

APPENDIX U - VMT ANALYSIS



ASSOCIATED TRANSPORTATION ENGINEERS

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Since 1978

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June 8, 2020

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VEHICLE MILES TRAVELED (VMT) ANALYSIS FOR THE CAMARILLO SPRINGS GOLF COURSE PROJECT, CITY OF CAMARILLO

Associated Transportation Engineers (ATE) has prepared the following Vehicle Miles Traveled (VMT) analysis for the Camarillo Springs Golf Course Project (the "Project"), proposed in the City of Camarillo.

PROJECT DESCRIPTION

The Project is proposing to remove 6 holes from the Camarillo Springs Golf Course and develop 248 senior housing units (age restricted to 55 years or older) and 7.6 acres of public park areas (1.3-acre dog park + 6.3-acre public park).

VMT ANALYSIS

The City of Camarillo's adopted Traffic Impact Thresholds are used to evaluate whether a project has a significant traffic impact under the California Environmental Quality Act (CEQA). Recent legislation, Senate Bill 743, is moving away from the Level of Service (LOS) metric to a Vehicle Miles Traveled (VMT) metric to evaluate whether a project results in a significant traffic impact. Cities are required to implement Senate Bill 743 by July 1, 2020. It is anticipated that LOS will still remain as a policy consistency issue, though not as an impact metric under CEQA environmental review.

Per the State's Natural Resource Agency Updated Guidelines for the Implementation of the CEQA adopted in 2018, VMT has been designated as the most appropriate measure of transportation impacts. "Vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. For land use projects, vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. The City of Camarillo has not adopted VMT thresholds of significance or analysis methodologies at this time.

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CEQA Guidelines. The California Governor's Office of Planning and Research (OPR) published a technical advisory that includes recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures.¹ The recommended VMT impact threshold for residential projects is as follows:

"Recommended threshold for residential projects: A proposed project exceeding a level of 15 percent 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. Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the SCS (Sustainable Community Strategy) for that city, and should be consistent with the SCS.

Residential development that would generate vehicle travel that is 15 or more percent below the existing residential VMT per capita, measured against the region or city, may indicate a less-than significant transportation impact. In MPO areas, development measured against city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the population or number of units specified in the SCS for that city because greater-than-planned amounts of development in areas above the region-based threshold would undermine the VMT containment needed to achieve regional targets under SB 375.

For residential projects in unincorporated county areas, the local agency can compare a residential project's VMT to (1) the region's VMT per capita, or (2) the aggregate population-weighted VMT per capita of all cities in the region. In MPO areas, development in unincorporated areas measured against aggregate city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the population or number of units specified in the SCS for that city because greater-than-planned amounts of development in areas above the regional threshold would undermine achievement of regional targets under SB 375."

As noted, the City of Camarillo has not established a VMT calculation procedure at this time. The CalEEMod air quality model was therefore utilized to develop VMT estimates for proposed senior housing units and the existing golf course use that will be removed (calculation worksheets attached). Table 1 presents the results of the CalEEMod VMT calculations.

Table 1
Project CalEEMod VMT Estimates

Land Use	Size	Yearly VMT	Daily VMT
Senior Housing	248 Units	1,564,310	4,286
Golf Course	-6 Holes	-400,999	-1,099
Net Increase	NA	1,163,311	3,187

¹ Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.

In order to determine the VMT per capita for the Project, estimates of household size were developed using US Census data for the census blocks located adjacent to the Project site (census data attached). The data showed an average of 2.05 persons per household in the adjacent residences. The VMT analysis will use a more conservative rate of 2.00 persons per household to account for the age-restricted units. Based on this factor, the Project would have a total population of 496 residents which yields 6.43 VMT per capita. This information is presented in Table 2.

Table 2.
Project Per Capita VMT Estimates

Land Use	Units	Persons Per unit	Total Population	Daily VMT	VMT per Capita
Senior Housing	248 Units	2.0	496	3,187	6.43

Given that the City of Camarillo has not established VMT per capita thresholds at this time, the VMT per capita standards published by Ventura County were used to evaluate the potential impacts of the Project. The Transportation and Traffic Section of the Draft EIR for the Ventura County 2040 General Plan² indicates that the per capita VMT in the County is 9.66 miles (data attached). The Project's estimated per capita VMT of 6.43 is about 33% less than the County average. Based on this analysis, the Project's VMT generation would be less than significant since it does not exceed a level of 15% below existing regional per capita VMT. Table 3 summarizes the VMT data.

