

**DATE:** January 30, 2023  
**TO:** Connie Anderson, T&B Planning, Inc.  
**FROM:** Alex So, Urban Crossroads  
**JOB NO:** 14482-02 VMT

## **8TH STREET INDUSTRIAL VEHICLE MILES TRAVELED (VMT) ANALYSIS**

Connie Anderson,

Urban Crossroads, Inc. is pleased to provide the following Vehicle Miles Traveled (VMT) Analysis for the 8th Street Industrial (**Project**), which is located on the southeast corner of 8<sup>th</sup> Street and Rancho Vista Boulevard, in the City of Palmdale.

### **PROJECT OVERVIEW**

The Project is proposed to consist of a 384,800 square foot single warehouse building (see Attachment A). For the purposes of this analysis, the Project will be evaluated assuming 384,800 square feet of high-cube fulfillment center (non-sort facility).

### **BACKGROUND**

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020, consistent with Senate Bill 743 (SB 743). At the time of this analysis, the City of Palmdale has not formally adopted its own guidelines and impact thresholds, and instead currently utilizes the County of Los Angeles [Transportation Impact Analysis Guidelines](#) (July 23, 2020) (**County Guidelines**) (1) until such time that the City is able to develop their own guidelines and thresholds.

### **VMT SCREENING**

The County Guidelines provides details on appropriate screening criteria that can be used to identify when a proposed land use project is anticipated to result in a less than significant transportation impact and are broken down into four categories. Consistent with the screening criteria identified within the County Guidelines, the criteria in bold will be evaluated further based on applicability:

- **Non-Retail Project Trip Generation Screening**
- Retail Project Site Plan Screening
- **Proximity to Transit Based Screening**
- Residential Land Use Based Screening

A land use project need only to meet one of the above screening criteria to be excused from further VMT analysis.

### **NON-RETAIL PROJECT TRIP GENERATION SCREENING**

The County Guidelines state that development projects generating a net increase of fewer than 110 daily vehicle trips are presumed to have a less than significant impact absent substantial evidence to the contrary.

In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11<sup>th</sup> Edition, 2021) were used to estimate the trip generation for actual vehicles. The proposed Project is anticipated to generate a total of 698 daily vehicle trips, exceeding the 110 daily vehicle trip threshold (see Attachment B, Tables B-1 and B-2)

**Non-Retail Project Trip Generation Screening criteria is not met.**

### **PROXIMITY TO TRANSIT BASED SCREENING**

The County Guidelines state that projects located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor may be presumed to have a less than significant transportation impact if the Project meets the following sub-criteria:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking than required by the County Code;
- Is inconsistent with the applicable Sustainable Communities Strategy RTP/SCS; or
- Replaces affordable residential units with a smaller number of market-rate residential units.

The proposed Project is located within a TPA nor HQT (See Attachment C). However, the Project does not meet the sub criteria (i.e., FAR greater than 0.75)

**TPA screening criteria is not met.**

Consistent with County Guidelines, projects that do not meet screening criteria are required to prepare a project level VMT analysis.

## **VMT ANALYSIS**

### **MODELING METHODOLOGY**

The County Guidelines identifies the SCAG model as the appropriate tool for conducting VMT analysis for land use projects in Los Angeles County. The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) trip-based model is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and

employment. The current SCAG model has a base year of 2012 and a forecast year of 2040 and can be used to estimate VMT for existing year 2022 conditions. The 2040 model contains the planned transportation improvements in the RTP and growth projections in the SCS.

Urban Crossroads has obtained project generated VMT calculations for baseline 2022 conditions from Fehr and Peers, who has the SCAG model in-house and is able to provide project level model runs and VMT estimates by individual traffic analysis zones (TAZ).

### **SIGNIFICANCE THRESHOLD**

Based on County Guidelines, the City of Palmdale utilizes the following impact threshold:

- The project's employment VMT per employee exceeding 16.8% below the Baseline employment VMT per employee for the North Los Angeles County area is considered to have a significant VMT impact.

