

ATTACHMENT K
TRIP GENERATION ASSESSMENT

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January 2, 2024

Mr. Jeff Reese
C.J. Segerstrom & Sons
3315 Fairview Road
Costa Mesa, CA 92626

LLG Reference: 2.23.4762.1

**Subject: Trip Generation Assessment for the Proposed
South Coast Technology Center Project
Santa Ana, California**

Dear Mr. Reese:

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit this Trip Generation Assessment for the proposed South Coast Technology Center Project (herein after referred to as Project) to be located at 3100 – 3120 West Lake Center Drive in the City of Santa Ana. The Project site is situated on both the southwest and southeast quadrants of Susan Street and West Lake Center Drive. The westerly portion of the Project site is currently vacant and the easterly portion of the Project site is currently occupied with three (3) office buildings that will be razed and redeveloped with three (3) industrial buildings on both sites.

This letter summarizes the traffic generation forecast potential for the proposed Project. Additionally, it estimates the trip generation of the prior uses trip-making potential, and further makes a comparison between the proposed Project and the prior uses.

PROJECT DESCRIPTION

The Project site is currently developed with a combination of a vacant lot and three (3) office buildings totaling 178,026 square feet (SF) that will be razed and redeveloped with three (3) industrial (manufacturing) buildings totaling 325,044 SF. Access for the proposed Project will be provided via four (4) driveways along Lake Center Drive and three (3) driveways along Susan Street.

The proposed Project will demolish all three (3) existing office buildings on the southeast quadrant of the site and construct three (3) new industrial buildings on both sides of Susan Street that will be a combination of manufacturing and warehousing

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uses within each building. **Table 1** presents the project development summary for both the existing and proposed uses.

Figure 1, located at the rear of this letter report, presents a Vicinity Map, which illustrates the general location of the project and the surrounding street system. **Figure 2** presents the existing site aerial and **Figure 3** presents the proposed Project site plan prepared by DRA Architects.

PROJECT TRIP GENERATION ASSESSMENT

Trip Generation forecast

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation factors and/or equations used in this traffic analysis are based on information found in the 11th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington, D.C., 2021].

Table 2 presents the ITE rates used in forecasting the vehicular trips. Based on review of the Project description, the trip generation potential of the existing use was forecast using ITE Land Use Code 710: *General Office Building* and ITE Land Use Code 140: *Manufacturing* trip rates were used for the proposed Project.

The upper portion of **Table 2** presents the trip rates used for the existing and proposed uses. Review of the middle portion of **Table 2** shows the trip generation potential for the existing land use totals 1,930 daily trips, with 271 trips (238 inbound, 33 outbound) during the AM peak hour and 256 trips (44 inbound, 212 outbound) during the PM peak hour. A review of the lower portion of **Table 2** shows the gross trip generation forecast for the proposed Project, which totals 1,544 gross daily trips, with 222 gross trips (169 inbound, 53 outbound) during the AM peak hour and 242 gross trips (76 inbound, 166 outbound) during the PM peak hour. Furthermore, the lower half of **Table 2**, below the gross Project trip generation forecast, shows the passenger car equivalent (PCE) trip generation forecast for the proposed Project, which totals 1,960 PCE daily trips, with 279 PCE trips (215 inbound, 64 outbound) during the AM peak hour and PCE 306 trips (96 inbound, 210 outbound) during the PM peak hour. It should be noted that lower portion of **Table 2** also summarizes the vehicular trips (autos and trucks) generated by the proposed manufacturing Project using recommended factors published in the Truck Trip Generation Study – City of Fontana, August 2003. Consistent with standard traffic engineering practice, passenger car equivalent (PCE) factors have been utilized due to the expected heavy truck component of the Project uses. A PCE factor of 1.5, 2.0, and 3.0 has been applied to large 2-axle, 3-axle, and 4+-axle trucks, respectively.



Lastly as shown in the bottom of *Table 2*, a comparison of the gross trips generated by the proposed Project to the trips generated by the existing use shows that the proposed Project would generate 386 fewer gross daily trips, 49 fewer gross AM peak hour trips and 14 fewer gross PM peak hour trips. In addition, a comparison of the passenger car equivalent (PCE) trips generated by the proposed Project to the trips generated by the existing use shows that the proposed Project would generate 30 greater PCE daily trips, 8 greater PCE AM peak hour trips and 50 greater gross PM peak hour trips.

