



June 17, 2021

Ms. Nicole Morse
T&B Planning
3200 El Camino Real, Suite 100
Irvine, CA 92602

SUBJECT: OTTAWA BUSINESS CENTER VEHICLE MILES TRAVELED (VMT) ANALYSIS

Dear Ms. Nicole Morse:

The following VMT analysis has been prepared for the proposed Ottawa Business Center development (**Project**), located the northeast corner of Hesperia Road and Ottawa Street in the City of Victorville.

PROJECT OVERVIEW

The proposed Project consists of 200,000 square feet (SF) of high-cube cold storage warehouse use and 796,520 SF of high-cube fulfillment center warehouse use.

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) (**Technical Advisory**). (2) Based on OPR's Technical Advisory, the City of Victorville adopted Vehicle Miles Traveled (VMT) Analysis Guidelines (June 2020) (**City Guidelines**) (3), which documents the City's VMT analysis methodology and approved impact thresholds. The VMT analysis presented in this report has been developed based on the adopted City Guidelines.

PROJECT SCREENING

Consistent with City Guidelines, projects that meet certain screening thresholds based on their location and project type may be presumed to result in a less than significant transportation impact. The following screening criteria are described within the City Guidelines:

- Daily Trip Screening
- Land Use Type Screening
- Low VMT Area Screening

A land use project need only meet one of the above screening criteria to result in a less than significant impact.

DAILY TRIP SCREENING

The City Guidelines indicate that projects that result in a net increase of 1,285 daily vehicle trips or less may be presumed to have a less than significant impact based on their negligible impact on citywide VMT and resulting greenhouse gas emissions. Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017. (1) The proposed Project is anticipated to generate 2,124 vehicle trip-ends per day (see Attachment A). Therefore, the Project exceeds the 1,285 vehicle trips per day threshold.

The Daily Trip screening criteria is not met.

LAND USE SCREENING

The City Guidelines identify that warehousing land use less than 829,000 SF or other local serving essential services (e.g., local parks, day care centers, public schools, affordable housing, etc.) are presumed to have a less than significant impact absent substantial evidence to the contrary. The Project, as designed includes a warehouse building exceeding the City's adopted threshold.

The Land Use screening criteria is not met.

LOW VMT AREA SCREENING

As noted in the Technical Advisory, "residential and office projects that locate in areas with low VMT and that incorporate similar features (density, mix of uses, and transit accessibility) will tend to exhibit similarly low VMT." (1) It is our understanding that the City of Victorville utilizes the San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool (**Screening Tool**). The Screening Tool allows users to input an assessor's parcel number (APN) to determine if a project's location meets one or more of the screening thresholds for land use projects. The Screening Tool uses the sub-regional San Bernardino Transportation Analysis Model (SBTAM) to measure VMT performance within individual traffic analysis zones (TAZ's) within the region. The Project's physical location, based on parcel number, is input into the Screening Tool to determine project generated VMT. The parcel containing the proposed Project was selected and the Screening Tool was run for Production/Attraction (PA) VMT per service population (SP) (i.e., population and employment) measure of VMT.

The City Guidelines indicate that projects with VMT per SP less than the City's future year General Plan buildout VMT per SP are considered to have a less than significant impact. SBCTA has published VMT per SP values for the City of Victorville. Based on the Screening Tool results (see Attachment B), the future year General Plan buildout VMT per SP is 25.04. The TAZ in which the Project resides, is estimated to generate 66.4 VMT per SP. Therefore, the Project resides within a TAZ that generates VMT per SP exceeding the City's General Plan buildout VMT per SP threshold.

The Low VMT Area screening criteria is not met.

As none of the aforementioned screening criteria has been met. A project level VMT analysis shall be prepared.

PROJECT GENERATED VMT

City Guidelines state that SBTAM is a useful tool to calculate VMT as it considers interaction between different land uses based on socio-economic data such as population, employment and other factors. It was also the tool used to establish the City’s impact threshold, so is the appropriate tool to conduct the analysis to ensure an apples-to-apples comparison of project generated VMT to the adopted threshold.

