shall be systematically proscribed." See LAMC Section 111.00. This high noise level will be unnecessary, excessive and annoying and therefore prohibited by the LAMC. Moreover, this high noise level was not examined for the impact it will have on the future hotel and residential uses proposed. Those uses would likely experience noise level in excess of the purported standard listed in the EIR. The EIR fails to disclose this significant impact and provide all feasible mitigation.

The proposed new on-site residential uses and hotel will be exposed to high noise levels that exceed General Plan standards. This will impact not only indoor use, but also outdoor use of balconies and not allow the opening of windows except with the exposure of a high level of noise. The EIR incorrectly states that the standard is concerned only with the interior noise levels. It is not. There would be a significant impact relating to land use compatibility for the new residential and hotel uses (and their outdoor use of space) that was not disclosed in the EIR.

#### **Response to Comment #15**

The noise analysis was prepared in accordance with the City of Los Angeles CEQA Threshold Guide (2006), which provides the threshold of significance for various noise sensitive uses; commercial property, however, is not considered a noise sensitive receptor. Table 2 on page 4 provides the estimated helistop operations noise levels at the exterior and the interior of Brookfield's buildings. As indicated in Table 2, the estimated helicopter at the exterior of Brookfield's buildings would range from 65 dBA L_{max} at the 33 S. Hope building (ground level) to 79 dBA L_{max} at the 601 S. Figueroa building (roof level). The estimated helicopter noise levels inside the Brookfield's building, as indicated in Table 2, would range from approximately 30 dBA L_{max} at the 333 S. Hope building (ground level) to 44 dBA L_{max} at the 601 S. Figueroa building (roof level). The estimated noise levels at the interior of Brookfield's buildings would be consistent with typical office interior background noise levels, approximately 44 dBA  $L_{eq}$  (as discussed in Response to Comment #3 above). It should be noted SEL is a calculated noise level that is normalized to a one (1) second time interval and is used to evaluate sleep interference (for residential use). It is not the actual sound level that a person would hear. The sound level that a person would hear is measured by the L_{max} descriptor. With respect to speech interference levels, a maximum noise level of 55 dBA L_{max} is used as criteria for classroom environment, where speech interference is an important consideration.¹² As the estimated helicopter noise levels at the interior of Brookfield's office buildings would be consistent with the typical office building background noise level 44 dBA Leq, as well as the 55 dBA Lmax criteria for speech interference.

See Response to Comment #13 above regarding new on-site residential and hotel uses consistency with the General Plan. With regard to the Balconies, the City of Los Angeles General Plan does not mention balconies as an outdoor use requiring a noise limit.

¹² Wilshire Grand Redevelopment Project Draft EIR, Appendix IV.C.1, Noise Impact Study, Page 13.

#### Comment #16: Page Six, Item D.3

Add a condition that would prohibit the heliport from an elevation lower than 1,090 feet above grade (i.e., 1,368 feet AMSL).

#### **Response to Comment #16**

A condition prohibiting the location of the helistop lower than 1,090 feet above grade (1,368 feet above MSL) is not necessary because the EIR evaluated the location of the helistop down to an elevation of 717 feet above ground level (AGL) or 995 feet above mean sea level (MSL) in the Reduced Height Alternative. The helistop elevation under this alternative was estimated to be 373 feet lower than that of the Project, which is located at 1,090 feet AGL (or 1,368 MSL).

The helistop flight paths as well as helistop operations including types and numbers of helicopter flights under the Reduced Height Alternative would be similar to that of the Project as described in the Project EIR. However, the helicopter flight elevation would be lowered due to the lowered helistop at 717 feet AGL. As described in the Reduced Height Alternatives analysis:

The helicopter would then be taking off from the lower elevation, and would likely require a change in the helicopter flight profile. That is, once departing from the helistop, it would take a longer distance for the helicopter to climb from 717 feet AGL to an optimal cruise altitude, which could potentially increase the noise exposure along the flight paths. The same would hold true when the helicopter is approaching to land at the helistop. Therefore, the helistop operations related noise levels at the nearest off-site noise sensitive receptors could potentially exceed the Project's significance threshold of 94 dBA SEL under this Alternative.

Table 3 on page 16 provides the estimated helistop operations noise levels at the receptor locations analyzed in the Draft EIR (in terms of CNEL) under the Project (helistop at 1,090 feet AGL) and under the Reduced Height Alternative (helistop at 717 feet AGL). As reported in Table 3, the estimated helistop operations noise levels under the Reduced Height Alternative vary from 26.3 to 48.6 dBA CNEL, which represent 0.3 to 3.9 dBA CNEL higher noise levels as compared to the Project. However, the helistop operations noise levels at both 717 feet AGL and 1,090 feet AGL would be well below the existing ambient noise levels (in terms of CNEL).

Table 4 on page 17 shows the estimated helistop single-event noise levels (in terms of SEL), as generated by the loudest type of helicopter, with the helistop at 717 feet AGL and 1,090 feet AGL. The estimated SEL with the helistop at 717 feet AGL would be 1 to 6 decibels higher as compared to the helistop at 1,090 feet AGL (Proposed Project). With the exception of receptor location R17 (Jonathan Club building at 545 S. Figueroa Street), the estimated single-event noise levels at all sensitive receptors (i.e., residential, hotel, and hospital, where sleeping typically occurs) would be below the significance threshold of 94 dBA SEL. At receptor location R17, the estimated SEL noise level of 94.5 dBA SEL due to the helicopter fly over would exceed the significance threshold by 0.5 dBA SEL, which could result in a significant noise impacts.

	Predicted Helistop Op CNEL	erations Noise Levels, ¹ (dBA)	Increase in Noise	
Location	Helistop at 1090 feet AGL (Proposed Project)	Helistop at 717 feet AGL (Reduced Height Alternative )	Levels of the Alternative compared with the Proposed Project	Existing Ambient Noise Levels, ² CNEL (dBA)
R0	44.1	47.5	3.4	71.7
R1	44.7	48.5	3.8	72.0
R2	44.7	48.6	3.9	76.1
R3	44.2	47.7	3.5	72.1
R4	42.9	45.5	2.6	68.6
R5	41.5	43.5	2.0	75.0
R6	40.4	42.0	1.6	72.2
R7	41.7	43.8	2.1	68.9
R8	40.9	42.7	1.8	74.1
R9	37.8	38.4	0.6	75.4
R10	42.6	45.0	2.4	71.1
R11	42.8	45.3	2.5	73.7
R12	39.6	40.8	1.2	71.0
R13	38.0	39.1	1.1	66.2
R14	30.8	31.3	0.5	62.9
R15	26.0	26.3	0.3	63.4
R16	32.2	32.6	0.4	62.1
R17	43.9	47.1	3.2	70.2
R18	36.8	37.9	1.1	60.3
Notes: ¹ Predicted noise level ² From Draft EIR, App Source: Acoustical Engin	at ground level. pendix IV.C.1, Table 18. neering Services, 2011		<u>.</u>	

<b>Table 3. Helistop Noise Impacts</b>	Under Prope	osed Project and R	educed Height Alternative
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Increasing the distance between the helicopter flight path and the respective noise receptor would reduce the helicopter noise levels at the affected receptor, R17. To reduce the SEL noise level at receptor location R17, the helistop would be required to be located at a minimum 817 feet AGL (or 1095 feet MSL). With the helistop at 817 feet AGL, the single-event noise level at receptor location R17 would be 93.6 dBA SEL. A noise mitigation measure to limit the helistop elevation to minimum 817 feet AGL (or 1095 MSL) is recommended. Therefore, the potential noise impacts related to the helistop are less than significant level.

