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Mr. Ernest Perea
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SUBJECT: SUN LAKES VILLAGE NORTH SPECIFIC PLAN AMENDMENT NO. 6 VEHICLE MILES TRAVELED (VMT) ANALYSIS

Dear Mr. Ernest Perea:

The following vehicle miles traveled (VMT) analysis has been prepared for the proposed Sun Lakes Village North Specific Plan Amendment No. 6 (**Project**) in the City of Banning. It is our understanding that the Project is to consist of a Specific Plan Amendment that amends the allowed Land Use Plan from "Retail Commercial" to "Business Park" and "Professional Office" along the primary freeway frontage and "Commercial Retail" along the Sun Lakes Boulevard frontage.

PROJECT OVERVIEW

The Project proposes to develop up to approximately 877,298 square feet (sf) of Industrial Park, 52,065 sf of medical office, and 37,189 sf of retail use on 47.11 acres.

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 takes 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 of 2018) (**Technical Advisory**). (1) Based on OPR's Technical Advisory, the Western Riverside Council of Governments (WRCOG) prepared a WRCOG SB 743 Implementation Pathway Document Package (March 2019) to assist its member agencies with implementation tools necessary to adopt analysis methodology, impact thresholds and mitigation approaches for VMT. To add to the previous work effort, WRCOG in February 2020 released its Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (**WRCOG Guidelines**), which provides specific procedures for complying with the new CEQA requirements for VMT analysis. (2)

VMT ANALYSIS METHODOLOGY

Through consultation with the City of Banning, it is our understanding that the City has yet to formally adopt its own VMT analysis guidelines and thresholds. Therefore, for the purposes of this analysis the recommended VMT analysis methodology and thresholds recommended by the Technical Advisory and supported by the WRCOG Guidelines have been used.

As outlined in the Technical Advisory, mixed-use projects such as the proposed Project need to evaluate each component of the project independently and apply the relevant significance threshold for each project type (i.e., office, retail, etc.). For the purposes of this VMT analysis, the evaluation of VMT will focus on the employment uses (i.e., industrial park and medical office uses) only. Consistent with Technical Advisory recommendations, local serving retail that is typically less than 50,000 sf will tend to improve retail destination proximity and short trips, which in turn reduces VMT. The Technical Advisory notes that local agencies can presume that such development creates a less-than-significant impact. [1]

The Technical Advisory provides for the following recommended threshold for office/industrial land use projects:

> "A proposed project exceeding a level of 15 percent below existing regional VMT per employee may indicate a significant transportation impact." [2]

PROJECT SCREENING

The Technical Advisory provides details on appropriate "screening thresholds" that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed analysis. Screening thresholds are broken into three types:

- Project Type Screening
- Map Based Screening based on Low VMT Area
- Transit Priority Area (TPA) Screening

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

For the purposes of this analysis, the initial VMT screening process has been conducted with using the WRCOG VMT Screening Tool (**Screening Tool**), which uses screening criteria consistent with the screening thresholds recommended in the Technical Advisory.

[1] Page 16 of the OPR's Technical Advisory.
[2] Page 16 of the OPR's Technical Advisory.

PROJECT TYPE SCREENING

The Technical Advisory identifies projects that are consistent with the current Sustainable Communities Strategy (SCS) or general plan, and that generate fewer than 110 daily vehicle trips be presumed to have a less-than-significant impact on VMT. Based on the Project's trip generation (see Attachment A), the Project is not consistent with the City's general plan and would generate more than 110 daily vehicle trips, therefore, the Project would not be eligible to screen out based on project type screening.

The Project Type screening threshold is not met.

