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

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

5000 Beethoven Street
DOT Case No. CTC15-103068

Date: January 11, 2018

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

From: Hamed Sandoghdar, Transportation Engineer
Department of Transportation

Subject: **ADDENDUM TO THE TRAFFIC ASSESSMENT FOR THE PROPOSED RESIDENTIAL PROJECT LOCATED AT 5000 BEETHOVEN STREET**

On June 30, 2016, the Department of Transportation (DOT) issued a traffic assessment report to the Department of City Planning (DCP) on the proposed residential/office project located at 5000 Beethoven Street. On October 19, 2017, DOT received a supplemental traffic impact review report, prepared by KOA Corporation for the revised proposed project. Under the revised project concept, the overall traffic trip generation intensity would be slightly lower than that of the original project proposal for PM , but slightly higher daily and AM, and as such, the supplemental review report summarily concludes that the traffic impact analysis findings of the original project proposal is sufficiently applicable to the revised project concept as well. After completing a review of the pertinent data provided in the supplemental report, DOT is providing this traffic impact assessment addendum to confirm it's concurrence with this finding.

PROJECT DESCRIPTION

Under the revised project proposal, the new land-use configuration would consist of the following uses and dimensions:

- 235 Units - Apartment

The proposed project replaces the original proposal of 175 apartment units and 18,000 square-feet (sf) of office floor space.

DISCUSSION AND FINDINGS

Trip Generation

Under the original development proposal, it was estimated that the project would potentially generate a net increase of 1,363 daily trips, a net increase of 117 AM peak hour trips and a net increase of 174 PM peak hour trips. Under the revised project proposal, the anticipated net change in daily, AM, and PM peak hour trips would be 1,569, 120, and 165 respectively. This corresponds to an effective net increase of 206 daily and 3 AM trips, but a net reduction of 9 net PM trips compared to the original project proposal analysis. A copy of the revised project study trip generation table (Table 5) is provided as **Attachment "AA"**.

Traffic Impact

As previously stated, the revised project proposal discussed in the October 19, 2017 supplemental traffic review report contains an overall traffic trip generation intensity that is fairly close to that of the original project proposal. Furthermore, the number of significantly impacted intersections has been reduced

from three in the original proposal to only one in the revised project. **(See Attachment "BB")**. As such, it is DOT's determination that the traffic impact assessment issued on June 30, 2016, provides sufficient consideration toward the potential impacts of this new proposal and the mitigation as proposed would reduce traffic impacts to a less than significant level, thus no additional traffic impact requirements are needed. A copy of the June 30, 2016 determination letter is provided as **Attachment "CC"** to this report.

If you have any questions, please contact me or Clive Grawe, of my staff, at (213) 485-1062.

HS:CG

Enclosure

c: Krista Kline, Council District No. 11
Sean Haeri, Mo Blorfroshan, Rudy Guevara, DOT
Kevin Azarmahan, BOE
Brian Marchetti, KOA Corporation

3. Project Traffic

This section defines the traffic that would be generated by the proposed Project.

3.1 Project Trip Generation

The trip rates and the associated traffic generation forecast for the proposed Project are provided in Table 5.

Table 5 – Project Trip Generation

Land Use	ITE Code	Intensity		Average Weekday	AM Peak Hour			PM Peak Hour [a]		
					In	Out	Total	In	Out	Total
Trip Generation Rates										
Apartments *	220	1	unit	6.65	20%	80%	0.51	65%	35%	0.70
Estimated Trips										
Apartments *	220	236	unit	1,569	24	96	120	107	58	165
Total				**1,569**	**24**	**96**	**120**	**107**	**58**	**165**

Source: ITE, 9th Edition

[a] PM peak hour trip rates obtained from the City of Los Angeles Coastal Transportation Corridor Specific Plan Appendix A.

** Local Serving Uses*

The proposed project is projected to generate approximately 1,569 weekday daily trips, including 120 trips during the a.m. peak hour (24 inbound trips and 96 outbound trips) and 165 trips during the p.m. peak hour (107 inbound trips and 58 outbound trips).