	Predicted He					
	Helistop at 10 (Proposed	90 feet AGL Project)	Helistop at 71 (Reduced Heigh	17 feet AGL nt Alternative)		Significance
Location	At Ground Level	At Building Roof Level	At Ground Level	At Building Roof Level	Land Use	Threshold, SEL ( dBA)
R0	90.4	93.4	93.8	97.4	Commercial	¹
R1	90.9	93.6	94.7	98.7	Commercial	¹
R2	90.9	94.6	94.9	100.6	Commercial	¹
R3	90.5	95.8	94.0	100.2	Commercial	¹
R4	89.0	89.4	91.5	91.9	Residential/ Office	94
R5	87.6	87.9	89.4	89.7	Residential/ Office	94
R6	86.4	88.1	87.9	89.1	Residential/ Commercial	94
R7	87.9	89.6	89.8	91.3	Hotel/ Commercial	94
R8	86.7	88.5	88.2	89.6	Hotel/ Commercial	94
R9	83.6	84.2	84.1	84.5	Hotel/ Residential/ Commercial	94
R10	88.7	89.5	91.1	91.8	Residential/ Commercial	94
R11	88.9	89.9	91.3	92.3	Hotel/ Residential/ Commercial	94
R12	85.7	86.0	86.7	86.9	Residential/ Commercial	94
R13	83.9	84.2	84.9	85.1	Hospital	94
R14	76.0	²	76.6	2	Residential/ Commercial	94
R15	72.0	2	72.1	2	School/ Commercial	¹
R16	77.5	2	77.8	2	Residential/ Commercial	94
R17	90.0	91.2	93.1	94.5	Hotel/ Commercial	94
R18	82.4	2	83.6	2	School/ Residential	94 ³

Table 4.	Helicopter	Single-Event Not	ise Analysis (SEL)
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Notes:

SEL significance threshold is not applicable to commercial/office and school land uses, data provided for information only. Not calculated for buildings with less than three stories. Significance threshold is applicable to the residential uses at R18, not applicable to the school uses. 1

2

3

Source: Acoustical Engineering Services, 2011

The single-event noise level in terms of  $L_{max}$  was calculated at the nearest school site, the Miguel Contreras Learning and Evelyn Thurman Gratts Elementary School (receptor location R18), to evaluate the potential impacts with respect to speech interference. With the helistop at 717 feet AGL, the Bell 206L would generate maximum noise levels of 69 dBA  $L_{max}$  at noise receptor location R18, which is 1 dBA higher than that of the helistop at 1,090 feet AGL. The predicted  $L_{max}$  levels at the school sites would be below the 80 dBA  $L_{max}$  threshold (for school uses). Therefore, the overall noise exposure due to Helistop operations at 717 feet AGL would be less than significant.

Additional noise analysis was performed to evaluate the helistop noise impacts at the four Brookfield buildings in the vicinity of the Project site. Table 5 below reports the closest distances "Slant Distance" in feet between the helicopter flight path and Brookfield's buildings, with the helistop located at 717 feet AGL. The helicopter flight paths would be a minimum 90 feet from the top of the 601 S. Figueroa building, 225 feet from the top of the 725 S. Figueroa building, 744 feet from the 735 S. Figueroa building, and 1,050 feet from the top of the 333 S. Hope building.

Table 5. Distance from Helicopter Flight Path to Brookfield's Building Locationswith Helistop at 717 feet AGL

Building / Location	Nearest Draft EIR Noise Receptor Location	Longitudinal distance to flight path, feet (A)	Building Height, ^a feet (B)	"Slant Distance" to flight path, ^b feet		
Figueroa at Wilshire Building / 601 S. Figueroa	R1	90	716	from ground level – 718 from roof level – 90		
Ernst & Young Plaza / 725 S. Figueroa	R3	170	534	from ground level – 732 from roof level – 250		
7th+Fig / 735 S. Figueroa	R3	330	50	from ground level – 785 from roof level – 744		
Bank of America / 333 S. Hope	R8	1050	735	from ground level – 1269 from roof level – 1050		
^{<i>a</i>} Source: <u>www.skyscraperpage.com</u> . Building height for 735 S. Figueroa is estimated. ^{<i>b</i>} The "Slant Distance" represents the actual distance between the building(at the roof level) and the helicopter flight path, which is calculated as follow. "Slant Distance" = $[A^2 + (717 - B)^2]^{1/2}$ for ground level $B = 5$ feet						

Table 6 on page 19 reports the estimated helistop operations noise levels at the exterior and interior of Brookfield's building. As reported in Table 6, the predicted exterior noise levels generated by the helistop operation with the helistop at 717 feet AGL would range from 38 dBA CNEL at the ground (street) level of the 333 S. Hope building to 59 dBA CNEL at the roof level of the 601 S. Figueroa building. These estimated noise levels represent an increase of approximately 1 to 6 dBA CNEL as compared to the helistop at 1,090 feet AGL condition. The estimated helistop operations noise levels (at both 717 feet AGL and 1,090 feet AGL elevations) at the exterior of Brookfield's building (in terms of CNEL) would be well below the existing ambient noise levels (Table IV.C-9 of the Draft EIR, Page IV.C-21), which is approximately 72 dBA CNEL. With respect to the City's General Plan, the predicted helistop operation noise levels would be well below the City's General Plan standards (i.e., 65 dBA CNEL).

	Predicted Helistop Operations Noise Levels at the <u>EXTERIOR</u> of the Buildings, dBA			Predicted Helistop Operations Noise Levels at the <u>INTERIOR</u> of the Buildings, ^b dBA			
	(P	Proposed Proje	ct/		(Proposed Project/		
	Reduce	d Height Alter	native) ^a	Reduc	Reduced Height Alternative)		
Location	CNEL	SEL	L _{max}	CNEL	SEL	L _{max}	
601 S. Figueroa							
- Ground Level	45 / 49	91 / 95	73 / 75	10 / 14	56 / 60	38 / 40	
- Roof Level	53 / 59	100 / 105	79 / 86	18 / 24	65 / 70	44 / 51	
725 S. Figueroa							
- Ground Level	44 / 48	91 / 94	72 / 75	9 / 13	56 / 59	37 / 40	
- Roof Level	49 / 54	96 / 100	77 / 80	14 / 19	61 / 65	42 / 45	
735 S. Figueroa							
- Ground Level	44 / 47	90 / 93	72 / 74	9 / 12	55 / 58	37 / 39	
- Roof Level	44 / 47	90 / 93	72 / 74	9 / 12	55 / 58	37 / 39	
333 S. Hope							
- Ground Level	37 / 38	83 / 83	65 / 64 ^c	2/3	48 / 48	30 / 29 ^c	
- Roof Level	39 / 40	84 / 84	68 / 70	4 / 5	49 / 49	33 / 35	

Table 6. I	Estimated	Helistop	Noise 1	Levels at	<b>Brookfield's</b>	<b>Buildings</b>

^a Helistop at 1090 feet above ground level under the Proposed Project and at 717 feet above ground level under the Reduced Height Alternative.