Project generated VMT has been calculated using the most current version of SBTAM. Adjustments in socio-economic data (SED) (i.e., population, households, and employment) have been made to the Project’s TAZ to reflect the Project’s proposed land uses (i.e., warehousing uses). Table 1 summarizes the population and employment estimates for the Project.

TABLE 1: SED ESTIMATES

Land Use	Quantity	Conversion Factors	Estimated SED
Warehousing	996,520 SF	1,195 SF per employee	834 Employees

Project SED presented in Table 1 are based on total proposed warehousing quantity of 996,520 SF using an employment rate of 1,195 SF per employee.¹ Adjustments to the number of employees to the Project’s TAZ were made to the base year model and the model was run inclusive of the Project’s employment.

Project generated VMT was calculated using the production/attraction (PA) trip matrix. The VMT value was then normalized by dividing by the Project’s service population (i.e., number of employees). Table 2 presents the key inputs for the calculation of project generated VMT per service population.

TABLE 2: PROJECT VMT PER SERVICE POPULATION

	Baseline
Project generated VMT	20,514
Service Population	834
VMT per Service Population	24.60

The City of Victorville has selected an impact threshold based on VMT per service population being less than the City’s VMT General Plan buildout per service population.²

Table 3 presents a comparison between Project generated VMT per service population to the City’s impact threshold. As shown, the Project is anticipated to generate VMT 1.76% below the City General

¹ SCAG Employment Density Report; page 4, Table 2-B.

² City Guidelines; Page 1

Plan (GP) buildout VMT per SP. As such, the Project does not exceed the threshold and is presumed to have a less than significant impact.

TABLE 3: PROJECT GENERATED VMT PER SP COMPARISON

	Baseline
City GP Buildout VMT per SP	25.04
Project VMT per SP	24.60
Percent Change	-1.76%
Potentially Significant?	No

PROJECT'S CUMULATIVE EFFECT ON VMT

The Technical Advisory notes that "... metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term goals and relevant plans has no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa. This is similar to the analysis typically conducted for greenhouse gas emissions, air quality impacts, and impact that utilize plan compliance as a threshold of significance."³ Since the Project was found to have a less than significant impact at the project level, it is considered to be less than significant cumulative impact as well.

CONCLUSION

In summary, the Project was found to not meet applicable VMT screening thresholds and as required by City Guidelines, a project level VMT analysis was performed consistent with the requirements identified for single land use type. Project generated VMT was calculated and divided by the Project's employment to obtain the City's selected measure of VMT efficiency of VMT per service population. The Project does not exceed the City's adopted impact threshold and is therefore presumed to be less than significant.

Respectfully submitted,

URBAN CROSSROADS, INC.



Alex So
Senior Analyst

³ Page 6 of the OPR's Technical Advisory.

REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
2. **City of Victorville.** *City of Victorville Vehicle Miles Traveled (VMT) Guidelines.* June 2020.
3. **Institute of Transportation Engineers.** *Trip Generation Manual.* 10th Edition. 2017.

ATTACHMENT A
PROJECT TRIP GENERATION

TABLE 1: TRIP GENERATION RATES (WITH ITE 2020 SUPPLEMENT TRUCK %)