LOW VMT AREA SCREENING

The Technical Advisory also states that, "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." The Screening Tool uses the sub-regional Riverside County Transportation Analysis Model (RIVTAM) to measure VMT performance within individual traffic analysis zones (TAZ's) within the WRCOG region. The Project's physical location based on parcel number was selected within the Screening Tool to determine the relevant TAZ's VMT as compared to the jurisdictional average (see Attachment B). The Project boundary is located in TAZ 4344, and would not appear to be within a low VMT generating TAZ based on daily total VMT per service population, but appears to potentially reside within a low generating TAZ based on daily home-based work (HBW) VMT per worker. As noted in the WRCOG Guidelines, "the analyst must identify if the project is consistent with the existing land use within the TAZ and use professional judgement that there is nothing unique about the project that would otherwise be mis-represented utilizing data from the travel demand model."[3] Based on a review of the land use information contained within TAZ 4344 for the RIVTAM base year (2012) model, the zone includes very low levels of employment and low amounts of population and household data. The proposed Project would significantly increase the number and type of employment uses in the zone and would therefore not be entirely consistent with the underlying land use assumptions.

The Low VMT Area screening threshold is not met.

TPA SCREENING

Consistent with guidance identified in the Technical Advisory, projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"[4] or an existing stop along a "high-quality transit corridor"[5]) may be presumed to have a less than significant impact absent substantial evidence to the contrary.

[3] Page 25 of the WRCOG Guidelines

[4] 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.").

[5] 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.").

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 does is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor.

The TPA screening threshold is not met.

Since none of the project level screening criteria were met, a project level VMT analysis should be prepared.

PROJECT VMT ASSESSMENT

RIVTAM 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 WRCOG Guidelines identifies RIVTAM as the appropriate tool for conducting VMT analysis for land use projects in Riverside County.

Project VMT has been calculated using the most current version of RIVTAM. Adjustments in socio-economic data (SED) (i.e., employment) have been made to a separate TAZ within the RIVTAM model to reflect the Project's proposed employment uses (i.e., industrial park and medical office). A separate TAZ is used to isolate the Project's VMT.

As noted previously, the Project's local serving retail component is less than 50,000 sf and meets the screening threshold recommended in the Technical Advisory for local serving retail projects that can be presumed to result in a less than significant impact.

Table 1 summarizes the employment estimates for the Project. It should be noted that the employment estimates are consistent with the land use to employment generation factors from the Riverside County General Plan. (3)

TABLE 1: EMPLOYMENT ESTIMATES

Land Use	Building Area	Building Area per Employee	Estimated Employees[6]
Industrial Park	877,298 sf	1,030 sf	852
Medical Office	52,065 sf	300 s.f.	174
Total:	929,363 sf	--	1,026

Adjustments to employment factors for the Project TAZ were made to the RIVTAM base year model (2012) and the cumulative year model (2040). Each model was then run with the updated SED factors included for the Project TAZ.

PROJECT VMT CALCULATION

Consistent with recommendations contained in the Technical Advisory, calculation of VMT for employment uses such as the industrial and medical office uses proposed by the Project are evaluated using home-based work trips[7]. The ability to separate trips by trip purpose can be achieved with the RIVTAM model by using the production-attraction (PA) trip matrices. Using these matrices, project generated HBW VMT was calculated for both the base year model (2012) and cumulative year model (2040) and linear interpolation was used to determine the Project's baseline (2020) HBW VMT. The HBW VMT is then normalized by dividing by the number of Project employees. As shown in Table 2, the Project baseline (2020) HBW VMT per worker is 13.33.

TABLE 2: PROJECT HBW VMT PER WORKER

	Project 2012	Project 2040	Project 2020 (interpolated)
Employment	1,026	1,026	1,026
HBW VMT	14,707	11,115	13,681
HBW VMT / Worker[8]	14.33	10.83	13.33

As noted previously, the City of Banning is still in development of their VMT guidelines and thresholds. To provide a comparison of the Project's VMT per worker to the existing regional VMT per worker, VMT values previously calculated and published by WRCOG as part of their WRCOG Guidelines has been utilized. WRCOG has provided HBW VMT per worker from RIVTAM for the base year model (2012) and the cumulative year model (2040) for each of its member agencies, the WRCOG region, and the unincorporated areas of the WRCOG region. For purposes of this assessment, the WRCOG region was utilized. Similar to the method used to calculation baseline (2020) Project VMT, the 2012 and 2040

[6] Riverside County General Plan Employment Factors
[7] Page 16 of the OPR's Technical Advisory
[8] HBW VMT/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 Riverside County VMT calculation guidelines.

published data for HBW VMT per worker were used to interpolate (using linear interpolation) the WRCOG region's baseline 2020 HBW VMT per worker (see Table 3).

