Appendix H Vehicle Miles Traveled Analysis

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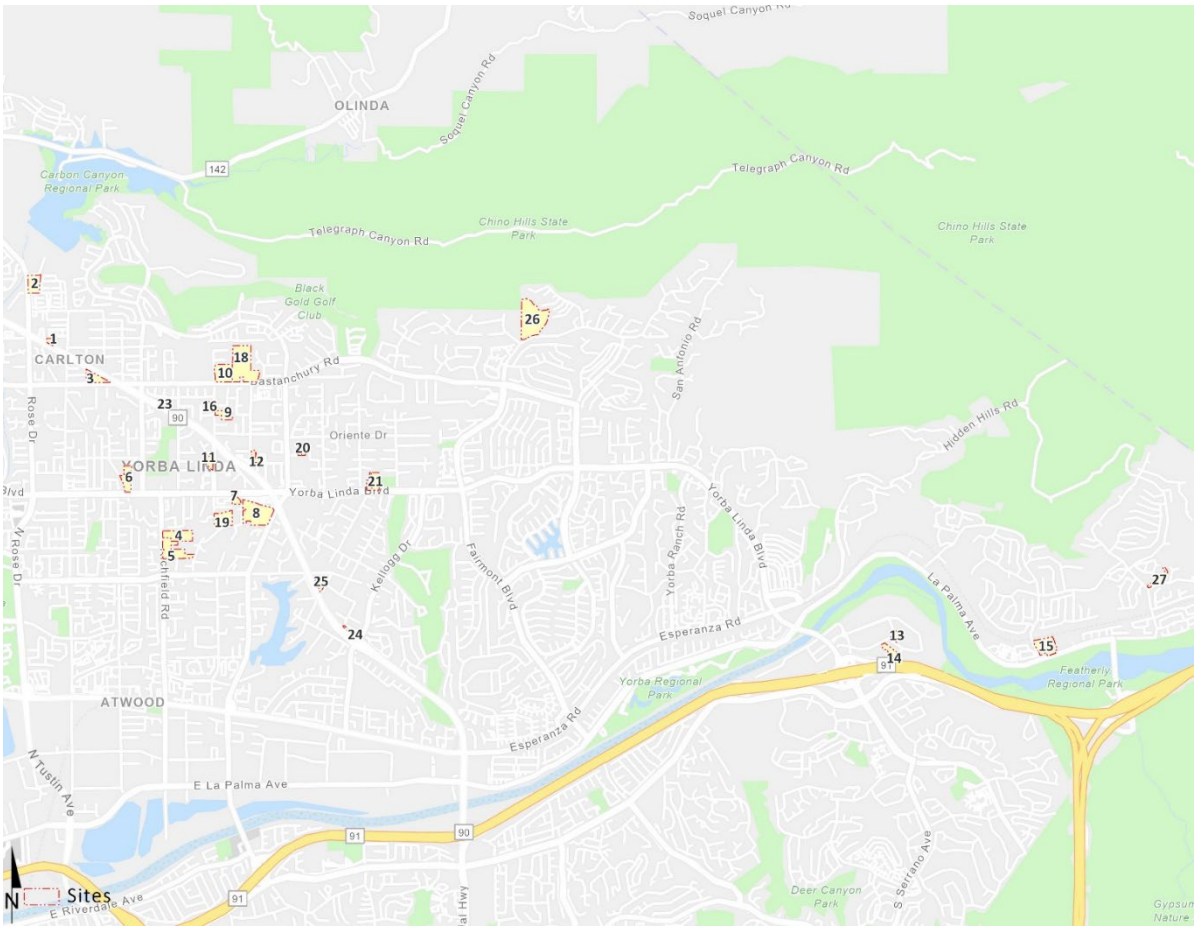
YORBA LINDA YORBA LINDA 2021-2029 HOUSING ELEMENT IMPLEMENTATION PROGRAMS VEHICLE MILES TRAVELED (VMT) ANALYSIS

Ms. Nicole Morse,

Urban Crossroads, Inc. is pleased to provide the following Vehicle Miles Traveled (VMT) Analysis for the Yorba Linda Yorba Linda 2021-2029 Housing Element Implementation Programs development (**Project**) located in the City of Yorba Linda as seen in Exhibit 1.

EXHIBIT 1: HOUSING ELEMENT SITE LOCATION MAP



SUMMARY OF FINDINGS

The Project's VMT analysis findings for project generated VMT per service population was found to not exceed the City's threshold. In addition, the Project's cumulative effect to citywide VMT per service population was found also to decrease with the inclusion of the proposed housing element changes as compared to without changes. The Project's impact on VMT is presumed to be less than significant.

The City of Yorba Linda's VMT threshold is consistent with the City of Yorba Linda's general plan build out. The results of the project generated VMT per service population not exceeding the adopted City thresholds, shows additional growth capacity for the City of Yorba Linda through year 2045. Consistent with Senate Bill 743, the Project's VMT less than significant findings proves that the Project is incentivized by the development of higher density residential to service the job base in Yorba Linda and Orange County. Thus, reducing commute VMT and employee travel distances. There is an unmet need for housing and providing new housing opportunities allows people to reside closer to their jobs, this is evidenced further by the results of this VMT analysis. The VMT analysis results consistent with Southern California Association of Governments (SCAG) Current Context Demographics and Growth Forecasts (1), for City of Yorba Linda's employment growth in the City exceeds population growth as shown in Table 1.

