Reviewed 10/20.

No further comments.

VMT analysis deemed complete and acceptable.

LINSCOTT LAW & GREENSPAN engineers

VEHICLE MILES TRAVELED ANALYSIS

65TH STREET WEST AND WEST AVENUE K RESIDENTIAL PROJECT

City of Lancaster, California
October 2, 2023

Prepared for:
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TABLE OF CONTENTS

TABLE OF CONTENTS *(continued)*

LIST OF FIGURES

LIST OF TABLES

VEHICLE MILES TRAVELED ANALYSIS

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1.0 INTRODUCTION

This Vehicle Miles Traveled (VMT) analysis has been conducted to identify and evaluate the potential traffic impact of the proposed residential project (the "Project") located at the northwest corner of the future 65th Street W. / W. Avenue K intersection in the City of Lancaster, California (the "Project Site"). The Project proposes to develop a residential development consisting of 75 single-family homes. The Project Site is generally bounded by vacant land to the north, east, and west, and W. Avenue K to the south. The Project Site location and general vicinity are shown in ***Figure 1–1***.

This transportation analysis follows the City of Lancaster (the "City") *Local Transportation Assessment Guidelines*[1] (LTAG). In compliance with the California Environmental Quality Act (CEQA), the City's LTAG identifies VMT as the primary metric for evaluating a project's transportation impacts. Therefore, this transportation analysis provides an assessment of the Project's VMT transportation impact.

[1] *Local Transportation Assessment Guidelines*, City of Lancaster Department of Public Works, January 2021.

MAP SOURCE: GOOGLE MAPS
PROJECT SITE

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FIGURE 1-1
VICINITY MAP

1.1 Study Area

The VMT assessment criteria for this transportation analysis were identified in consultation with City of Lancaster staff. The analysis criteria were determined based on the City's LTAG, the proposed Project description and location, and the characteristics of the surrounding transportation system. The general location of the Project in relation to the surrounding street system is presented in *Figure 1–1*.

2.0 PROJECT DESCRIPTION

2.1 Site Location

The proposed Project Site is located at the northwest corner of the future 65th Street W. / W. Avenue K intersection in the City of Lancaster. The Project Site is generally bounded by vacant land to the north, east, and west, and W. Avenue K to the south. The Project Site location and general vicinity are shown in *Figure 1–1*.