Table 3
Project VMT Comparison to County Average

Project VMT Estimate	Ventura County Average	Percent Less Than Average
6.27 VMT Per Capita	9.66 VMT Per Capita	33%

RESIDENTIAL TRIP GENERATION COMPARISON

The proposed senior housing development would also generate significantly lower traffic volumes compared to standard single-family residences and multi-family housing units, and thus would have lower VMT than other residential types. A comparison of the residential trip generation rates contained in the Institute of Transportation Engineers (ITE) Trip Generation Manual³ is provided in Table 4.

² Ventura County 2040 General Plan Draft EIR, Ventura County, January 2020.

³ Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017.

Table 4
Residential Trip Generation Rate Comparison

Land Use	Daily Trip Rate	Senior Housing Rate	Percentage Less
Single Family	9.44/Unit	4.27/Unit	55% Less
Multi-Family	7.32/Unit	4.27/Unit	42% Less

The data presented in Table 4 show that the Project would generate 55% less daily traffic than single family homes and 42% less traffic than multi-family developments further indicating that the Project would generate less VMT per capita than other residential developments in the City and the County.

This concludes ATE's VMT analysis for the Camarillo Springs Golf Course Project.

Associated Transportation Engineers


Scott A. Schell, AICP
Principal Transportation Planner

SAS/DLD

Attachments

**Associated Transportation Engineers
VMT SUMMARY CALCULATIONS**

CAMARILLO SPRINGS GOLF COURSE PROJECT

PROJECT VMT

Use	Size	Annual VMT	Daily VMT
Proposed			
Senior Housing	248 DU	1,564,310	4,286
Existing to be Removed			
Golf Course	-6.0 Holes	400,999	1,099
Net VMT		1,163,311	3,187

VMT PER CAPITA

Units	People per DU	Total Population	VMT per Capita
248	2.00	496	6.43

Camarillo Springs Senior Housing - Ventura County APCD Air District, Annual

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	SO2 CO2	NO2 CO2	Total CO2	CH4	N2O	CO2e
Category	t/day										MT/yr					
Mitigated	0.1332	0.5908	1.7698	0.2800e-003	0.5917	5.2600e-003	0.5969	0.1583	4.9000e-003	0.1632	0.0000	577.0914	577.0914	0.0234	0.0000	577.6758
Unmitigated	0.1332	0.5908	1.7698	0.2800e-003	0.5917	5.2600e-003	0.5969	0.1583	4.9000e-003	0.1632	0.0000	577.0914	577.0914	0.0234	0.0000	577.6758

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Retirement Community	595.20	503.44	483.60	1,564,310	1,564,310
Total	595.20	503.44	483.60	1,564,310	1,564,310

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-D or C-NW	H-W or C-W	H-S or C-C	H-D or C-NW	Primary	Diverted	Pass-by
Retirement Community	10.80	7.30	7.50	32.90	18.00	49.10	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MMD	RHD	OBUS	UBUS	MCV	SBUS	MH
Retirement Community	0.588665	0.041515	0.188382	0.110464	0.019030	0.006351	0.019720	0.017925	0.001164	0.001012	0.003904	0.000380	0.001490

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Camarillo Springs Senior Housing - Ventura County, Annual

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive Puro	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NGK-CO2	Total CO2	CH4	N2O	CO2e
Category	ton/yr										MT/yr					
Mitigated	0.0481	0.1850	0.5103	1.8500e-003	0.1517	1.4400e-003	0.1531	0.0408	1.3400e-003	0.0418	0.0000	151.9657	151.9657	8.8900e-003	0.0000	152.1341
Unmitigated	0.0481	0.1850	0.5103	1.8500e-003	0.1517	1.4400e-003	0.1531	0.0408	1.3400e-003	0.0418	0.0000	151.9657	151.9657	8.8900e-003	0.0000	152.1341

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Golf Course	214.44	243.78	237.18	400,999	400,999
Total	214.44	243.78	237.18	400,999	400,999

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Golf Course	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	RHD	OBUS	UBUS	MCY	SBUS	MW
Golf Course	0.588665	0.041515	0.188382	0.110464	0.019030	0.006351	0.019720	0.017925	0.001164	0.001012	0.003904	0.000380	0.001490

