QUESTHAVEN

Transportation Impact Study

MARCH 2023

Prepared For

CR Questhaven, LLC
444 West Beech Street, Suite 300
San Diego, CA 92101

Prepared By

CR Associates
3900 Fifth Avenue, Suite 310
San Diego, CA 92103

Table of Contents

List of Figures

List of Tables

Appendices

1.0 Introduction

The purpose of this Transportation Impact Study is to identify and document any significant impact in the form of Vehicle Miles Traveled (VMT) associated with the development of the proposed Questhaven Project (the "Proposed Project"), and to recommend mitigation measures, as necessary.

1.1 Project Description

The Proposed Project is located on the south side of San Elijo Road between Fallsview Road and the Loma San Marcos Movie Studio project driveway, near the San Elijo Community, within the unincorporated County of San Diego. The Project proposes to construct 76 single-family estate residential dwelling units and a 0.30-acre park within an 89.23-acre lot. 69 of the single-family units will be market rate units and seven (7) will be affordable housing units. **Figure 1.1** displays the Proposed Project's regional location.

Access to the Proposed Project will be provided along San Elijo Road via two driveways, Street "D" and Street "E". Both driveways will operate as side-street stop-controlled intersections and only allow right-in/right-out movements. **Figure 1.2** displays the Proposed Project site plan.

1.2 Project Trip Generation

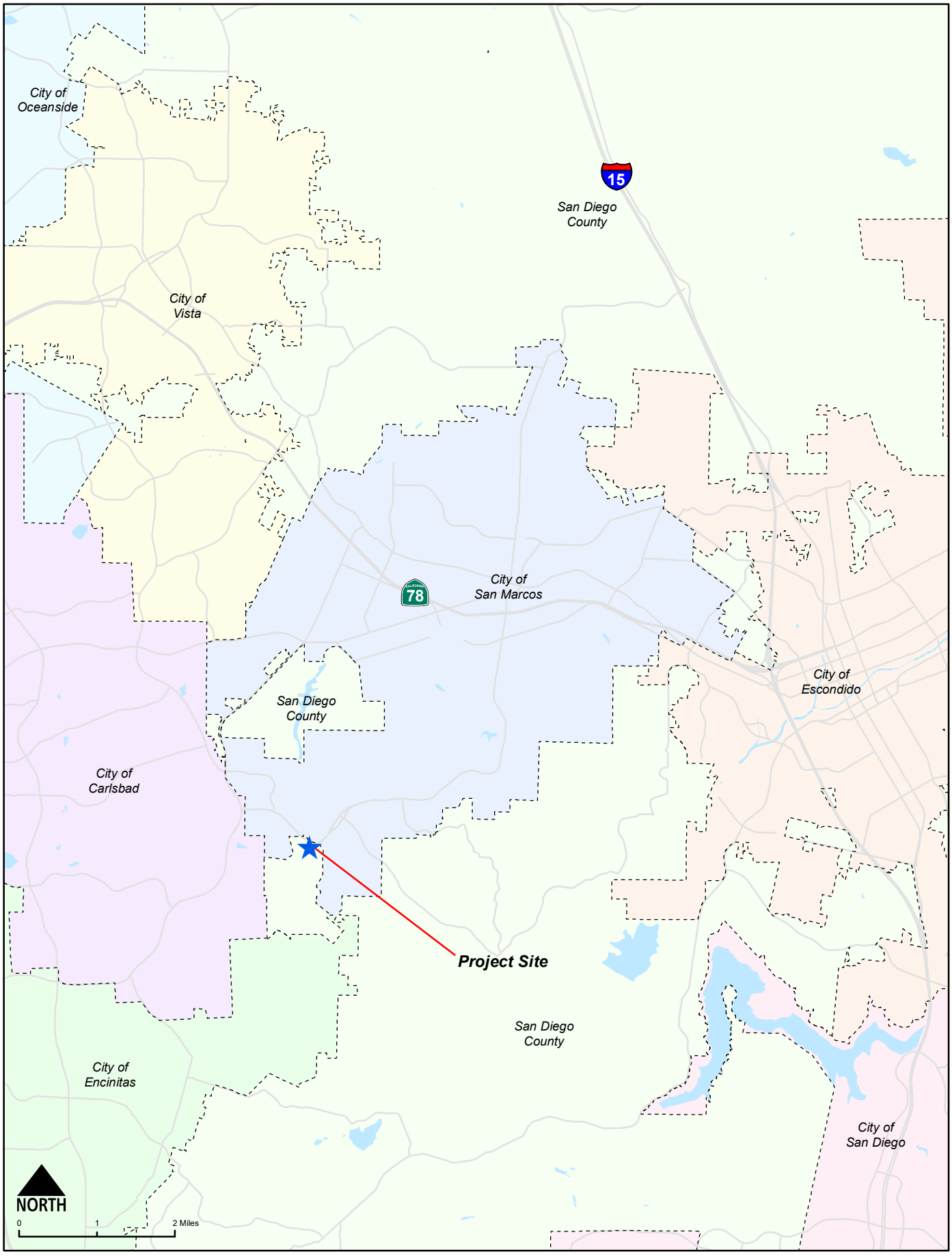
Proposed Project trip generation estimates were derived utilizing the trip generation rates outlined in SANDAG's (not sot) Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region (April 2002). **Table 1.1** displays the anticipated daily and peak hour trip generation for the Proposed Project.