3.2 Project Trip Distribution

Trip distribution is the process of assigning the directions from which traffic will access a project site. Trip distribution is dependent upon the land use characteristics of the project, the local roadway network, and the general locations of other land uses to which project trips would originate or terminate.

Figure 7 illustrates the intersection trip distribution percentages that were applied to the Project trip generation.

3.3 Project Trip Assignment

Based on the trip generation and distribution assumptions described above, Project traffic was assigned to the roadway system based on site driveway locations and the roadways that would likely be used to access the regional highway system.

Figures 8 and 9 illustrate the assigned project trips for the weekday a.m. and p.m. peak hours, respectively.

The proposed Project is anticipated to have significant traffic impact at the intersection of Centinela Avenue-Inglewood Boulevard and Jefferson Boulevard under the analyzed existing with-Project traffic conditions. Recommended mitigation measures are discussed in the next sub-section.

7.3 Project Traffic Impacts – Future 2020 with Project Conditions

Table 11 provides a summary of the future 2020 with-Project V/C and LOS values. Traffic impacts created by the Project are determined by comparing the future without-Project conditions to the future with-Project conditions.

Table 11 – Assessment of Project Impacts Based on Future Conditions (Year 2020)

	Study Intersections	Peak Hour	Existing 2017 Conditions		Future 2020 No Project		Future 2020 With Project		Change in V/C	Sig Impact?
			V/C	LOS	V/C	LOS	V/C	LOS		
1	Centinela Avenue & SR-90 WB Off-Ramp	AM	0.526	A	0.572	A	0.572	A	0.000	No
		PM	0.467	A	0.515	A	0.519	A	0.004	No
2	Centinela Avenue & SR-90 EB Ramps	AM	0.570	A	0.631	B	0.633	B	0.002	No
		PM	0.452	A	0.523	A	0.529	A	0.006	No
3	Lincoln Boulevard & Jefferson Boulevard	AM	0.899	D	0.954	**E**	0.959	**E**	0.005	No
		PM	0.685	B	0.768	C	0.780	C	0.012	No
4	Alla Road & Jefferson Boulevard	AM	0.484	A	0.533	A	0.540	A	0.007	No
		PM	0.603	B	0.686	B	0.691	B	0.005	No
5	Beethoven Street & Jefferson Boulevard	AM	0.345	A	0.411	A	0.452	A	0.041	No
		PM	0.403	A	0.479	A	0.539	A	0.060	No
6	McConnell Avenue & Jefferson Boulevard	AM	0.379	A	0.417	A	0.421	A	0.004	No
		PM	0.361	A	0.410	A	0.426	A	0.016	No
7	Centinela Avenue / Campus Ctr. Drive & Jefferson Boulevard	AM	0.885	D	0.989	**E**	0.995	**E**	0.006	No
		PM	0.604	B	0.708	C	0.725	C	0.017	No
8	Centinela Avenue / Inglewood Boulevard & Jefferson Boulevard	AM	0.992	**E**	1.133	**F**	1.144	**F**	0.011	**Yes**
		PM	1.105	**F**	1.243	**F**	1.249	**F**	0.006	No
9	I-405 SB Ramps & Jefferson Boulevard	AM	0.760	C	0.899	D	0.907	**E**	0.008	No
		PM	0.611	B	0.738	C	0.746	C	0.008	No
10	I-405 NB Ramps & Jefferson Boulevard	AM	1.037	**F**	1.100	**F**	1.107	**F**	0.007	No
		PM	1.181	**F**	1.256	**F**	1.260	**F**	0.004	No

LOS = Level of Service

V/C = Volume-to-Capacity Ratio

The proposed Project is anticipated to have significant traffic impact at the intersection of Centinela Avenue-Inglewood Boulevard and Jefferson Boulevard under the analyzed future 2020 with project traffic conditions. Recommended mitigation measures are discussed in the next sub-section.

7.4 Recommended Mitigation Measures

The Project applicant has proposed to implement a Transportation Demand Management and Monitoring Program (TDMMP) to help reduce vehicle trips to and from the Project site. The details of the Program are provided below, to be developed in more detail and separately from this traffic report, in concert with LADOT, to provide potential conditions including monitoring of trips after Project opening.