TABLE 3: WRCOG UNINCORPORATED REGION HBW VMT PER WORKER

	Project 2012	Project 2040	Project 2020 (interpolated)
HBW VMT / Worker	12.83	14.02	13.17

Table 4 illustrates the comparison between Project-generated HBW VMT per worker to the existing (2020) WRCOG region HBW VMT per worker. As shown, the Project would exceed the 15 percent below existing regional HBW VMT per worker by 19.12 percent. As such, the Project's impact based on VMT for the light industrial and business park components is potentially significant.

TABLE 4: PROJECT VMT PER WORKER COMPARISON

	Project	Existing Regional Average (2020)	OPR 15% below Existing Regional Average
HBW VMT/Worker	13.33	13.17	11.19
Difference w/ Project		+0.16	+2.14
Percent Change		+1.22%	+19.12%

PROJECT'S POTENTIAL CUMULATIVE IMPACT ON VMT

The Technical Advisory states the following, "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 impacts that utilize plan compliance as a threshold of significance."[9] Therefore, the Project's finding related to cumulative impacts is considered potentially significant.

POTENTIAL VMT REDUCTION STRATEGIES

Transportation demand management (TDM) strategies have been evaluated for the purpose of reducing VMT impacts determined to be potentially significant. The effectiveness of TDM strategies to reduce VMT has been determined based on the SB 743 Implementation TDM Strategy Assessment (February 26, 2019, Fehr & Peers) (**WRCOG Report**) prepared for WRCOG and the Quantifying Greenhouse Gas Mitigation Measures (CAPCOA, 2010). The WRCOG Report indicates that of the 50 transportation measures presented by CAPCOA, only 41 are applicable at a building and site level. The remaining 9

[9] Page 6 of the OPR's Technical Advisory.

measures are functions of, or depend on, site location and/or actions by local and regional agencies or funders.

Based on a review of the 41 transportation measures identified by CAPCOA, the WRCOG Report identifies that only 7 of those measures may be effective at the project level. The effectiveness of the following TDM measures would be dependent in large part on future Project design features and building occupancies, which are unknown at this early land entitlement stage. Beyond the Project's tenancy considerations, land use context is a major factor relevant to the potential application and effectiveness of TDM measures. More specifically, the land use context of the Project is characteristically suburban. Of itself, the Project's suburban context acts to reduce the range of feasible TDM measures and moderates their potential effectiveness. Relevant discussion in this regard is presented in the WRCOG Report, excerpted in pertinent part below:

> The Technical Advisory relies on the Quantifying Greenhouse Gas Mitigation Measures, (CAPCOA) 2010 resource document to help justify the 15 percent reduction in VMT threshold stating, " . . . fifteen percent reduction in VMT are achievable at the project level in a variety of place types . . . ". A more accurate reading of the CAPCOA document is that a fifteen percent is the maximum reduction when combining multiple mitigation strategies for the *suburban center*[10] place type. For *suburban*[11] place types 10 percent is the maximum and requires a project to contain a diverse land use mix, workforce housing, and project-specific transit. It is also important to note that the maximum percent reductions were not based on data or research comparing the actual performance of VMT reduction strategies in these place types. Instead, the percentages were derived from a limited comparison of aggregate citywide VMT performance for Sebastopol, San Rafael, and San Mateo where VMT performance ranged from 0 to 17 percent below the statewide VMT/capita average based on data collected prior to 2002. Little evidence exists about the long-term performance of similar TDM strategies in different land use contexts. As such, VMT reductions from TDM strategies cannot be guaranteed in most cases (*WRCOG SB 743 Implementation Pathway Document Package*, pp. 65 – 66).