PROJECT TRIP DISTRIBUTION ASSESSMENT

The Project distribution pattern will consist of travel north and south along Susan Street as well as east and west along Lake Center Drive to access Harbor Boulevard and MacArthur Boulevard for local and regional commuter travel. Regional access for the proposed Project to and from the I-405 Freeway will be provided primarily via Susan Street and Harbor Boulevard, while local access will be provided primarily Mac Arthur Boulevard and Susan Street, such that no single intersection in the vicinity of the Project site will experience 50 or more net greater gross or PCE peak hour Project trips compared to existing traffic conditions.

CONCLUSION

Given the proposed Project results in a net of 386 fewer gross daily trips (30 greater PCE daily trips), 49 fewer gross AM peak hour trips (8 greater PCE AM peak hour trips), and 14 fewer gross PM peak hour trips (50 greater PCE PM peak hour trips), compared to the Existing land use, it can be concluded that the potential impacts of the proposed industrial Project would be insignificant and that no additional analysis is required.

We appreciate the opportunity to prepare this trip generation letter. Should you have any questions regarding this analysis, please call us at (949) 825-6175.

Sincerely,

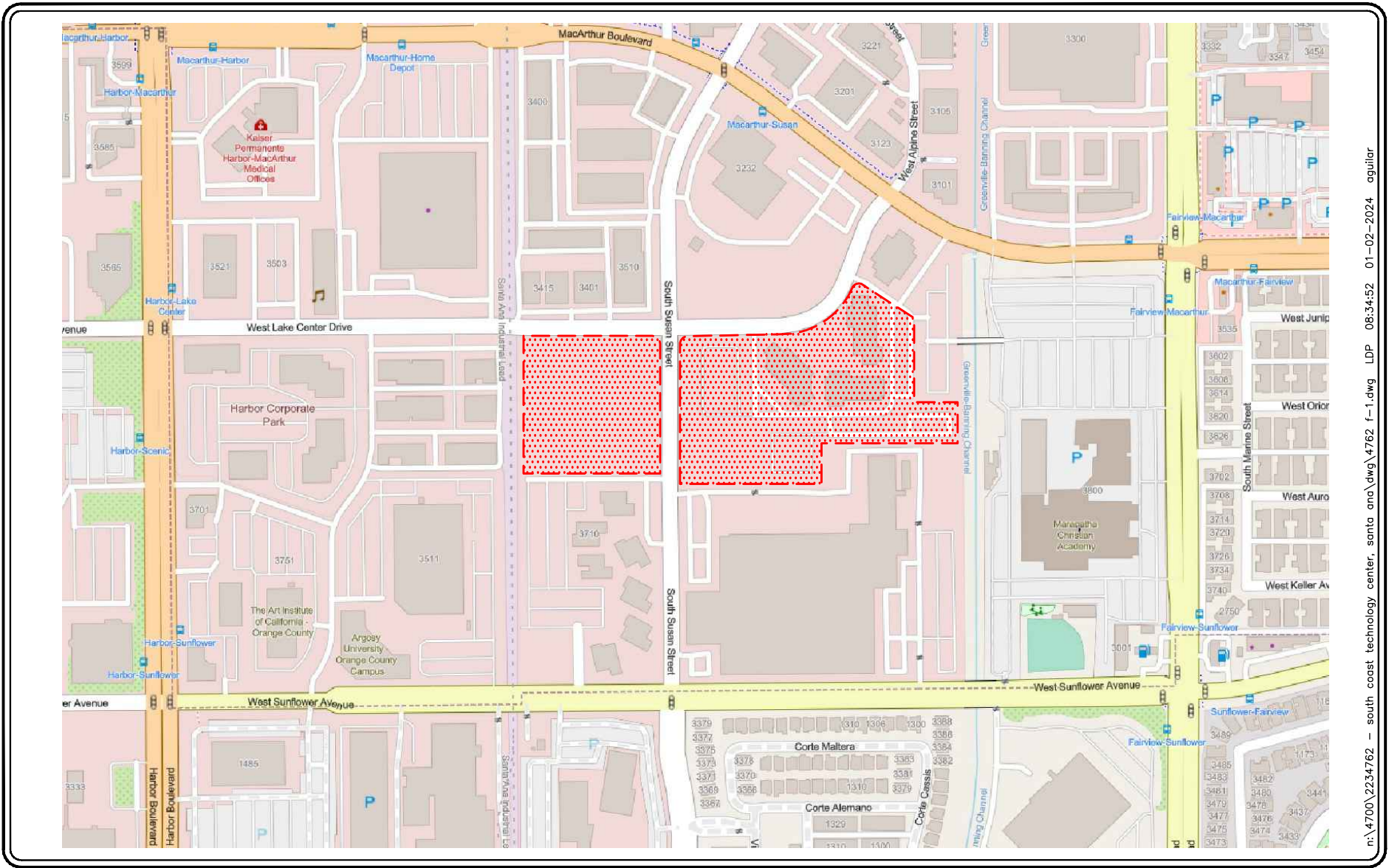
Linscott, Law & Greenspan, Engineers

A handwritten signature in blue ink, appearing to read 'Keil D. Maberry', is written over a light blue circular stamp.

