

January 3, 2022

Mr. Ross Geller
Applied Planning, Inc.
11762 De Palma Road, 1-C 310
Corona, CA 92883

SUBJECT: MORENO VALLEY BUSINESS PARK – PHASE II VEHICLE MILES TRAVELED (VMT) ANALYSIS

Dear Mr. Ross Geller:

The following vehicle miles traveled (VMT) analysis has been prepared for the proposed Moreno Valley Business Park – Phase II (**Project**), which is located east of Heacock Street and north of the 60 Freeway in the City of Moreno Valley.

PROJECT OVERVIEW

It is our understanding that the proposed Project is to consist of 220,390 square foot industrial building (Building 5), which will be evaluated assuming 154,270 square feet of warehousing use (70% of the overall square footage), 33,060 square feet of manufacturing use (15% of the overall square footage), and 33,060 square feet of high-cube cold storage warehouse use (15% of the overall square footage) for a total of 220,390 square feet of industrial uses. A preliminary site plan for the proposed Project is shown on Attachment A.

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 new 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**) (1). Based on OPR's Technical Advisory, the City of Moreno Valley has developed their own City of Moreno Valley Traffic Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (June 2020) (**City Guidelines**) (2). The following analysis has been prepared utilizing the City Guidelines and the City's recently developed General Plan Buildout traffic model for the cumulative year analysis, which was directed by City staff.

VMT SCREENING ASSESSMENT

City's Guidelines list standardized screening methods for project level VMT analysis that can be used to identify when a proposed land use development project is anticipated to result in a less than significant

impact thereby eliminating the need to conduct a full VMT analysis. To aid in the project-level VMT screening process, the City of Moreno Valley utilizes the Western Riverside Council of Governments (WRCOG) VMT Screening Tool (**Screening Tool**). The web-based Screening Tool allows a user to select an assessor's parcel number (APN) to determine if a project's physical location meets one or more of the land use screening methods documented in the City Guidelines. The City of Moreno Valley VMT screening steps, as described within the City Guidelines, are listed below:

- Step 1: Transit Priority Area (TPA) Screening
- Step 2: Low VMT Area Screening
- Step 3: Project Type Screening

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

TPA SCREENING

The Technical Advisory and City Guidelines describe that projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing “major transit stop”¹ or an existing stop along a “high-quality transit corridor”²) may be presumed to have a less than significant impact absent substantial evidence to the contrary.

However, the presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Based on the Screening Tool results presented in Attachment B, the Project site is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor.

TPA screening is not met.

¹ Pub. Resources Code, § 21064.3 (“Major transit stop’ means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.”).

² Pub. Resources Code, § 21155 (“For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.”).

LOW VMT AREA SCREENING

The City Guidelines state that, “residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project 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.”³ The Project’s physical location, based on parcel number, is input into the Screening Tool to determine project generated VMT as compared to the City’s impact threshold. The parcel containing the proposed Project was selected and the Screening Tool was evaluated for the VMT per employee metric of VMT. Based on the Screening Tool results, the Project resides within TAZ 3,675 and was shown to generate 8.26 VMT per employee, whereas the City’s impact threshold (i.e., City of Moreno Valley net VMT per employee) is 11.01 VMT per employee (See Attachment B). However, the Project is proposing a General Plan Amendment and is therefore not eligible for low VMT area screening.

Low VMT area screening is not met.

PROJECT TYPE SCREENING

The City Guidelines identify that local serving retail buildings with less than 50,000 square feet or other local serving essential services (e.g., day care centers, public schools, medical/dental office buildings, etc.) are presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, small projects anticipated that generate low traffic volumes (i.e., fewer than 400 daily trips) and by association low greenhouse gas (GHG) emissions are also assumed to cause a less than significant impact. Trips generated by the Project’s proposed land use have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition, 2021. (3) The Project is estimated to generate 498 vehicle trip-ends per day and would exceed the 400 daily trip threshold. (See Attachment C)

Small project screening is not met.

Based on a more detailed review of the applicable VMT screening steps, it was determined that the Project is not eligible for screening and a VMT analysis should be performed consistent with City Guidelines.

VMT ANALYSIS

VMT MODELING

City Guidelines identifies RIVTAM/RIVCOM as appropriate tools for conducting VMT analysis for land development projects in the City of Moreno Valley. Based on discussion with City staff, it was determined

³ City Guidelines; page 23.

that this analysis would be prepared based on an unmodified version of RIVTAM for the base year model and a modified version of RIVTAM inclusive of the recent City of Moreno Valley General Plan update for the cumulative year model.