^b Interior noise levels are estimated based on an outdoor-to-indoor noise reduction of 35 dBA. Source: Westfield Century City New Century Plan, Final EIR, 2008. <u>http://cityplanning.lacity.org/eir/</u> <u>CenturyPlan/FEIR/issues/</u>Vol._I_III._Response_to_Written_Comments.pdf

^c The predicted  $L_{max}$  noise levels at 333 S. Hope (ground level) for the helistop at 717 feet AGL are 1 dBA lower than that of the helistop at 1,090 feet AGL. This seemingly incongruous result appears to be an anomaly in the INM model with respect to the receptor and the lateral directivity of the helicopter noise. The INM model is specific to the project and no corrections are allowed in an attempt to resolve the noted condition. The resulting interior noise levels are well below the applicable significance threshold.

Source: Acoustical Engineering Services, 2011

The helistop single-event noise levels (in terms of SEL and  $L_{max}$ ) with the helistop at 717 feet and 1,090 feet elevations above ground level are also reported in Table 6. As reported in Table 6, the estimated exterior single-event noise levels (SEL) with the helistop at 717 feet AGL elevation would range from 83 dBA SEL at the ground (street) level of the 333 S. Hope building to 105 dBA SEL at the roof level of the 601 S. Figueroa building. The estimated single-event noise levels in terms of maximum sound level ( $L_{max}$ ) vary from 64 dBA  $L_{max}$  to 86 dBA  $L_{max}$  at the exterior of Brookfield's buildings. These estimated single-event noise levels (in terms of SEL and  $L_{max}$ ) for the helistop at 717 feet AGL elevation would be up to 7 decibels higher as compared to the helistop at 1,090 feet AGL elevation. For comparison, the existing maximum noise levels in the vicinity of the Project site were measured up to 93 dBA  $L_{max}$ , at receptor location R1 (Project Draft EIR, Appendix IV.C-1, Appendix A).

Also reported in Table 6 are the estimated noise levels at the interior of Brookfield's building. As previously explained in Response to Comment #3, a typical high-rise office building façade (with fixed
windows) would provide approximately 35 dBA exterior-to-interior noise reduction.¹³ Therefore, the estimated noise levels at the interior of Brookfield's building would range from approximately 2 dBA CNEL at the 333 S. Hope building (ground level) to a maximum 24 dBA CNEL at the 601 S. Figueroa building (roof level), with the helistop at 717 feet AGL. These estimated interior noise levels would be well below the recommended maximum interior noise level of 45 dBA CNEL. As previously explained, the estimated interior SEL noise levels are provided as information only, as the SEL noise descriptor is used to evaluate sleep interference (for residential uses), where as speech interference (for office or school uses) is best analyzed using  $L_{max}$ .¹⁴ The estimated maximum noise levels as experienced at the interiors of Brookfield's buildings would range from approximately 30 dBA L_{max} at the 333 S. Hope building (ground level) to 44 dBA L_{max} at the 601 S. Figueroa building (roof level), with the helistop at 1,090 feet AGL. The estimated maximum helicopter noise levels at the interiors of Brookfield's buildings, with the helistop at 1,090 feet AGL, would be consistent with typical office background noise levels of 44 dBA L_{eq}, per the ASHRAE.¹⁵ The maximum helicopter noise at the interiors of Brookfield buildings would be increased by up to 7 dBA L_{max} at the 601 S. Figueroa building (roof level), if the helistop was to be located at 717 feet AGL. With the helistop at 717 feet AGL, the estimated noise levels at the interior of the 601 S. Figueroa and 725 S. Figueroa buildings would be 51 dBA L_{max} and 45 dBA L_{max}, respectively. The interior noise levels at 601 S. Figueroa and 725 S. Figueroa buildings with the helistop at 717 feet AGL, would be slightly above the typical office background noise environment of 44 dBA Lea, but would be below the 55 dBA L_{max} criteria for speech interference.¹⁶

In summary, the helistop noise analysis with the helistop at 717 feet AGL elevation could result in a significant noise impact at one off-site noise sensitive receptor, R17. Therefore, a noise mitigation measure, which would limit the helistop elevation to minimum 817 feet AGL elevation (or 1095 MSL) is provided to reduce the potential noise impact to a less than significant level. Furthermore, the proposed noise mitigation (i.e., helistop at 817 feet AGL elevation) would also reduce the noise levels at the Brookfield buildings.

### Comment #17: Page Seventeen Item F

The recent case Sunnyvale West Neighborhood Association v. City of Sunnyvale City Council (6th App. Dist., December 16, 2010) throws into question the traffic, noise and air quality analyses since the EIR utilized a future year as the baseline, and not existing environmental conditions. The commenter further states that no analysis in the EIR with regard to the Project's traffic or noise impacts on the existing environment.

### **Response to Comment #17**

The analyses of operational and construction noise presented in the EIR were based upon comparison of Project-related noise levels to the existing noise environment and are therefore satisfy the

¹³ Westfield Century City New Century Plan, Final EIR, 2008. <u>http://cityplanning.lacity.org/eir/ CenturyPlan/FEIR/issues/</u> Vol._I_III._Response_to_Written_Comments.pdf

¹⁴ Federal Interagency Committee On Aviation Noise (FICAN), The Use of Supplemental Noise Metrics in Aircraft Noise Analyses, February 2002.

¹⁵ American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., 2003 ASHRAE Handbook.

¹⁶ Wilshire Grand Redevelopment Project Draft EIR, Appendix IV.C.1, Noise Impact Study, Page 13.

analysis required by the recent *Sunnyvale* decision, with one exception. The traffic noise analysis compared the future with project noise levels to future without project noise levels to determine project impacts. This analysis was re-calculated (Appendix D) by adding Project traffic to existing traffic levels and comparing the resulting noise level to the existing traffic noise levels to determine whether an audible increase (3 dBA) would occur.

The roadway traffic noise impact, as analyzed in the EIR, was based on the incremental increase in the traffic noise levels attributable to Project as compared to the baseline condition when the Project is completed. Additional analysis was made to determine the potential noise impacts, based on the increase in noise levels due to Project-related traffic compared with the existing traffic noise conditions. Table 7 on page 22 reports the off-site roadway traffic noise impacts due to the Project-related traffic as compared to the existing traffic conditions. As reported in Table 7, the Project-related traffic volumes would result in a maximum noise increase of 2.2 dBA CNEL along Francisco Street, between 7th Street and Wilshire Boulevard. For comparison, the Project's traffic noise impacts based on the existing conditions would be approximately 0.1 dBA higher than the analysis presented in the EIR. Overall, the differences in Project's traffic noise impacts based on the EIR are 0.2 dBA or less.

In summary, the result of this analysis show that the Project traffic noise impacts based on the existing traffic conditions would not alter the results of the less than significant impact analysis presented in the EIR.