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy



ASSOCIATED TRANSPORTATION ENGINEERS

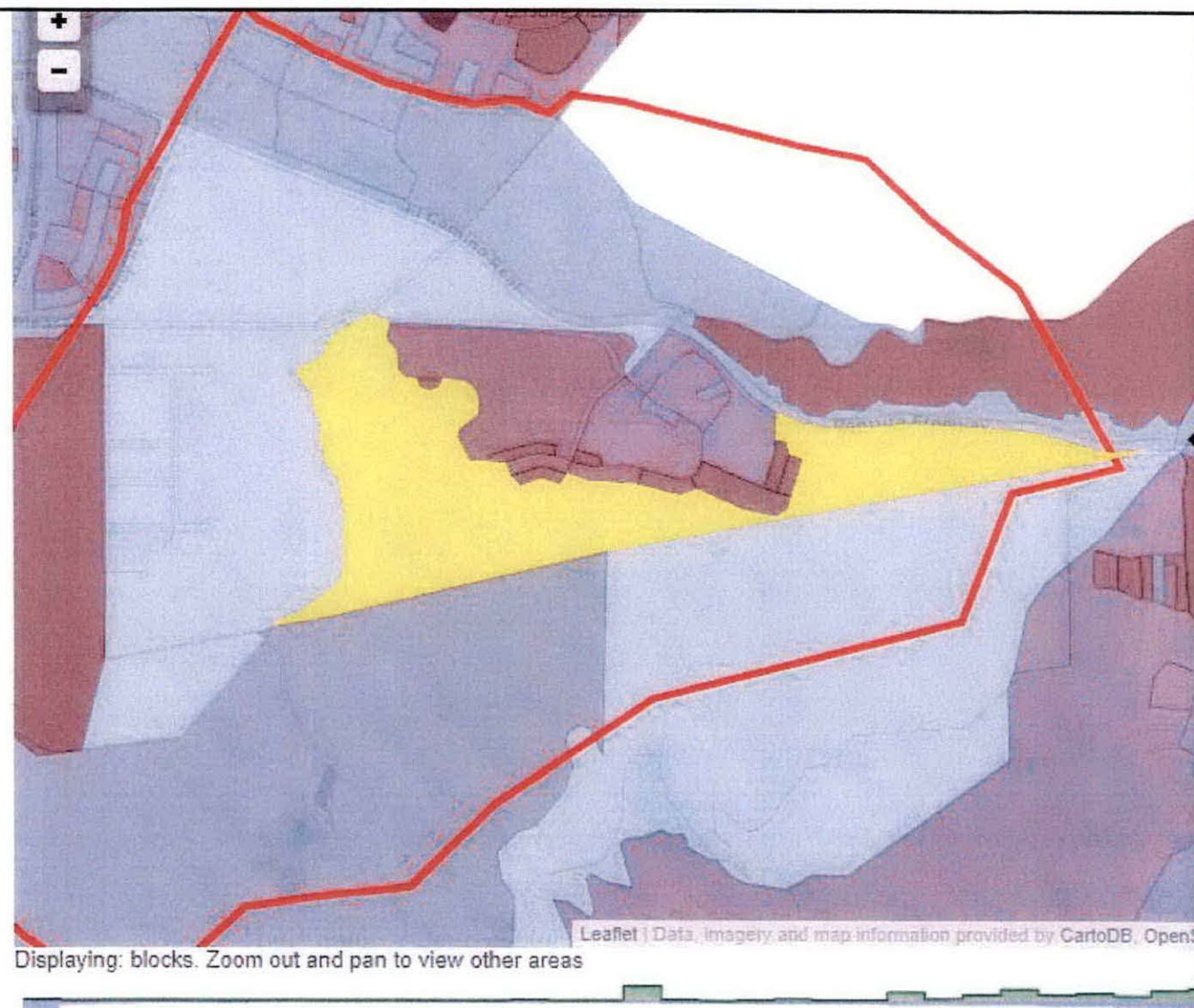
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Since 1978

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Camarillo Springs Golf Course Project US Census Population Data

Census Block	Population	Households	Persons per Household
1	468	222	2.11
2	193	93	2.07
3	138	72	1.92
4	217	122	1.78
5	222	95	2.34
Total	1,238	604	2.05



