Appendix G: Vehicle Miles Traveled Analysis Woodcrest Christian School Expansion

VEHICLE MILES TRAVELED ANALYSIS

WOODCREST CHRISTIAN SCHOOL EXPANSION

CITY OF RIVERSIDE

RIVERSIDE COUNTY, CALIFORNIA

This Vehicle Miles Traveled Analysis has been prepared under the supervision of Ambarish Mukherjee, P.E.

LSA

March 2024

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WOODCREST CHRISTIAN SCHOOL EXPANSION

CITY OF RIVERSIDE

RIVERSIDE COUNTY, CALIFORNIA

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1.0 EXECUTIVE SUMMARY

The proposed Woodcrest Christian School Expansion Project will include expansion of the existing school's enrollment by 280 students. This expansion will include the addition of administrative offices, classroom buildings, amphitheater, food service facilities, lockers/snack bar, a chapel arts building, weight room, and storage rooms.

The project site is located south of Van Buren Boulevard between Little Court and Dauchy Avenue in the City of Riverside (City). The existing project parcel is considered as Public Facilities/Institutional (PF) in the General Plan Land Use and Public Facilities (PF-SP) Orangecrest Specific Plan Overlay as the Zoning. The adjacent parcel (APN 266020059) located northeast of the current Woodcrest Christian School site will be acquired as part of this project. The adjacent parcel is considered as Mixed Use-Village (MU-V) in the General Plan Land Use and Mixed Use – Village – 2 Story Building – 15 feet Building Setback (MU-V-S-2-X-15-SP) Orangecrest Specific Plan Overlay as the Zoning. This project will only require a Conditional Use Permit (CUP) but not require a General Plan Amendment (GPA) nor Zone Change (ZC). The project is anticipated to be completed by year 2029.

Access to the project site is currently provided via five driveways, one on Van Buren Boulevard and four driveways on Dauchy Avenue. Following is a description of all driveways providing access to the site:

- Driveway on Van Buren Boulevard:
    - Project Driveway 1: This is a gated right-in/right-out (RIRO) driveway. Project traffic would not be typically allowed to use this driveway.
- Driveways on Dauchy Avenue:
    - Project Driveway 2: This is a full-access driveway.
    - Project Driveway 3: This is an entrance only driveway.
    - Project Driveway 4: This is a full-access driveway.
    - Project Driveway 5: This is a restricted access driveway for authorized vehicles. Project traffic would not be allowed to use this driveway.

The project is forecast to generate 814 daily trips, with 303 trips in the a.m. peak hour, and 209 trips occurring during the afternoon peak hour.

The City adopted its *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* in July 2020. The project doesn't meet screening criteria for VMT evaluation identified in the City's guidelines. The City's guidelines recommend that for projects that are not screened out of VMT analysis, a detailed VMT analysis be prepared using Riverside County Transportation Model (RIVCOM) for evaluation of project VMT impacts. The City's guidelines provide guidance regarding VMT analysis based on land use types. The proposed project is a school expansion which falls under "other land use projects" category. Therefore, pursuant to the City's VMT analysis guidelines for "other land use projects", a significant VMT impact would occur if the net total VMT of the

jurisdiction (City) with the project is higher than the net total VMT of the jurisdiction (City) without the project. The net total VMT includes trips that originate and end in the City (Internal-Internal trips), and trips that originate or end at the City from other jurisdictions (External-Internal and Internal-External trips).

The project is located on the eastern boundary of the City and given the location and unique operational characteristics of the project, it was determined that use of City boundary may not be suitable for estimation of net change in VMT for project evaluation. A catchment area for the project was determined based on existing student enrollment information which was used to estimate net change in VMT using RIVCOM. Based on the VMT analysis, the project will not have a significant transportation impact under CEQA.

2.0 VEHICLE MILES TRAVELED ANALYSIS

2.1 BACKGROUND

On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) guidelines for use. Among the changes to the guidelines was removal of vehicle delay and level of service from consideration under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on Vehicle Miles Traveled (VMT).

The City adopted its Senate Bill 743 (SB 743) guidelines / VMT analysis guidelines (guidelines) in July 2020. Therefore, for purposes of this analysis, the City's Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (dated July 2020) have been used.