	Calculated Z	Fraffic Noise BA CNEL	Increase in	Increase in Noise Levels	
Roadway Segment	Existing (A)	Existing Plus Project (B)	Noise Levels due to Project, dBA CNEL (B – A)	due to Project as Analyzed in the Project EIR, dBA CNEL	
Glendale Boulevard					
- Between Temple St. and Beverly Blvd.	73.2	73.2	0.0	0.0	
Francisco Street					
- Between 7 th Street and Wilshire Blvd.	66.2	68.4	2.2	2.1	
Lucas Avenue					
- Between 3 rd St. and 6 th St.	70.2	70.2	0.0	0.0	
- Between 6 th St. and Wilshire Blvd.	68.8	69.1	0.3	0.2	
Wilshire Boulevard					
- Between Alvarado St. and Lucas Ave.	71.6	71.7	0.1	0.1	
- Between Lucas Ave. and Beaudry Ave.	71.3	71.4	0.1	0.1	
- Between Francisco St. and Figueroa St.	70.8	71.7	0.9	0.7	
- Between Figueroa St. and Grand Ave.	69.0	69.3	0.3	0.2	
6 th Street					
- Between Figueroa St. and Flower St	69.3	69.5	0.2	0.0	
- Between Flower St. and Olive St	68.7	68.7	0.0	0.0	
- East of Olive St.	70.0	70.0	0.0	0.0	
7 th Street					
- Between Alvarado St. and Bixel St.	67.7	67.9	0.1	0.1	
- Between Bixel St. and Francisco St.	67.8	68.1	0.3	0.3	
- Between Francisco St. and Figueroa St.	68.2	68.9	0.7	0.6	
- Between Figueroa St. and Grand Ave.	68.4	69.0	0.6	0.5	
- Between Grand Ave. and Alameda Blvd	67.8	68.1	0.3	0.3	
Figueroa Street					
- Between 3rd St. and 5th St.	73.3	73.5	0.2	0.2	
- Between 5th St. and Wilshire Blvd.	73.6	74.0	0.4	0.3	
- Between Wilshire Blvd. and 7th St.	72.2	72.3	0.1	0.1	
- Between 7th St. and Olympic Blvd.	71.3	71.4	0.1	0.0	
- Between Olympic Blvd. and Pico Blvd.	71.6	71.7	0.1	0.1	
Flower Street					
- Between 3rd St. and 5th St.	70.9	71.0	0.2	0.2	
- Between 5th St. and Wilshire Blvd.	70.5	70.7	0.2	0.1	
- Between Wilshire Blvd. and 8th St.	71.3	71.5	0.2	0.1	
- South of 8th St.	70.8	71.0	0.2	0.1	

Table 7.	Off-Site Roadway Traffic Noise Impacts

	Calculated 7 Levels, dl	Fraffic Noise BA CNEL	Increase in	Increase in Noise Levels		
Roadway Segment	Existing (A)	Existing Plus Project (B)	Noise Levels due to Project, dBA CNEL (B – A)	due to Project as Analyzed in the Project EIR, dBA CNEL		
Grand Avenue						
- Between 3rd St. and Wilshire Blvd.	69.4	69.5	0.0	0.0		
- Between Wilshire Blvd. and 7th St.	70.5	70.6	0.2	0.1		
- South of 7th St.	69.9	70.2	0.4	0.3		
Source: Acoustical Engineering Services, 2010		•				

### LETTER #4 – PBS&J dated January 14, 2011

### Comment #1: Page 2, Construction Noise

Construction period noise levels within the interior of the interior of the offices facing the project site would be approximately 70 dBA.

### **Response to Comment #1**

PBS&J estimation of the noise levels at the interior of the offices facing the project site assumed a 15 dBA exterior-to-interior noise reduction. There is no reference in the PBS&J letter as to where the 15 dBA noise reduction was based on. This assumption is likely based EPA's data for residential dwellings with windows open (i.e., EPA Protective Noise Level Document); however, the Brookfield's office buildings are high-rise structures, typically constructed of the steel, concrete and heavy glass curtain walls. High-rise commercial/ office buildings, in general, do not have operable windows. As reported in the Draft EIR, a typical high-rise office building façade (with fixed windows) would provide approximately 35 dBA exterior-to-interior noise reduction.¹⁷

### Comment #2: Page 2, 1st Bullet

• Specifying a sound barrier wall at the ground level along the north and south perimeter of the construction site such that it attenuates to a minimum of 20 dBA.

### **Response to Comment #2**

See Response to Letter #3, Comment #4 above.

### Comment #3: Page 2, 2nd Bullet

• Upper floor construction of the two high-rise towers need to include temporary sound barrier walls along the north and south sides of the high-rise towers as they are constructed to attenuate construction noise impacts at the upper floor offices of at 601 S. Figueroa Street and 725 S. Figueroa Street. These upper floor sound barriers need to be designed such that they attenuate to a minimum of 20 dBA.

### **Response to Comment #3**

See Response to Letter #3, Comment #5 above.

### Comment #4: Page 3, 1st Bullet

• The construction contractor should consult with Brookfield Properties Management in order to coordinate noise intensive activities to avoid interruptions of office activities to the fullest extent feasible.

¹⁷ Westfield Century City New Century Plan, Final EIR, 2008. <u>http://cityplanning.lacity.org/eir/ CenturyPlan/FEIR/issues/</u> Vol._I_III._Response_to_Written_Comments.pdf

### **Response to Comment #4**

See Response to Letter #3, Comment #6 above.

### Comment #5: Page 3, 2nd Bullet

• Where health and safety are not compromised, additional temporary sound walls will be used in conjunction with noise intensive construction equipment that has limited mobility while in use (i.e., jackhammers, compressors, etc.).

### **Response to Comment #5**

See Response to Letter #3, Comment #7 above.

### Comment #6: Page 3, 3rd Bullet

• Haul trucks should avoid Figueroa Street between 7th Street and Wilshire Boulevard and Wilshire Boulevard east of Francisco Street in order to reduce construction related noise at the offices located at 601 and 725 S Figueroa Street.

### **Response to Comment #6**

As noted on page 192, Chapter 9 of the Transportation Study, the haul trucks exiting the Project Site would head northeast on Figueroa Street and take the northbound on-ramp at 5th Street to the SR 110 North, take the I-10 exit toward I-5/Santa Ana/San Bernardino, continue on to US 101 South to SR 60 East, and exit the freeway at Crossroads Parkway (South) to Puente Hills Landfill in Whittier, California. On the return route to the Project Site, the trucks would head toward Crossroads Parkway (South), turn right at Crossroads Parkway (North), take the ramp onto SR 60 West, continue on I-10 West, take the exit for SR 110 North, and exit the freeway at 9th Street/James M. Wood Boulevard. The trucks would then turn left at Figueroa Street followed by another left at 7th Street and then a right at Francisco Street.

While the trucks are not expected to travel along Wilshire Boulevard, east of Francisco Street, it would not be possible to restrict travel along Figueroa Street between 7th Street and Wilshire Boulevard as Figueroa Street provides access to the freeway ramps. It should be noted that the Applicant is required to submit a construction management plan to LADOT for approval.