Land Use ¹	Units ²	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 Warehouse ⁴	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks			0.006	0.002	0.008	0.003	0.008	0.011	0.162
5+-Axle Trucks			0.008	0.003	0.011	0.003	0.007	0.010	0.217
High-Cube Cold Storage Warehouse ³	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars			0.062	0.018	0.080	0.025	0.067	0.092	1.378
2-Axle Trucks			0.008	0.002	0.010	0.003	0.007	0.010	0.257
3-Axle Trucks			0.003	0.001	0.003	0.001	0.002	0.003	0.082
4+-Axle Trucks	0.012	0.004	0.016	0.004	0.011	0.015	0.403		
Passenger Car Equivalent (PCE) Trip Generation Rates⁵									
High-Cube Fulfillment Center Warehouse ⁴	TSF	--	0.094	0.028	0.122	0.046	0.119	0.165	2.129
Passenger Cars			0.079	0.024	0.103	0.040	0.104	0.144	1.750
2-4 Axle Trucks (PCE = 2.0)			0.012	0.004	0.016	0.006	0.016	0.022	0.324
5+-Axle Trucks (PCE = 3.0)			0.025	0.008	0.033	0.008	0.022	0.030	0.651
High-Cube Cold Storage Warehouse ³	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars			0.062	0.018	0.080	0.025	0.067	0.092	1.378
2-Axle Trucks (PCE = 1.5)			0.012	0.004	0.015	0.004	0.010	0.014	0.386
3-Axle Trucks (PCE = 2.0)			0.005	0.002	0.007	0.002	0.004	0.006	0.163
4+-Axle Trucks (PCE = 3.0)	0.037	0.011	0.048	0.012	0.033	0.045	1.209		

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

² TSF = thousand square feet

³ Vehicle Mix Source: ITE Trip Generation Handbook Supplement (2020), Appendix C.

Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

Normalized % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

⁴ Vehicle Mix Source: High Cube Warehouse Trip Generation Study, WSP, January 29, 2019.

Inbound and outbound split source: ITE Trip Generation Manual, Tenth Edition (2017) for ITE Land Use Code 154.

⁵ PCE factors per SBCTA CMP: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

TABLE 2: TRIP GENERATION SUMMARY

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
High-Cube Cold Storage	200.000 TSF							
Passenger Cars:		12	4	16	5	13	18	276
2-axle Trucks:		2	0	2	1	1	2	52
3-axle Trucks:		1	0	1	0	0	0	16
4+-axle Trucks:		2	1	3	1	2	3	82
Total Truck Trips (Actual Vehicles):		5	1	6	2	3	5	150
High-Cube Cold Storage Total Trips (Actual Vehicles)²		17	5	22	7	16	23	426
High-Cube Fulfillment	796.520 TSF							
Passenger Cars:		63	19	82	32	83	115	1,394
2-4axle Trucks:		5	1	6	2	6	8	130
5+-axle Trucks:		7	2	9	2	6	8	174
Total Truck Trips (Actual Vehicles):		12	3	15	4	12	16	304
High-Cube Fulfillment Total Trips (Actual Vehicles)²		75	22	97	36	95	131	1,698
Total Passenger Car Trips		75	23	98	37	96	133	1,670
Total Truck Trips		17	4	21	6	15	21	454
Total Trips (Actual Vehicles)²		92	27	119	43	111	154	2,124

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

ATTACHMENT B
SBCTA SCREENING TOOL RESULTS

SBCTA VMT Screening Tool Powered by Fehr & Peers User's Guide

Hesperia Rd & Ottawa St, Victorville

Show search results for Hesperia Rd ...

Complete #1 - 4, Then Click 'Run'

have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*

PA VMT Per Service Population

#3. Select the Baseline Year. The years available for analysis are from 2016 to 2040.*

2016

#4. Select the Threshold (% reduction from baseline year). Note each jurisdiction may have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*

Below City Future Buildout (0%)

[Help](#) **Run**

Project Area VMT (2 of 2)

Assessor Parcel Number (APN)	309041103
Traffic Analysis Zone (TAZ)	53937103
TAZ VMT	66.4
Jurisdiction VMT	25
% Difference	165.07%
VMT Metric	PA VMT Per Service Population
Threshold	25

[Zoom to](#) ...

Map Layers

- Project Area VMT
- Screening Results
- Low VMT Generating TAZs
- Parcels
- Jurisdiction Boundaries
- TAZ
- Transit Priority Area

City of Victorville, Bureau of