

**DATE:** October 27, 2023  
**TO:** Ross Geller, Applied Planning, Inc.  
**FROM:** Alex So, Urban Crossroads, Inc.  
**JOB NO:** 14698-01 VMT

## **EDEN MIXED-USE VEHICLE MILES TRAVELED (VMT) ANALYSIS**

Urban Crossroads, Inc. is pleased to provide the following Vehicle Miles Traveled (VMT) Analysis for the Eden Mixed-Use (**Project**), which is located on the northwest corner of Euclid Avenue (SR-83) and Schaefer Avenue in the City of Chino.

### **PROJECT OVERVIEW**

The proposed Project includes the development of the following:

- 282 multifamily (mid-rise) residential dwelling units
- 145,000 square feet of self-storage use
- 2 fast-food restaurants with drive-through window pads totaling 7,000 square feet
- 12,500 square feet of inline retail (9,400 square feet of fast-food restaurant without drive-through window and 3,100 square feet of retail use)

A site plan is included in Attachment A.

### **BACKGROUND**

The California Environmental Quality Act (CEQA) requires all lead agencies to adopt VMT as the measure for identifying transportation impacts for land use projects. To comply with CEQA, the City of Chino adopted their City of Chino Traffic Impact Analysis Guidelines, (**City Guidelines**) (1). This VMT analysis has been developed based on the adopted City Guidelines.

### **VMT SCREENING**

City Guidelines note that a project may have a less than significant impact and screen from the need to conduct a project level VMT analysis if it meets one or more VMT screening criteria. The City's adopted VMT screening criteria are described in Table 1 along with a determination of each screening criteria's applicability to the Project.

**TABLE 1: SCREENING FOR LAND USE PROJECTS EXEMPT FROM VMT ANALYSIS**

Screening Criteria	Description	Result
Transit Priority (TPA) Screening	Projects located within a TPA (i.e., within a half mile of an existing major transit stop or an existing stop along a high-quality transit corridor) are presumed to have less than significant impact on VMT.	Does not meet.
Low VMT Area Screening	Projects located within a low VMT generating zone that can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area are presumed to have a less than significant VMT impact.	Does not meet.
Project Type Screening	Local-Serving Retail under 50,000 square feet, neighborhood schools, and projects generating less than 110 daily vehicle trips are presumed to have a less than significant impact on VMT.	Does not meet.

Although the Project’s retail component appears to meet the Project Type Screening criteria as it is less than 50,000 square feet and provides local serving food and shopping to the Project’s residents and nearby area, the retail component has been included as part of the VMT forecasting performed to estimate both project-generated total VMT and project effect on VMT.

**VMT ANALYSIS**

**TRAFFIC MODELING METHODOLOGY**

The City Guidelines identify the San Bernardino Traffic Analysis Model (SBTAM) as the appropriate tool for conducting VMT analysis for land use projects within the City of Chino. This model considers interactions between different land uses based on socio-economic data, including population, households, and employment. SBTAM is a travel forecasting model that represents a sub-area (San Bernardino County) of the Southern California Association of Governments (SCAG) regional traffic model. SBTAM was designed to provide a greater level of detail and sensitivity in the San Bernardino County area as compared to the regional SCAG model.

**VMT ANALYSIS METHODOLOGY**

For this analysis, VMT has been estimated using the Origin/Destination method and the Boundary method. For both methodologies, VMT is presented as total VMT and total VMT per Service Population. Total VMT encompasses all VMT generated in the City of Chino or by the Project on a typical weekday, while total VMT per Service Population is an efficiency metric representing VMT generated on a typical weekday per person who resides and/or works in the City or who resides within the Project.

**ORIGIN/DESTINATION METHOD**

The Origin/Destination (OD) method for calculating VMT sums all weekday VMT generated by trips with at least one trip-end in the study area and tracks those trips to their origin or destination. Origins are all vehicle trips that start in a specific traffic analysis zone, while destinations are all vehicle trips that end in a specific traffic analysis zone. The OD method

accounts for all trips (i.e., both passenger cars and trucks) and trip purposes (i.e., total VMT) and therefore provides a more complete estimate of VMT.