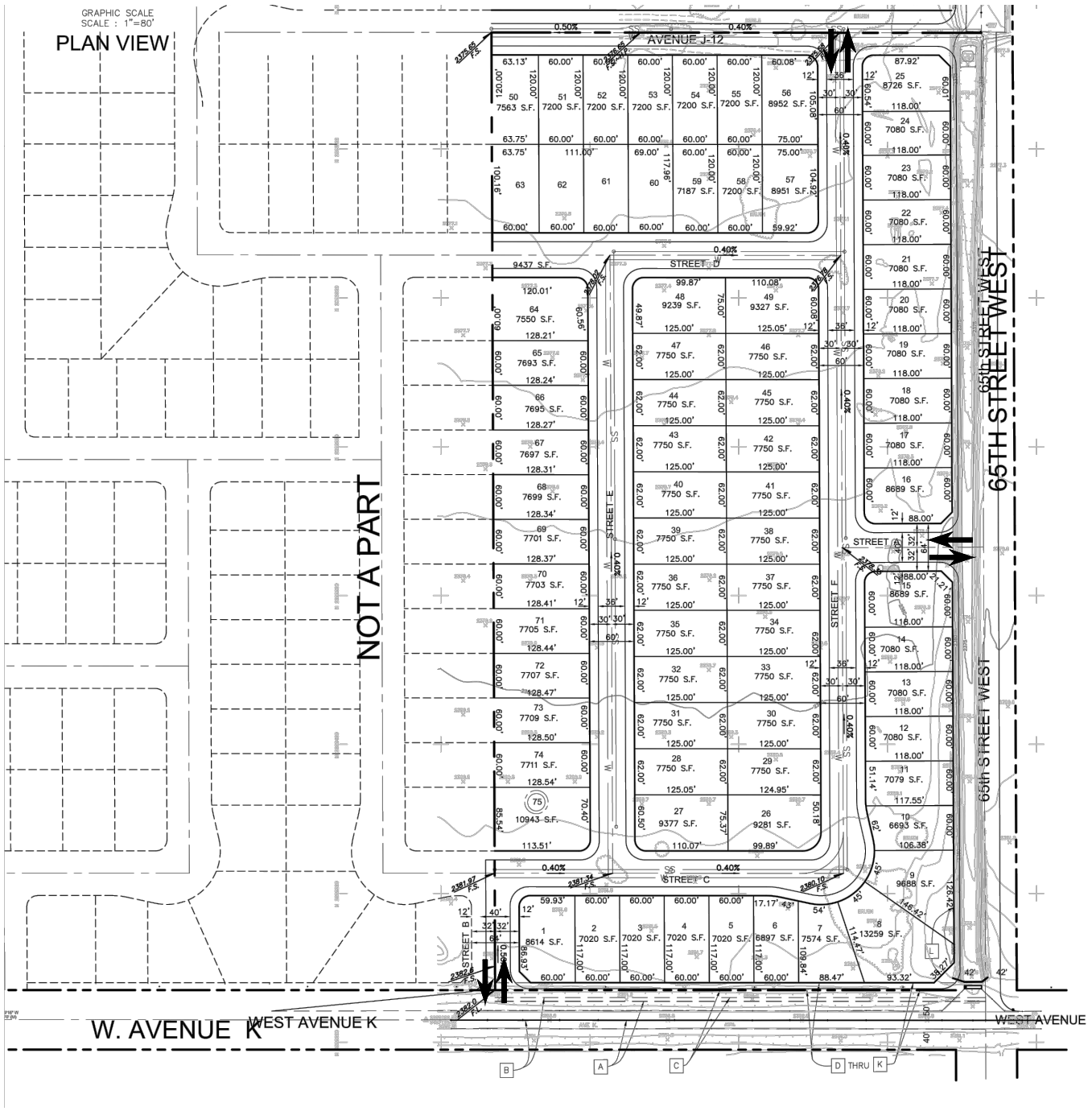
2.2 Existing Project Site

The Project Site comprises approximately 20 acres and is currently vacant. Vehicular access to the existing Project Site is currently not provided from W. Avenue K.

2.3 Proposed Project Description

The Project proposes the construction of 75 single-family homes. Construction and occupancy of the proposed Project is planned to be completed by the year 2024. The site plan for the proposed Project is illustrated in ***Figure 2–1***.

Vehicular access to the Project Site will be provided via 65th Street W., which will be extended to the north from W. Avenue K to join the existing segment of 65th Street W. as part of the Project, a new W. Avenue J-12, which will border the Project Site to the north, and W. Avenue K. Further discussion on the Project Site access and circulation schemes is provided in Section 3.0.



SOURCE: CIVIL DESIGN & DRAFTING, INC.

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FIGURE 2-1
PROJECT SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

65TH STREET WEST AND WEST AVENUE K RESIDENTIAL PROJECT

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3.0 SITE ACCESS AND CIRCULATION

The proposed site access scheme for the Project is displayed in *Figure 2–1*. A description of the proposed site access and circulation scheme is provided in the following subsections.

3.1 Existing Vehicular Site Access

Vehicular access to the existing Project Site is currently unavailable, as 65th Street W. currently terminates at a cul-de-sac north of the Project Site and there are no existing driveways along the north side of W. Avenue K (i.e., along the Project Site's southerly frontage).

3.2 Vehicular Project Site Access

Vehicular access to the Project Site will be provided via one driveway along the west side of the future 65th Street W., which will be extended to the north from W. Avenue K to join the existing segment of 65th Street W. as part of the Project, one driveway along the south side of the future W. Avenue J-12, which will border the Project Site to the north, and one driveway along the north side of W. Avenue K. The 65th Street W. driveway, W. Avenue J-12 driveway, and W. Avenue K driveway are proposed to accommodate full vehicular access (i.e., left-turn and right-turn ingress and egress turning movements).

4.0 EXISTING STREET SYSTEM

4.1 Regional Highway System

Regional access to the Project Site is provided by the SR-14 (Antelope Valley) Freeway. A brief description of the SR-14 Freeway is provided in the following paragraph.

SR-14 (Antelope Valley) Freeway is a north-south freeway that extends from the northern Mojave Desert to Los Angeles. In the Project vicinity, three mixed-flow freeway lanes are provided in each direction on the SR-14 Freeway. Northbound and southbound on- and off-ramps are provided at W. Avenue K and are located approximately 5.0 miles east of the Project Site.