Attachment CC

CITY OF LOS ANGELES

INTER-DEPARTMENTAL MEMORANDUM

5000 Beethoven Street
DOT Case No. CTC15-103068

DATE: June 30, 2016

TO: Karen Hoo, City Planner
Department of City Planning

FROM: Eddie Guerrero, Transportation Engineer
Department of Transportation

SUBJECT: **TRAFFIC IMPACT ASSESSMENT FOR THE PROPOSED MIXED-USE RESIDENTIAL/OFFICE PROJECT TO BE LOCATED AT 5000 BEETHOVEN STREET**

Pursuant to the Coastal Transportation Corridor Specific Plan (CTCSP), Ordinance No. 168,999, the Department of Transportation (DOT) has completed the traffic assessment of the proposed Mixed-Use Residential/Office Project, to be located at 5000 Beethoven Street. This traffic assessment is based on the traffic impact analysis report prepared by the LOA Corporation, dated May 19, 2016 and subsequent report revisions through June 2016. After a review of the pertinent data, DOT has determined that the traffic study adequately describes the project-related impacts of the proposed development.

PROJECT DESCRIPTION

The project would construct a mixed-use development consisting of 175 apartment units and 18,000 square-feet (sf) of office floor space. Vehicular access to the Project will be provided via the construction of a new bridge over the Centinela Creek that connects the project site to the current northern terminus of Beethoven Street south of the creek. Full buildout of the project is anticipated to be completed by the year 2019.

DISCUSSION AND FINDINGS

Trip Generation

The proposed project is estimated to generate a net increase of 1,363 daily trips, a net increase of 117 A.M. peak hour trips and, a net increase of 174 P.M. peak hour trips. The trip generation rates are based upon Appendix "A" of the CTCSP and formulas published by the Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition, 2012. A copy of the project study trip generation table (Table 5) is provided as **Attachment "A"** to this report.

Traffic Impacts

Based on DOT's traffic impact criteria[1], the proposed project is expected to impose a significant level impact at three (3) of the eight study intersections that were identified for analysis. A copy of the project study intersection capacity and level-of-service (LOS) analysis summary tables (Table 10 and 11) is provided as **Attachment "B"** to this report. The project also conducted a traffic signal warrant analysis at the un-signalized intersection of Beethoven Street & Coral Tree Place, which is the nearest controlled

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

intersection to the project. Based on the minimum volume thresholds defined in the Manual of Uniform Traffic Control Devices (MUTCD), the combination of existing and forecasted project trips does not meet the minimum threshold for consideration of signalization. A copy of the study report warrant analysis (Appendix E) is provided as **Attachment "C"** to this report.

Impact Mitigation

In response to the potential traffic impacts discussed above, the project is proposing the implementation of a Transportation Demand Management and Monitoring Program (TDM&MP) as mitigation. The TDM&MP would include a vehicle trip cap equivalent to a 20% reduction in the forecasted project trips in order to achieve full mitigation. Additional discussion of the proposed TDM&MP is provided in the recommended Project Requirements discussion below.

Congestion Management Program (CMP)

A review of the proposed project's trip generation estimates, as referenced previously and included as Attachment "A" to this report, indicates that it is expected to result in a total of 117 net new trips during the A.M. peak hour, and a total of 174 net new trips during the P.M. peak hour. As indicated in the study report, the nearest CMP monitoring stations are at the intersections of Lincoln & Manchester and Lincoln & State Route 90 Expressway, located approximately 1.5 miles from the project site. Based on the defined project trip generation, and the distance of these locations from the project site, potential project trips at each of these locations is projected to be well below the 50-trip threshold that the CMP requires for intersection analysis during the AM and PM peak hours. The nearest freeway monitoring station is located on Interstate 405 east of Venice Boulevard, which is 2.2 miles from the project site. The A.M. peak hour projected trips does not meet the CMP 150-trips threshold required for freeway analysis and the P.M. peak hour project trips is only 24 trips above the 150-trips threshold and thus, the anticipated distribution of project trips for this analysis is expected to be well below the required threshold as well. Therefore, no further analysis of potential CMP impacts is required.