For purposes of VMT analyses, the County Guidelines identifies the Baseline condition as the year the analysis is conducted or in this case 2022. Using the SCAG model base year (2016) and cumulative year (2040), the North Los Angeles County Baseline (2022) VMT was calculated using straight line linear interpolation as 15.9 VMT per employee. To arrive at the adopted impact threshold of 16.8% below Baseline North County area VMT per employee the resulting impact threshold to be used for this analysis is **13.2 VMT per employee** ( $15.9 \times 0.832 = 13.2$ ).

It is also noted that Los Angeles County is currently updating their VMT guidelines to incorporate a revised Baseline VMT threshold for the entire Los Angeles County area instead of separating the North and South County areas into two areas. The SCAG model has been used to calculate employment VMT per employee for the entire Los Angeles County area for Baseline (2022) conditions resulting in a Baseline VMT per employee of 16.3. To arrive at the impact threshold of 16.8% below Baseline Los Angeles County VMT per employee the resulting impact threshold is **13.6 VMT per employee** ( $16.3 \times 0.832 = 13.6$ ). For the purposes of this analysis the Project will also be compared to this anticipated future impact threshold.

### **PROJECT LAND USE CONVERSION**

To estimate Project generated VMT, standard land use information such as total building square footage must first be converted into a SCAG travel demand forecasting model compatible dataset. The SCAG model utilizes socio-economic data (SED) (e.g., population, households and employment) instead of land use information for the purposes of vehicle trip estimation. Land use information for the Project has been converted to SED and input into the Project's TAZ to calculate Project generated HBW VMT. Table 2 summarizes the SED inputs used to reflect the Project.

**TABLE 2: PROJECT EMPLOYEE ESTIMATES**

Land Use	Quantity	Employment Factor <sup>1</sup>	Employees
Industrial	384,800 SF	1.18 employee per 1,000 SF	454

**PROJECT VMT AND COMPARISON TO IMPACT THRESHOLD**

HBW VMT per employee for the Project was calculated for Baseline (2022) conditions using the SCAG travel demand model and is presented in Table 3 along with the estimated number of Project employees, and the resulting HBW VMT per employee.

**TABLE 3: PROJECT VMT AND VMT THRESHOLD OF NORTH LOS ANGELES COUNTY**

Project HBW VMT	4,767
Project Employment	454
Project HBW VMT per Employee	10.5
County Threshold	13.2
Percent Below Threshold	-20.45%
Potentially Significant?	No

As shown in Table 3, Project generated HBW VMT per employee is 10.5, which is 20.45% below the currently adopted impact threshold of 13.2 VMT per employee resulting in a less than significant impact.

In addition, Project generated HBW VMT per employee has also been compared to the County's anticipated future impact threshold of 16.8% below Baseline VMT for all of Los Angeles County. As shown in Table 4, Project HBW VMT per employee is 22.79% below the anticipated future threshold of 13.6 VMT per employee resulting in a less than significant VMT impact.

**TABLE 4: PROJECT VMT AND VMT THRESHOLD OF LOS ANGELES COUNTY**

	Project
HBW VMT	4,767
Employment	454
HBW VMT per Employee	10.5
County Threshold	13.6
Percent Change	-22.79%
Potentially Significant?	No

**CONCLUSION**

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

- The Project was evaluated against screening criteria as outlined in the County Guidelines. The Project was not found to meet any available screening criteria, and a VMT analysis was performed.

<sup>1</sup> City of Palmdale 2045 General Plan Update Final EIR; Table 2-4.

- Project generated VMT per employee was found to be 20.45% below the County's currently adopted impact threshold of 16.8% below Baseline VMT for North Los Angeles County.
- Project generated VMT per employee was also found to be 22.79% below the County's anticipated to be adopted impact threshold of 16.8% below Baseline VMT for Los Angeles County.
- The Project's VMT impact is considered less than significant.

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

Respectfully submitted,

URBAN CROSSROADS, INC.

