

Appendix R-6

Alternative 5 VMT Analysis

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JOB NO: 14064-09 Alternative VMT

WEST CAMPUS UPPER PLATEAU VEHICLE MILES TRAVELED (VMT) ALTERNATIVE 5 ANALYSIS

Urban Crossroads, Inc. is pleased to provide the following Vehicle Miles Traveled (VMT) Alternative 5 Analysis for the West Campus Upper Plateau (**Project**). The Project is located west of Cactus Avenue's current terminus, east and south of the Mission Grove neighborhood, and to the north of the Orangecrest neighborhood within the jurisdiction of the March Joint Powers Authority (**March JPA**). The purpose of this analysis is to evaluate potential changes in VMT for **Project Alternative 5**.

PROJECT ALTERNATIVE 5 VMT ANALYSIS

PROPOSED PROJECT

The proposed Project consists of 2,562,561 square feet of high-cube fulfillment center warehouse use, 500,000 square feet of high-cube cold storage warehouse use, 1,763,168 square feet of business park use, 160,921 square feet of commercial retail use, an 18.08-acre public park, a 42.2-acre active park, and a 445-acre Conservation Area.

PROJECT ALTERNATIVE 5

Specifically, Project Alternative 5 assumes the development of 374,398 square feet of commercial retail use (0.25 floor-to-area ratio or **FAR**) and 4,243,244 square feet of office park use (0.45 FAR). The Project also includes 18.08-acre public park, 42.2-acre active park, and 445-acre Conservation Area. The public park, active park, and conservation area are consistent with the currently proposed Project. The land use plan for Project Alternative 5 is shown on Attachment A, where the red represents commercial retail uses and the blue identifies the office park uses. A summary of Project Alternative 5 and the Proposed Project's land uses can be found below Table 1.

TABLE 1: LAND USE DATA SUMMARY

Land Use	Project	Project Alternative 5	Net Change
Mixed Use	643,686 TSF ¹	0	-643,686 TSF
Commercial	0	374.4 TSF ¹	374.4 TSF
Industrial	3,062.56 TSF	0	-3,062.56 TSF
Office Park	1,763.17 TSF	4,243.24 TSF ²	2,480.07 TSF
Public Park	18.08 AC	18.08 AC	0
Active Park	42.2 AC	42.2 AC	0
Conservation Area	445 AC	445 AC	0

¹TSF = thousand square feet ; AC = acres

²Warehousing is not a permitted use under Project Alternative 5.

Project generated VMT for the land use alternative has been evaluated using the methodology and procedures outlined in the Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (WRCOG Guidelines) (February 2020), (1) which calls for the use of the current RIVCOM travel demand model to estimate VMT. Table 2 presents the socio-economic data (SED) inputs used to populate the RIVCOM model to represent the Project and the Project Alternative 5.

TABLE 2: EMPLOYMENT ESTIMATES

Land Use	Project Employees	Alternative 5 ¹
Industrial	2,000 Industrial Employees	0 Industrial Employees
Office Park	340 Service Employees	7,072 Service Employees
Retail	255 Retail Employees	749 Retail Employees

ALTERNATIVE 5 RETAIL VMT AND COMPARISON TO PROJECT

Consistent with the Project analysis prepared previously, retail land uses are evaluated utilizing the VMT metric of total VMT. RIVCOM was used to calculate the baseline total link-level VMT for both the proposed Project and Alternative 5 model runs. This calculation is commonly referred to as boundary method and includes the total VMT for all vehicle trips with one or both trip ends within a specific geographic area – in this case 15-mile service area surrounding the Project site. A 15-mile service area is a conservatively estimated distance from the Project as the retail component is not anticipated as a regional shopping destination but instead is anticipated to serve the surrounding communities of Riverside, Moreno Valley, Perris, etc. Additionally, large boundaries such as Riverside County or WRCOG tend to be too large of an area to accurately measure an individual project’s effect on VMT without model noise (i.e., convergence criteria) influencing the results. As shown in Table 3, the increase in retail square footage proposed by Alternative 5 would result in an increase in total VMT within the region (i.e., 15-mile boundary)

¹ Employee estimates for Alternative 5 are based on the Riverside County General Plan Table E-3 - Commercial Employment Factors.

and a potentially significant impact.

TABLE 3: NET CHANGE IN REGIONAL TOTAL VMT FOR RETAIL

	Project	Alternative 5
Total VMT for No Retail	43,167,218	43,167,218
Total VMT for With Retail	43,039,938	43,862,638
+/- to VMT	-127,280	+695,420
Percent Change	-0.29%	+1.61
Potentially Significant	No	Yes

ALTERNATIVE 5 NON-RETAIL VMT AND COMPARISON TO PROJECT

Consistent with the Project analysis, non-retail employment based VMT is calculated as home-based work (HBW) VMT divided by the Project’s non-retail employment, which results in the efficiency metric HBW VMT per employee or VMT per employee. Table 4 presents HBW VMT as calculated from RIVCOM for the Project’s non-retail land uses, the number of Project non-retail employees and the resulting VMT per employee metric compared to the impact threshold.