### Comment #7: Page 3, Operation Noise, 1st paragraph

The analysis with respect to aviation noise impacts on offsite receptors associated with commercial helicopter operations on the rooftop of the proposed building A directly across the street from 601 Wilshire Boulevard is inadequate. The analysis assumes two round trip helicopter flights to building A per day. These flights could originate at various locations, with a departure and arrival flight track for the heliport specified in the prepared technical documents. While the 24-hour weighted averaging shows the CNEL values to be within the City's noise limits, Table 18 in the Noise Impact Study on Page 59 show that Single Event Noise Levels (SEL) would be 96 dBA on the rooftop and 91 dBA at ground level at R3 (725 S. Figueroa Street). Similar noise levels are shown for R1 which is adjacent to

601 Figueroa Street. In particular anticipated SEL noise levels at R1 are 94 dBA on the rooftop and 91 dBA at ground level. This level of noise generated during the daytime hours constitutes a significant temporary increase in ambient noise and is unacceptable in the offices at 601 and 725 S Figueroa Street. It is estimated that the interior noise level within the offices facing the helipad and helicopter approach and departure paths would range between 75 dBA to 71 dBA depending upon the floor. This level of noise within the offices at 601 and 725 S. Figueroa Street. The offices at 601 and 725 S. Figueroa Street. The SEL noise levels would constitute a severe interruption to the activities within the offices. Conversations during these SEL noise events would be impossible, which constitutes a significant noise impact and mitigation is required.

PBS&J provided screening level acoustical modeling of the rooftop helipad at selected points of reception in close proximity to the proposed building A. One receptor that was selected for this screening analysis was the upper floor offices at 601 S. Figueroa Street. This modeling exercise revealed that noise levels from the helicopter approach and rooftop helipad can reach a decibel level of 97.31 dBA SEL at the exterior of the windows of the upper floor offices. Interior noise levels during this noise event are approximately 77.31 dBA SEL. As this would increase the existing ambient noise level by more than 7 dBA this is a significant impact without mitigation at that location, which was not addressed in the Draft or Final EIRs. Additional mitigation is needed to attenuate the significant periodic noise impacts inflicted upon the offices at 601 and 725 S Figueroa Street. PBS&J concluded that the Project's noise impact analysis with respect to the helistop operations is inadequate.

### **Response to Comment #7**

PBS&J estimates that interior noise levels at the offices facing the helipads and helicopter flight paths would range from 75 dBA and 71 dBA depending upon the floor. PBS&J estimates appears to be based on the exterior noise levels of 96 dBA SEL (at the roof) and 91 dBA SEL (at the ground level) and the building exterior-to-interior noise reduction of approximately 20 dBA.

It was noted that the amount of the sound attenuation for the same building changed with the source of noise. That is, PBS&J assumed a 15 dBA exterior-to-interior noise reduction when the source was construction noise and a 20 dBA building noise reduction when the source of the noise was the helicopter. PBS&J concluded that the helicopter noise levels result in a substantial increase in the ambient noise at the inside the Brookfield's offices, using SEL noise metrics. In addition, PBS&J concluded that the estimated SEL noise levels inside Brookfield's offices would make conversation impossible.

Current scientific studies (FICAN reference) and a PBS&J acoustical report recommended using SEL to evaluate *sleep interference in a residential environment*.^{18,19} The SEL noise metric is a calculated noise level that is normalized to a one (1) second time interval but it is not the actual sound level that a person would hear.  $L_{max}$  is a better measure of what a person hears. It is also used to estimate speech interference. Therefore, the PBS&J conclusion based upon SEL levels with the respect to speech interference in a typical office environment is incorrect.

¹⁸ Federal Interagency Committee On Aviation Noise (FICAN), The Use of Supplemental Noise Metrics in Aircraft Noise Analyses, February 2002.

¹⁹ Stanford University Medical Center Facilities Renewal and Replacement, Draft EIR, 2010, Chapter 3.7 Noise, Page 3.7-21.

See also Response to Letter #3, Comment #16 above.

### Comment #8: Page 4, 1st Bullet

• Specifying a sound barrier wall at the rooftop level of proposed building A along the perimeter of the helipad constructed such that it attenuates to a minimum 30 dBA.

### **Response to Comment #8**

See Response to Letter #3, Comment #2 above.

### Comment #9: Page 4, 2nd Bullet

• Upper floor attenuation of the offices at 601 S. Figueroa Street and 725 S. Figueroa Street, including acoustically attenuating windows and additional rooftop and wall insulation, such that interior noise levels within these office buildings do not exceed 65 dBA SEL or 45 dBA CNEL.

### **Response to Comment #9**

See Response to Letter #3, Comment #3 above.

### Comment #10: Page 4, 3rd Bullet

• The manager of building A should consult with Brookfield Properties Management in order to inform and coordinate helicopter flight times in order for the occupants of 601 S Figueroa Street and 725 S. Figueroa Street to plan for and avoid interruptions of office activities to the fullest extent feasible.

### **Response to Comment #10**

The suggested condition that the building manager for Building A consult with and receive approval from an adjacent property with respect to helicopter flight times would be infeasible. The proposed helistop on Building A would not conduct regularly scheduled service but rather would be serviced by periodic flights for which the facility would need to be available.

The helistop would be operated in accordance with the requirements and regulations of the FAA and California Division of Aeronautics. Moreover, the noise analysis provided in the EIR does not identify significant impacts on adjacent uses as a result of helicopter operations. Therefore, this proposed measure is not needed to address an environmental impact.

### Comment #11: Page 4, 4th Bullet

• A detailed approach and departure path showing elevations of the approach and departure should be included as mitigation. The elevation in the approach and departure paths should

be designed so that the helicopter avoids undue noise impacts to the surrounding buildings while maintaining safe and stable flight of the helicopter.

### **Response to Comment #11**

The FAA controls the aircraft in the airspace and the pilot is responsible for the safety of flight. The City cannot interfere with the navigation of the helicopter by making the elevation of the helicopter in the airspace a mitigation measure. There are several different helicopters that could qualify to land at the helistop. Their approach/departure glides slopes will depend upon the weather, the wind, the performance characteristics of the aircraft and the noise abatement procedures that are appropriate for this helicopter. The flight paths presented in the DEIR were originally designed to avoid undue noise exposure to the surrounding neighbors, both residential and commercial. The helicopters landing or departing from the helistop will be flying at an altitude above the elevations of the commenter's buildings and not at the window level of these buildings. The pilots will use the best noise abatement procedures possible commensurate with safety of flight. Commenter is also referred to Figure 1 on page 2 and Responses to Letter #1, Comment #1-1 and Comment #1-3 above.

### Comment #12: Page 4, 5th Bullet

• Mitigation should include limiting commercial helicopter flights to a maximum of two round trips per day as was analyzed in the DEIR in order to avoid additional noise impacts.

### **Response to Comment #12**

See Response to Letter #1, Comment #1-2 above.