2.2 METHODOLOGY

2.2.1 Project VMT Screening Analysis

The City's guidelines include multiple screening criteria for small land use projects to be screened out of a detailed VMT analysis. The screening thresholds and their applicability to the project site are as follows:

- Transit Priority Area Screening: The project is not located in a Transit Priority Area, therefore this screening criteria does not apply and a VMT analysis would be required.

- Low VMT Area Screening: The project land use is considered "other land use projects" and therefore low VMT area screening is not applicable for the project.

- Project Type Screening: This applies to local serving projects, projects with 100% affordable housing and projects generating fewer than 110 daily vehicle trips. Local-serving K-12 schools are included for screening under this category. However, given the project is a private school with a bigger catchment area than a local-serving K-12 school, it was determined that the project does not meet this screening criterion and a detailed VMT analysis would be required.

- Mixed-Use Projects: The project is a single use and therefore does not meet this criterion and a VMT analysis would be required.

- Redevelopment Projects: The project is not a redevelopment project and therefore, this criterion would not apply to the project and a VMT analysis would be required.

As noted above, the project doesn't meet any of the screening criteria identified in the guidelines and so a detailed VMT analysis was conducted to evaluate the project VMT impact.

The City's guidelines provide guidance regarding VMT analysis based on land use types. The proposed project is an expansion of existing private school which falls under "other land use project" category. Therefore, pursuant to the City's VMT analysis guidelines, a significant VMT impact would occur according to the following criterion:

- The project would result in a significant VMT impact if the baseline or cumulative link-level boundary VMT (City) increases under the plus project condition compared to the no project condition.

The regional travel demand model - Riverside County Transportation Model (RIVCOM) has been used to estimate the project VMT impact. Both base line (2018) and cumulative (2045) scenarios were analyzed to estimate project VMT as recommended in the guidelines.

2.2.2 Project Traffic Analysis Zone Update

To calculate the project VMT, the first step was to update the traffic analysis zones (TAZs) in the model that include the project area. Typically, the project should be isolated in the travel model to estimate project VMT. RIVCOM doesn't include ability to split or add new TAZs, however, the model includes few empty zones. One empty zone was borrowed to model the project.

The proposed project involves expansion of an existing school, therefore only the proposed expansion was included in the newly borrowed zone. The project land use was added to the borrowed TAZ. Both baseline and cumulative scenario model runs were conducted with inclusion of project land use updates. No project specific roadway network modifications were made for the model runs.

2.3 VMT ANALYSIS

Outputs from the above-mentioned model runs (with project related land use changes) were used to develop project related VMT for both baseline and cumulative scenarios. LSA also conducted no project model runs for baseline and cumulative scenarios and outputs from the no project model runs were used to estimate VMT for "without project" conditions.

2.3.1 Observed Data

To determine the net change in link-level VMT, the City's guidelines recommend using the city boundary as the region. However, use of City boundary to estimate net change in VMT due to the project will not capture the project's effect on VMT given its location (eastern boundary of the City) and its unique nature (private school with its unique catchment area). Therefore, to appropriately capture the VMT effects of the project a different boundary was deemed necessary. Existing school has address information for its current enrollment which was used (anonymously) to determine appropriate sphere of influence/catchment area for the proposed expansion. Anonymous address information was available for all currently enrolled students. The student addresses were geocoded and average driving distances from the student addresses to the school were determined using Google. Peak periods of the day were used to estimate the average driving distances. Average trip distance for all the available addresses was estimated to be approximately 8.9 miles. Therefore, as a conservative approach, a 10-mile buffer was determined to be an appropriate boundary to identify VMT differences between "without" and "with" project model runs. The 10-mile buffer would capture majority of students (approximately 80 percent) currently enrolled and therefore it is anticipated that the catchment area for future enrollment with the school expansion would remain similar. Figure 2-A shows the 5 and 10-mile buffer boundaries overlaid on the geocoded addresses of current enrollment.

2.3.2 Project VMT

As previously explained, a 10-mile buffer was selected as a suitable boundary to evaluate change in link-level total VMT for the project. Link-level roadway VMT from RIVCOM model runs for both "without" and "with" project scenarios within the boundary were compared to determine the project's VMT impact. As shown in Table 2-A, there is no net increase in roadway VMT for both base and cumulative scenarios in the "with project" condition. Therefore, the project does not have a significant impact for VMT.