Freeway Screening Analysis

To comply with the Freeway Analysis Agreement executed between Caltrans and LADOT in October 2013, the study also included a screening analysis to determine if additional evaluation of freeway mainline and ramp segments was necessary. Exceeding one of the four screening criteria would require the applicant to work directly with Caltrans to prepare a more detailed freeway analysis. However, the project did not meet or exceed any of the four thresholds defined in the agreement; therefore, no additional freeway analysis is deemed required at this time. A copy of the project freeway screening analysis discussion (Traffic Study – Memorandum of Understanding (MOU), Attachment E) is provided as **Attachment "D"** to this report.

PROJECT REQUIREMENTS

In response to the findings of the traffic study, DOT recommends that the following project requirements be adopted as conditions of project approval.

A. Covenant and Agreement

Pursuant to Section 5.B of the CTCSP, the owner(s) of the property must sign and record a Covenant and Agreement prior to issuance of any building permit, acknowledging the contents and limitations of this Specific Plan in a form designed to run with the land.

B. Transportation Demand Management Plan

In response to the unavailability of physical improvements to mitigate the impacts identified in the study report, the project has proposed the implementation of a Transportation Demand

Management and Monitoring Program (TDM&MP) as in-lieu mitigation. In addition to the TDM strategies discussed below, the project shall, at a minimum, implement the following measure:

1. Implement a bike/pedestrian bridge across Ballona Creek that connects the project site to the existing Ballona Creek bike path if feasible and if the State, County and or private Owner of connecting northern link, not under control of the owner, grants a connecting easement.

The TDM Plan could also include, but is not limited to, the following trip reduction strategies:

- Provide a dedicated shuttle service
- Provide and internal Transportation Management Coordination Program with on-site transportation coordinator;
- Design the project to ensure a bicycle, pedestrian and transit friendly environment;
- Provide rideshare program and support for project employees and tenants;
- Allow for subsidized transit passes for eligible project employees and tenants;
- Coordinate with DOT to determine if the site would be eligible for one or more of the services to be provided by the future Mobility Hubs program (secure bike parking, bike share kiosks, and car-share parking spaces);
- Provide on-site transit routing and schedule information;
- Provide a program to discount transit passes for residents / employees possibly through negotiated bulk purchasing of passes with transit providers;
- Contribute a one-time fixed fee into the City's Bicycle Plan Trust Fund to implement bicycle improvements with the area on the proposed project. Amount of the fee to be determined in consultation with DOT and Council District 11 staff.
- Guaranteed Ride Home Program

Additionally, in order to verify that the 20% project trips reduction, needed to attain full mitigation, is being achieved, the project shall also provide a trip cap monitoring program. As noted in the traffic study report, the project A.M. peak trips is forecasted to be 117 and the P.M. peak hour trips is forecasted to be 174. **Therefore, the trip cap threshold for both the a.m. and p.m. peak hours shall be 94 and 139 trips respectively.**

The measurement of actual trips and monitoring shall be conducted using an automated detection and surveillance monitoring system. In addition to providing hourly vehicular count tabulations, the monitoring system shall also be designed in a manner that will permit direct data access to DOT staff. The installation and maintenance of the monitoring system shall be at the Project's expense. The monitoring program shall continue until such time that the Project has shown, for five consecutive years, at a minimum of 85% occupancy, achievement of the peak hour trip volume requirements as listed. Should the review show that the peak hour trip cap threshold has been exceeded, the project shall be subject to a penalty program, to be developed in consultation with LADOT.

A full detailed description of the TDM&MP, and all subsequent TDMMP reporting, should be prepared by a licensed Traffic Engineer and submitted to DOT for review. The TDMMP Plan should be submitted to DOT and the Department of City Planning for review and approval, prior to the issuance of any certificate of occupancy.

To the extent possible, the TDM Program should also include opportunities for coordination with the project adjacent Playa Vista and Howard Hughes Center Transportation Management Organizations (TMO's).