TABLE 4: NON-RETAIL VMT PER EMPLOYEE

	Project	Alternative 5
Non-Retail Employment	2,340	7,072
HBW VMT	58,874	205,170
VMT per Employee	24.12	26.24
WRCOG Threshold	25.47	25.47
Potentially Significant?	No	Yes

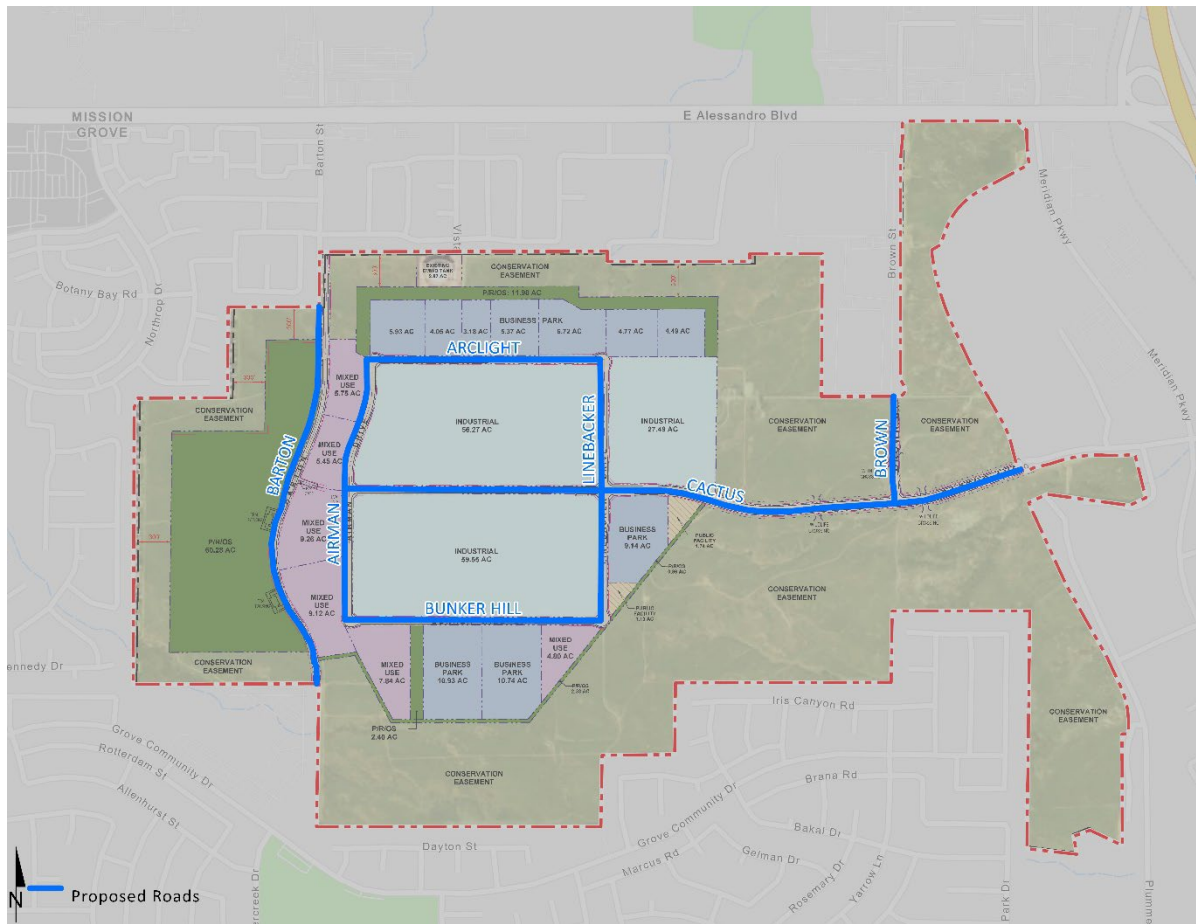
Project Alternative 5 proposes to shift all industrial land use and non-Barton Street mixed use to office park use and convert the mixed-use areas along Barton Street to commercial retail. Warehousing will not be a permitted use under Project Alternative 5. These shifts in land use result in a corresponding increase in overall vehicle trip generation (see *West Campus Upper Plateau Alternative 5 Trip Generation Assessment, May 2023*) and an associated increase in VMT. In addition, when VMT is presented as the efficiency metric VMT per employee the result is an increase above the impact threshold and a potentially significant impact.

REFERENCES

1. **Western Riverside Council of Governments (WRCOG).** *Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment.* February 13, 2020.

ATTACHMENT A
PROJECT AND ALTERNATIVE 5 LAND USE PLANS

PROJECT LAND USE PLAN



ALTERNATIVE 5 LAND USE PLAN