2.4 LIST OF CHAPTER 2.0 FIGURES AND TABLES

- Figure 2-A: Current Enrollment Address Locations
- Table 2-A: Roadway VMT - With and Without Project

Figure 2-A: Current Enrollment Address Locations

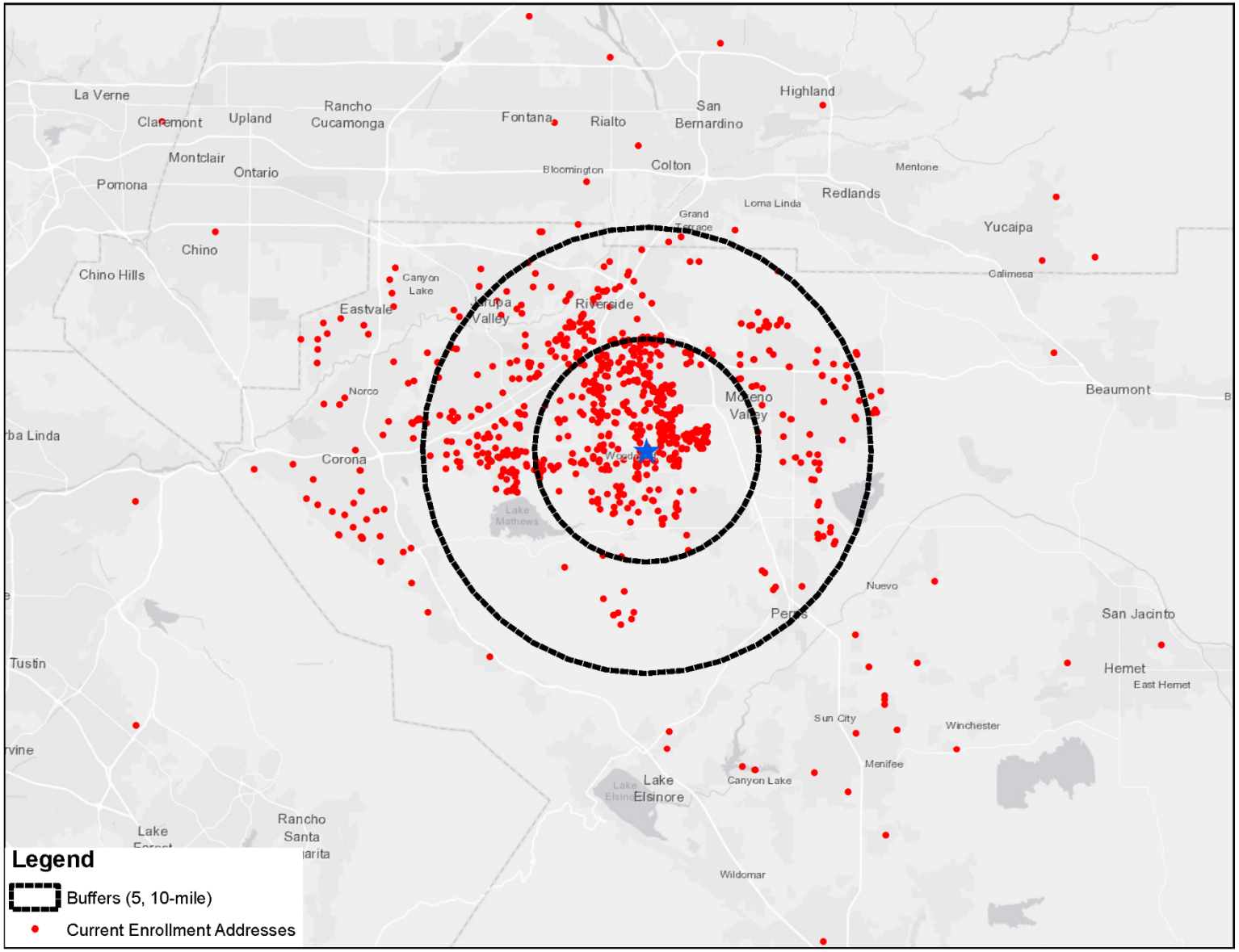

Table 2-A: Roadway VMT - With and Without Project

10 mile project buffer	With Project	Without Project	Difference
2018	15,107,009	15,107,174	(165)
2045	20,007,531	20,009,049	(1,518)

Source: RIVCOM
Roadway VMT within 10 mile buffer for "without project" has been obtained from LSA's no project model runs.