As indicated in the preceding discussion, even under the most favorable circumstances, projects located within a suburban context, such as the proposed Project evaluated here, can realize a maximum 10 percent reduction in VMT through implementation of feasible TDM measures. This could result in reduction from 13.33 to 11.99 HBW VMT per worker which would still exceed of the 15% below existing regional VMT per worker threshold of 11.19 by 7.15%. The following are the potential TDM measures

[10] ***Suburban Center:*** A project typically involving a cluster of multi-use development within dispersed, low-density, automobile dependent land use patterns (a suburb). The center may be an historic downtown of a smaller community that has become surrounded by its region's suburban growth pattern in the latter half of the 20th Century. The suburban center serves the population of the suburb with office, retail and housing which is denser than the surrounding suburb (*Quantifying Greenhouse Gas Mitigation Measures,* p. 60).

[11] ***Suburban:*** A project characterized by dispersed, low-density, single-use, automobile dependent land use patterns, usually outside.

that have the potential to be relevant to the proposed Project.

- *Measure 1: Increase Diversity of Land Uses.* Having different types of land uses near one another can decrease VMT since trips between land use types are shorter and may be accommodated by non-auto modes of transport. For example, when residential areas are in the same neighborhood as retail and office buildings, a resident may not need to travel outside of the neighborhood to meet his/her trip needs.

  Remarks: The Project proposes the construction of a diverse mix of land uses such as retail, medical office, and industrial park all to be located in close proximity to nearby single-family residential uses. It is recognized that the Project would introduce additional employment opportunities, acting to generally improve the regional jobs/housing balance. The resulting improved jobs/housing balance could reduce area commute VMT, as noted by CAPCOA (Quantifying Greenhouse Gas Mitigation Measures, p. 162).

- *Measure 2: Provide Pedestrian Network Improvements.* Providing a pedestrian access network to link areas of the Project site encourages people to walk instead of drive. This mode shift results in people driving less and thus a reduction in VMT.

  Remarks: The Project proposes increased diversification of land uses along with additional sidewalks along the Project's roadway network. This Project's implementation of this measure could provide for a potential reduction in Project VMT, as noted by CAPCOA (Quantifying Greenhouse Gas Mitigation Measures, p. 186).

- *Measure 3: Provide Traffic Calming Measure.* Providing traffic calming measures encourages people to walk or bike instead of using a vehicle. This mode shift will result in a decrease in VMT. Traffic calming features may include: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others.

  Remarks: There is limited opportunity for the Project to implement meaningful enhanced improvements related to traffic calming in this area. This measure is therefore not evaluated further as means of providing a reduction in Project VMT.

- *Measure 4: Implement Car-Sharing Program.* Implementing a car-sharing program would allow individuals to have on-demand access to a shared fleet of vehicles on an as-needed basis. User costs are typically determined through mileage or hourly rates, with deposits and/or annual membership fees.

  Remarks: It is possible that employers within the Project site could implement car-sharing programs. This may provide car access for employees on an as-needed basis, and thereby alleviate some of the costs and responsibilities of individual car ownership. However, this would not necessarily result in a reduction of VMT but would rather transfer the VMT source from individually-owned autos to employee-subsidized autos. Moreover, CAPCOA indicates that this measure would at most result in nominal percent reduction in VMT (CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, p. 245). This measure is therefore not evaluated further as means of providing a reduction in Project VMT.

- *Measure 5: Increase Transit Service Frequency and Speed.* This measure serves to reduce transit-passenger travel time through more reduced headways and increased speed and reliability. This makes transit service more attractive and may result in a mode shift from auto to transit which reduces VMT.

  Remarks: The area is currently served by Riverside Transit Agency (RTA), a public transit agency serving various jurisdictions within Riverside County. As the Project has no control over the routes serviced or the frequency

of public transit service, the measure is therefore not evaluated further as a means of providing a reduction in Project VMT.

- *Measure 6: Encourage Telecommuting and Alternative Work Schedule.* Encouraging telecommuting and alternative work schedules reduces the number of commute trips and therefore VMT traveled by employees. Alternative work schedules could take the form of staggered starting times, flexible schedules, or compressed work weeks.