Yours sincerely,

Amir Yazdanniyaz, P.E. Principal

Cc: Jeanet Babauta, Thomas Properties Group Alix Wisner, Thomas Properties Group Craig Fajnor, Ecotierra Consultants Ricarda Bennett, Heliport Consultants Sean Bui, Acoustical Engineering Services

# **APPENDIX C**

Memorandum, Assessment of Air Quality Impacts for the Wilshire Grand Redevelopment Project in Comparison to 2009 Existing Baseline Conditions, Environ to Thomas Properties Group February 11, 2010



February 11, 2011

### Via Electronic Mail

Jeanet Babauta Thomas Properties Group, Inc. City National Plaza 515 South Flower Street, 6th Floor Los Angeles, CA 90071

# Re: Assessment of Air Quality Impacts for the Wilshire Grand Redevelopment Project in Comparison to 2009 Existing Baseline Conditions

Dear Ms. Babauta:

ENVIRON International Corporation (ENVIRON) presents this technical letter report (Report) regarding air quality impacts of the Wilshire Grand Redevelopment Project (Project). ENVIRON has conducted additional quantitative analyses at the request of Thomas Properties Group to further assess the Project's air quality impacts in comparison to baseline conditions existing in 2009. This Report includes a description of the Project background related to this analysis, methodologies used, and analysis results.

### **Project Background**

The original Air Quality analyses were completed by Christopher A. Joseph and Associates (CAJA), and were included in the Project Draft Environmental Impact Report (DEIR). In response to public comments and a recent court decision made in regards to Environmental Impact Reports (EIR), ENVIRON has further evaluated the Project's air quality impacts in comparison to existing conditions (assumed to be 2009 in the Air Quality DEIR analysis). ENVIRON's evaluation is based on analyses conducted originally by CAJA and reported in the Project DEIR.

### Methodology

ENVIRON relied upon the air quality impact analysis methodology as used by CAJA in the DEIR. Details regarding the original analyses can be found in section IV.G of the DEIR. The primary differences in this analysis compared to the DEIR analysis are described below.

# Construction

The analyses of construction air emissions presented in the DEIR were based upon comparison of Project-related construction emissions to the existing 2009 levels of construction emissions on the project site (i.e., zero existing construction emissions). Therefore, no update of the DEIR analysis of mass daily emissions, localized emissions of CO, NOx, PM₁₀ and PM_{2.5}, or toxic air contaminants during the construction phase was required.

# Operations

ENVIRON evaluated Project operational emissions in comparison to 2009 baseline emissions. The emissions inventory relied upon in this analysis was reported in the DEIR and Appendix IV.G.6 of the DEIR. This analysis further compared the Project to existing conditions in 2009 to estimate the incremental change in operational mass emissions due to the Project. To evaluate the Project against South Coast Air Quality Management District (SCAQMD) localized

significance thresholds (LSTs), ENVIRON modified the CAJA URBEMIS modeling calculations to estimate onsite operational mobile emissions for existing site conditions in 2009. All other Project assumptions remained consistent with those assumed in the DEIR. To assess operational health risk for 2009 conditions, ENVIRON applied a ratio based on the change in onsite  $PM_{10}$  emissions, which were used as to represent the change in air toxic emissions as compared to that reported in the DEIR.

# **CO Hotspots**

ENVIRON evaluated the Project CO hotspots in comparison to existing 2009 baseline conditions. ENVIRON modified CAJA CO hotspots modeling calculations to estimate CO concentrations at the same intersections using 2009 traffic volumes and background CO concentrations. The numbers of trips at intersections were based on existing (2009) trips plus those associated with the Project.¹ Background CO concentrations were those used by CAJA in its analysis of 2009 existing Project site emissions. Other project assumptions remained consistent with those assumed in the DEIR.

# Harbor Freeway Health Risk Assessment (HRA)

ENVIRON estimated risk impacts from the Harbor Freeway as if the Project were to have existed in 2009. All other assumptions remained consistent with those assumed in the DEIR. Freeway emissions referenced to 2009 existing conditions were estimated using the ratio of 2009 on-road emission factors to those in the year evaluated in the DEIR (2015). Emission factors were determined using EMFAC2007. Health risk relative to 2009 existing conditions was calculated by multiplying risk impacts in the DEIR by the 2009-to-2015 emission factor ratio. For cancer and chronic hazard indices, maximum health impacts associated with TAC emissions from the Harbor Freeway under 2009 conditions were estimated by multiplying the risks reported in the DEIR by the 2009-to-2015 ratio of diesel PM emission factors, and for acute hazard indices, by the 2009-to-2015 ratio of emission factors for total organics.

# Odor

ENVIRON did not modify the odor analysis.

# Results

# **Operations**

Operational emissions are shown in Tables 1 and 2. Table 1 shows total operational emissions. Table 2 shows onsite operational emissions. Table 3 shows the estimated health risk impact due to operational emissions. Note that the risk impact of Project operations is negative relative to 2009 existing conditions, indicating that health risk from Project operations would be less than from operation of the currently existing hotel. Based on the net change in onsite  $PM_{10}$  emissions as reported in Table 2, the Project 2009 risk impact is approximately 1.1 times higher than that reported in the DEIR.²

¹ Gibson, 2010. Data provided via email from Thomas Properties Group. February 9, 2011.

² This estimate is based on the ratio of the sum of summertime and wintertime net emissions, which are 0.36 pounds per day and 0.35 pounds per day, respectively, in the DEIR to that estimated for 2009 conditions.

Table 3

Maximum Health Impacts Associated With TAC Emissions from Operations in 2009							
Conditions							
		Maximum Risk Impact					
Health Impact	Maximum Impacted	from Project	SCAQMD Threshold				
ficatti inipact	Off-Site Receptor ^a	Emissions	(Risk in 1 million)				
		(Risk in 1 million)					
Inhalation Cancer Risk	Residential	(14.8)	10				
	Worker	(3.0)	10				
		Maximum Risk Impact					
Health Impact	Maximum Impacted from Project		SCAQMD Threshold				
nealth impact	Off-Site Receptor ^a	Emissions	(Index)				
		(Index)					
Chronic Non-cancer	Residential	(0.07)	1.0				
Hazard Index	Worker	(0.07)	1.0				
		Maximum Risk Impact					
Health Imnact	Maximum Impacted	from Project	SCAQMD Threshold				
Πσαιτη πηραστ	Off-Site Receptor ^a	Emissions	(Index)				
		(Index)					
Acute Non-cancer	Residential	(0.6)	1.0				
Hazard Index	Worker	(0.6)	1.0				
Note: Numbers in parenthesis denote negative values. () indicates decrease.							

The maximum impacted off-site residential receptor is the 1010 Wilshire apartments located approximately 450 feet northwest of the Project Site, across the Harbor Freeway, and the maximum impacted off-site worker receptor is the 1000 Wilshire building located approximately 60 feet west of the Project Site, across Francisco Street.

# CO Hotspots

The localized CO hotspots analysis results are shown in Table 4.

# Harbor Freeway Health Risk Assessment (HRA)

The Harbor Freeway HRA results are shown in Table 5. Based on the ratio of 2009-to-2015 emission factors, diesel PM emissions were estimated to be 2.18 times higher in 2009 than 2015. Total organic emission factors were estimated to be 1.76 times higher in 2009 than 2015.