C. **Parking Requirements**
The applicant should check with the Department of Building and Safety on the number of Code-required parking spaces needed for the project.

D. **Construction Impacts**
DOT recommends that a construction work site traffic control plan be submitted to DOT's Western District Office for review and approval prior to the start of any construction work. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that construction related traffic be restricted to off-peak hours.

E. **Site Access and Internal Circulation**
This determination does not include approval of the project driveways internal circulation and parking scheme. The applicant is advised to consult with DOT for driveway locations and specifications prior to the commencement of any architectural plans, as they may affect building design. Final DOT approval shall be obtained prior to issuance of any building permits. This should be accomplished by submitting detailed site/driveway plans, at a scale of at least 1" = 40', separately to DOT's WLA/Coastal Development Review Section at 7166 West Manchester Avenue, Los Angeles 90045 prior to submittal of building plans for plan check to the Department of Building and Safety. In order to minimize and prevent last minute building design changes, the applicant should contact DOT, prior to the commencement of building or parking layout design efforts so that such traffic flow considerations are designed and incorporated early into the building and parking layout plans.

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

Pursuant to Section 9.A of the CTCSP, an applicant or any other interested person adversely affected by the modified project who disputes any determination made by DOT pursuant to this Ordinance may appeal to the General Manager of DOT. This appeal must be filed within a 15 day period following the applicant's receipt date of this letter of determination. The appeal shall set forth specifically the basis of the appeal and the reasons why the determination should be reversed or modified.

If you have any questions, please contact Pedro Ayala at the DOT West L.A. Planning Office at (213) 485-1062.

EG:PA

Attachments

cc: Ezra Gale, Eleventh Council District
Sean Haeri, Mohammad Blorfroshan, DOT
David Weintraub, DCP
Mike Patonai, BOE
Brian Marchetti, KOA Corporation

3. Project Traffic

This section defines the traffic that would be generated by the proposed Project.

3.1 Project Trip Generation

The trip rates and the associated traffic generation forecast for the proposed Project are provided in Table 5.

Table 5 – Project Trip Generation

Land Use	ITE Code	Intensity		Average Weekday	AM Peak Hour			PM Peak Hour [a]		
					In	Out	Total	In	Out	Total
Trip Generation Rates										
Apartments *	220	1	unit	6.65	20%	80%	0.51	65%	35%	0.70
Office *	710	1	k.s.f.	11.03	88%	12%	1.56	17%	83%	2.80
Estimated Trips										
Apartments *	220	175	unit	1,164	18	71	89	80	43	123
Office *	710	18.100	k.s.f.	200	25	3	28	9	42	51
Grand Total				1,363	43	74	117	89	85	174

Source: ITE, 9th Edition

[a] PM peak hour trip rates obtained from the City of Los Angeles Coastal Transportation Corridor Specific Plan Appendix A.

* Local Serving Uses

The proposed project is projected to generate approximately 1,363 weekday daily trips, including 117 trips during the a.m. peak hour and 174 trips during the p.m. peak hour.

7. Project Traffic Impacts and Mitigation Measures

7.1 Determination of Traffic Impacts

Traffic impacts are identified if a proposed development will result in a significant change in traffic conditions at a study intersection. A significant impact is typically identified if project-related traffic will cause service levels to deteriorate beyond a threshold limit specified by the overseeing agency. Impacts can also be significant if an intersection is already operating below an acceptable level of service and project related traffic will worsen conditions within the specified threshold range.

The City of Los Angeles Department of Transportation has established specific thresholds for project-related increases in the volume-to-capacity ratio (V/C) of signalized study intersections. The following increases in peak-hour V/C ratios are considered significant impacts:

Level of Service	Final V/C*	Project Related v/c increase
C	< 0.70 – 0.80	Equal to or greater than 0.040
D	< 0.80 – 0.90	Equal to or greater than 0.020
E and F	0.90 or more	Equal to or greater than 0.010

Note: Final V/C is the V/C ratio at an intersection, considering impacts from the project, ambient growth, trips from area/cumulative projects, but without proposed traffic impact mitigations.