Displaying: blocks. Zoom out and pan to view other areas

Leaflet | Data, imagery and map information provided by CartoDB, OpenS

93012

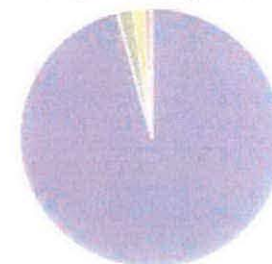
Population: 217
Households: 122

Households by type



Family
Non-Family

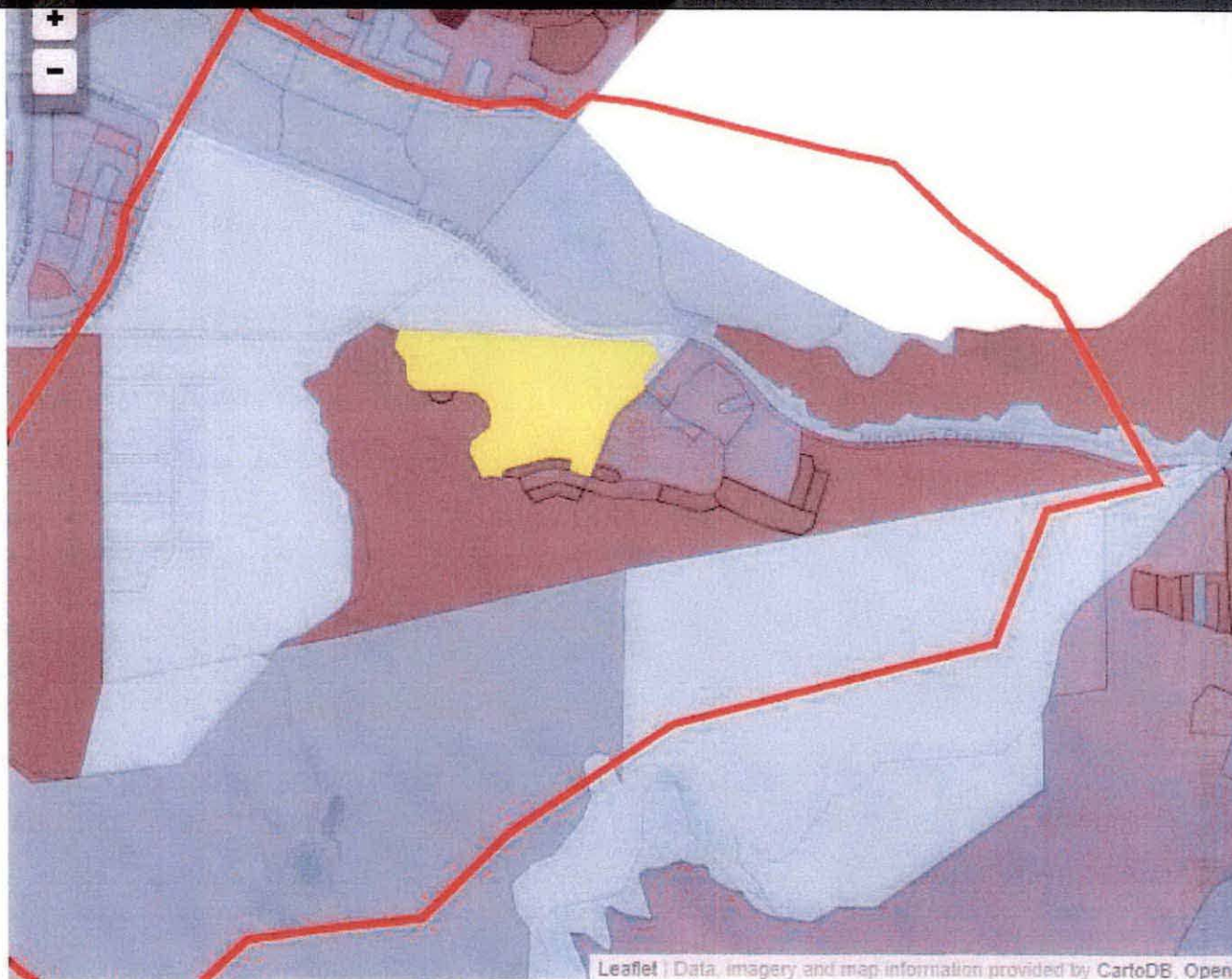
Population by race



White
Asian
Hispanic
Multirace

Median household income:
\$46,058

[Ventura County, CA](#)
[California, California forum,](#)
[California schools](#)