4.2 Local Roadway System and Roadway Descriptions

Immediate access to the Project Site will be provided via W. Avenue K and the future 65th Street W. A brief description of the roadways in the Project vicinity is provided in the following paragraphs.

65th Street W. is a north-south oriented roadway located east of the Project Site. Within the Project study area, 65th Street W. is designated as a Secondary Arterial by the City. Two through travel lanes are provided in the northbound direction and one through travel lane is provided in the southbound direction on 65th Street W. within the Project study area. 65th Street W. is posted for a speed limit of 55 miles per hour within the Project study area.

60th Street W. is a north-south oriented roadway located east of the Project Site. Within the Project study area, 60th Street W. is designated as a Major Arterial by the City. North of W. Avenue K, three through travel lanes are provided in the northbound direction and one to two through travel lanes are generally provided in the southbound direction on 60th Street W. within the Project study area. South of W. Avenue K, two through travel lanes are provided in the northbound direction and two through travel lanes are provided in the southbound direction on 60th Street W. Separate exclusive left-turn lanes are provided in each direction on 60th Street W. at the W. Avenue K intersection. 60th Street W. is posted for a speed limit of 55 miles per hour within the Project study area.

W. Avenue K is an east-west oriented roadway that borders the Project Site to the south. Within the Project study area, W. Avenue K is designated as a Major Arterial by the City. One to two through travel lanes are generally provided in each direction on W. Avenue K within the Project study area. Separate exclusive left-turn lanes are provided in each direction on W. Avenue K at the 60th Street W. intersection. W. Avenue K is posted for a speed limit of 55 miles per hour within the Project study area.

5.0 VEHICLE MILES TRAVELED ANALYSIS

5.1 Introduction

VMT is defined as a measurement of miles traveled by vehicles within a specified region and for a specified time period. VMT is a measure of the use and efficiency of the transportation network. VMTs are calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (round trip) travel and is often estimated for a typical weekday for the purpose of measuring transportation impacts.

In September 2013, the Governor's Office signed Senate Bill 743 (SB 743), starting a process that fundamentally changes the way transportation impact analysis is conducted under the California Environmental Quality Act. Within the State's CEQA Guidelines, these changes include the elimination of auto delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant traffic impacts. SB 743 identifies VMT as the most appropriate CEQA transportation metric, along with the elimination of auto delay/LOS for CEQA purposes statewide. The justification for this paradigm shift is that LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions.

5.2 Screening Criteria

As previously noted, the City's LTAG identifies VMT as the primary metric for determining transportation impacts of development projects. The City's LTAG includes VMT screening criteria, guidelines, and thresholds for measuring transportation impacts under CEQA.

Page 2 of the City's LTAG states:

> "A project only needs to satisfy one of the screening criteria to be exempt from requiring further VMT analysis:
>
> - Project Size – A project that generates 110 or fewer daily trips.
>
> - Locally Serving Retail – A project that has locally serving retail uses that are 50,000 square feet or less, including specialty retail, shopping center, grocery store, pharmacy, financial services/banks, fitness center or health club, restaurant, and café. If the project contains other land uses, those uses need to be considered under other applicable screening criteria.
>
> - Project Located in a Low VMT Area – A residential or office project that is located in a Traffic Analysis Zone (TAZ) that is already 15% below the Antelope Valley Planning Area (AVPA) Baseline VMT.

- Transit Proximity – A multifamily residential project providing higher density housing or a commercial project in an area already zoned for commercial use that is located within a one-half mile of the Metrolink station or within a one-half mile of a bus stop with service frequency of 15 minutes or less during commute periods.

- Affordable Housing – A residential project that provides affordable housing units; if part of a larger development, only those units that meet the definition of affordable housing satisfy the screening criteria.

- Transportation Facilities – Transportation projects that promote non-auto travel, improve safety, or improve traffic operations at current bottlenecks, such as transit, bicycle and pedestrian facilities, intersection traffic control (e.g., traffic signals or roundabouts), or widening at intersections to provide new turn lanes.

For projects that do not meet any of the screening criteria above, a VMT analysis is required and should rely on the best available data to inform trip generation and trip length estimates for the project uses."

5.2.1 *Project Traffic Generation*

Traffic volumes expected to be generated by the proposed Project during the weekday AM and PM peak hours, as well as on a daily basis, were estimated using rates published in the ITE *Trip Generation Manual*. The following trip generation rates were used to forecast the traffic volumes expected to be generated by the Project:

- Single-Family Homes: ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates were used to forecast the traffic volumes expected to be generated by the Project.