Table 1.1 - Project Trip Generation

Land Use	Units	Trip Rate	ADT	AM Peak Hour					PM Peak Hour				
				%	Trips	Split	In	Out	%	Trips	Split	In	Out
Residential – Estate	76 DU	12 / DU	912	8%	73	3:7	22	51	10%	92	7:3	64	28
Park – Neighborhood/County	0.30 acres	5 / acre	2	4%	1	5:5	1	0	8%	1	5:5	1	0
Total			**914**	**-**	**74**	**-**	**23**	**51**	**-**	**93**	**-**	**65**	**28**

Source: SANDAG (not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (April 2002)

As shown in Table 1.1, the Proposed Project would generate a total of 914 daily trips, including 74 trips (23-in / 51-out) during the AM peak hour and 93 trips (65-in / 28-out) during the PM peak hour.



Questhaven
Transportation Impact Study

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Figure 1.1
Project Regional Location

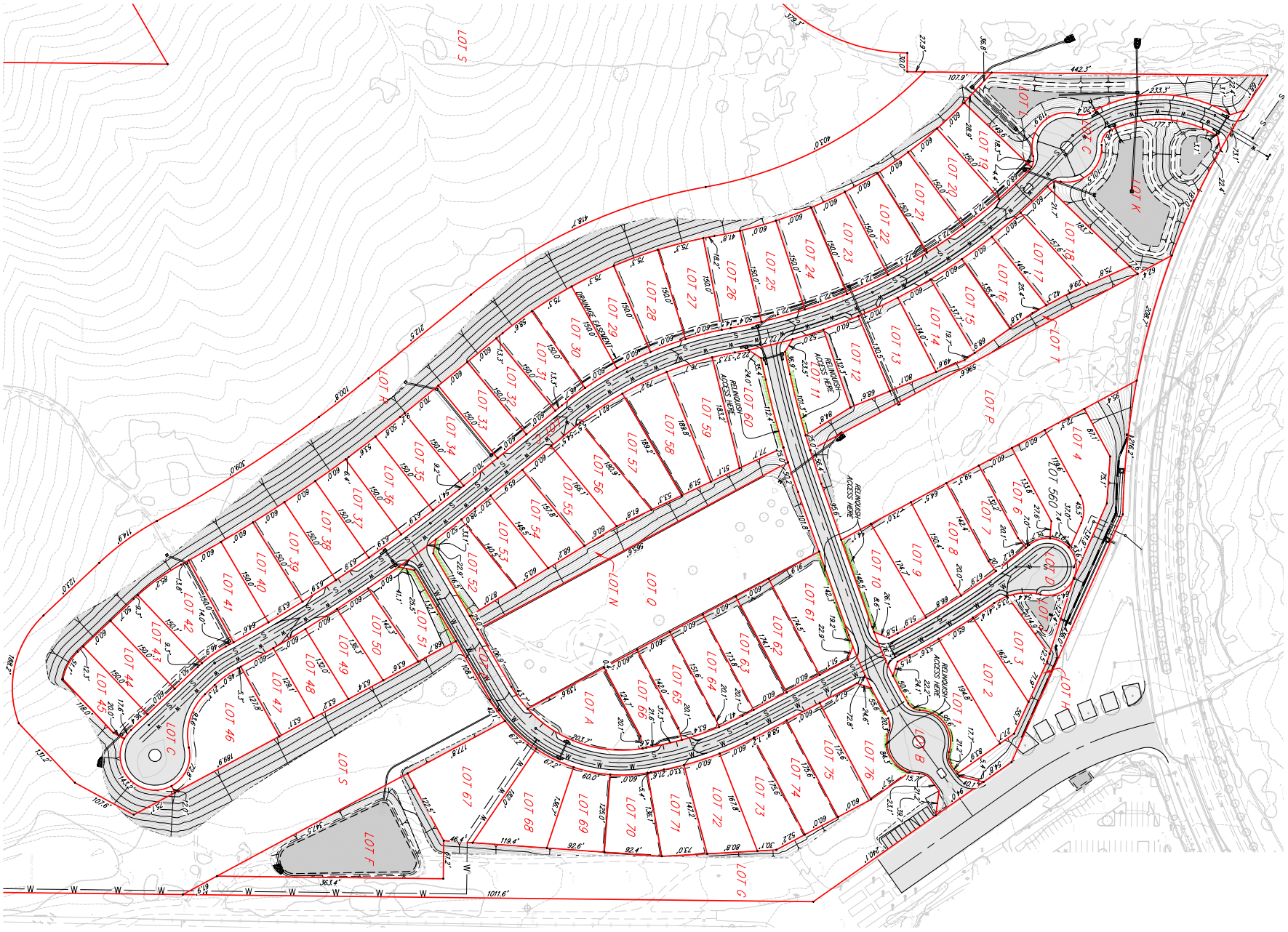

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Figure 1.2

Proposed Project Site Plan

1.3 Report Organization

Following this Introduction chapter, this report is organized into the following sections:

2.0 *Analysis Methodology* – This chapter describes the methodologies, standards, and thresholds utilized to evaluate VMT impacts associated with the Proposed Project, based on the revised (2021) State of California Environmental Quality Act (CEQA) Guidelines Section 15064.3 and the *County of San Diego Transportation Study Guidelines* (County TSG)[1], which were adopted by the San Diego County Board of Supervisors on September 22, 2022.

3.0 *VMT Analysis and Mitigation* – This chapter discusses the results of the VMT analysis as it relates to the proposed Project and determines whether the Project would result in a VMT impact based on the thresholds outlined in Chapter 2.0. This chapter also provides recommendations for mitigation measures to reduce the identified VMT impact, as needed, to less than significant levels, and evaluates the feasibility of the proposed mitigation measures.

[1] https://www.sandiegocounty.gov/content/dam/sdc/pds/SB743/Transportation%20Study%20Guide%20-%20FINAL%20-%20September%202022.pdf

2.0 Analysis Methodology

The VMT analysis for the Project was conducted following the County TSG as well as in accordance with CEQA Statutes and Guidelines. Land development projects within the County of San Diego are required to conduct a detailed transportation VMT analysis for each land use component of the project[2], unless the project is presumed to have a less than significant impact based on Table 1 of the County TSG. The screening approach is consistent with those provided in the California Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA[3]. **Table 2.1** displays the County TSG screening criteria.