7.2 Project Traffic Impacts – Existing with Project Conditions

A summary of the existing and existing with-Project V/C and LOS values is provided by Table 10. Traffic impacts created by the proposed Project are determined by comparing the existing conditions to the existing with-Project conditions.

Table 10 – Assessment of Project Impacts Based on Existing Conditions

	Study Intersections	Peak Hour	Existing 2015 Conditions		Existing 2015 + Project		Change in V/C	Sig Impact?
			V/C	LOS	V/C	LOS		
1	Lincoln Boulevard & Jefferson Boulevard	AM	0.835	D	0.840	D	0.005	No
		PM	0.637	B	0.643	B	0.006	No
2	Beethoven Street & Jefferson Boulevard	AM	0.346	A	0.371	A	0.025	No
		PM	0.351	A	0.413	A	0.062	No
3	Centinela Avenue & SR-90 WB Off-Ramp	AM	0.466	A	0.467	A	0.001	No
		PM	0.454	A	0.454	A	0.000	No
4	Centinela Avenue & SR-90 EB Ramps	AM	0.428	A	0.434	A	0.006	No
		PM	0.457	A	0.464	A	0.007	No
5	Centinela Avenue-Campus Center Drive & Jefferson Boulevard	AM	0.659	B	0.669	B	0.010	No
		PM	0.621	B	0.637	B	0.016	No
6	Centinela Avenue-Inglewood Boulevard & Jefferson Boulevard	AM	0.783	C	0.790	C	0.007	No
		PM	0.663	B	0.675	B	0.012	No
7	Jefferson Boulevard at Freeway I-405 SB on and off Ramps	AM	0.632	B	0.643	B	0.011	No
		PM	0.559	A	0.568	A	0.009	No
8	Jefferson Boulevard at Freeway I-405 NB on and off Ramps	AM	1.013	F	1.018	F	0.005	No
		PM	0.938	E	0.944	E	0.006	No

LOS = Level of Service

V/C = Volume-to-Capacity Ratio

The proposed Project is not anticipated to create significant traffic impacts at any of the study intersections under the analyzed existing with-Project traffic conditions scenario.

7.3 Project Traffic Impacts – Future 2019 with Project Conditions

Table 11 provides a summary of the future 2019 with-Project V/C and LOS values. Traffic impacts created by the Project are determined by comparing the future without-Project conditions to the future with-Project conditions.

Table 11 – Assessment of Project Impacts Based on Future Conditions (Year 2019)

	Study Intersections	Peak Hour	Existing 2015 Conditions		Future 2019 No Project		Future 2019 With Project		Change in V/C	Sig Impact?
			V/C	LOS	V/C	LOS	V/C	LOS		
1	Lincoln Boulevard & Jefferson Boulevard	AM	0.835	D	1.059	F	1.065	F	0.006	No
		PM	0.637	B	0.803	D	0.813	D	0.010	No
2	Beethoven Street & Jefferson Boulevard	AM	0.346	A	0.469	A	0.504	A	0.035	No
		PM	0.351	A	0.477	A	0.538	A	0.061	No
3	Centinela Avenue & SR-90 WB Off-Ramp	AM	0.466	A	0.613	B	0.614	B	0.001	No
		PM	0.454	A	0.572	A	0.575	A	0.003	No
4	Centinela Avenue & SR-90 EB Ramps	AM	0.428	A	0.617	B	0.620	B	0.003	No
		PM	0.457	A	0.680	B	0.686	B	0.006	No
5	Centinela Avenue-Campus Center Drive & Jefferson Boulevard	AM	0.659	B	0.836	D	0.846	D	0.010	No
		PM	0.621	B	0.885	D	0.901	E	0.016	Yes
6	Centinela Avenue-Inglewood Boulevard & Jefferson Boulevard	AM	0.783	C	1.146	F	1.154	F	0.008	No
		PM	0.663	B	1.075	F	1.086	F	0.011	Yes
7	Jefferson Boulevard at Freeway I-405 SB on and off Ramps	AM	0.632	B	0.956	E	0.967	E	0.011	Yes
		PM	0.559	A	0.794	C	0.803	D	0.009	No
8	Jefferson Boulevard at Freeway I-405 NB on and off Ramps	AM	1.013	F	1.129	F	1.134	F	0.005	No
		PM	0.938	E	1.094	F	1.100	F	0.006	No

