

## Memorandum

Date: January 7, 2021  
To: Samir Sharma  
From: Robert Eckols and Mark Soendjojo, Fehr & Peers  
**Subject: 140 Lyell Street Housing Project Traffic Study**

*SJ20-2052*

This memorandum presents the findings of a traffic study (TS) for a proposed five-unit housing development that will replace an existing house located at 140 Lyell Street in Los Altos. Based on comments received from the City of Los Altos, this traffic study addresses the following topics:

- project trip generation
- vehicle miles traveled (VMT) analysis per SB 743

Based on our analysis, Fehr & Peers has reached the following conclusions:

- The proposed housing development will generate 28 additional daily trips, two additional AM peak hour trip, and two additional PM peak hour trips than the existing house.
- This project would be screened out from further VMT analysis since the project generated VMT is lower than the VMT screening threshold.

### Project Description

The proposed residential project is located at 140 Lyell Street in Los Altos, California. A five-unit housing development will replace a single existing housing unit. The project is located in a residential neighborhood with a mixture of single-family and multi-family units. The project site has access to Lyell Street to the north and Gabilan Street to the east and is bounded by apartment complexes to the west and south. The project will provide a total of 12 on-site parking spaces. Ten parking spaces are reserved for the residences (one covered, one uncovered per unit, in compliance with code) and two off-street uncovered spaces are provided for guests, in compliance with code.



## Trip Generation Estimates

Fehr & Peers prepared daily, AM peak hour, and PM peak hour vehicle trip generation estimates for the proposed project. The trip generation estimates were prepared using the trip rates from the latest version of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10<sup>th</sup> Edition (2017) using the rates for single family housing (Land Use Code 210) and multifamily housing (Land Use Code 221). Project trip generation was calculated using the average rates based on the number of dwelling units for the housing.

**Table 1** shows the trip generation estimated for the existing house, the proposed multifamily housing, and the net trip generation for the project (project trips minus existing trips). The existing house generates nine daily trips, one AM peak hour trip, and one PM peak hour trip. The proposed project will generate 37 daily trips, three AM peak hour trips, and three PM peak hour trips. Therefore, the proposed project will generate 28 additional daily trips, two additional AM peak hour trip, and two additional PM peak hour trips.

**Table 1: Trip Generation Summary**

Land Use	Size <sup>1</sup>	Weekday Daily Total	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Single-Family Detached Housing <sup>2</sup> (A)	1 DU	9	0	1	1	1	0	1
Multifamily Housing (Low-Rise) <sup>2</sup> (B)	5 DU	37	1	2	3	2	1	3
<b>Total Net New Project Trips (B-A)</b>		<b>28</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>

Existing House Trip Generation:

1. DU = dwelling units
2. Following ITE trip generation equations used (ITE Code 210 – Single-Family Detached Housing, 10<sup>th</sup> Edition):  
 Weekday Daily: Average Rate – 9.44 per DU, Enter = 50%, Exit = 50%  
 AM: Average Rate – .74 per DU; Enter = 25%, Exit = 75%  
 PM: Average Rate – .99 per DU; Enter = 63%, Exit = 37%

Proposed Multifamily Housing Trip Generation:

1. DU = dwelling units
2. Following ITE trip generation equations used (ITE Code 220 – Multifamily Housing (Low-Rise), 10<sup>th</sup> Edition):  
 Weekday Daily: Average Rate – 7.32 per DU, Enter = 50%, Exit = 50%  
 AM: Average Rate – .46 per DU; Enter = 23%, Exit = 77%  
 PM: Average Rate – .56 per DU; Enter = 63%, Exit = 37%

Sources: *Trip Generation Manual*, 10<sup>th</sup> Edition, Institute of Transportation Engineers (ITE), 2017; Fehr & Peers 2020.



## Project Vehicle Miles Traveled Estimates

The project VMT was calculated using the project's total daily trip generation and applying an average trip length for residential (home-based) trips. Based on data from the 2012 California Household Travel Survey (CHTS), the average home-based vehicle trip length for California households is 7.9 miles. As shown in **Table 2**, the project generates 292 VMT per day.

**Table 2: Project VMT Estimate**

	Project Daily Trip Generation	Average Vehicle Trip Length (miles) <sup>1</sup>	Project Generated Daily VMT
Total	37	7.9	292

1. From 2012 California Household Travel Survey (CHTS)  
Source: 2012 CHTS; Fehr & Peers 2020.

## Small Project Screening for SB 743

The City of Los Altos is in the process of implementing SB 743 and may continue to issue guidance regarding when a full transportation analysis is necessary by, for instance, allowing the screening of small projects from VMT analysis, or requiring only qualitative VMT assessment for small projects. At this time, the small project screening criteria that the City of Los Altos is considering is based on the OPR *Technical Advisory* (page 12) to screen projects that generate or attract fewer than 110 trips per day. Rather than using this daily vehicle trip threshold, the City is considering small project screening that is based on the CEQA Statue & Guidelines categorical exemption for existing facilities less than 10,000 square feet (§ 15301, subdivision. (e)(2).) and generate or attract fewer than 836 daily VMT. The 836 daily VMT is based on the small project trigger research presented in **Attachment A**. The 836 daily VMT small project screening threshold uses OPR's estimate of 110 daily vehicle trips for screening small non-residential projects of 10,000 square feet or less and average trip length data from the CHTS.