Table 2.1 - VMT Screening Criteria

Screening Criteria
1. **Projects Located in VMT Efficient Areas Based on Regional Average** ▪ Region being defined by OPR as the MPO/RTPA geographical boundary ▪ Use location-based screening maps (consistent with project land uses)
2. **Projects Located in Infill Village Areas** ▪ Use location-based screening maps ▪ VMT Screening Criteria for Infill Areas (See County TSG Appendix D)
3. **Small Residential and Employment Projects** ▪ Projects that generate less than 110 average daily trips (trips based on the number of vehicles trips after any alternative modes/location-based adjustments applied)
4. **Locally Serving Retail Projects** ▪ Projects that are 50,000 square feet or less
5. **Locally Serving Public Facilities** ▪ Public facilities that serve the local community including transit centers, public schools, libraries, post office, park-and-ride lots, other government offices, parks/trail heads, emergency shelters, and passive public uses.
6. **Redevelopment Projects with Lower Total VMT** ▪ The proposed project's total daily project VMT is less than the existing land use's total daily VMT
7. **Affordable Housing** ▪ 100% affordable housing

Source: County TSG (2022)

Project or parts of a project that does not meet screening requirements are required to conduct a detailed transportation VMT analysis.

[2] Both the County TSG and the OPR Technical Advisory stated that land uses within a mixed-use development should be analyze separately to determine the impact of each land use type.

[3] https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

2.1 VMT Analysis Procedures and Threshold of Significance

The County TSG provided the following guidance on how to conduct transportation VMT analysis based on the project type and number of driveway trips, as well as the threshold where a project is considered to have a significant transportation related impact. **Table 2.2** displays a summary of the guidance for the different project types.

Table 2.2 – Summary of VMT Analysis Approach and Significance Thresholds

Project Type	Approach		Threshold of Significance
	Determine Average VMT by Maps	SANDAG Modeling Required	
Residential, Employment, or Mixed-Use	Less than 2,400 un-adjusted driveway trips	Greater than 2,400 un-adjusted driveway trips	15 percent (15%) below the Regional Average VMT per Resident
Non-Locally Serving Retail/Service, Public Facility, or Other	N/A	All Projects	A net change in total regional VMT

Because the proposed Project generates less than 2,400 average daily trips (ADT) and is a residential project, per the County TSG (p. 24), the project shall conduct a VMT analysis by identifying the location of the project on the County's VMT per Resident map.

The project's VMT per Resident will be considered the same as the VMT per Resident of the Traffic Analysis Zone it is located in. The project also has the option to use the SANDAG Regional Travel Demand Model (year that is used to determine the VMT thresholds) to determine the project's VMT per Resident. A residential project is considered to have a less than significant impact if the project's VMT per resident is 15 percent or more below the regional average (i.e., less than or equal to 85 percent of the regional average VMT per resident). For additional information regarding other land uses, please see the County TSG.

2.2 VMT Reduction and Mitigation Measures

Projects that have a significant VMT related impact would be required to mitigate their impact which is done by reducing the number of automobile trips generated by the project and reducing the distance that people drive to the project site. VMT reductions are generally achieved through changes in a project's site design, or the application of on-site measures and strategies designed to incentivize, or require, users to take alternate forms or transportation in-lieu of single occupancy vehicles. This approach is otherwise known as Transportation Demand Management (TDM). The project would quantify the measure of effectiveness of each TDM measures by using the calculation/method outline in the California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing GHG Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (GHG Handbook), December 2021[4].

[4] https://www.caleemod.com/documents/handbook/full_handbook.pdf

3.0 VMT Analysis and Mitigation

This chapter discusses the VMT generated by the Proposed Project and whether the Proposed Project would result in a VMT impact based on the thresholds outlined in Chapter 2.0 and provides recommendations for mitigation measures to reduce or mitigate identified VMT impacts.

3.1 VMT Analysis

In accordance with the County TSG, the Project's two land use components, a 0.30-acre neighborhood park and 76 residential units (including seven affordable housing units) which are to be evaluated separately.

