



## MEMORANDUM

**TO:** LSA Associates, Inc.

**FROM:** Jonathan Chambers, P.E.

**DATE:** September 30, 2014

**RE:** Analysis of Alley Access to  
Century City Center  
Century City, California

**Ref:** J1076

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Gibson Transportation Consulting, Inc. was asked to prepare this supplemental analysis of potential traffic and circulation impacts involving the existing alleyway that is adjacent to the Project Site for the proposed Century City Center Project (located to the east), based on comments and requests made during the Project's public hearing process.

The Los Angeles Department of Transportation (LADOT) does not require that unsignalized intersections be analyzed for potential impacts. Rather, according to *Traffic Study Policies and Procedures* (LADOT, August 2014), unsignalized intersections that are adjacent to a project or are integral to a project's site access and circulation plan should be identified. For these intersections, vehicular delay should be estimated using the *Highway Capacity Manual* (Transportation Research Board, 2010) (HCM) methodology. If any unsignalized intersection is projected to operate at LOS E or F under Future with Project conditions, then the intersection should be evaluated for the need to install a traffic signal by conducting a signal warrant analysis.

While LADOT provides no impact thresholds for unsignalized intersections, there are analysis criteria and impact thresholds identified in *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (City of Los Angeles, 2006) (L.A. CEQA Thresholds Guide). Similar to the LADOT guidelines, the L.A. CEQA Thresholds Guide requires that average vehicular delay be assessed using the HCM methodology to determine level of service (LOS).

If any intersection is found to operate at LOS C, D, E, or F, then additional analysis is conducted using the Critical Movement Analysis (CMA) methodology that LADOT prescribes for the analysis of signalized intersections, with a reduced intersection capacity of 1,200 vehicles per hour per lane to simulate stop-controlled conditions. The results of the CMA analysis are used to identify potential significant impacts using the same sliding scale that is used for signalized intersections according to LADOT criteria. In this scale, a project's maximum allowable increase in volume-to-capacity (V/C) ratio at an intersection decreases as the LOS worsens. For an intersection operating at LOS C under Future with Project conditions, a significant impact is identified if the V/C ratio increases by 0.040 or more. For intersections operating at LOS D under Future with Project conditions, a significant impact is identified if the V/C ratio increases by 0.020 or more. For intersections operating at LOS E or F under Future with Project conditions, a significant impact is identified if the V/C ratio

increases by 0.010 or more. There are no applicable requirements or thresholds to analyze queuing or queue lengths on alleyways.

This supplemental analysis was conducted of the unsignalized intersection of the alleyway forming the eastern border of the Project site & Constellation Boulevard. Afternoon peak hour traffic counts, provided in the Attachment, were conducted at this intersection in September 2013 and were used for this analysis. Because the alley provides access to several office buildings, and would also provide access to the Century City Center project (primarily an office building), traffic at this intersection is heavily skewed toward morning arrivals into the alley and afternoon departures out of the alley. Because turns from higher-volume, uncontrolled Constellation Boulevard to the low-volume alley are not substantially delayed while stop-controlled turns from the alley onto higher-volume Constellation Boulevard may experience delay, the afternoon peak hour represents the worst case operating condition for this intersection and it is unnecessary to conduct analysis of the morning peak hour.

It is important to note that this supplemental analysis conservatively uses worst-case vehicular delay to estimate LOS, though the L.A. CEQA Thresholds Guide specifies that the less-conservative average vehicular delay may be used to assess LOS for all unsignalized intersections. At two-way stop-controlled intersections such as the intersection of the alley & Constellation Boulevard, the worst-case delay is experienced by vehicles attempting to turn from the alley onto Constellation Boulevard. On the other hand, the average delay is weighted heavily by the larger number of vehicles travelling east and west on Constellation Boulevard, which experience no delay at all.