As presented in ***Table 5–1***, the proposed Project is expected to generate 53 net new vehicle trips (14 inbound trips and 39 outbound trips) during the AM peak hour. During the PM peak hour, the proposed Project is expected to generate 71 net new vehicle trips (45 inbound trips and 26 outbound trips). Over a 24-hour period, the proposed Project is forecast to generate 707 daily trips ends (approximately 354 inbound trips and 353 outbound trips) during a typical weekday.

As the Project is forecast to generate more than 110 daily vehicle trips, it does not meet the screening criteria regarding project size and therefore, a VMT analysis is required for the Project. Further, the Project is not classified as locally serving retail, is not located in a low VMT area, is not located within a one-half mile of a Metrolink station or bus stop, does not provide affordable housing units, and is not a transportation project. Accordingly, a VMT analysis has been prepared of the Project's potential VMT impact based on the guidelines presented in the LTAG.

5.3 Impact Methodology and Criteria

Per Page 3 of the City's LTAG, for projects consisting of residential land uses, the VMT analysis should be conducted using the Southern California Association of Governments (SCAG)

Table 5-1
PROJECT TRIP GENERATION [1]

29-Sep-23

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Project								
Single-Family Homes [3]	75 DU	707	14	39	53	45	26	71
NET INCREASE PROJECT TRIPS		**707**	**14**	**39**	**53**	**45**	**26**	**71**

[1] Source: ITE *Trip Generation Manual,* 11th Edition, 2021.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
- Daily Trip Rate: 9.43 trips/dwelling unit; 50% inbound and 50% outbound
- AM Peak Hour Trip Rate: 0.70 trips/dwelling unit; 26% inbound/74% outbound
- PM Peak Hour Trip Rate: 0.94 trips/dwelling unit; 63% inbound/37% outbound

regional travel demand model. The impact methodology set forth in the LTAG for residential projects such as the Project is as follows:

- Existing/Baseline Conditions: Project-generated VMT should be estimated for the proposed land uses under existing/baseline conditions. VMT can be estimated using the SCAG regional travel demand model and should be reported as Home-Based VMT per Capita (residential projects), Home-Based Work VMT per Employee (office or employment-generating projects), or Total VMT per Service Population (all other land uses). For land use plans, Total VMT per Service Population or Total VMT can be used to determine potential impacts.

- Cumulative Conditions: A less than significant impact under Existing/Baseline conditions would also result in a less than significant cumulative impact as long as the project is consistent with the SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

Per Page 4 of the LTAG, a development project will have a potential VMT impact if the project meets the following:

- Residential Project – The project exceeds 15% below the AVPA Baseline VMT for Home-Based VMT per Capita.

The AVPA Baseline VMT for Home-Based VMT per Capita for the 2012 Base Year is 21.0 VMT per Capita. Therefore, the VMT impact criteria (i.e., 15% below the AVPA Baseline VMT) applicable to the Project is 17.85 VMT per Capita for the 2012 Base Year. Within the SCAG model, all home-based auto vehicle trips are traced back to the residence of the trip-maker (non-home-based trips are excluded) and then divided by the population within the geographic area to get the efficiency metric of Home-Based VMT per Capita.

5.4 Summary of Project VMT Analysis

The VMT expected to be generated by the Project for the 2012 Base Year was determined using the SCAG regional travel demand model. Based on the SCAG model, the Project Site is within TAZ 20292600. ***Figure 5-1*** presents the SCAG TAZ Map that shows the location of the Project Site within TAZ 20292600. Details for the SCAG TAZ 20292600 are shown below for the 2012 Base Year:

- VMT = 45,433.65

- Population = 1,767

- Project VMT per Capita = 25.71 (45,433.65/1,767)

The population within the TAZ 20292600 was determined from the factors within the SCAG model. Specifically, the population for TAZ 20292600 for the 2012 Base Year without the Project was determined from the SCAG model to be 1,505 persons within 431 households,

NOT TO SCALE

MAP SOURCE: SCAG
PROJECT SITE
TAZ BOUNDARY
TAZ 20292600 BOUNDARY

FIGURE 5-1
SCAG TAZ MAP

yielding a factor of 3.49 persons per household. Multiplying this factor by the Project's 75 proposed single-family homes yields approximately 262 persons for the Project. Adding the Project's 262 persons to 1,505 persons yields a population of 1,767 persons for TAZ 20292600 for the 2012 Base Year with the Project.