Keil D. Maberry, P.E.
Principal



Attachments



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SOURCE: OPEN STREETS

KEY

 = PROJECT SITE



NO SCALE

FIGURE 1

VICINITY MAP
SOUTH COAST TECHNOLOGY CENTER, SANTA ANA



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NO SCALE

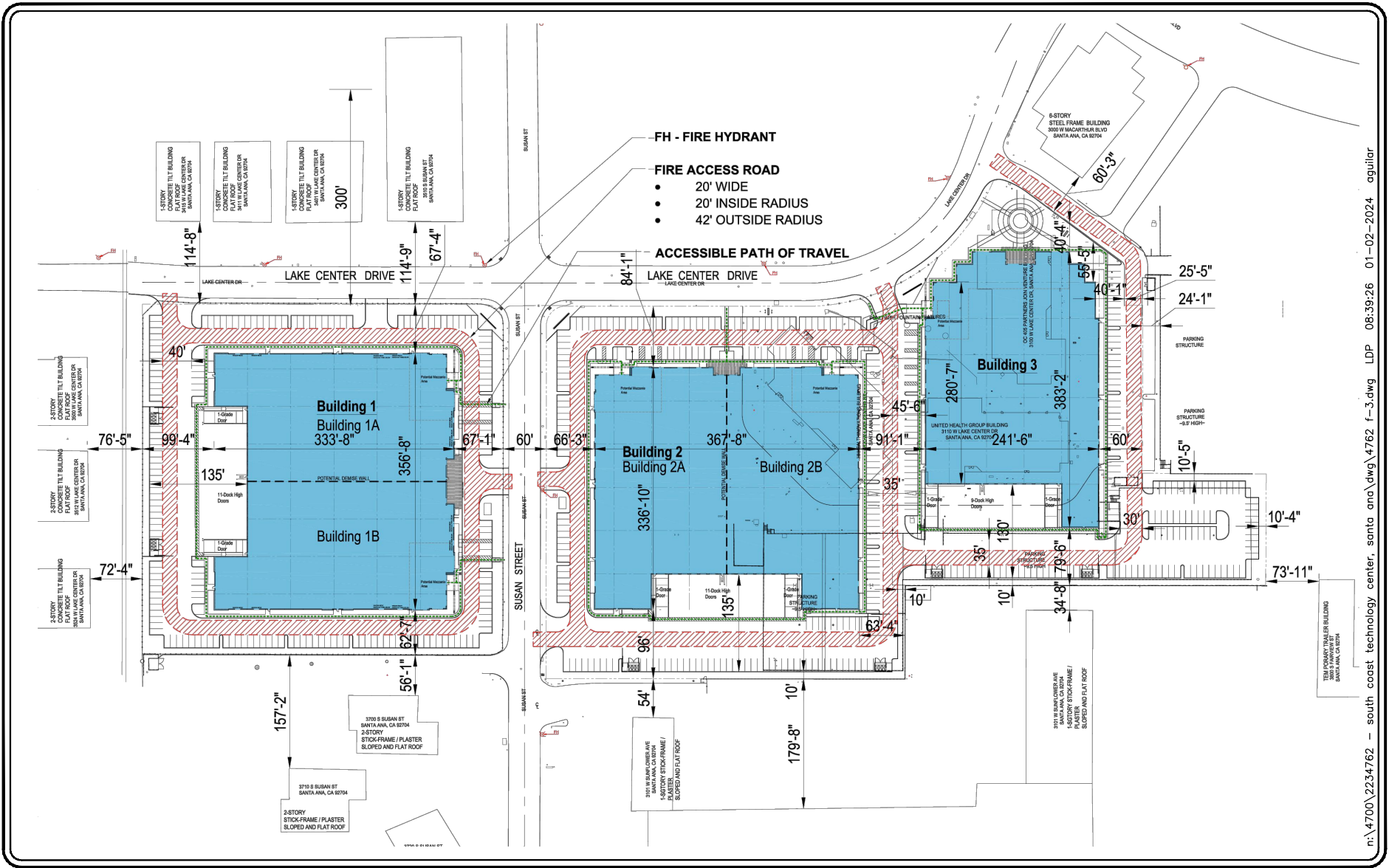
SOURCE: GOOGLE

KEY

 = PROJECT SITE

FIGURE 2

EXISTING SITE AERIAL
SOUTH COAST TECHNOLOGY CENTER, SANTA ANA



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SOURCE: DRA ARCHITECTS

FIGURE 3



PROPOSED SITE PLAN SOUTH COAST TECHNOLOGY CENTER, SANTA ANA



TABLE 1
PROJECT DEVELOPMENT SUMMARY¹
SOUTH COAST TECHNOLOGY CENTER, SANTA ANA

Project Description	(1) Office	(2) Manufacturing/Warehousing
<i>Existing Use</i>		
▪ 3100 W Lake Center Drive	60,462 SF	--
▪ 3110 W Lake Center Drive	56,930 SF	--
▪ 3120 W Lake Center Drive	60,634 SF	--
Existing Totals	178,026 SF	--
<i>Proposed Project Use</i>		
▪ Building 1	--	117,305 SF
▪ Building 2	--	121,645 SF
▪ Building 3	--	86,169 SF
Proposed Project Totals	--	325,044 SF

¹ Project development summary is based on the proposed project site plan prepared by DRA Architects, dated August 21, 2023.



TABLE 2
PROJECT TRAFFIC GENERATION RATES AND FORECAST²
SOUTH COAST TECHNOLOGY CENTER, SANTA ANA

Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Trip Generation Rates:</u>							
▪ ITE 710: General Office Building (TE/TSF)	10.84	88%	12%	1.52	17%	83%	1.44
▪ ITE 140: Manufacturing – Total (TE/TSF)³	4.75	0.52	0.16	0.68	0.23	0.51	0.74
❑ Passenger Cars – 78.6% (TE/TSF)	3.73	0.41	0.13	0.54	0.18	0.40	0.58
❑ 2 Axle Trucks – 8.0% (TE/TSF)	0.38	0.04	0.01	0.05	0.02	0.04	0.06