The supplemental analysis was conducted for years 2011, 2015, and 2021 for Alternative 9 (the Enhanced Retail Alternative), which was adopted by the City Planning Commission at its June 12, 2014 hearing. The analysis was conducted under “no Project” conditions and “with Project” conditions considering trip generation using the Empirical Rate, the Economy Adjustment Rate, and the Published Rates for Alternative 9 as provided in Section 3.1.1 of the Final Subsequent EIR. Further, for all “with Project” conditions, two possible Project access configurations were examined.

In the first configuration, as shown in Figure 1, the primary Project driveway on Constellation Boulevard (west of the alley) would operate as a full-access, signalized driveway allowing left and right-turns into and out of the Project site (Full Access Driveway). In the second configuration, as shown in Figure 2, the primary Project driveway would be restricted to right-turns in and out only via a physical median on Constellation Boulevard that would serve to restrict left turns to and from the Project driveway while maintaining full access to 2000 Avenue of the Stars on the south side of Constellation Boulevard (RIRO Driveway).

As detailed above, both the LADOT analysis for potential signalization of unsignalized intersections and the L.A. CEQA Thresholds Guide analysis for potential significant traffic impacts begin with an HCM analysis to calculate delay at the subject intersection. The HCM analysis was conducted for each of the scenarios described above and is summarized in Table 1.

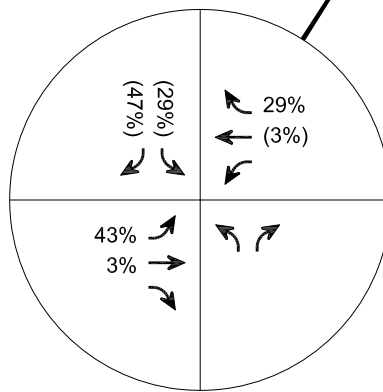
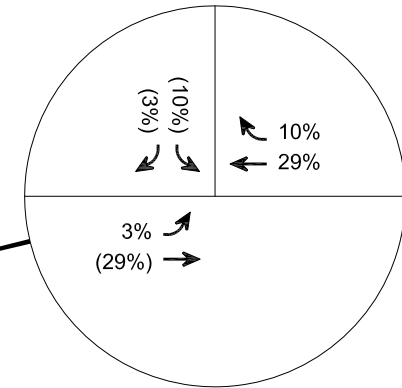
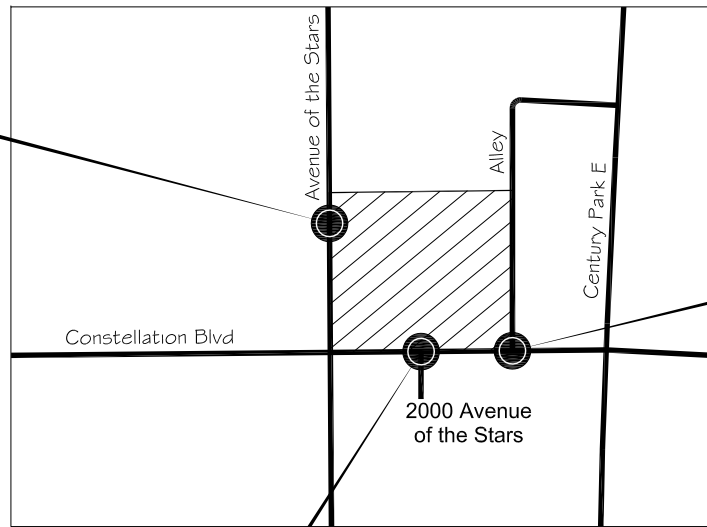
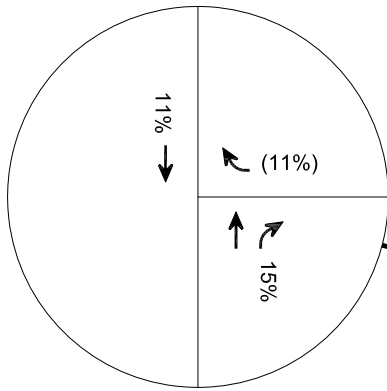
As shown in Table 1, under conditions without the Project, the intersection would operate at LOS B in years 2011, 2015, and 2021. With Alternative 9 in place, it would continue to operate at LOS B using the trip generation under the Empirical Rate or Economy Adjustment Rate in