VMT Analysis – Neighborhood Park

The 0.30-acre Neighborhood Park was first evaluated using the screening criteria provided in Section 2 and the County TSG. Because the Neighborhood Park is limited in size and is anticipated to generate two vehicle trips per day, it was determined that the Neighborhood Park meets the "Locally Serving Public Facilities" screening criteria. The County TSG defines Locally Serving Public Facilities as facilities that serve the surrounding community or public facilities that have passive uses. These types of facilities may be presumed to have a less than significant impact absent substantial evidence to the contrary. As such, the Neighborhood Park component of the Project is presumed to have a less than significant transportation related impact, and no additional analysis or mitigation is required.

VMT Analysis - Residential

The 76 residential units do not meet any of screening criteria provided in Section 2, therefore a detailed VMT analysis was conducted using the SANDAG San Diego Regional Travel Demand Model SB-743 VMT Map for the Year 2016 scenario (SANDAG 2016 VMT Map) [5]. While the proposed Project buildout year is Year 2024, for a conservative analysis the Year 2016 scenario was selected because future year scenarios (as modeled in the Regional Model) may include TDMs that are currently not available at the time of the NOP. **Figure 3.1** displays the VMT per Resident for the proposed Project. **Table 3.1** summarizes the VMT analysis results.

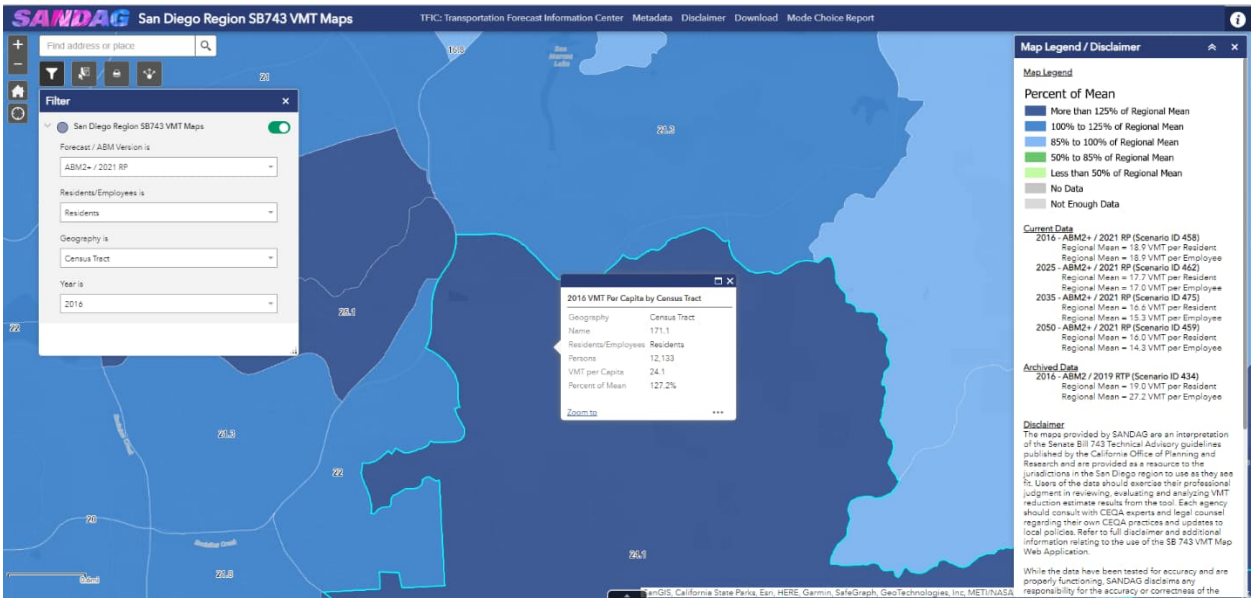
Table 3.1 - VMT Impact Analysis – Residential

Metric	VMT per Resident (miles/person)
Regional Average	18.9[1]
Significant Impact Threshold (85%)	16.07[2]
Proposed Project	24.1[1]
Significant Impact?	Yes

Notes:
[1] Source = SANDAG Series 14 Year 2016 Base Model
[2] Regional Average (18.9) x 85% = 16.07.