❑ 3 Axle Trucks – 3.9% (TE/TSF)	0.19	0.02	0.01	0.03	0.01	0.02	0.03
❑ 4+ Axle Trucks – 9.5% (TE/TSF)	0.45	0.05	0.01	0.06	0.02	0.05	0.07
<u>Existing Land Use:</u>							
▪ Lake Center Office (178,026 SF)	1,930	238	33	271	44	212	256
Total Existing Land Use Trips	1,930	238	33	271	44	212	256
<u>Proposed Project:</u>							
▪ South Coast Technology Center (325,044 SF)							
❑ Passenger Cars	1,212	133	43	176	59	130	189
❑ 2 Axle Trucks	124	13	3	16	7	13	20
❑ 3 Axle Trucks	62	7	3	10	3	7	10
❑ 4+ Axle Trucks	146	16	4	20	7	16	23
Total Proposed Project Trips (Gross)	1,544	169	53	222	76	166	242
▪ South Coast Technology Center (325,044 SF)							
❑ Passenger Cars	1,212	133	43	176	59	130	189
❑ 2 Axle Trucks	185	20	4	24	10	19	29
❑ 3 Axle Trucks	124	13	7	20	7	13	20
❑ 4+ Axle Trucks	439	49	10	59	20	48	68
Total Proposed Project Trips (PCE)	1,960	215	64	279	96	210	306
Net Gross Difference Trip Generation Forecast (Proposed Project minus Existing)	-386	-69	+20	-49	+32	-46	-14
Net PCE Difference Trip Generation Forecast (Proposed Project minus Existing)	+30	-23	+31	+8	+52	-2	+50

Notes:

TE/TSF = Trip ends per 1,000 Sf of development

PCE = Passenger Car Equivalent

² Source: *Trip Generation*, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021). The trips for the PM peak hour are based on the PM Peak Hour of Generator trip rate.

³ Recommended mix of truck traffic is based on the *Truck Trip Generation Study – City of Fontana, August 2003*. All 2-axle, 3-axle and 4+-axle trucks are converted to passenger car equivalents using a factor of 1.5 vehicles per truck, 2.0 vehicles per truck, and 3.0 vehicles per truck, respectively.