VMT METRIC AND SIGNIFICANCE THRESHOLD

As stated in the City Guidelines, for projects that are office and industrial land use types, the City Guidelines identify VMT per employee as the appropriate VMT metric. Therefore, the Project’s industrial warehouse land uses should be evaluated based on the metric VMT per employee. The City Guidelines describes the following significance thresholds for VMT analyses⁴:

- A project would have a significant VMT impact if, in the Existing Plus Project per employee (for office and industrial projects) exceeds the per employee VMT for Moreno Valley.
- If a project is not consistent with the RTP/SCS, then it would have a significant VMT impact if, for office and industrial projects its net VMT per employee exceeds the average VMT per employee for Moreno Valley in the RTP/SCS horizon year, or in this case the City of Moreno Valley General Plan buildout conditions.

WRCOG publishes jurisdictional averages for its member agencies and for the City of Moreno Valley the current base year (2012) VMT per employee is 11.01. It should be noted that the current (2006) City of Moreno Valley general plan VMT per employee is 14.51 for the cumulative year (2040). However, based on City staff’s direction, for the cumulative year, a no project RIVTAM cumulative year model run was performed inclusive of the City’s General Plan Update, as provided by the City of Moreno Valley General Plan Update EIR. The General Plan Update EIR shows the City of Moreno Valley citywide average VMT per employee in the horizon (cumulative) year to be 14.40.

PROJECT LAND USE CONVERSION

In order to evaluate Project VMT, standard land use information must first be converted into a RIVTAM compatible dataset. The RIVTAM model utilizes socio-economic data (SED) (e.g., population, households, employment, etc.) instead of land use information for the purposes of vehicle trip estimation. Project land use information such as building square footage must first be converted to SED for input into RIVTAM. Utilization of employment generation factors were taken from the Riverside County General Plan (4). Table 1 presents the estimated number of Project employees by land use type used to populate the RIVTAM model.

TABLE 1: EMPLOYMENT ESTIMATES

Land Use	Building Area	Conversion Factor ⁵	Estimated Employees
Industrial	220,390 SF	1,030 SF per employee	214 Industrial Employees

⁴ City Guidelines; Page 26

⁵ Riverside County General Plan; Appendix E-2

The RIVTAM model was then run inclusive of the Project’s SED inputs.

PROJECT VMT CALCULATION AND COMPARISON TO IMPACT THRESHOLD

As noted previously, RIVTAM was utilized to calculate project generated VMT for the Project. That value was then divided by the Project’s employment estimate to derive the efficiency metric of VMT per employee in the base year and the cumulative year inclusive of the City’s General Plan Update. Table 2 presents home-based work VMT for the Project’s TAZ for both base year and cumulative year conditions, the number of Project employees, and the resulting VMT per employee.

TABLE 2: PROJECT VMT PER EMPLOYEE

	Project Base Year	Project Cumulative Year
VMT	1,751	2,475
Employment	214	214
VMT per Employee ⁶	8.18	11.57

Table 3 provides a comparison between Project VMT per employee to the City’s significance threshold of 11.01 in base year conditions and 14.40 for cumulative year inclusive of the City’s General Plan update conditions.

TABLE 3: PROJECT VMT PER EMPLOYEE COMPARISON

	Base Year	Cumulative Year
City Threshold	11.01	14.40
Project	8.18	11.57
Percent Change	-25.70%	-19.65%
Potentially Significant?	No	No

The Project’s VMT per employee was found not to exceed the City’s significance threshold in either the base year or cumulative year. Therefore, the Project potential impact to VMT is less than significant.

CONCLUSION

In summary, the Project was evaluated against the City’s applicable VMT screening steps and did not qualify for screening. A full VMT analysis using the VMT metric of VMT per employee was performed consistent with City Guidelines. The Project’s VMT per employee was found to not exceed the City’s impact thresholds for either base year or cumulative year conditions. The Project’s potential impact to VMT is therefore considered less than significant.

⁶ HBW VMT per Employee is a measure of all auto trips between home and work and does not include heavy duty truck trips or freight, which is consistent with OPR direction and City Guidelines.

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If you have any questions, please contact me directly at (949) 660-1994.

Respectfully submitted,

URBAN CROSSROADS, INC.

A handwritten signature in black ink, appearing to read 'Alex So', with a long horizontal flourish extending to the right.

Alex So
Senior Analyst

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 Moreno Valley.** *Traffic Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment.* City of Moreno Valley : s.n., June 2020.
3. **Institute of Transportation Engineers.** *Trip Generation Manual.* 11th Edition. 2021.
4. **County of Riverside.** *Appendix E: Socioeconomic Build-Out Assumptions and Methodology.* County of Riverside : s.n., April 2017.

ATTACHMENT A
PRELIMINARY PROJECT SITE PLAN



ATTACHMENT B
WRCOG VMT SCREENING TOOL

WRCOG VMT Screening Tool

Heacock St & IRONWOOD Ave, X

Show search results for Heacock St & ...

VMT Impact Screening

Input Output

Zoom in to your project location close enough that the blue parcel layer appears. Select Western Riverside County Parcels in the drop-down below, then use the black square to select your project parcels. When ready, click on the Execute button. To clear the selection or start over, click on the "X" on the output tab once the tool has run. All results based on RIVTAM Model*

Western Riverside County Parcels...