[5] The County of San Diego VMT screening map was reviewed prior to using the SANDAG 2016 VMT Map. The County VMT Map identified the TAZ where the Project is located as "Not Enough Data" because the TAZ is currently open space. However, its surroundings are fully developed residential neighborhoods. Therefore, in order to determine the VMT per Resident, which is typically reflected by the travel behavior of the existing residents, a larger capture area to provide more samples is needed. In this case the SANDAG VMT Map, which uses Census Tract (larger than TAZ), is an appropriate source. Link to SANDAG 2016 VMT Map: https://arcg.is/1GnbHe

Figure 3.1 - Project Location within SANDAG SB 743 VMT Map



As shown in Table 3.1, the Proposed Project's residential land use is anticipated to generate a VMT per resident of 24.1 miles, which exceeds the significance threshold of 16.07 miles. Therefore, the residential component of the Proposed Project would have a significant VMT impact and mitigation measures are required to reduce the VMT per resident.

3.2 Mitigation

The proposed Project VMT per Resident is required to provide TDM to reduce the Project's VMT per Resident. The GHG Handbook provides several TDM measures for land use projects, those that apply to residential development were evaluated to determine whether the measure is appropriate/feasible for the Project and are shown in **Table 3.2**. The comprehensive list of TDM measures is provided in **Appendix A.**

Table 3.2 -TDM Measures

Measure	Max VMT Reduction	Applicability	Project's VMT Reduction
Increase Residential Density (GHG Handbook: T-1)	30%	No – Not financially feasible for project to increase number of residential units.	0%
Provide Transit-Oriented Development (GHG Handbook: T-3)	31%	No - The Project is not located near a major transit stop.	0%
Implement Commute Trip Reduction Marketing (GHG Handbook: T-6)	4%	**Yes** – However, not quantifiable for the Proposed Project as this measure is aimed at employment projects.	0%

Table 3.2 -TDM Measures

Measure	Max VMT Reduction	Applicability	Project's VMT Reduction
Provide Ridesharing Program (GHG Handbook: T-7)	8%	No – Not financially feasible for project to host and implement a ridesharing program.	0%
Provide End-of-Trip Bicycle Facility (GHG Handbook: T-9)	4.4%	**Yes -** The project will provide short term bicycle racks at the Neighborhood Park. Since these racks will likely be utilized by residents in nearby communities, and for a conservative analysis, VMT reduction was not assumed for these amenities. Additionally, not quantifiable for the Proposed Project as this measure is aimed at employment projects.	0%
Limit Residential Parking Supply (GHG Handbook: T-14)	13.7%	No – Not feasible to reduce parking for this residential project.	0%
Provide Pedestrian Network Improvement (GHG Handbook T-17)	6.4%	No – Although the project is providing pedestrian improvements within the project site and project frontage, it is not financially feasible to provide pedestrian network improvements beyond the project site.	0%
Implement Conventional Carshare Program (GHG Handbook: T-20-A)	0.15%	No – Not financially feasible for project to implement a carshare program.	0%
Implement Electric Carshare Program (GHG Handbook: T-20-B)	0.18%	No – Not financially feasible for project to implement an electric carshare program.	0%
Implement Pedal (Non-Electric) Bikeshare Program (GHG Handbook: T-21-A)	0.02%	No – Not financially feasible for project to implement a pedal bikeshare program.	0%
Implement Electric Bikeshare Program (GHG Handbook: T-21-B)	0.06%	No – Not financially feasible for project to implement an electric bikeshare program.	0%

