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**TO:** Connie Anderson, T&B Planning, Inc.  
**FROM:** Alex So, Urban Crossroads, Inc.  
**JOB NO:** 14925-01 VMT

## **L-4 AVENUE WAREHOUSE VEHICLE MILES TRAVELED (VMT) ANALYSIS**

Urban Crossroads, Inc. is pleased to provide the following Vehicle Miles Traveled (VMT) Analysis for the L-4 Avenue Warehouse (**Project**), which is located north of Avenue L-4 and west of Sierra Highway in the City of Lancaster.

### **PROJECT OVERVIEW**

The proposed Project consists of a 217,700 square foot warehouse building of which 2,500 square feet will be used for ground floor office space. A preliminary site plan for the Project can be found 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 Lancaster adopted their Local Transportation Assessment Guidelines (January 5, 2021) (**City Guidelines**) (1). The VMT evaluation presented in this report has been developed based on these guidelines.

### **VMT SCREENING**

City Guidelines states that a project may be determined to have a less than significant impact and screen out of requiring a project level VMT analysis if it meets at least one of the City's 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 PROJECTS EXEMPT FROM VMT ANALYSIS**

Screening Criteria	Description	Result
Project Type Screening	Projects that generate less than 110 daily trips and Local-Serving Retail projects under 50,000 square feet may be presumed to have a 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 employee 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.
Transit Priority Area (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.
Affordable Housing Screening	Affordable housing projects typically generate lower VMT than market-rate housing. The screening can be applied to projects containing all affordable housing units or to only those units within a larger development that meet affordable housing requirements.	Does not meet.
Transportation Facilities Screening	Transportation projects that promote active transportation, such as transit, bicycle and pedestrian facilities, are presumed to generally reduce VMT and can be screened from further analysis.	Does not meet.

As noted in the City Guidelines, projects not meeting at least one of the above-described screening criteria are required to complete a VMT analysis.

**VMT ANALYSIS**

**MODELING METHODOLOGY**

City Guidelines identifies the Southern California Association of Governments (**SCAG**) model as the appropriate tool for conducting VMT analysis for land use projects in the City of Lancaster. The (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 estimates from Fehr and Peers, who maintains the SCAG model in-house and is able to provide project level model runs and VMT estimates by individual traffic analysis zones (TAZ).

**VMT METRIC AND SIGNIFICANCE THRESHOLD**

The City of Lancaster has identified Home-Based Work (HBW) VMT per Employee as the appropriate metric for evaluating potential VMT impacts for employment generating land uses such as commercial or industrial projects. HBW VMT per Employee is an efficiency metric that represents commute VMT generated on a typical weekday per employee. This metric allows

project VMT to be evaluated based on trip purpose consistent with the Governor’s Office of Planning and Research’s (OPR’s) Technical Advisory (2).

Based on City Guidelines, the City of Lancaster has adopted the following impact threshold for employment (commercial or industrial) projects:

- Project exceeds 15% below Los Angeles County’s Antelope Valley Planning Area (AVPA) Baseline VMT for HBW VMT per employee

For the purposes of this analysis, Baseline conditions are defined as the year in which the VMT analysis is prepared or in this case 2022. Using the SCAG model, the AVPA Baseline (2022) HBW VMT per employee has been estimated as 9.1 HBW VMT per employee while the impact threshold of 15% below Baseline AVPA VMT is calculated as **7.7 HBW VMT per employee**.

**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 employment and input into the Project’s traffic analysis zone (TAZ) to estimate 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	Employees
Industrial	217,700 SF	1 employee per 1,000 SF <sup>1</sup>	218

**PROJECT GENERATED VMT AND COMPARISON TO IMPACT THRESHOLD**

Project HBW VMT has been 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 HBW VMT PER EMPLOYEE**

	Project
HBW VMT	2,463
Employment	218
HBW VMT per Employee	11.3
City’s Threshold	7.7
Percent Above Threshold	46.8%
Potentially Significant?	Yes

As shown above, the Project generates 11.3 HBW VMT per employee. In comparison to the VMT threshold of 15% below Baseline VMT of the AVPA, the Project is 46.8% above the currently adopted threshold, which results in a potential VMT impact. To reduce the Project’s potential VMT

<sup>1</sup> This analysis used the employment ratio for Light Industrial from LA City VMT Calculator (LADOT, 2020). [https://ladot.lacity.org/sites/default/files/documents/vmt\\_calculator\\_documentation-2020.05.18.pdf](https://ladot.lacity.org/sites/default/files/documents/vmt_calculator_documentation-2020.05.18.pdf)

impact, the HBW VMT per employee needs to be reduced by 784 VMT<sup>2</sup>. This VMT reduction equates to 32%<sup>3</sup>.

## VMT MITIGATION FEE BANK

The City of Lancaster has adopted Resolution No. 23-08 on January 24, 2023, which would allow new residential and nonresidential development to mitigate their project specific VMT impacts by making a “fair share” payment to cover the cost of the identified transportation demand management (TDM) strategies and VMT-reducing projects within the City of Lancaster. The proposed fee would apply to new residential and nonresidential development in the City that are subject to a VMT analysis under CEQA and is shown to generate VMT over the City’s established threshold of significance. The City’s Resolution states that VMT Mitigation Fee of \$150.00 per vehicle mile traveled above the City’s VMT impact threshold shall be paid. Through the payment of fees that fund programs that reduce VMT in the City, payment of the fees will result on impacts that are less than significant. The Project would be able to pay the fee per VMT to reduce the project’s total VMT to a less than significant level.

As calculated above, the Project is required to reduce its VMT impact by 784 total VMT. In order for the Project to reduce its VMT impact to a level of less than significant, the Project will need to contribute a fee of \$117,750 (785 x \$150 = \$117,750).

## SUMMARY AND CONCLUSION

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

- The Project was evaluated against screening criteria as outlined in the City Guidelines. The Project was not found to meet any available screening criteria and a VMT analysis was performed.
- The Project’s VMT analysis found the Project to exceed the City’s VMT per employee threshold by 46.8% using the currently adopted thresholds. To reduce the Project’s potential VMT impact, the VMT per employee needs to be reduced by 32% or 785 VMT.
- For the Project to fully mitigate its VMT impact, the Project would need to contribute to the City’s VMT fee bank mitigation program in the amount of \$117,750 to reduce the Project’s VMT impact to a level of less than significant.

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

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<sup>2</sup> (11.3 VMT/Employee<sub>Project</sub> x 218 Employees) - (7.7 VMT/SP<sub>Threshold</sub> x 218 Employees) = 785 VMT

<sup>3</sup> 785 VMT / 2,463 VMT x 100 = 32%

## REFERENCES

1. **City of Lancaster Public Works.** *Local Transportation Assessment Guidelines.* Lancaster : Public Works, 2021.
2. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.

**ATTACHEMENT A  
PRELIMINARY SITE PLAN**

