

DATE: May 31, 2024
TO: Dan Darnell, Carson Companies
FROM: Alex So, Urban Crossroads
JOB NO: 14324-02 VMT

PEPPER 210 COMMERCE CENTER TRSTY-2022-00034 VEHICLE MILES TRAVELED (VMT) ANALYSIS

Urban Crossroads, Inc. is pleased to provide the following Vehicle Miles Traveled (VMT) Analysis for the Pepper 210 Commerce Center (**Project**), which is located at 20080 N. Highland Avenue, in the County of San Bernardino.

PROJECT OVERVIEW

The proposed Project is to consist of 1,867,660 square feet of High-Cube Fulfillment Center Warehouse use with an anticipated opening year (i.e. constructed and occupied) of 2029. The Project also includes a total of 626 trailer parking spaces that will be ancillary use and utilized by the future tenant of the building and not an independent off-site operator. It should be noted, 620,000 square feet of the total High-Cube Fulfillment Center square footage is associated with pick mod mezzanine space and the building footprint is 1,232,660 square feet. There is a proposed 2,100 square foot yard office associated with the trailer yard. A site plan 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 County of San Bernardino adopted analytical procedures, screening tools, and impact thresholds for VMT, which are documented in the San Bernardino County Transportation Impact Study Guidelines (**County Guidelines**) (1). The County Guidelines were used for this VMT analysis.

VMT SCREENING

County Guidelines state that a project may be determined to have a less than significant impact and screen from the need to prepare a project level VMT analysis if it meets one or more eligible screening criteria. The County'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 CALCULATIONS

Screening Criteria	Description	Result
Local Serving Land Use	Local-Serving Retail under 50,000 square feet and projects Local Essential Services such as K-12 schools, day care centers, and community institutions shortens non-discretionary trips by putting those goods and services closer to residents, resulting in an overall reduction in VMT.	Does not meet.
Project's Generating Less Than 110 Daily Trips	Projects generating fewer than 110 daily trips are presumed to have a less than significant impact on VMT.	Does not meet.
Transit Priority Area (TPA)	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	Projects located in a low VMT generating area of the County are beneficial to the region as they can reduce VMT per person/employee.	Does not meet.

As the Project was not found to meet any of the applicable screening criteria, consistent with the County Guidelines a project level VMT analysis should be prepared.

VMT ANALYSIS

TRAFFIC MODELING METHODOLOGY

County Guidelines state that the San Bernardino County Transportation Analysis Model (**SBTAM**), is the preferred tool for conducting VMT analysis for land use projects in the County of San Bernardino. SBTAM 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 calculation of VMT for land use projects is based on the total number of trips generated and the average trip length of each vehicle type.

VMT ANALYSIS METHODOLOGY

For the purposes of this analysis, VMT has been estimated using the Production/Attraction (PA) method and boundary method. Consistent with County Guidelines, VMT has been presented as Home-Based work (HBW) VMT per employee. HBW VMT per employee is an efficiency metric representing VMT generated on a typical weekday for all Project generated HBW trips divided by the Project's employment. County Guidelines note that VMT per employee should be used to evaluate employment projects and would apply to office, industrial, governmental, and institutional projects.

PRODUCTION/ATTRACTION METHOD

The PA method for calculating VMT sums all weekday VMT generated by Home-Based (HB) and HBW trips with at least one trip-end in the study area (i.e., Traffic Analysis Zone(s) or TAZ) by trip purpose. Productions are land use types that generate trips (residences), and attractions are land use types that attract trips (employment). The PA method allows Project VMT to be evaluated

based on trip purpose, which is consistent with recommendations noted by the Governor's Office of Planning and Research (OPR) Technical Advisory (2) and the chosen VMT metric required for analysis by County Guidelines.

BOUNDARY VMT METHOD

The boundary method is the sum of all weekday VMT on the roadway network within a designated boundary (i.e., County boundary or other designated geographic area). VMT included in the boundary method calculation includes all vehicle trips (both passenger car and trucks) and all trip purposes. The boundary method estimates VMT by multiplying vehicle trips on each roadway segment within the boundary by that segment's length. This approach consists of all trips, including those trips that do not begin or end in the designated boundary. Please note that the results are aggregated into the total geographic area and are not refined by incorporated or unincorporated areas as the project effect on VMT relates to the entire County as a whole. In addition, the Project was evaluated using a 10-mile radius surrounding the Project. A 10-mile boundary scenario is provided as the County boundary may be too expansive to measure the net change in VMT for a project of this size without model noise (i.e., convergence criteria), which may influence the results with inaccurate data and an incomplete accounting of trips coming to and from the Project.