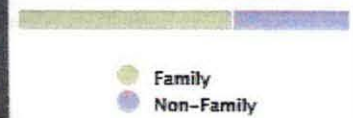
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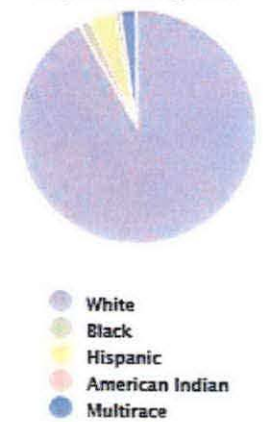
Ventura County, CA (93012)

Population: 138
Households: 72

Households by type



Population by race



Median household income:
\$46,058

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0% 20% 40% 60% 80% 100%

93012

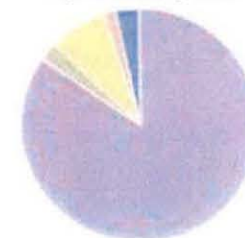
Population: 193
Households: 90

Households by type



- Family
- Non-Family

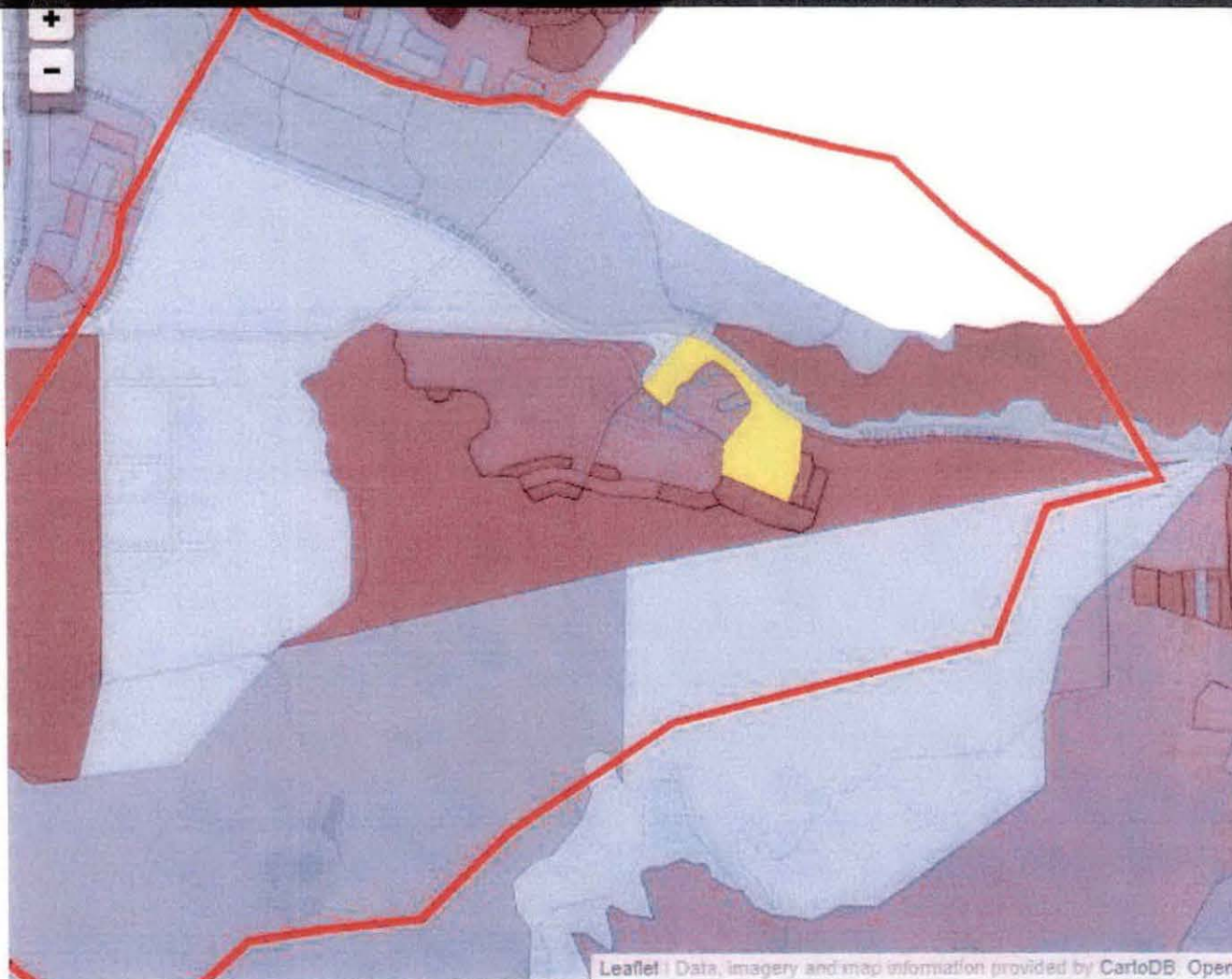
Population by race



- White
- Asian
- Hispanic
- American Indian
- Multirace

Median household income:
\$46,058

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[California schools](#)



Leaflet | Data, imagery and map information provided by CartoDB, OpenS

Displaying: blocks. Zoom out and pan to view other areas



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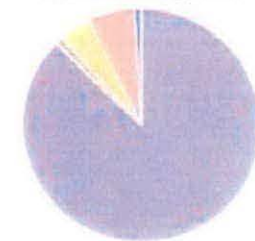
Ventura, CA (93012)