  Remarks: This measure could provide for a potential reduction in Project VMT, as noted by CAPCOA (Quantifying Greenhouse Gas Mitigation Measures, p. 236). However, the effectiveness of this measure is dependent on the ultimate building tenant(s) which are unknown currently. This measure is therefore not evaluated further as means of providing a reduction in Project VMT.

- *Measure 7: Provide Ride-Sharing Programs.* This strategy focuses on encouraging carpooling and vanpooling but its ultimate implementation is limited as Measure 6 above.

  Remarks: This measure could provide for a potential reduction in Project generated VMT, as noted by CAPCOA (Quantifying Greenhouse Gas Mitigation Measures, p. 227). However, the effectiveness of this measure is dependent on the ultimate building tenant(s) which are unknown currently. This measure is therefore not evaluated further as means of providing a reduction in Project VMT.

It is also recognized that as the Project area and surrounding communities develop as envisioned under the City of Banning general plan, new residential, office, retail, and industrial development would be implemented. These actions could collectively alter transportation patterns, improve the Region's jobs/housing ratio, diminish VMT, and support implementation of new or alternative TDM measures. There is no means, however, to quantify any VMT reductions that could result. Additionally, the effectiveness of some of the TDM strategies that have potential to reduce the Project VMT are dependent on as yet unknown Project building tenant(s); and as noted above, "VMT reductions from TDM strategies cannot be guaranteed in most cases."

In summary, the Project's HBW VMT per worker exceeds the threshold of 15% below the existing regional WRCOG HBW VMT per worker. Even with implementation of the limited feasible TDM measures discussed above, Project VMT cannot be reduced to levels that would be less-than-significant. Additionally, the efficacy of TDM measures and reduction of VMT impacts below thresholds cannot be assured. The Project VMT impact is therefore considered ***significant and unavoidable.***

If you have any questions, please contact me directly at (949) 336-5978.

Respectfully submitted,

URBAN CROSSROADS, INC.

Aric Evatt, PTP
President

Robert Vu, PE
Transportation Engineer

REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
2. **Western Riverside Council of Governments (WRCOG).** *Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment.* February 13, 2020.
3. **County of Riverside.** *Appendix E: Socioeconomic Build-Out Assumptions and Methodology.* County of Riverside : s.n., April 2017.