**BOUNDARY METHOD**

The boundary method calculates the sum of all weekday VMT on the roadway network within a specified boundary, which can be the City boundary or another designated geographic area. VMT is estimated by multiplying the number of vehicle trips on each roadway segment within the boundary by the length of that segment. This method includes all trips, even those that do not begin or end within the designated boundary. The City of Chino serves as the boundary for this assessment, however, as the Project is situated near the southeastern edge of the City of Chino, an additional assessment has been conducted covering a ten-mile boundary area surrounding the Project site to ensure that trips associated with the Project are not omitted.

**CITY OF CHINO VMT IMPACT CRITERIA**

VMT Guidelines adopted by the City state that for purposes of determining a potentially significant impact to transportation pursuant to CEQA, a project would result in a significant project-generated impact if the following condition is satisfied:

- A significant impact would occur if project VMT per service population exceeds the Citywide average under General Plan Horizon Year Conditions.
- A significant cumulative impact would occur if the project caused total daily VMT within the City to be higher than the ‘no project alternative’ under cumulative conditions.

To make an impact determination, the City of Chino’s average VMT per service population (VMT per SP) under General Plan Horizon Year Conditions was calculated using the SBTAM model. Table 1 presents the resulting City of Chino’s average VMT per SP for General Plan Horizon Year Conditions.

**TABLE 2: CITY OF CHINO VMT PER SERVICE POPULATION**

	General Plan Horizon Year
SP	173,150
VMT	5,930,004
VMT per SP	34.3

As shown in Table 2, the City of Chino’s VMT per SP for General Plan Horizon Year has been calculated as **34.3 VMT per SP**.

**VMT ESTIMATES**

To estimate project-generated VMT, standard land use information, such as building square footage, must be converted into a SBTAM model-compatible dataset. The SBTAM model uses socio-economic data (SED), such as households, population, and employment. Table 3 summarizes the SED inputs used to represent the project, which was then coded into the Project’s TAZ to derive project generated VMT.

**TABLE 3: LAND USE DATA SUMMARY**

Land Use	Project
Households	282
Population	987
Total Employment	156

Table 4 presents Project generated total OD VMT and the resulting total OD VMT per SP for both Baseline (2023) and Cumulative (2040) conditions.

**TABLE 4: PROJECT GENERATED VMT**

	Baseline	Cumulative
SP <sup>1</sup>	1,143	1,143
OD VMT	33,297	33,600
OD VMT per SP	29.1	29.4
City Threshold	34.3	34.3
Potentially Significant?	No	No

As shown in Table 4, the Project would generate total OD VMT per SP below the City's adopted impact threshold for both Baseline and Cumulative (2040) conditions. The Project is found to have a less than significant impact for project-generated VMT.

Table 5 presents VMT estimates for the Project effect on VMT and was performed using the boundary method within the City of Chino and a 10-mile radius surrounding the Project site.

**TABLE 5: CUMULATIVE BOUNDARY VMT RESULTS**

Scenario	City Boundary		10-Mile Boundary	
	No Project	With Project	No Project	With Project
SP	173,150	174,293	1,720,763	1,721,906
Boundary VMT	2,922,752	2,925,350	33,629,607	33,641,261
VMT per SP	16.8	16.8	19.5	19.5
Change in VMT	0.0		0.0	
Potentially Significant?	No		No	

As shown in Table 5, the Boundary VMT per SP remains unchanged under the with Project scenario for both the Chino City boundary and 10-mile radius of the Project site. The Project's cumulative effect on VMT is considered less than significant.

<sup>1</sup> SP = Service Population which refers to the Project's population estimate.

## SUMMARY

Based on the results of this analysis the following findings are made:

- Consistent with City Guidelines, VMT estimates were prepared measuring both project generated VMT per SP and City of Chino total daily VMT (i.e., project effect on VMT).
- Project generated VMT per SP was found to be below the City's adopted impact threshold of Citywide average VMT per SP under General Plan Buildout Conditions and is considered **less than significant**.
- Total daily VMT per SP within the City of Chino is forecast to remain unchanged with the addition of the proposed Project and is considered **less than significant**.

If you have any questions, please contact me directly at [aso@urbanxroads.com](mailto:aso@urbanxroads.com).

## REFERENCES

1. **City of Chino.** *City of Chino Traffic Impact Analysis Guidelines.* City of Chino : s.n., December 2020.

**ATTACHMENT A**  
**PRELIMINARY SITE PLAN**