Population: 468
Households: 222

Households by type



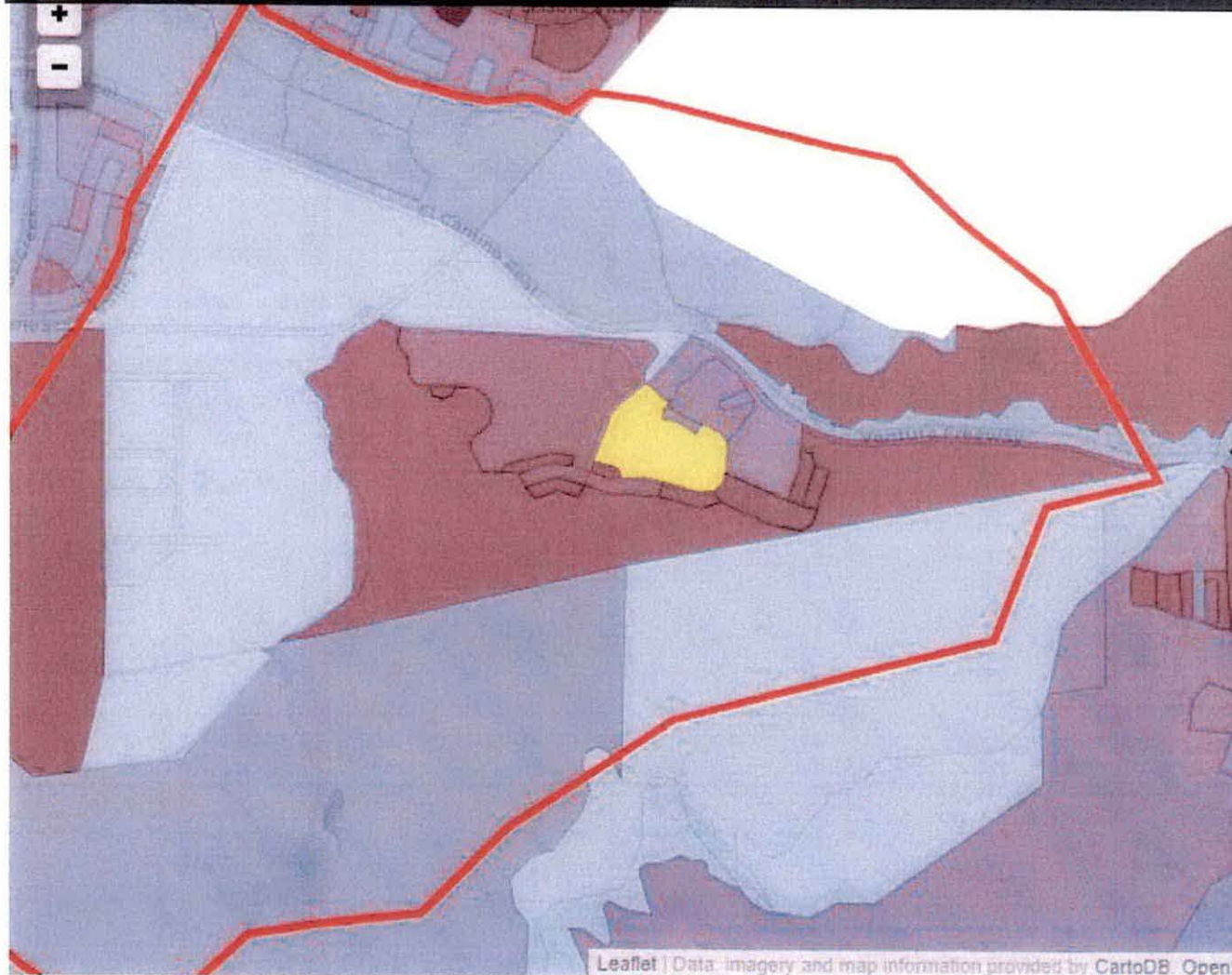
Population by race



White
Black
Asian
Hispanic
Multirace

Median household income:
\$46,058

Ventura County, CA
California, California forum,



Leaflet | Data: imagery and map information provided by CartoDB, OpenS

Displaying: blocks. Zoom out and pan to view other areas

Camarillo, CA (race)
93012

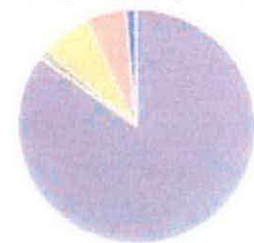
Population: 222
Households: 95

Households by type



- Family
- Non-Family

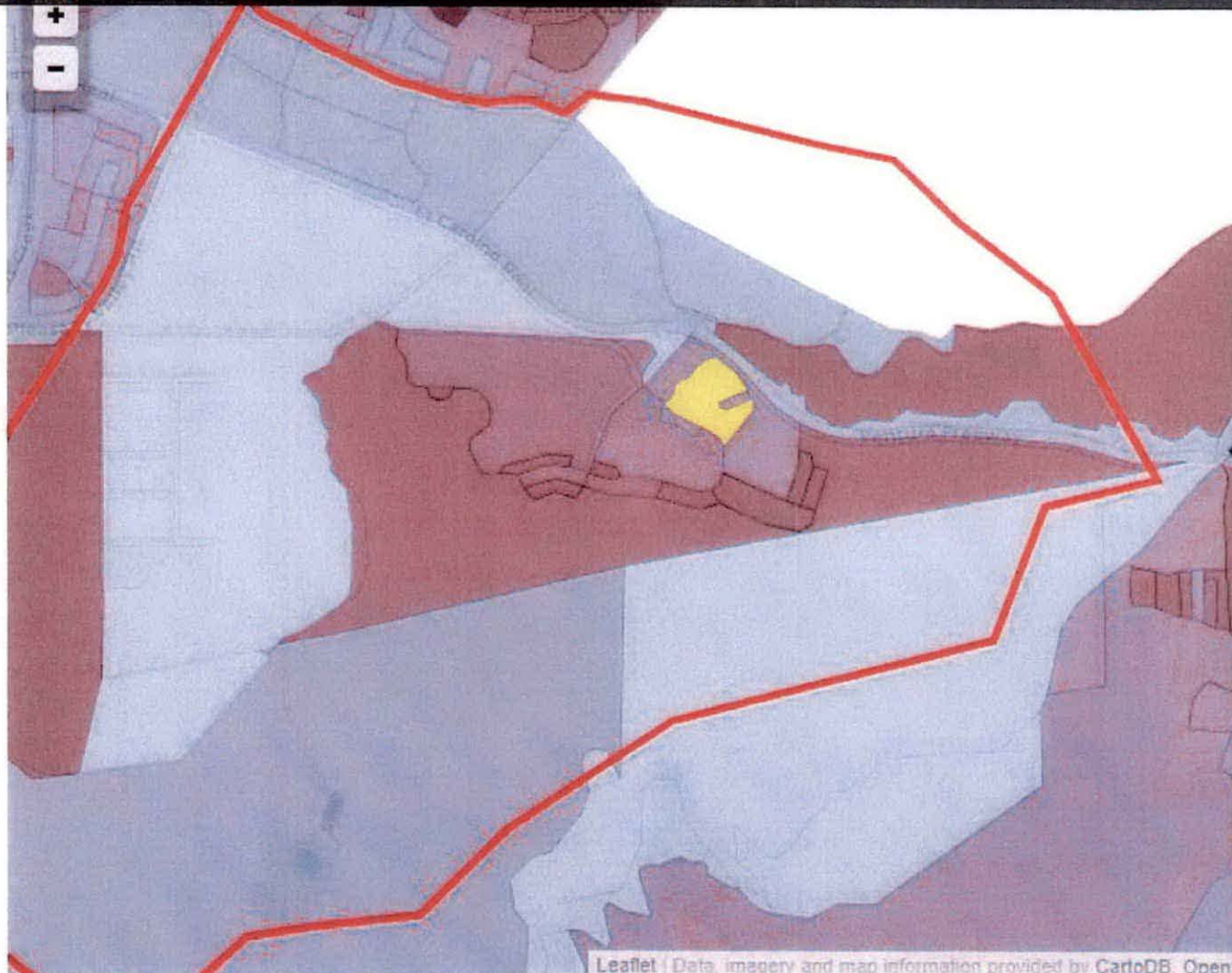
Population by race



- White
- Black
- Asian
- Hispanic
- Multirace

Median household income:
\$46,058

Ventura County, CA
California, California forum,
California schools



Displaying: blocks. Zoom out and pan to view other areas

Leaflet | Data, imagery and map information provided by CartoDB, OpenS





DRAFT ENVIRONMENTAL IMPACT REPORT

Ventura County 2040 General Plan



STATE CLEARINGHOUSE NO: 2019011026

Prepared for



County of Ventura
County Government Center Hall of Administration

January 2020

by the California Air Resources Board under SB 375 (19 percent reduction in per capita carbon dioxide (CO₂) emissions from passenger vehicles by 2035 relative to a 2005 baseline).

While LOS is no longer a determination of significance under CEQA, the County will continue to rely on LOS for determining consistency with the General Plan (i.e., for discretionary development that may result in an unacceptable LOS to County roadways) and as the basis for developing project conditions of approval and applying fees on new development for transportation related improvements required to meet General Plan policy consistency.

