# Appendix H Baxter Village Vehicle Miles Traveled (VMT) Assessment

# Appendices

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URBAN CROSSROADS

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Mr. Eric Flodine
Strata Equity Group
4370 La Jolla Village Drive, Suite 960
San Diego, CA 92122

**SUBJECT: BAXTER VILLAGE VEHICLE MILES TRAVELLED (VMT) ASSESSMENT**

Dear Mr. Eric Flodine:

The following Vehicle Miles Travelled (VMT) Assessment has been prepared for the proposed Baxter Village development (referred to as "Project"), which is north of Baxter Road and east of White Street in the City of Wildomar. The Project is proposed to consist of the following uses (See Exhibit 1):

- 66 Dwelling Units of Single Family Detached
- 204 Dwelling Units of Multi-Family Housing
- A 102-room hotel
- 84,000 square feet of Medical-Dental Office

## BACKGROUND

The Natural Resources Agency has adopted updates to California Environmental Quality Act (CEQA) Guidelines to incorporate Senate Bill 743 (SB 743) that requires use of VMT as a replacement for automobile delay-based LOS for the purposes of determining a significant transportation impact under CEQA. Lead agencies have to apply the new VMT based analysis methodology and thresholds by July 1, 2020. The City of Wildomar has yet to formally adopt VMT thresholds.

## VMT THRESHOLD

The Office of Planning and Research (OPR) published an updated Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018, which provided guidance in evaluating transportation impacts based on VMT. The OPR's current Technical Advisory has the following recommended numeric thresholds:

- For residential projects, a proposed project exceeding a level of 15% below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as City VMT per capita.
- For office projects, a proposed project exceeding a level of 15% below existing regional VMT per employee may indicate a significant transportation impact.
- For retail projects, a net increase in total VMT may indicate a significant transportation impact.

- Numerical thresholds are not provided for other project types such as industrial uses.

In March 2019, the Western Riverside Council of Governments (WRCOG) published a SB 743 Implementation Pathway Document Package ("WRCOG Document"). The WRCOG Document includes recommendations on VMT assessment methodology, thresholds of significance and examples of potential mitigation measures.

The WRCOG Document recommends use of the Riverside County Transportation Analysis Model (RivTAM) for VMT impact analysis in the WRCOG region. RivTAM is a sub-regional travel demand model based on the regional travel demand model maintained by Southern California Association of Governments (SCAG). In addition, WRCOG provided the following thresholds to determine significant transportation impacts based on VMT were presented as part of the SB 743 Implementation Pathway roll-out:

- Below City-wide average VMT
- Below WRCOG regional average VMT

As the City of Wildomar has yet to formally adopt VMT thresholds of significance for purposes of determining transportation impacts under CEQA, the more conservative threshold of 15% below existing conditions presented in the OPR's Technical Advisory has been used for the purposes of this evaluation.

## PROJECT VMT

The calculation of vehicle miles traveled has two components – the total number of trips generated and the average trip length of each vehicle. 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. Project VMT was calculated using the most current version of RivTAM. Adjustments in socio-economic data (households, population and employment) were made to the appropriate traffic analysis zone (TAZ) within the RivTAM model to reflect the Project's proposed land use. Socio-economic data inputs were derived based on Riverside County General Plan, Appendix E-2: Socioeconomic Build-out Assumptions and Methodology.

### PROJECT HOME-BASED (HB) VMT/CAPITA

The home-based (HB) VMT per capita is the home-based production VMT divided by the population derived from the RivTAM model. The HB VMT/Capita is used to measure efficiency of VMT generated by residential uses. The Project HB VMT/Capita is 28.16.

### PROJECT HOME-BASED WORK (HBW) VMT/EMPLOYEE

The home-based work (HBW) VMT per employee is the HBW attraction VMT divided by the number of workers derived from the RivTAM model. The HBW VMT/Employee is used to measure efficiency of VMT

generated by employment-based uses. The Project HBW VMT/Employee calculated based on RivTAM is 8.41.

## CITYWIDE AVERAGE VMT

The average VMT for the City of Wildomar was calculated from the RivTAM model consistent with the model used to calculate the Project VMT.

### CITYWIDE HB VMT/CAPITA

The HB VMT/Capita calculated for the City of Wildomar based on RivTAM is 24.19.

### CITYWIDE HBW VMT/EMPLOYEE

The HBW VMT/Employee calculated for the City of Wildomar based on RivTAM is 11.04.

## THRESHOLDS

For purposes of this VMT assessment the Project's HB VMT/Capita and HBW VMT/Employee has been compared to 15% below citywide baseline HB VMT/Capita and HBW VMT/Employee, based on OPR's recommendation.