VMT METRIC AND SIGNIFICANCE THRESHOLD

As stated in County Guidelines, the appropriate VMT metric for employment generating industrial related land uses is VMT per employee¹. The County Guidelines identifies a Project would result in a significant project generated VMT impact if the following condition is met:

- A project should be considered to have a significant impact if the project VMT per person/employee is greater than 4% below the existing VMT per person/employee for the unincorporated County.

San Bernardino County Transit Authority (SBCTA) provides published VMT values for its member agencies for base year (2016) and cumulative year (2040). Using straight-line linear interpolation, existing (2023) Unincorporated County of San Bernardino VMT per employee is 18.8 and 4% below existing VMT per employee is **18.1 VMT per employee**.

PROJECT VMT ESTIMATES

To estimate Project generated VMT, standard land use information such as building square footage must first be converted into a SBTAM compatible dataset. The SBTAM model utilizes socio-economic data (SED) (e.g., population, households, and employment) for the purposes of vehicle trip estimation. Table 2 summarizes the SED inputs used to represent the Project. Project SED data was then added to the Project TAZ and the SBTAM model was run inclusive of the Project.

¹ County Guidelines; Page 20

TABLE 2: EMPLOYMENT ESTIMATES

Land Use	Building Area	Conversion Factor ²	Estimated Employees
Warehouse	1,867,660 SF	1,195 SF per Employee	1,562
Yard Office	2,100 SF	300 SF per Employee	7

The VMT estimates calculated for the Project are presented in Table 3. The proposed Project is forecast to generate HBW VMT per employee below the County's adopted impact threshold and is considered to have a less than significant impact.

TABLE 3: PROJECT GENERATED HBW VMT PER EMPLOYEE

	Existing 2023
Employment	1,569
HBW VMT	27,596
VMT / employee	17.6
Unincorporated County Threshold	18.1
Potentially Significant?	No

CUMULATIVE ANALYSIS

In addition, the County Guidelines state, that if the Project is inconsistent with the regional transportation plan or sustainable community strategies (RTP/SCS) the project's cumulative effect on VMT would be considered significant if it results in the following condition to be satisfied:

- Perform a Cumulative Analysis to determine if VMT per person/employee increases or decreases compared to the RTP/SCS assumptions.

The Cumulative analysis can be accomplished using the boundary method as previously described. Table 4 presents boundary VMT and boundary VMT per service population (e.g., person/employee) estimates for the cumulative condition.

TABLE 4: CUMULATIVE BOUNDARY VMT

	County Boundary		10-Mile Boundary	
	No Project	With Project	No Project	With Project
Cumulative				
Service Population	3,749,647	3,751,208	1,255,910	1,257,471
Boundary VMT	87,716,504	87,731,915	21,487,199	21,500,255
VMT per Service Population	23.4	23.4	17.1	17.1
Change in VMT per Service Population	0.0		0.0	

The boundary VMT per service population is found to remain unchanged in the With Project scenario under both Countywide and 10-mile boundary scenarios. Therefore, the Project's cumulative effect on VMT is also considered less than significant.

² SCAG Employment Density Study; Table II-B

SUMMARY

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

- The Project was evaluated against eligible screening criteria as described in the County Guidelines and was found to NOT meet screening criteria, as such, a VMT analysis was performed.
- A project-level VMT analysis was prepared to calculate Project generated HBW VMT per employee and to compare the results to the County's adopted impact threshold. The Project was determined to have a less than significant impact.
- In addition, the cumulative VMT analysis found that the Project would not increase VMT per person/employee within the County or 10-mile boundary scenarios.
- Based on the results of the analysis conducted consistent with County Guidelines, the Project is determined to have a less than significant VMT impact.

If you have any questions, please contact me directly at aso@urbanxroads.com.

REFERENCES

1. **San Bernardino County.** *Transportation Impact Study Guidelines*. July 2019.

ATTCHMENT A
PRELIMINARY SITE PLAN