year 2011 with the Full Access Driveway configuration. In all other analysis years and trip generation scenarios, as well as all scenarios involving the RIRO Driveway, the intersection would operate at LOS C with Alternative 9. It should be noted that if the LOS were based on less conservative average delay (see discussion above), the intersection would operate at LOS A using each trip generation rate and under each analysis year.

Based on the results, the worst-case operating LOS, with Alternative 9 in place, is projected to be LOS C. Based on LADOT guidelines, an unsignalized intersection should be further analyzed using signal warrants in the event that an unsignalized intersection is projected to operate at LOS E or F based on the HCM methodology. Since the intersection is projected to operate at LOS C, no further analysis is required to determine the need for signalization based on LADOT guidelines. The intersection does not require signalization pursuant to LADOT criteria.

The L.A. CEQA Thresholds Guide bases the need for further analysis of an unsignalized intersection on whether or not that intersection is projected to operate at LOS C, D, E, or F under Future with Project conditions *based on the peak hour average vehicular delay through the intersection*. Table 1 reports LOS based on the worst-case delay, which is a significantly more conservative metric as discussed above. Nonetheless, based on that conservative metric the intersection would operate at LOS C, which would require additional analysis of the intersection using the CMA methodology and applying LADOT's signalized intersection significant impact thresholds.

Table 2 summarizes the results of the intersection analysis using the CMA methodology with a reduced capacity of 1,200 vehicles per hour per lane to simulate stop-controlled conditions. As Table 2 shows, based on the CMA methodology, the intersection would operate at LOS A under all analysis scenarios – both the Full Access Driveway and RIRO Driveway configurations, each of the three trip generation rates, and under each analysis year. As described above, based on LADOT significant impact criteria, a project would not result in a significant intersection impact under the CMA methodology unless it operated at LOS C at a minimum. Since the intersection would operate at LOS A under the CMA methodology in the worst-case scenario with the addition of Alternative 9 traffic, no significant traffic impact would occur.