TABLE 1: SCAG GROWTH FORECAST FOR THE CITY OF YORBA LINDA

City of Yorba Linda[1]	2016	2045	Increase
Population	67,800	70,600	4.13%
Employment	17,400	19,300	10.92%

PROJECT OVERVIEW

The Yorba Linda 2021 – 2029 Draft Housing Element traffic study analyzed and identified potential traffic-related deficiencies resulting from the rezoning and revised General Plan land use development assumptions necessary to address the City of Yorba Linda's regional housing needs assessment (RHNA) allocation. The Housing Element proposes a rezoning program of 27 vacant or underutilized sites for multi-family residential use at densities of 10 to 35 units to the acre. The Yorba Linda 2021 – 2029 Draft Housing Element will revise the General Plan land use and development intensities for the 27 sites to accommodate approximately 2,100 additional dwelling units for a net total of 2,410 dwelling units (including the existing zoning). Housing Element sites summarized on Table 2.

[1] SCAG Demographics and Growth Forecast; Page 38

TABLE 2: SUMMARY OF HOUSING ELEMENT SITES

#	HE Site ID	Site	Current Zoning	Proposed Zoning	Acres	Total Net Unit Potential
1	S1-021	W. of 16951 Imperial Highway	CG	Commercial Mixed Use Overlay	1.76	62
2	S1-200	SEC Rose Dr. & Blake Rd.	RE	RM-20 w/ Affordable Overlay	5.94	208
3	S2-008	17151 Bastanchury Rd.	RE	Congregational Land Overlay	4.92	60
4	S3-012	5320 Richfield Rd.	RU	Congregational Land Overlay	9.48	55
5	S3-207	5300-5392 Richfield Rd.	RU	RM-20 w/ Affordable Overlay	9.7	340
6	S2-013	4861 Liverpool St.	RU	Congregational Land Overlay	6.2	40
7	S3-074	18132 Yorba Linda Bl.	CG	RM-20 w/ Affordable Overlay	0.42	15
8	S3-024	Friends Church Overflow Parking	RE	Congregational Land Overlay	17.45	48
9	S3-033	4382 Eureka Av.	RS	Congregational Land Overlay	3.88	30
10	S3-210	18111 Bastanchury Rd.	PD-26	Congregational Land Overlay	9.23	105
11	S3-082	4791 & 4811 Eureka Av.	CG	RM-20 w/ Affordable Overlay	1.75	61
12	S4-075	4742 Plumosa Dr.	CG	RM-20 w/ Affordable Overlay	1.62	57
13	S6-015	22722 Old Canal Rd.	PD	Affordable Housing Overlay	2.56	89
14	S6-020	22711 Oak Crest Circle	PD	RM-20 w/ Affordable Housing Overlay	10.35	143
15	S7-001	Bryant Ranch Shopping Center	CG	Commercial Mixed Use Overlay	9.15	320
16	S3-034	4341 Eureka Av.	RS	RM	2.19	22
18	S3-203	18101-18251 Bastanchury Rd.	PD	PD	22.83	228
19	S3-205A	5225 & 5227 Highland Av.	RE	RM	7.08	71
20	S4-200	18597-18602 Altrudy Ln.	RS	RM-20	2	40
21	S4-204A	19045 Yorba Linda Bl.	RE	Congregational Land Overlay	1.85	17
	S4-204B	19081-19111 Yorba Linda Bl.	RE	RM-20	3.9	78
23	S3-211	17651 Imperial Highway	RS	RM	2.32	23
24	S4-053	SWC of Kellogg Dr. & Grandview Av.	RE	RM	0.98	10
25	S4-060	5541 S. Ohio St.	RE	RM	0.96	10
	S4-201	5531 S. Ohio St.	RE	RM	1.82	18
26	S5-008	Fairmont Bl.	PD	RM	23.01	230
27	S7-005	NEC of Camino del Bryant & Meadowland	RU	RM	3.06	30
TOTAL					**166.41**	**2,410**

The VMT analysis will evaluate the proposed development intensities expected for the 27 sites and assess the potential VMT impacts that may result from the implementation of the rezoning and changes to land use.

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 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 of 2018) (**Technical Advisory**) (1). Based on OPR's Technical Advisory, the City of Yorba Linda has adopted their own City of Yorba Linda Traffic Impact Analysis (TIA) Guidelines (May 2020) (**City Guidelines**) (2), which documents the City's VMT analysis methodology and approved impact thresholds. This VMT analysis has been developed based on the adopted City Guidelines.

VMT ANALYSIS

VMT MODELING

City Guidelines identify Orange County Transportation Analysis Model (OCTAM) version 5.0 as the appropriate tool for conducting VMT analysis for land use projects in the City of Yorba Linda. OCTAM is a useful tool to estimate VMT as it considers interactions between different land uses based on socio-economic data such as population, households and employment. The calculation of VMT for land use projects is based on the total number of trips generated and the average trip length of each vehicle. OCTAM is also consistent with the model used to develop the City's VMT impact thresholds listed by the City Guidelines. Therefore, the vehicle trips and average daily trip length for project-related vehicle trips are model derived from OCTAM.