Attachment A

Project Trip Generation

Project Trip Generation Summary

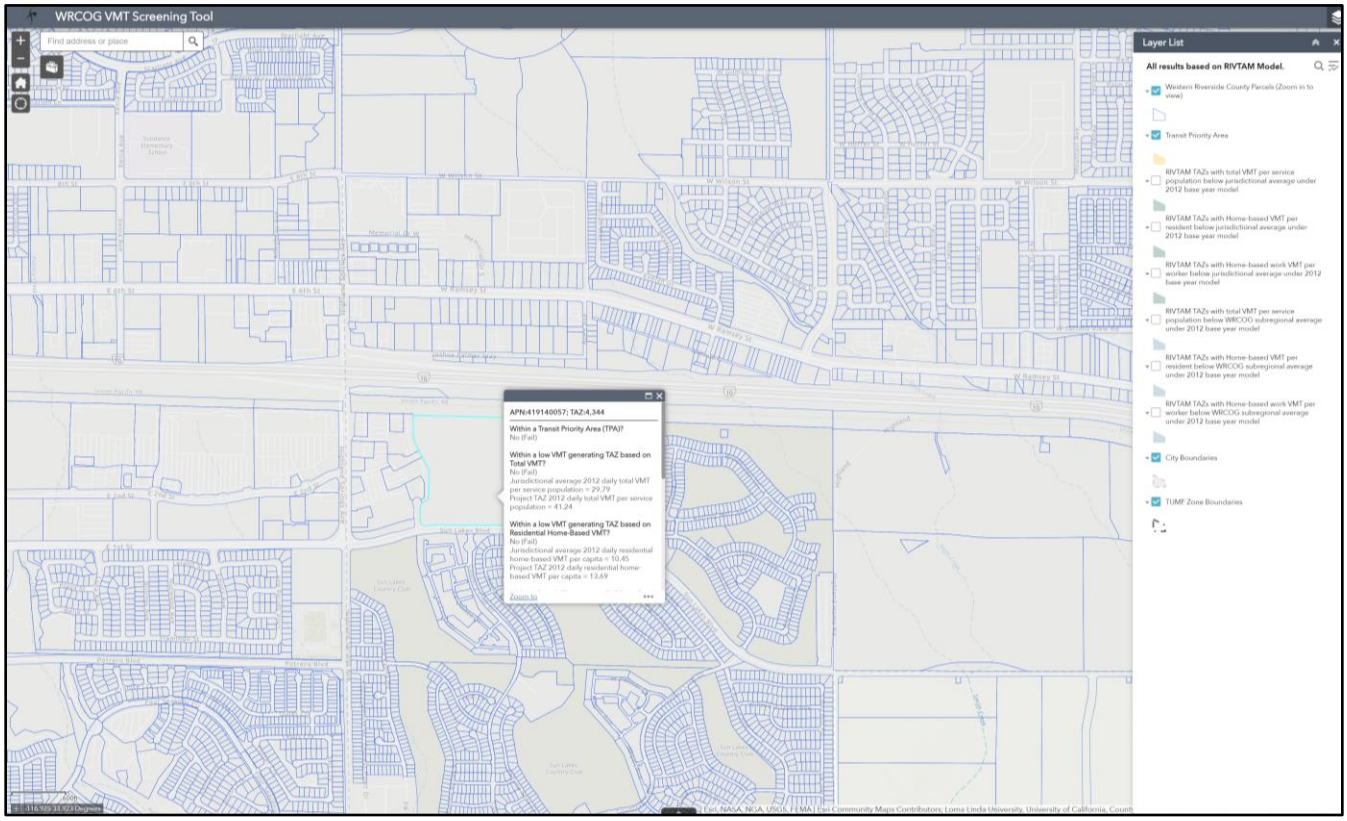
Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Industrial Park	877.298	TSF							
Passenger Cars:			250	59	309	66	250	316	2,514
Truck Trips:									
2-axle:			6	1	8	1	5	8	74
3-axle:			7	2	10	2	6	10	92
4+-axle:			21	5	28	5	17	29	278
- Truck Trips			34	8	46	8	28	47	444
Industrial Park Subtotal			***284***	***67***	***351***	***74***	***278***	***352***	***2,958***
Medical Office	52.065	TSF	113	32	145	50	130	180	1,812
Internal Capture			-4	-7	-11	-1	-5	-6	-62
Office Subtotal			***109***	***25***	***134***	***49***	***125***	***174***	***1,750***
Commercial Retail	37.189	TSF	22	13	35	68	74	142	1,404
Internal Capture			-7	-4	-11	-5	-1	-6	-60
Pass-By (34% PM/Daily)			0	0	0	-21	-21	-43	-458
Retail Subtotal			***15***	***9***	***24***	***42***	***51***	***93***	***886***
TOTAL TRIPS[2]			**408**	**101**	**509**	**165**	**454**	**619**	**5,594**

[1] TSF = thousand square feet

[2] TOTAL TRIPS = Passenger Cars + Truck Trips.

Attachment B

WRCOG VMT Screening Tool


WRCOG VMT Screening Tool
Find address or place
Layer List
All results based on RIVTAM Model.
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
APN:419140057; TAZ:4,344
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 = 29.79
Project TAZ 2012 daily total VMT per service population = 41.24
Within a low VMT generating TAZ based on Residential Home-Based VMT?
No (Fail)
Jurisdictional average 2012 daily residential home-based VMT per capita = 10.45
Project TAZ 2012 daily residential home-based VMT per capita = 13.69
Zoom to
Esri, NASA, NGA, USGS, FEMA | Esri Community Maps Contributors, Loma Linda University, University of California, Count