LOS = Level of Service

V/C = Volume-to-Capacity Ratio

The proposed Project is anticipated to have a significant traffic impact at three of the eight study intersections under analyzed future post-Project conditions. These three intersections are as follows:

- Centinela Avenue-Campus Center Drive & Jefferson Boulevard
- Centinela Avenue-Inglewood Boulevard & Jefferson Boulevard
- Jefferson Boulevard at Freeway I-405 SB on and off Ramps

WARRANT 3 - Peak Hour **SATISFIED** YES ☐ NO ☒
(Part A or Part B must be satisfied)

PART A **SATISFIED** YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1	The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	YES ☐ NO ☒ *7.7 seconds in delay & 0 vehicle-hours of delay*
2	The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	YES ☒ NO ☐
3	The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES ☐ NO ☒

PART B **SATISFIED** YES ☐ NO ☒

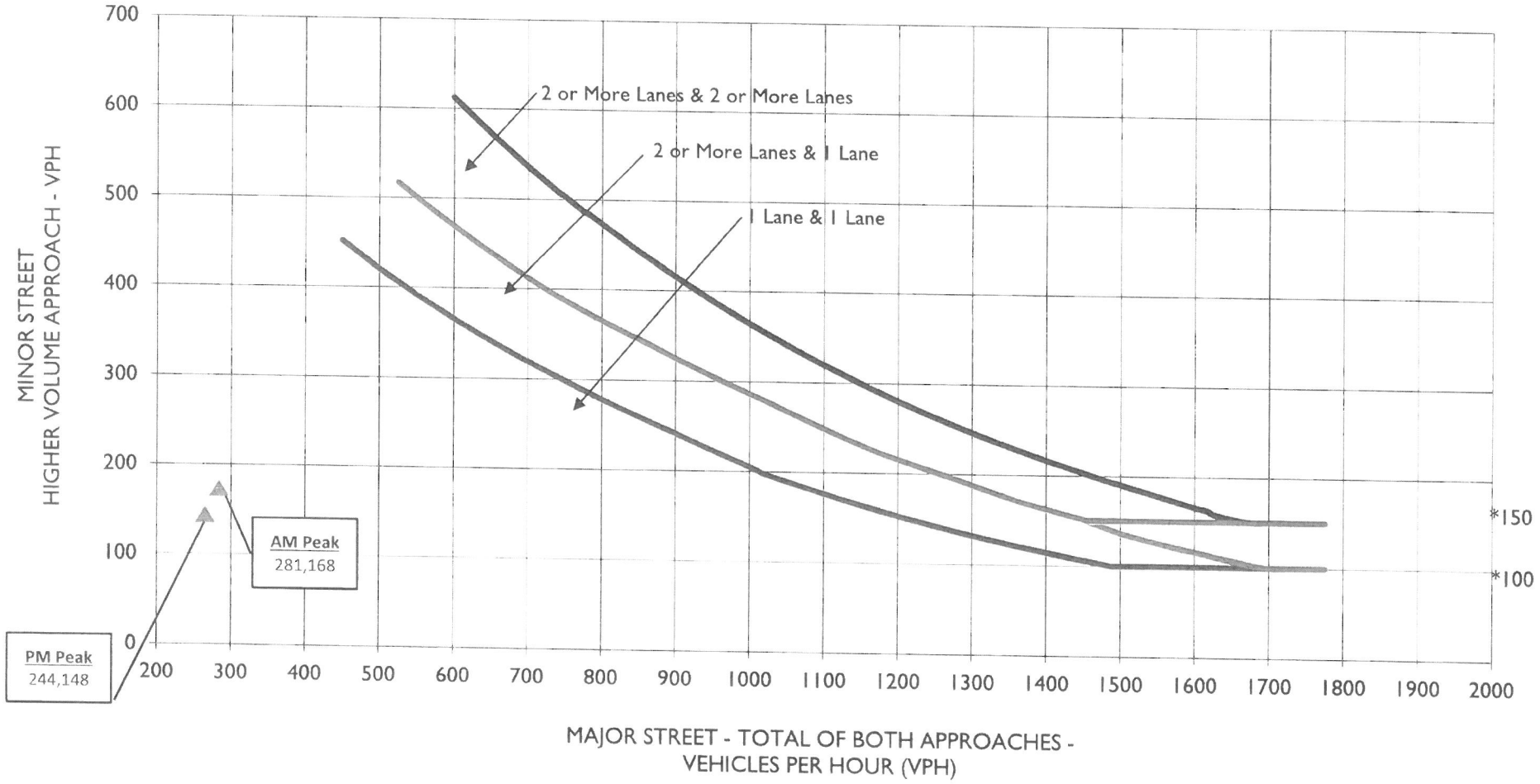
APPROACH LANES	One	2 or More	*am peak*	*pm peak*
Both Approaches - Major Street		x	281	244
Higher Approach - Minor Street	x		148	168