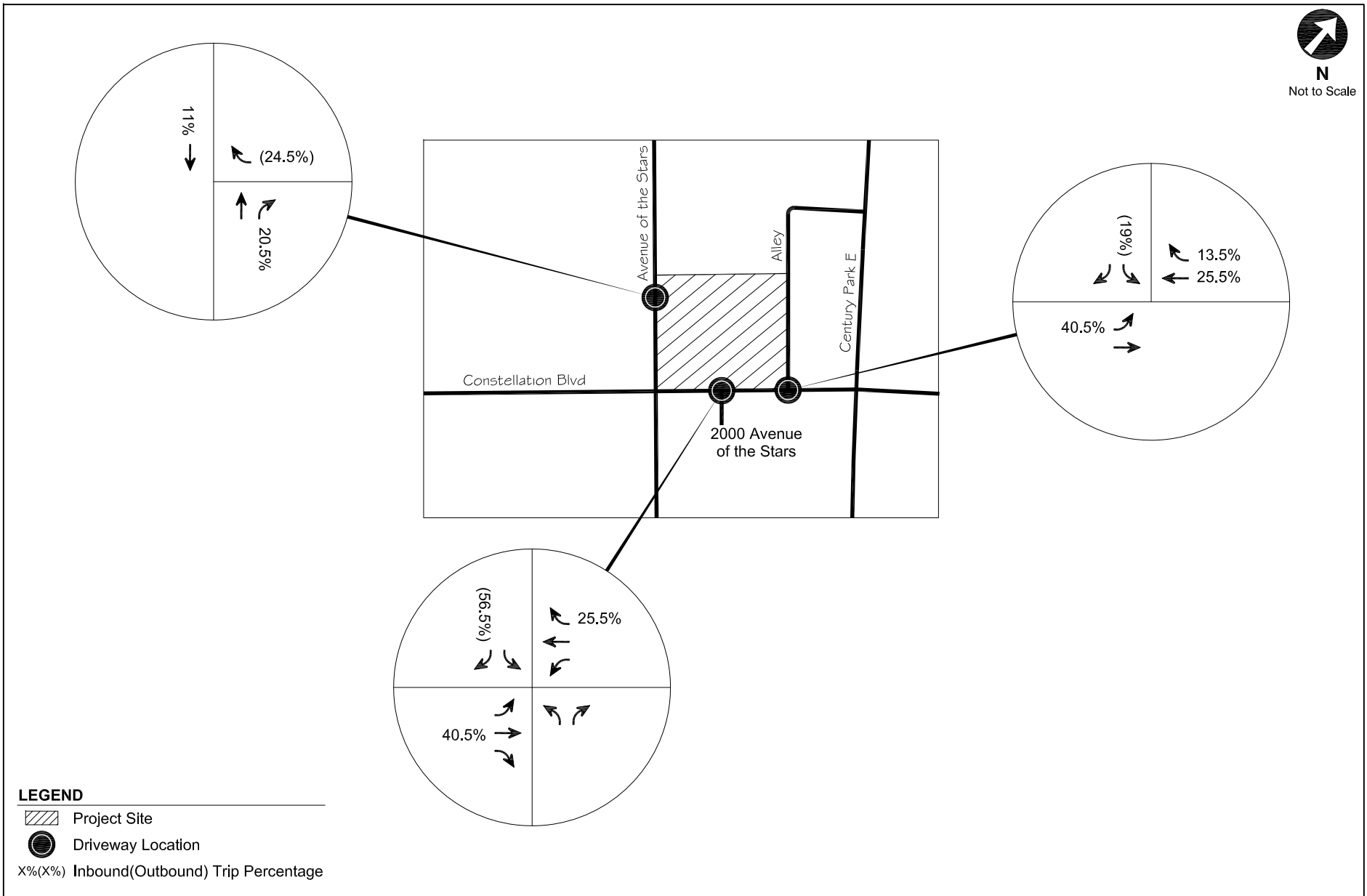


**LEGEND**

- Project Site
- Driveway Location
- X%(X%) Inbound(Outbound) Trip Percentage

**DRIVEWAY TRIP DISTRIBUTION  
WITH FULL ACCESS DRIVEWAY ON CONSTELLATION BOULEVARD**

**FIGURE  
1**



**DRIVEWAY TRIP DISTRIBUTION  
WITH RIGHT-IN, RIGHT-OUT DRIVEWAY ON CONSTELLATION BOULEVARD**

**FIGURE  
2**

**TABLE 1  
LEVEL OF SERVICE SUMMARY - ALLEY & CONSTELLATION BOULEVARD  
HIGHWAY CAPACITY MANUAL METHODOLOGY**

Analysis Scenario	Full-Access Driveway			Right-In, Right-Out Driveway		
	Year 2011	Year 2015	Year 2021	Year 2011	Year 2015	Year 2021
<b>No Project</b>						
<i>Average Delay</i>	4.1	4.1	4.0	4.1	4.1	4.0
<i>Worst-Case Delay</i>	12.7	12.8	13.0	12.7	12.8	13.0
[a] <i>Level of Service</i>	B	B	B	B	B	B
<b>Empirical Rates</b>						
<i>Average Delay</i>	4.7	4.7	4.7	5.8	5.8	5.8
<i>Worst-Case Delay</i>	14.8	15.0	15.4	16.0	16.3	16.8
[a] <i>Level of Service</i>	B	C	C	C	C	C
<b>Economy Adjustment</b>						
<i>Average Delay</i>	4.7	4.7	4.7	5.9	5.9	5.9
<i>Worst-Case Delay</i>	15.0	15.2	15.6	16.3	16.6	17.1
[a] <i>Level of Service</i>	B	C	C	C	C	C
<b>Published Rates</b>						
<i>Average Delay</i>	5.2	5.2	5.2	7.7	7.8	7.9
<i>Worst-Case Delay</i>	16.9	17.2	17.8	21.0	21.6	22.6
[a] <i>Level of Service</i>	C	C	C	C	C	C