As shown above, the 2012 VMT per Capita for the TAZ that the Project is located within is 25.71 VMT per Capita, which is greater than the VMT impact criteria threshold of 17.85 VMT per Capita for the 2012 Base Year. In order to reach the VMT impact criteria threshold, the VMT of TAZ 20292600 with the Project would need to be reduced by 13,892.70 VMT, as shown in the calculation below:

- VMT Reduction = 45,433.65 – (17.85 * 1,767) = 13,892.70 VMT

It is noted that the Project could incorporate Transportation Demand Management (TDM) measures from the California Air Pollution Control Officers Association (CAPCOA) as mitigation measures. However, many of the CAPCOA TDM measures are not applicable to a residential subdivision project such as the Project. In addition, since the Project's locational context would be categorized as 'rural,' most of the CAPCOA TDM measures are not applicable to the Project.

5.4.1 *Effects of Telework on Project VMT and Estimated Fee*

It is noted that while the SCAG model takes into account a wide variety of socio-economic data, including factors such as household size, income, and vehicle ownership, as well as aspects of travel mode choices relating to vehicle operating costs, transit wait times, etc., it does not account for all factors that affect travel behavior in the Southern California region. Specifically, the effect of telework or remote work on VMT generation is not reflected in the SCAG model and is therefore not reflected in the baseline VMT forecasts reported by the VMT model.

Telework refers to the practice of working from home or other remote locations by using telecommunications services such as the internet and phone services to connect to a central office or place of business.[2] Further, the COVID-19 pandemic has substantially and likely permanently changed telework. By example, the Orange County Transportation Authority (OCTA) determined based on an employment travel survey that in February 2020[3] (pre-pandemic), an average of 0.76 days per five-day work week, or 15.1% of working days were worked remotely via teleworking. OCTA further found that teleworking increased to an average of 2.56 days per work week, or 52.8% of working days, in response to the COVID-19 pandemic. Further, surveyed employees expected to telework 1.55 days per work week on average, or 31.2% of working days, in post-pandemic conditions. It is therefore expected that the percent of employees teleworking will remain elevated in the post-pandemic period.

[2] It should be noted that the definition of telework typically does not include work which is primarily conducted in the home (i.e., self-employed, caretaker, etc.) or which require travel to off-site locations as part of the normal job duties (i.e., service technicians, drivers, etc.)

[3] "Employment & Travel Survey: Summary Report of Pandemic Impacts", prepared for OCTA by True North Research, Inc., December 14, 2021.

The degree of teleworking in the SCAG region is expected to remain higher than pre-pandemic levels for the foreseeable future. Further, the proposed single-family homes at the Project can accommodate home offices and workspaces, and the site will accommodate new and efficient internet and cable systems to provide reliable communication connections; therefore, the Project will increase the number of residential units in the region which are well-suited to accommodate telework. Employed residents of the Project are therefore expected to reflect increased teleworking trends compared to pre-pandemic conditions.

Based on the Project features, the location of the City of Lancaster relative to business centers, and consultation with City staff, it was determined that a straight five percent (5%) reduction for telework can be applied to the Project's VMT and subsequently to the estimated fee for the VMT Impact Fee Mitigation Program as described in the following section.

5.4.2 *City of Lancaster VMT Impact Fee Mitigation Program*

In February 2023, the City adopted Ordinance No. 1100, approving a VMT Impact Fee Mitigation Program (the "Mitigation Program") to assist development projects with mitigating their VMT impacts. The program entails an impact fee that would allow new development projects to mitigate their project-specific VMT impacts by making a fair-share payment to cover the cost of Citywide VMT-reducing projects and TDM measures, such as sidewalk improvements, multi-purpose paths, pedestrian refuge islands, flashing beacons, traffic calming measures, etc. A development project with a significant VMT impact (i.e., VMT greater than the VMT impact criteria threshold) can pay the fee for all of its VMT that is above the threshold, implement TDM measures to reduce the amount of VMT above the threshold and pay a reduced fee, or implement TDM measures to reduce its VMT below the threshold and be exempt from paying the fee. It is noted that the Mitigation Program is consistent with the City's General Plan and would not conflict with any applicable policies within the General Plan.