# Table 5 Maximum Health Impacts Associated With TAC Emissions from Harbor Freeway in 2009 Conditions

Health Impact	Population Receptor	Maximum Risk Impact from Harbor Freeway Emissions (Risk in 1 million)	SCAQMD Threshold (Risk in 1 million)		
Inhalation Cancer Risk	Adult	4.6	10		
	Child	2.3	10		
Chronic Non-cancer Hazard Index	Future Project Residents	0.010	1.0		
Acute Non-cancer Hazard Index	Future Project Residents	0.007	1.0		

# Summary

ENVIRON has further evaluated the Project's air quality impacts in comparison to existing conditions in 2009. While the DEIR included analyses for baseline 2009 existing conditions, ENVIRON has performed additional analyses to supplement what was reported in the DEIR. Project operational emissions as reported in the DEIR were adjusted for comparison to 2009 existing site conditions. The CO hotspots analysis was adjusted to evaluate existing 2009 traffic volumes and 2009 background CO concentrations with Project traffic. The Harbor Freeway HRA analysis was adjusted to 2009 conditions. These additional analyses show that estimated air quality impacts from Project operations, CO Hotspots, and the Harbor Freeway HRA in comparison to 2009 existing conditions would also remain below the significance thresholds, similar to what was reported in the DEIR.

# Closing

The analysis presented herein represents ENVIRON's understanding based on the information available at the time of this report. To the extent that information that was relied upon changes, the results reported may also change. The evaluation of the Project against 2009 existing site conditions is a hypothetical representation of Project impacts and is based on information as reported in the Project DEIR. Please feel free to contact Eric Lu (949) 798-3650 or Stan Hayes at (510) 420-2527 if you have any questions.

Sincerely,

Eric C. Lu, MS, PE Senior Manager

Stan R. Haves

Stan R. Hayes Principal

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Attachment: Tables 1, 2, and 4

Tables

Table 1
<b>Estimated Daily Operational Emissions 2009 Conditions</b>

	Emissions in Pounds per Day							
Emissions Source	VOC	NOx	CO	SOx	PM10	PM2.5		
Summertime Emissions								
Project Emissions								
Natural Gas Usage	1.46	20.09	8.03	0.00	0.04	0.04		
Landscape Maintenance Equipment	0.61	0.10	7.73	0.00	0.03	0.03		
Consumer Products	5.13							
Architectural Coatings	11.00							
Mobile (Vehicle) Sources	58.61	48.76	616.19	1.20	212.10	40.58		
Helicopters	0.12	4.06	3.21					
On-site Broilers	0.08	0.35	0.30	0.00	1.25	0.03		
Total Emissions	77.01	73.36	635.46	1.20	213.42	40.68		
Existing Site Emissions		•						
Natural Gas Usage	3.57	49.23	19.69	0.00	0.09	0.09		
Landscape Maintenance Equipment	0.52	0.07	6.41	0.00	0.02	0.02		
Architectural Coatings	4.41							
Mobile (Vehicle) Sources	78.28	77.45	909.09	0.82	143.43	27.30		
On-site Broilers	0.10	0.44	0.37	0.00	1.57	0.03		
Total Emissions	86.88	127.19	935.56	0.82	145.11	27.44		
Total Project Net Emissions	(9.87)	(53.83)	(300.10)	0.38	68.31	13.24		
SCAQMD Thresholds	55.00	55.00	550.00	150.00	150.00	55.00		
Significant Impact?	No	No	No	No	No	No		
	Wintert	ime Emissi	ions		-			
Project Emissions								
Natural Gas Usage	1.46	20.09	8.03	0.00	0.04	0.04		
Consumer Products	5.13							
Architectural Coatings	11.00							
Mobile (Vehicle) Sources	59.47	59.81	580.51	0.95	212.10	40.58		
Helicopters	0.12	4.06	3.21					
On-site Broilers	0.08	0.35	0.30	0.00	1.25	0.03		
Total Emissions	77.26	84.31	592.05	0.95	213.39	40.65		
Existing Site Emissions		-	-		-			
Natural Gas Usage	3.57	49.23	19.69	0.00	0.09	0.09		
Architectural Coatings	4.41							
Mobile (Vehicle) Sources	83.77	95.48	875.58	0.65	143.43	27.30		
On-site Broilers	0.10	0.44	0.37	0.00	1.57	0.03		
Total Emissions	91.85	145.15	895.64	0.65	145.09	27.42		
Total Project Net Emissions	(14.59)	(60.84)	(303.59)	0.30	68.30	13.23		
SCAQMD Thresholds	55.00	55.00	550.00	150.00	150.00	55.00		
Significant Impact?	No	No	No	No	No	No		

	Total On-site Emissions (Pounds per Day)							
Emissions Source	NOx	CO	PM10	PM2.5				
Summertime Emissions								
Project Emissions								
Natural Gas Usage	20.09	8.03	0.04	0.04				
Landscape Maintenance Equipment	0.10	7.73	0.03	0.03				
Consumer Products								
Architectural Coatings								
Mobile (Vehicle) Sources	5.88	74.58	2.45	0.67				
Helicopters	0.05	0.17						
On-site Broilers	0.35	0.30	1.25	0.03				
Total Emissions	26.47	90.81	3.77	0.77				
Existing Site Emissions								
Natural Gas Usage	49.23	19.69	0.09	0.09				
Landscape Maintenance Equipment	0.07	6.41	0.02	0.02				
Architectural Coatings								
Mobile (Vehicle) Sources	10.06	105.70	1.70	0.44				
On-site Broilers	0.44	0.37	1.57	0.03				
Total Emissions	59.80	132.17	3.38	0.58				
Total Project Net Emissions	(33.33)	(41.36)	0.39	0.19				
SCAQMD Thresholds	95.63	1,350.82	2.95	1.77				
Significant Impact?	No	No	No	No				
Winte	ertime Emiss	sions						
Project Emissions								
Natural Gas Usage	20.09	8.03	0.04	0.04				
Consumer Products								
Architectural Coatings								
Mobile (Vehicle) Sources	6.84	93.51	2.45	0.67				
Helicopters	0.05	0.17						
On-site Broilers	0.35	0.30	1.25	0.03				
Total Emissions	27.33	102.01	3.74	0.74				
Existing Site Emissions								
Natural Gas Usage	49.23	19.69	0.09	0.09				
Architectural Coatings								
Mobile (Vehicle) Sources	11.69	138.42	1.70	0.44				
On-site Broilers	0.44	0.37	1.57	0.03				
Total Emissions	61.36	158. <b>4</b> 8	3.36	0.56				
Total Project Net Emissions	(34.03)	(56.47)	0.38	0.18				
SCAQMD Thresholds	95.63	1,350.82	2.95	1.77				
Significant Impact?	No	No	No	No				