VMT METRIC AND SIGNIFICANCE THRESHOLD

As stated in City Guidelines, the appropriate VMT metric for land uses projects for the purposes of VMT Analysis is VMT per service population. The City Guidelines identifies that a Project would result in a significant project generated VMT impact if the following condition is met:

1. The baseline project generated VMT per service population exceeds the City of Yorba Linda General Plan Buildout VMT per service population, or
2. The cumulative project generated VMT per service population exceeds City of Yorba Linda General Plan Buildout VMT per service population

North Orange County Cities VMT screening tool (NOCC+ Tool) provides published VMT values for its member agencies. For the City of Yorba Linda, the General Plan Buildout VMT per service population is 35.1.

PROJECT LAND USE CONVERSION

In order to evaluate Project VMT, standard land use information must first be converted into a OCTAM compatible dataset. The OCTAM 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 dwelling units must first be converted to SED for input into OCTAM. Adjustments in SED have been made to the appropriate TAZs within the OCTAM model to reflect the Project's proposed land uses (i.e., residential). Table 3 summarizes the population estimates for the Project. It should be noted that the population estimates are consistent with the population density factors identified in the California Department of Finance, Table 2: E-5 (January 2021).

TABLE 3: POPULATION ESTIMATES

Land Use	Quantity (DU)	Population Density Factor	Estimated Population
Residential	2,410	2.94 Persons per Household	7,085

In Table 4 presents the proposed population changes by TAZ within OCTAM. The TAZs represented below are all within the City of Yorba Linda's city boundary.

TABLE 4: POPULATION CHANGES BY TAZ

TAZ	Population Added
57	676.2
167	979.02
168	793.8
172	176.4
175	279.3
178	117.6
179	388.08
180	179.34
181	88.2
182	117.6
187	1555.26
197	682.08
198	940.8
253	111.72

BASELINE AND CUMLATIVE "PLUS PROJECT" CONDITIONS VMT CALCULATION

The values as calculated previously for the Project land use conversion are inputted into the OCTAM model for each of the Project's TAZs and the OCTAM model was ran inclusive of the Project's SED changes. Table 5 identifies the VMT per SP of the combined TAZs of the Project in the base year (2016) plus project and cumulative year (2045) plus project conditions.

TABLE 5: "PLUS PROJECT" VMT PER SERVICE POPULATION

	Base Year	Cumulative Year
Service Population	43,525	46,374
VMT	1,448,926	1,564,641
VMT / SP	33.29	33.74

PROJECT'S COMPARISON TO SIGNIFICANCE THRESHOLD

Table 6 shows the comparison between Project's baseline and cumulative VMT per service population to the City's impact threshold. As noted previously, the City of Yorba Linda has identified a VMT per service population significance threshold of 35.1. As shown below, the Project would not exceed the City's VMT per employee impact threshold for baseline and cumulative conditions by 5.16% - 3.87%, respectively. The Project's VMT impact is therefore considered less than significant.

TABLE 6: "WITH PROJECT" COMPARISON TO CITY THRESHOLD

	Base Year	Cumulative Year
Impact Threshold	35.1	35.1
With Project VMT / SP	33.29	33.74
Percent Change	-5.16%	-3.87%
Potentially Significant?	No	No

PROJECT'S CUMULATIVE EFFECT ON VMT

Consistent with City Guidelines, in addition to evaluating the project VMT per service population (SP) (i.e., Population and Employees), the analysis must also evaluate the cumulative effects of the project on VMT. To complete this cumulative analysis, the analysis must compare the citywide VMT per SP "with project" with "no project" VMT per SP. This analysis is performed using the boundary method, which includes all vehicle trips with one or both trip-ends within a specific geographic area of interest the City of Yorba Linda boundary. Once the areawide VMT value is calculated, it is then normalized by dividing by the number of population and employees in the City of Yorba Linda (based on the OCTAM model). Baseline and Cumulative link-level boundary VMT per service population (City) is calculated for both "No Project" and "With Project" conditions. If an increase occurs for the With Project condition as compared to No Project condition, then the impact is considered significant. As shown in Table 7, citywide VMT per SP was found to decrease under cumulative conditions and would also have a less than significant impact.

TABLE 7: CITYWIDE VMT PER SERVICE POPULATION

	Base Year No Project	Base Year With Project	Cumulative Year No Project	Cumulative Year With Project
Service Population	91,267	98,352	97,814	104,899
VMT	1,446,176	1,495,953	1,673,239	1,703,753
VMT/SP	15.85	15.21	17.11	16.24
Change in VMT	-0.64		-0.86	

If you have any questions, please contact me directly at aso@urbanxroads.com.

Respectfully submitted,

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Alexander So
Senior Associate

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 Yorba Linda.** *City of Yorba Linda Traffic Impact Analysis (TIA) Guidelines.* May 2020.