



September 02, 2020

Mahmoud Khodr
Senior Traffic Engineer
City of Fontana
8353 Sierra Avenue
Fontana, California 92335

Subject: Slover – Juniper Industrial Building Project Trip Generation Analysis and Vehicle Miles Traveled Analysis Memorandum (LSA Project No. LBB2001)

Dear Mahmoud:

LSA Associates, Inc. (LSA) is under contract to prepare a trip generation analysis and vehicle miles traveled (VMT) analysis memorandum for the proposed Slover – Juniper Industrial Building project in the City of Fontana (City). The project will consist of a 41,000 square-foot industrial warehouse at 16726 Slover Avenue. The project will also include a General Plan Amendment (GPA) and Zone Change (ZC) from General Commercial (C-2) to Light Industrial (M-1). Figure 1 illustrates the regional and project location. Figure 2 illustrates the project conceptual site plan.

The objectives of this memorandum are as follows:

- To compare the trip generation for the commercial and light industrial uses and determine whether a Traffic Impact Analysis (TIA) will be required for the proposed project
- To determine whether a VMT analysis is required for the project

TRIP GENERATION ANALYSIS

Trip generations for the commercial and light industrial uses were developed using rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) for Land Uses 820 – “Shopping Center” and 110 – “General Light Industrial”, respectively. For the later, project trips were converted to trucks and passenger vehicles based on City of Fontana *Truck Trip Generation Study* recommendations for light industrial projects. As such, 21.4 percent of project traffic will be trucks, of which 8 percent will be 2-axle trucks, 3.9 percent will be 3-axle trucks, and 9.5 percent will be 4-axle trucks. Based on the City’s TIA Guidelines, all truck trips were converted to passenger car equivalents (PCEs) using a 2.0 PCE factor for 2-axle trucks, 2.5 for 3-axle trucks, and 3.0 for 4- and more axle trucks. At present, there are two existing structures on site. However, no trip credits for considered for these structures since they are not occupied. Table A shows the trip generation comparison. As shown in Table A, the commercial use will generate 39 trips in the a.m. peak hour, 102 trips in the p.m. peak hour, and 1,021 daily trips. The proposed project will generate 39 PCE trips in the a.m. peak hour, 33 PCE trips in the p.m. peak hour, and 269 daily PCE trips. Therefore, the proposed project will generate the same number of trips in the a.m. peak hour, 69 less trips in the p.m. peak hour, and 752 less daily trips.

As shown in Table A, compared to the commercial use, the proposed project is anticipated to generate the same number of trips in the a.m. peak hour, but significantly less number of p.m. peak hour and daily trips. Additionally, the City follows the City of Fontana Traffic Engineering Division's *Draft Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (dated June 2020), which states that a TIA is required when a project will generate 50 or more peak hour trips. Since the anticipated number of peak hour trips generated by the proposed project is lower than the trip threshold (50 trips) established by the City's TIA Guidelines, a TIA will not be required for the project.

VEHICLE MILES TRAVELED ANALYSIS

The City is updating its VMT analysis guidelines. As per discussion with City staff, the updated VMT guidelines state that projects generating less than 500 daily trips are presumed to have a less than significant VMT impact. The project is anticipated to generate only 269 daily PCE trips. Therefore, the project can be presumed to have a less than significant VMT impact and can be screened out from a VMT analysis.

If you have any questions, please do not hesitate to contact me at (951) 781-9310 or Ambarish.Mukherjee@lsa.net.

Sincerely,

LSA



Ambarish Mukherjee, AICP, PE
Principal

Attachments:

- Table A: Trip Generation Comparison
- Figure 1: Regional and Project Location
- Figure 2: Conceptual Site Plan

TABLES

Table A - Project Trip Generation

Land Uses	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Existing Use - General Commercial	41.00 TSF							
Trips/Unit ¹		0.58	0.36	0.94	1.83	1.98	3.81	37.75
Trip Generation		24	15	39	75	81	156	1,548
Pass-by Trips ²		0	0	0	(26)	(28)	(54)	(527)
Total Net Trips		24	15	39	49	53	102	1,021
Proposed Project - Light Industrial³	41.00 TSF							
Trips/Unit (Cars)		0.488	0.062	0.550	0.062	0.433	0.495	3.899
Trips/Unit (2-Axle Trucks)		0.049	0.007	0.056	0.007	0.043	0.050	0.397
Trips/Unit (3-Axle Trucks)		0.024	0.003	0.027	0.003	0.022	0.025	0.193
Trips/Unit (4+ Axle Trucks)		0.059	0.008	0.067	0.008	0.052	0.060	0.471
Trips/Unit (Total)		0.620	0.080	0.700	0.080	0.550	0.630	4.960
Trip Generation (Cars)		20	3	23	3	17	20	160
Trip Generation (2-Axle Trucks)		2	0	2	0	2	2	16
Trip Generation (3-Axle Trucks)		1	0	1	0	1	1	8
Trip Generation (4+ Axle Trucks)		2	1	3	0	2	2	19
Trip Generation (Total)		25	4	29	3	22	25	203
Trip Generation (Cars)		20	3	23	3	17	20	160
PCE Trip Generation (2-Axle Trucks)		4	0	4	0	4	4	32
PCE Trip Generation (3-Axle Trucks)		3	0	3	0	3	3	20
PCE Trip Generation (4+ Axle Trucks)		6	3	9	0	6	6	57
PCE Trip Generation (Total)		33	6	39	3	30	33	269
Trip Generation Difference (Proposed Project - Existing Use)		9	(9)	0	(46)	(23)	(69)	(752)

Notes:

TSF = thousand square-feet

¹ Trip Generation Rates based on Land Use 820 - "Shopping Center" from Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition. Setting/Location used is General Urban/Suburban.