The plotted point falls above the curve in Figure 4C-3.	YES ☐ NO ☒
OR, The plotted point falls above the curve in Figure 4C-4.	YES ☐ NO ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

KOA CORPORATION
PLANNING & ENGINEERING

Figure 4C-3 Warrant 3
Beethoven Street and Coral Tree Place
AM (PM) Peak hour Traffic Signal Warrant Based on California Manual on Uniform Traffic Control Devices, 2014
Future post-Project Conditions



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

LEGEND
▲ Beethoven Street (1 Lane Major Street): VPH
Coral Tree Place (1 Lane Minor Street): VPH

Peak Hour Volumes Satify Warrants? NO

ATTACHMENT E

Initial Freeway Impact Analysis Screening

Location	Peak Hour	Project Trips		Freeway Mainline Capacity [a]		Caltrans Criteria for Impact Analysis [b]		Freeway Impact Analysis Required?
		NB/WB	SB/EB	NB/WB	SB/EB	NB/WB	SB/EB	
I-405 Freeway,	AM	11	6	10,000	10,000	100	100	NO
north of Jefferson Boulevard	PM	13	13	10,000	10,000	100	100	NO
I-405 Freeway,	AM	6	11	10,000	10,000	100	100	NO
south of Centinela Avenue	PM	13	13	10,000	10,000	100	100	NO
SR-90 Freeway,	AM	4	7	6,000	6,000	60	60	NO
east of Centinela Avenue	PM	9	9	6,000	6,000	60	60	NO

NB = northbound, WB = westboud, SB = southbound, EB = eastbound

[a] The freeway capacity is 2,000 vehicles per hour per lane.

[b] A 1% or more increase to the freeway mainline capacity for a freeway segment operating at LOS E or F would require a freeway impact analysis.

Location	Peak Hour	Project Trips	Freeway Off- Ramp Capacity [a]	Caltrans 1% Criteria for Impact Analysis [b]	Caltrans 2% Criteria for Impact Analysis [c]	Off-Ramp Impact Analysis Required?
I-405 Freeway Southbound	AM	6	1,500	15	30	NO
Off-Ramp at Jefferson Boulevard	PM	13	1,500	15	30	NO
I-405 Freeway Northbound	AM	6	1,500	15	30	NO
Off-Ramp at Jefferson Boulevard	PM	13	1,500	15	30	NO
SR-90 Freeway Westbound	AM	4	1,500	15	30	NO
Off-Ramp at Centinela Avenue	PM	9	1,500	15	30	NO

[a] The freeway off-ramp capacity is 1,500 vehicles per hour per lane.

[b] A 1% or more increase to the capacity of a freeway off-ramp operating at LOS E or F would require a freeway impact analysis.

[c] A 2% or more increase to the capacity of a freeway off-ramp operating at LOS D would require a freeway impact analysis.