The fee for the Mitigation Program was calculated based on the cost to implement the Citywide VMT-reducing projects and TDM measures divided by the projected growth in Citywide VMT from the year 2021 to the year 2040. Accordingly, the City has recommended a fee of $150 per vehicle mile traveled that is above the VMT impact criteria threshold.

The Project's fee for the Mitigation Program was determined in consultation with City staff. As noted in Section 5.4 herein, the population of the Project was determined to be 262 persons. However, the population was determined from a household density factor of 3.49 persons per household, which was obtained from the population and number of households within TAZ 20292600. The household density factor for TAZ 20292600 was deemed by City staff to be based on insufficient data (1,505 persons within 431 households) and likely not representative of household density throughout the City. Accordingly, a Citywide household density factor of 3.29 persons per household was utilized to calculate the Project's fee for the Mitigation Program in order to better represent the conditions anticipated upon construction and occupancy of the Project. A Citywide household density factor (3.29 persons per household) was determined from the population and number of households in the City from the SCAG model (151,791 residents in 46,108 households).

The Project's estimated fee for the VMT Impact Fee Mitigation Program with a 5% reduction accounting for telework was calculated as follows:

- Population of the Project = 75 single-family homes * 3.29 persons per household = 247 persons
- Project VMT = 247 persons * 25.71 VMT per Capita = 6,350 VMT
- Project VMT with 5% Telework Reduction = 6,350 VMT * (1-0.05) = 6,033 VMT
- VMT Impact Criteria Threshold = 247 persons * 17.85 VMT per Capita = 4,409 VMT
- VMT Over Impact Criteria Threshold = 6,033 VMT – 4,409 VMT = 1,624 VMT
- Estimated Fee = 1,624 VMT * $150 per VMT = $243,600.00.

As shown above, the Project's estimated fee for the Mitigation Program with a 5% reduction accounting for telework is $243,600.00. Therefore, with the contribution of the estimated fee for the Mitigation Program and accounting for telework, the Project is not expected to result in a significant household VMT impact.

5.5 Summary of Cumulative VMT Analysis

As stated in the City's LTAG, analyses should consider both short-term and long-term project effects on VMT. Short-term effects are evaluated in the detailed project-level VMT analysis summarized above. Long-term, or cumulative, effects are determined through a consistency check with SCAG's RTP/SCS. The RTP/SCS is the regional plan that demonstrates compliance with air quality conformity requirements and greenhouse gas (GHG) reduction targets. As such, projects that are consistent with this plan in terms of development, location, density, and intensity, are part of the regional solution for meeting air pollution and GHG goals. As noted in the City's LTAG, for projects that do not demonstrate a project impact by applying an efficiency-based impact threshold (i.e., VMT per Capita) in the analysis, a less than significant project impact conclusion and consistency with the RTP/SCS is sufficient in demonstrating a less than significant cumulative impact on VMT. Development in a location where the RTP/SCS does not specify any development may indicate a significant impact on transportation.

It is noted that the Project is consistent with the RTP/SCS. Further, based on the above project related VMT analysis and the conclusions reported (i.e., which conclude that the Project with contribution of a fee to the City's VMT Impact Fee Mitigation Program has a less than significant household VMT impact for the 2012 Base Year), a significant cumulative household VMT impact is not anticipated. Therefore, the Project is expected to result in a less than significant cumulative VMT impact.

6.0 CONCLUSIONS

This VMT analysis has been prepared to evaluate the potential impact due to the proposed residential project located at the northwest corner of the future 65th Street W. / W. Avenue K intersection in the City of Lancaster. The City's current local transportation assessment guidelines require that a VMT analysis be performed for the purpose of identifying transportation impacts under CEQA. A VMT assessment has therefore been prepared in accordance with the City's guidelines. Based on the SCAG regional travel demand model and the thresholds outlined in the City's guidelines, the VMT per Capita for the TAZ that the Project is located within is 25.71 miles per Capita for the 2012 Base Year. As determined in consultation with City staff and outlined in Ordinance No. 1100 approving a VMT Impact Fee Mitigation Program, the Project's contribution of a fair-share payment to cover the cost of Citywide VMT-reducing projects and TDM measures would result in a less than significant household VMT impact. Based on the Project related VMT analysis and conclusions reported in Sections 5.4 and 5.5, cumulative household VMT impacts are also not anticipated for the Project based on payment of the VMT Mitigation Fee.