Table 2Localized Estimated Daily Operational Emissions 2009 Conditions

	CO Concentrations in Parts per Million ^a							
	Roadw	ay Edge	25 feet		50 feet		100 feet	
Intersection	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Grand Ave. and Hollywood Freeway NB Ramps	4.0	2.9	3.6	2.6	3.5	2.5	3.3	2.4
Hope St./Hollywood Freeway SB Ramps and Temple St.	3.6	2.6	3.4	2.4	3.3	2.4	3.2	2.3
Figueroa St. and 3rd St.	4.1	3.0	3.7	2.7	3.6	2.6	3.4	2.5
Figueroa St. and 5th St./Harbor Freeway On-Ramps	4.1	3.0	3.7	2.7	3.6	2.6	3.5	2.5
Figueroa St. and 6th St./Harbor Freeway Off-Ramps	4.1	3.0	3.7	2.7	3.6	2.6	3.4	2.5
Alvarado St. and Wilshire Blvd.	3.6	2.6	3.4	2.5	3.3	2.4	3.2	2.4
Beaudry Ave. and Wilshire Blvd.	3.6	2.6	3.4	2.4	3.3	2.4	3.2	2.3
Francisco St. and Wilshire Blvd.	3.5	2.6	3.3	2.4	3.3	2.4	3.2	2.3
Figueroa St. and Wilshire Blvd.	4.2	3.0	3.7	2.7	3.6	2.6	3.4	2.5
Flower St. and Wilshire Blvd.	3.6	2.6	3.4	2.4	3.3	2.4	3.2	2.3
Bixel St. and 7th St.	3.6	2.6	3.3	2.4	3.3	2.4	3.2	2.3
Figueroa St. and 7th St.	3.8	2.7	3.5	2.5	3.4	2.5	3.3	2.4
Flower St. and 7th St.	3.6	2.6	3.4	2.5	3.3	2.4	3.2	2.4
Alameda St. and 7th St.	3.6	2.6	3.4	2.5	3.3	2.4	3.2	2.3
Soto St. and 7th St.	3.6	2.6	3.3	2.4	3.3	2.4	3.2	2.3
Bixel St./Harbor Freeway SB On-Ramp and 8th St.	3.7	2.7	3.4	2.5	3.3	2.4	3.2	2.3
Figueroa St. and 8th St.	3.5	2.6	3.4	2.5	3.3	2.4	3.2	2.4
Cherry St. and Pico Blvd.	3.6	2.6	3.4	2.5	3.3	2.4	3.2	2.3
Grand Ave. and 18th St.	3.4	2.5	3.3	2.4	3.2	2.4	3.2	2.3
Figueroa St. and Olympic Blvd.	3.7	2.7	3.5	2.5	3.4	2.5	3.3	2.4
Glendale Blvd. and Temple St.	4.4	3.2	3.9	2.8	3.7	2.7	3.5	2.5
Glendale Blvd./Lucas Ave. and 1st St./2nd St.	3.6	2.6	3.3	2.4	3.3	2.4	3.2	2.3
Lucas Ave. and 3rd St.	3.6	2.6	3.4	2.5	3.3	2.4	3.2	2.3
Lucas Ave. and 6th St.	3.6	2.6	3.3	2.4	3.3	2.4	3.2	2.3
Lucas Ave. and Wilshire Blvd.	3.7	2.7	3.4	2.5	3.3	2.4	3.2	2.4
a The national 1-hour CO ambient air quality standard is 35.0 ppm, and the state 1-hour CO ambient air quality standard is								

 Table 4

 Project Existing Conditions (2009) Localized Carbon Monoxide Concentrations

The national 1-hour CO ambient air quality standard is 35.0 ppm, and the state 1-hour CO ambient air quality standard is 20.0 ppm. National and state 8-hour standards are 9.0 parts per million.

Traffic Information Source: Provided by Thomas Properties Group and prepared by Gibson Transportation Consulting, Inc. via email February 9, 2010.

# **APPENDIX D**

Caltrans Letter, August 18, 2010

### STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY

DEPARTMENT OF TRANSPORTATION DISTRICT 7, OFFICE OF PUBLIC TRANSPORTATION AND REGIONAL PLANNING IGR/CEQA BRANCH 100 SOUTH MAIN STREET LOS ANGELES, CA 90012 PHONE (213) 897-6696 FAX (213) 897-1337





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August 18, 2010

IGR/CEQA DEIR CS/100704 City of Los Angeles Wilshire Grand Redevelopment Project Case No. ENV-2009-1577-EIR Vic. LA-110-22.66, SCH# 2009071035

Ms. Mariana Salazar City of Los Angeles Department of City Planning 200 N. Spring Street, Room 620 Los Angeles, CA 90012

Dear Ms. Salazar:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Draft Environmental Impact Report (DEIR) for the proposed Wilshire Grand Redevelopment Project. Based on the information received, we have the following comments:

The project includes redevelopment of an existing facility at 930 Wilshire Boulevard on a 3.2- acre site located in the Downtown district of the City of Los Angeles. The project includes demolition of the Wilshire Grand Hotel/Center, and the development of a maximum of 560 hotel rooms and/or condo-hotel units, 1,500,000 sq. ft of office, and 275,000 sq. ft of amenity areas.

The redeveloped site will be a grand-plaza style with two (65-story and 45-story) main structures. The project site is in a business district where several other large developments are underway, approved or planned. The site is surrounded by a network of four major freeways. The closest being the I-110, Harbor Freeway.

#### **Project Traffic Study:**

The scope of the study is a geographical area approximately 2.5 miles (north-south) by approximately 4 miles (eastwest) that includes facilities in the jurisdiction of the City and CALTRANS. The study analyzes 8 freeway segments (I-110) and 42 intersections including 7 freeway ramp locations. For the purpose of Caltrans review, the traffic analysis for the facilities under CALTRANS jurisdiction is further isolated and presented in a separate section -Appendix J of the DEIR.

#### CALTRANS ANALYSIS (Appendix J):

The analysis concludes that most freeway facilities (mainline & ramps) in the project vicinity which are currently running congested (LOS E thru F) during AM & PM peaks will continue to do so and worsen by the Wilshire Grand build -out in 2020. This is due to the increased traffic resulting from the ambient growth and other 90 plus related projects. Having concluded this, the analysis identifies a couple of feasible physical improvements (one being I-110 freeway segment in the immediate vicinity of the proposed project and the other a Grand Ave Off-ramp at NB US-101) that would help relieve some of the congestion.

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CALTRANS currently has an approved improvement project that includes construction of auxiliary lanes on the I-110 freeway (in both directions) from 0.18 mile south of the Washington Blvd. undercrossing to 0.2 mile north of Wilshire Blvd. overcrossing.

#### **Traffic Mitigation for State Highways:**

The developers of the project (DEIR PDF-5) have agreed to participate in CALTRANS' I-110 widening by offering a pro-rata share of \$1,950,000.

### **Comments:**

The I-110 widening (auxiliary lanes) project is underway and may be completed before build-out of the entire or part of the Wilshire Grand project. In that case the balance of the offered cost share may need to be transferred for the improvement at the Grand Ave. off-ramp at NB101.

We recommend that construction related truck trips on State Highways be limited to off-peak commute periods. Transport of over-size or over-weight vehicles on State Highways will need a Caltrans Transportation Permit. The contractor should agree to avoid platooning of truck trips on mainline freeways, on freeway ramps and at freeway ramp intersections.

If you have any questions regarding our comments, you may reach me at (213) 897-1726 and please refer to our record number 100704/CS.

Sincerely,

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Carl Shiigi IGR/CEQA Coordinator Office of Regional Planning

cc: Scott Morgan, State Clearinghouse