This project meets the CEQA Statue & Guidelines categorical exemption for existing facilities less than 10,000 square feet (§ 15301, subdivision. (e)(2).), and as noted in **Table 2**, the Project would generate 292 daily VMT, which is lower than the 836 VMT threshold for projects smaller than 10,000 square feet. Therefore, this project would be screened from further VMT analysis.



## Conclusion

Fehr & Peers has reached the following conclusions:

- The proposed housing development will generate 28 additional daily trips, two additional AM peak hour trip, and two additional PM peak hour trips than the existing house.
- This project would be screened from further VMT analysis since the project generated daily VMT is lower than the VMT screening threshold.

**Attachment A: Small Project Screening for SB 743**

## SMALL PROJECT SCREENING FOR SB743

The following document provides substantial evidence to support the screening on 'small' projects for SB 743 purposes. The OPR Technical Advisory relies on a trip trigger based on CEQA exemptions.

### *Screening Threshold for Small Projects*

Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day<sup>19</sup> generally may be assumed to cause a less-than-significant transportation impact.

### *Map-Based Screening for Residential and Office Projects*

Residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with VMT data, for example from a travel survey or a travel demand model, can illustrate areas that are

---

<sup>19</sup> CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

Two potential limitations of this trigger have been identified. First, the trigger is not tied to a VMT estimate. Second, the trigger does not consider residential land uses. To strengthen the evidence, we used specific CEQA exemptions related to residential projects and 2012 California Household Travel Survey (CHTS) household VMT estimates to develop the following modification to the OPR approach. The CEQA exemption sections are provided below.

### **15303. NEW CONSTRUCTION OR CONVERSION OF SMALL STRUCTURES**

Class 3 consists of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. The numbers of structures described in this section are the maximum allowable on any legal parcel. Examples of this exemption include, but are not limited to:

- (a) One single-family residence, or a second dwelling unit in a residential zone. In urbanized areas, up to three single-family residences may be constructed or converted under this exemption.
- (b) A duplex or similar multi-family residential structure, totaling no more than four dwelling units. In urbanized areas, this exemption applies to apartments, duplexes and similar structures designed for not more than six dwelling units.
- (c) A store, motel, office, restaurant or similar structure not involving the use of significant amounts of hazardous substances, and not exceeding 2500 square feet in floor area. In urbanized areas, the exemption also applies to up to four such commercial buildings not exceeding 10,000 square feet in floor area on sites zoned for such use if not involving the use of significant amounts of hazardous substances where all necessary public services and facilities are available and the surrounding area is not environmentally sensitive.

**Note:** Authority cited: Section 21083, Public Resources Code; Reference: Sections 21084, Public Resources Code.

#### 15315. MINOR LAND DIVISIONS

Class 15 consists of the division of property in urbanized areas zoned for residential, commercial, or industrial use into four or fewer parcels when the division is in conformance with the General Plan and zoning, no variances or exceptions are required, all services and access to the proposed parcels to local standards are available, the parcel was not involved in a division of a larger parcel within the previous 2 years, and the parcel does not have an average slope greater than 20 percent.

**Note:** Authority cited: Sections Section 21083, Public Resources Code; Reference: Section 21084, Public Resources Code.

Based on the 2012 CHTS, here are a range of VMT estimates for 2, 4, and 6 units based on the CA and SACOG average VMT generation per household.

CA Average – 41.6 VMT per household

- 2 units = 83.2 VMT per day
- 4 units = 166.4 VMT per day
- 6 units = 249.6 VMT per day (urban areas only)

SACOG Average – 42.9 VMT per household

- 2 units = 85.8 VMT per day
- 4 units = 171.6 VMT per day
- 6 units = 257.4 VMT per day (urban areas only)

Another option is to rely on the maximum level of development allowed by CEQA exemptions and convert that value to a 'dwelling unit equivalent' measure similar to impact fee programs. OPR estimated that non-residential uses could generate 110-124 daily trips based on a maximum project exemption size of 10,000 square feet (KSF). Using the lower end of the range and CHTS trip lengths produces a VMT equivalent for 10 KSF for CA and SACOG of 836 and 869, respectively. This equates to about 20 residential households.