Table 1 shows the calculated VMT thresholds for HB VMT/Capita and HBW VMT/Employee:

**TABLE 1: VMT THRESHOLDS**

| Threshold Option | Threshold |
|---|---|
| Citywide Baseline (HB VMT/Capita) | 24.19 |
| Citywide Baseline (HBW VMT/Employee) | 11.04 |
| 15% below Baseline (HB VMT/Capita) | 20.56 |
| 15% below Baseline (HBW VMT/Employee) | 9.38 |

## IMPACT DETERMINATION

As shown in Table 2, the Project's HB VMT/Capita would not meet the 15% below citywide baseline threshold. The Project's HBW VMT/Employee would be less than the 15% below citywide baseline. As such, the Project's transportation impact based on HB VMT/Capita is potentially significant based on OPR's recommended thresholds.

**TABLE 2: VMT IMPACT EVALUATION**

| Threshold Option | Threshold | Project | Change in VMT | Potentially Significant? |
|---|---|---|---|---|
| HB VMT/Capita | 20.56 | 28.16 | +7.6 | Yes |
| HBW VMT/Employee | 9.38 | 8.41 | -0.97 | No |

## MITIGATION

Transportation demand management (TDM) strategies have been evaluated for 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) prepared for WRCOG. The memo evaluated 50 transportation measures presented in the CAPCOA 2010 report *Quantifying Greenhouse Gas Mitigation Measures* and indicated 41 are applicable at building and site level. The remaining measures are functions of, or depend on, site location and/or actions by local and regional agencies or funders.

Review of the 41 transportation measures identified by CAPCOA, indicates that only 7 of those measures may be effective at the project level, which is consistent with WRCOG's findings. Evaluation of potentially applicable TDM strategies in the context of the Project is summarized below. As indicated, of the seven TDMs with potential application to the Project, only three would provide for any potentially meaningful reduction in VMT, which are described below:

- *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 does not need to travel outside of the neighborhood to meet his/her trip needs.

  *Remarks:* The Project proposes the 66 single family detached residential dwelling units, 204 multi-family dwelling units, 102 room hotel and 84,000 square feet (sf) of medical-dental office. In order for the above measure to apply, at least three of the following will be located on or off-site within ¼ mile of the Project: Residential Development, Retail Development, Park, Open Space, or Office. The Project includes residential, hotel and office in the development plan. The Project's proposed colocation of varied residential, hotel and office uses within ¼ mile proximity together with supporting amenities would tend to decrease the propensity for vehicle travel for local residents. The implementation of this measure could reduce commute VMT by 0 – 12 percent.

- *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:* Pedestrian connections shall be provided to surrounding areas consistent with the City's General Plan. Providing a pedestrian access network to link areas of the Project site encourages people to walk instead of drive. The Project would provide a pedestrian access network that internally links all uses and connects to

all existing or planned external streets and pedestrian facilities contiguous with the project site. The Project would minimize barriers to pedestrian access and interconnectivity. Implementation of this measure could reduce commute VMT by 0.5 – 5.7 percent.

- *Measure 3: Provide Traffic Calming Measures.* 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:* It is recommended that applicable traffic calming measures be considered as part of the final site design to encourage pedestrian and bicycle activity. Implementation of this measure could reduce commute VMT by 0.0 – 1.7 percent.

Implementation of applicable TDM strategies (*Measure 1: Increase Land Use Diversity, Measure 2: Provide Pedestrian Network Improvements and Measure 3: Provide Traffic Calming Measures*) have the potential to reduce the Project VMT/Capita.

The theoretical effectiveness on the identified mitigation measures are shown on Table 3.

**TABLE 3: MITIGATION MEASURE SUMMARY**

| Unmitigated Project HB VMT/Capita | VMT Reduction (Measure 1, 2 and 3)[1] | Project VMT/SP With Mitigation |
|---|---|---|
| 28.16 | 9.95% | 25.36 |

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. Based on available research, projects located within a suburban context, a maximum 10% reduction in VMT is achievable when combining multiple mitigation strategies.

In summary, the Project's HB VMT/Capita could potentially exceed applicable thresholds. The Project would implement TDM measures that could potentially reduce HB VMT/Capita impacts. Even with implementation of TDM measures, HB VMT/Capita impacts could not be reduced to levels that would be less-than-significant.

**Cumulative VMT Impacts**

As summarized in *WRCOG SB 743 Implementation Pathway Document Package . . .* "VMT thresholds based on an efficiency form of the metric such as VMT per capita, can address project and cumulative impacts in a similar manner that some air districts do for criteria pollutants and GHGs (*WRCOG SB 743 Implementation Pathway Document Package, p. 67*). In this respect, significant VMT impacts at the

[1] Midpoint of the potential VMT reduction range indicated in the WRCOG Document has been utilized.

Project level would also be considered cumulatively significant.

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

Respectfully submitted,

URBAN CROSSROADS, INC.

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President

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Senior Engineer

## EXHIBIT 1: PRELIMINARY LAND USE PLAN