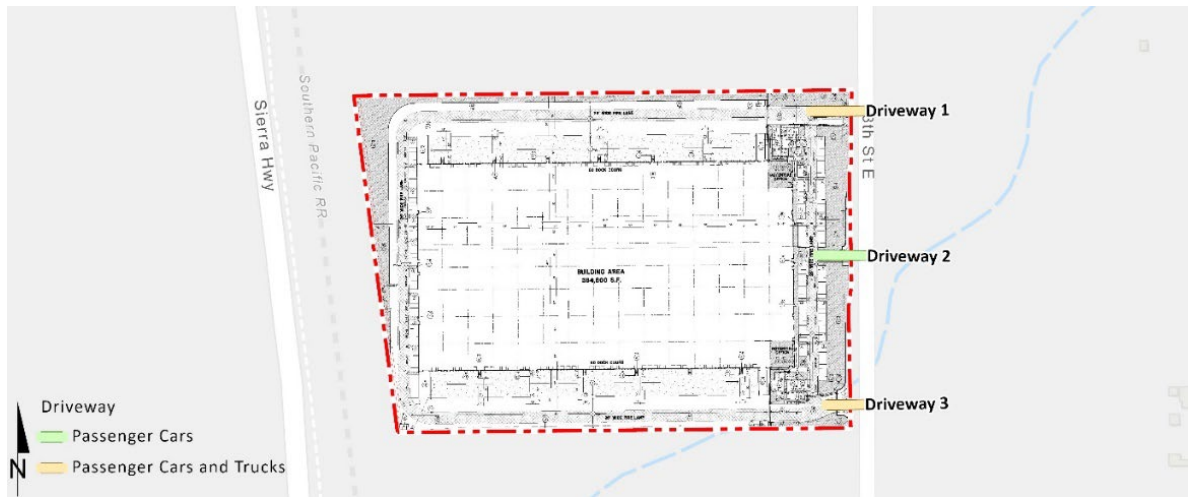


Alexander So  
Senior Associate

## REFERENCES

1. **Los Angeles County Public Works.** *Transportation Impact Analysis Guidelines.* Los Angeles : Public Works, 2020.

**ATTACHMENT A  
PRELIMINARY SITE PLAN**





**ATTACHMENT B**  
**PROJECT TRIP GENERATION**

**TABLE B-1: PROJECT TRIP GENERATION RATES**

Land Use <sup>1</sup>	Units <sup>2</sup>	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
High-Cube Fulfillment Center (Non-Sort) <sup>3</sup>	TSF	155	0.122	0.028	0.150	0.062	0.098	0.160	1.810
Passenger Cars			0.112	0.018	0.130	0.057	0.093	0.150	1.580
2-Axle Trucks			0.002	0.001	0.003	0.001	0.001	0.002	0.038
3-Axle Trucks			0.002	0.002	0.004	0.001	0.001	0.002	0.048
4+-Axle Trucks			0.006	0.007	0.013	0.003	0.003	0.006	0.144

<sup>1</sup> Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

<sup>2</sup> TSF = thousand square feet

<sup>3</sup> Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.  
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

**TABLE B-2: PROJECT TRIP GENERATION SUMMARY**

Land Use	Quantity Units <sup>1</sup>	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
High-Cube Fulfillment (Non-Sort)	384.800 TSF							
Passenger Cars:		43	7	50	22	36	58	608
2-axle Trucks:		1	1	1	0	0	1	16
3-axle Trucks:		1	1	2	0	0	1	18
4+-axle Trucks:		2	3	5	1	1	2	56
Total Truck Trips (Actual Vehicles):		4	5	9	1	1	2	90
<b>Total Trips (Actual Vehicles)<sup>2</sup></b>		<b>47</b>	<b>12</b>	<b>59</b>	<b>23</b>	<b>37</b>	<b>60</b>	<b>698</b>

<sup>1</sup> TSF = thousand square feet

<sup>2</sup> Total Trips = Passenger Cars + Truck Trips.

**ATTCHMENT C**  
**TPA SCREENING MAP**