Ventura County plans to adopt formal thresholds of significance under SB-743 prior to July 1, 2020. In lieu of adopted thresholds, VMT thresholds consistent with OPR's final technical guidance for implementation of SB 743 (OPR 2018) were applied. The selected thresholds for this analysis are provided in Table 4.16-3 and described in the following text.

Table 4.16-3 Analysis of Transportation Impacts Thresholds

Project Type	Metric Unit	Model Trip Types	Target	Baseline VMT	Threshold VMT
Residential	VMT/Capita	Average of all Home Based Trip Types	15% Reduction of Regional Average	9.66	8.21
Office	VMT/Employee	Home Based Work Trips	15% Reduction of Regional Average	13.52	11.49
Industrial	VMT/Employee	Home Based Work Trips	15% Reduction of Regional Average	13.52	11.49
Retail	Net Change in Unincorporated VMT	All Trip Types	No Net Increase	7,500,249	7,500,249
Agriculture	Net Change in Unincorporated VMT	All Trip Types	No Net Increase	7,500,249	7,500,249
Infrastructure	Net Change in Unincorporated VMT	All Trip Types	No Net Increase	7,500,249	7,500,249

For **residential** land uses, OPR recommends a VMT per capita threshold set at 15 percent below baseline levels. Using the VCTC model, the average trip length of all home-based model trip types was used as a surrogate for a per capita estimate. Based on the VCTC baseline model, the average trip length for all home-based trips is 9.66 miles. Applying the 15 percent reduction yields a VMT Threshold for residential land uses of 8.21 miles.

For non-residential land uses, OPR identifies three basic land use categories: office, retail, and mixed use. For **office**, the average trip length of home-based work trips was used as a surrogate for a per employee estimate. Based on the VCTC baseline model, the average trip length for home-based work trips are 13.52 miles. Applying the 15 percent reduction yields a VMT Threshold for office land uses of 11.49 miles. Given that **retail** land uses attract many kinds of trip types (i.e., home based and non-home based trips) and generally redistributes existing retail trips rather than creating new trips, OPR recommends using no net change in either project or regional VMT. Given this programmatic application, the unincorporated trip-based VMT estimate was used to establish this VMT threshold. For **mixed use** development (typically includes a combination of residential and retail/office), OPR guidance suggests applying the threshold of one (or more) of the land uses. Given that land use growth under the 2040 General Plan can be thought of as one holistic mixed-use development, application of the residential, office, and retail thresholds inherently reflects mixed-use development.

Given that the predominant non-residential land uses in Ventura County are industrial and agricultural, these land uses can be generally associated with the OPR non-residential land