[Help](#) **Execute**

Layer List

All results based on RIVTAM Model.

- Output Layer
- Western Riverside County Parcels (Zoom in to view)
- Transit Priority Area
- RIVTAM TAZs with total VMT per service population below jurisdictional average under 2012 base year model
- RIVTAM TAZs with Home-based VMT per resident below jurisdictional average under 2012 base year model
- RIVTAM TAZs with Home-based work VMT per worker below jurisdictional average under 2012 base year model
- RIVTAM TAZs with total VMT per service population below WRCOG subregional average under 2012 base year model
- RIVTAM TAZs with Home-based VMT per resident below WRCOG subregional average under 2012 base year model
- RIVTAM TAZs with Home-based work VMT per worker below WRCOG subregional average under 2012 base year model
- City Boundaries
- TUMF Zone Boundaries

(1 of 2)

APN:481020038; TAZ:3,765

Within a Transit Priority Area (TPA)?
No (Fail)

Within a low VMT generating TAZ based on Total VMT?
No (Fail)
Jurisdictional average 2012 daily total VMT per service population = 24.49
Project TAZ 2012 daily total VMT per service population = 37.72

Within a low VMT generating TAZ based on Residential Home-Based VMT?
Yes (Pass)
Jurisdictional average 2012 daily residential home-based VMT per capita = 12.79
Project TAZ 2012 daily residential home-based VMT per capita = 10.45

Within a low VMT generating TAZ based on Home-Based Work VMT?
Yes (Pass)
Jurisdictional average 2012 daily home-based work VMT per worker = 11.01
Project TAZ 2012 daily home-based work VMT per worker = 8.26

Notes:

- TPA designation is based on October 2018 conditions.
- Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.
- If VMT screening is desired for current baseline conditions, contact WRCOG for 2012 and 2040 VMT data. Interpolated VMT results can be obtained using the complete data set.
- VMT results do not account for full length of trips that occur beyond the SCAG region.

ATTACHMENT C
PROJECT TRIP GENERATION

TABLE 1: PROJECT TRIP GENERATION RATES

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									
Manufacturing ³	TSF	140	0.517	0.163	0.680	0.229	0.511	0.740	4.750
Passenger Cars			0.494	0.156	0.650	0.220	0.490	0.710	4.300
2-Axle Trucks			0.003	0.002	0.005	0.002	0.003	0.005	0.075
3-Axle Trucks			0.003	0.003	0.006	0.003	0.004	0.006	0.093
4+-Axle Trucks			0.011	0.008	0.019	0.008	0.011	0.019	0.282
Warehousing ³	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.116	0.034	0.150	0.042	0.108	0.150	1.110
2-Axle Trucks			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks			0.007	0.006	0.013	0.010	0.009	0.019	0.376
High-Cube Cold Storage Warehouse ³	TSF	157	0.085	0.025	0.110	0.034	0.086	0.120	2.120
Passenger Cars			0.062	0.018	0.080	0.025	0.065	0.090	1.665
2-Axle Trucks			0.003	0.007	0.010	0.005	0.005	0.010	0.260
3-Axle Trucks			0.001	0.002	0.003	0.002	0.001	0.003	0.083
4+-Axle Trucks			0.005	0.011	0.016	0.008	0.008	0.016	0.113

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

² TSF = thousand square feet

³ 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.

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

TABLE 2: PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
Manufacturing	33.060 TSF							
Passenger Cars:		16	5	21	7	16	23	142
2-axle Trucks:		0	0	0	0	0	0	2
3-axle Trucks:		0	0	0	0	0	0	4
4+axle Trucks:		0	0	0	0	0	0	10
Total Truck Trips (Actual Vehicles):		0	0	0	0	0	0	16
Subotal Trips (Actual Vehicles)²		16	5	21	7	16	23	158
Warehousing	154.270 TSF							
Passenger Cars:		18	5	23	6	17	23	172
2-axle Trucks:		0	0	0	0	0	0	16
3-axle Trucks:		0	0	0	0	0	0	20
4+axle Trucks:		1	1	2	2	1	3	58
Total Truck Trips (Actual Vehicles):		1	1	2	2	1	3	94
Subotal Trips (Actual Vehicles)²		19	6	25	8	18	26	266
High-Cube Cold Storage	33.060 TSF							
Passenger Cars:		2	1	3	1	2	3	56
2-axle Trucks:		0	0	0	0	0	0	10
3-axle Trucks:		0	0	0	0	0	0	4
4+axle Trucks:		0	0	0	0	0	0	4
Total Truck Trips (Actual Vehicles):		0	0	0	0	0	0	18
Subotal Trips (Actual Vehicles)²		2	1	3	1	2	3	74
Passenger Cars		36	11	47	14	35	49	370
Trucks		1	1	2	2	1	3	128
Project Total Trips (Actual Vehicles)²		37	12	49	16	36	52	498

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.