² Pass-by rates based on Land Use 820 – "Shopping Center" from ITE Trip Generation Handbook, 3rd Edition. No pass-by rate was available for the a.m. peak hour. The p.m. peak hour pass-by rate is 34%. There is no data available for daily pass-by trips; therefore, the p.m. pass-by rate was used as the daily rate.

³ The trip generation was developed based on the ITE *Trip Generation Manual* (10th edition) rates for Land Use 110 – "General Light Industrial." The resulting trips were converted to trucks and passenger vehicles based on the City of Fontana *Truck Trip Generation Study* recommendations for light industrial projects. As such, 21.4 percent of project traffic will be trucks. Based on Vehicle Mix from the City of Fontana *Truck Trip Generation Study*, dated August 2003, the truck mix was considered as 9.5% 4-axle, 3.9% 3-axle, and 8.0% 2-axle trucks for light industrial projects. Based on the City of Fontana *Draft Traffic Impact Analysis Guidelines*, all truck trips were converted to passenger car equivalents (PCEs) using a 2.0 PCE factor for 2-axle trucks, 2.5 for 3-axle trucks, and 3.0 for 4- and more axle trucks.

FIGURES

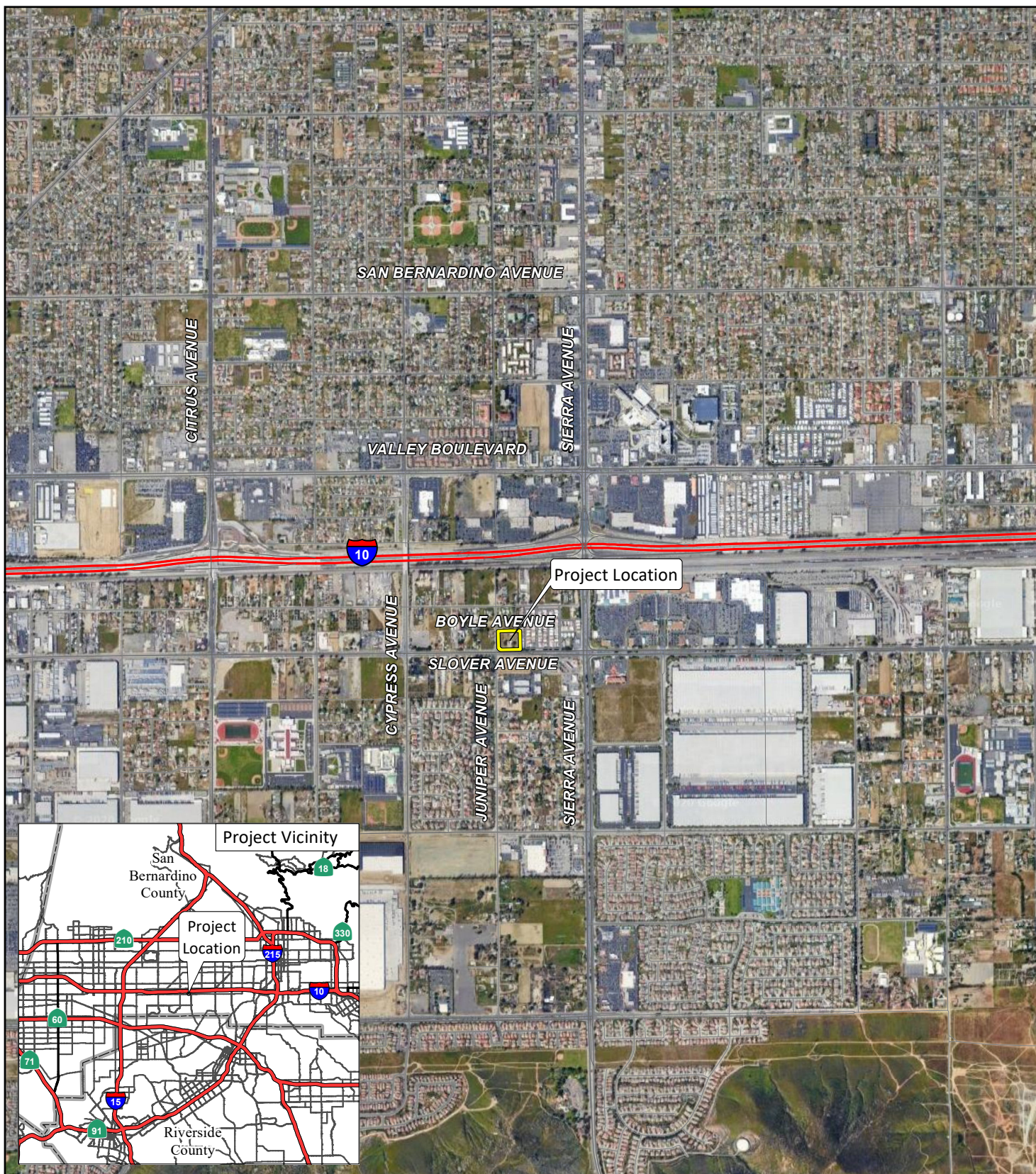
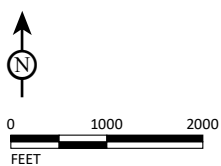


FIGURE 1

LSA

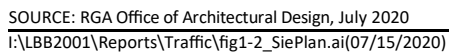


SOURCE: ESRI Streetmap, 2013; Google Earth, 2018.

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*Slover-Juniper Industrial Building
Trip Generation Memorandum*

Regional and Project Location



Slover - Juniper Industrial Building
Trip Generation Memorandum
Conceptual Site Plan