[a] - Level of service is based on worst-case delay.

**TABLE 2**  
**LEVEL OF SERVICE SUMMARY - ALLEY & CONSTELLATION BOULEVARD**  
**CRITICAL MOVEMENT ANALYSIS METHODOLOGY**

Analysis Scenario	Full-Access Driveway			Right-In, Right-Out Driveway		
	Year 2011	Year 2015	Year 2021	Year 2011	Year 2015	Year 2021
<b>No Project</b>						
<i>V/C Ratio</i>	0.407	0.419	0.438	0.407	0.419	0.438
<i>Level of Service</i>	A	A	A	A	A	A
<b>Empirical Rates</b>						
<i>V/C Ratio</i>	0.483	0.495	0.514	0.459	0.472	0.491
<i>Level of Service</i>	A	A	A	A	A	A
<b>Economy Adjustment</b>						
<i>V/C Ratio</i>	0.487	0.499	0.518	0.462	0.474	0.493
<i>Level of Service</i>	A	A	A	A	A	A
<b>Published Rates</b>						
<i>V/C Ratio</i>	0.521	0.533	0.553	0.493	0.504	0.520
<i>Level of Service</i>	A	A	A	A	A	A

***Attachment***

***Afternoon Peak Hour Traffic Counts***



## INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.  
 PROJECT: CENTURY CITY TRAFFIC COUNTS  
 DATE: TUESDAY, SEPTEMBER 10, 2013  
 PERIOD: 3:00 PM TO 6:00 PM  
 INTERSECTION: N/S ALLEY WEST OF CENTURY PARK EAST  
 E/W CONSTELLATION BLVD  
 CITY: CENTURY CITY

15 MIN COUNTS													
PERIOD	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
300-315	10	0	14	2	58	0	0	0	0	0	75	8	167
315-330	13	0	13	3	41	0	0	0	0	0	82	3	155
330-345	22	0	8	2	50	0	0	0	0	0	98	2	182
345-400	13	0	12	5	65	0	0	0	0	0	86	9	190
400-415	33	0	13	1	43	0	0	0	0	0	126	8	224
415-430	24	0	17	2	36	0	0	0	0	0	86	7	172
430-445	45	0	28	5	49	0	0	0	0	0	93	6	226
445-500	49	0	30	4	52	0	0	0	0	0	95	5	235
500-515	71	0	11	5	62	0	0	0	0	0	105	4	258
515-530	51	0	9	3	65	0	0	0	0	0	95	4	227
530-545	51	0	10	3	45	0	0	0	0	0	90	3	202
545-600	40	0	4	1	44	0	0	0	0	0	90	2	181
HOUR TOTALS													
TIME	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTAL
300-400	58	0	47	12	214	0	0	0	0	0	341	22	694
315-415	81	0	46	11	199	0	0	0	0	0	392	22	751
330-430	92	0	50	10	194	0	0	0	0	0	396	26	768
345-445	115	0	70	13	193	0	0	0	0	0	391	30	812
400-500	151	0	88	12	180	0	0	0	0	0	400	26	857
415-515	189	0	86	16	199	0	0	0	0	0	379	22	891
430-530	216	0	78	17	228	0	0	0	0	0	388	19	946
445-545	222	0	60	15	224	0	0	0	0	0	385	16	922
500-600	213	0	34	12	216	0	0	0	0	0	380	13	868