Table 3.2 -TDM Measures

Measure	Max VMT Reduction	Applicability	Project's VMT Reduction
Implement Scootershare Program (GHG Handbook: T-21-C)	0.07%	No – Not financially feasible for project to implement an electric scootershare program.	0%
Integrate Affordable and Below Market Rate Housing	Non-quantifiable	**Yes** - The project is providing seven units (near 10%) of affordable housing. However, for a conservative analysis, the potential VMT reduction were not assumed for these units.	0%

As shown above, none of the measures applicable for the project are quantifiable measures. Therefore, the Project is anticipated to continue generating 24.1 VMT per resident, which exceeds the 16.07 miles threshold. Since the mitigation measures would not reduce the VMT per resident to less than significant levels, **the Project is considered to have a significant impact and unmitigated impact.**

4.0 Site Access, Circulation, and Active Transportation Facilities

Access to the Project's site will be provided via the existing driveway that access San Elijo Road. The Project will update this existing driveway to satisfy both County of San Diego and City of San Marcos current standards, including the following Project's features:

- Re-construct the existing driveway to County of San Diego/City of San Marcos standards.
- Construct sidewalk at project frontage.
- Restripe the existing buffer bike lanes with the reconstruction of the Project's driveway to the City's traffic engineer satisfaction.

Appendix A - List of TDM Measures

Transportation

LAND USE

- T-1. Increase Residential Density
- T-2. Increase Job Density
- T-3. Provide Transit-Oriented Development
- T-4. Integrate Affordable and Below Market Rate Housing
- T-17. Improve Street Connectivity

TRIP REDUCTION PROGRAMS

- T-5. Implement Commute Trip Reduction Program (Voluntary)
- T-6. Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring)
- T-7. Implement Commute Trip Reduction Marketing
- T-8. Provide Ridesharing Program
- T-9. Implement Subsidized or Discounted Transit Program
- T-10. Provide End-of-Trip Bicycle Facilities
- T-11. Provide Employer-Sponsored Vanpool
- T-12. Price Workplace Parking
- T-13. Implement Employee Parking Cash-Out
- T-23. Provide Community-Based Travel Planning

PARKING OR ROAD PRICING/MANAGEMENT

- T-14. Provide Electric Vehicle Charging Infrastructure
- T-15. Limit Residential Parking Supply
- T-16. Unbundle Residential Parking Costs from Property Cost
- T-24. Implement Market Price Public Parking (On-Street)

NEIGHBORHOOD DESIGN

- T-18. Provide Pedestrian Network Improvement
- T-19-A. Construct or Improve Bike Facility
- T-19-B. Construct or Improve Bike Boulevard
- T-20. Expand Bikeway Network
- T-21-A. Implement Conventional Carshare Program
- T-21-B. Implement Electric Carshare Program
- T-22-A. Implement Pedal (Non-Electric) Bikeshare Program
- T-22-B. Implement Electric Bikeshare Program
- T-22-C. Implement Scootershare Program

TRANSIT

- T-25. Extend Transit Network Coverage or Hours
- T-26. Increase Transit Service Frequency
- T-27. Implement Transit-Supportive Roadway Treatments
- T-28. Provide Bus Rapid Transit
- T-29. Reduce Transit Fares

CLEAN VEHICLES AND FUELS

- T-30. Use Cleaner-Fuel Vehicles

Interactions between transportation measures are complex and sometimes counterintuitive, whereby combining measures can have a substantive impact on reported emission reductions. To safeguard the accuracy and reliability of the methods, while maintaining their ease of use, the following rules should be followed when combining reductions achieved by transportation measures.

Combining Measures Across Scales

The first level of organization for the transportation measures is the scale of application. There are 16 quantified measures at the Project/Site scale that can be combined with each other and 17 quantified measures at the Plan/Community scale that can be combined with each other.[4] *The GHG reductions of transportation measures from different scales of application should never be combined.* While it may be possible that a user's project involves measures that affect vehicle trips or VMT at both scales, it is likely that combining the percent reduction from measures of different scales would not be valid. This rule does not apply to non-transportation measures that calculate the emissions reduction in terms of absolute emissions.

[4] There is one additional quantified transportation measure: Measure T-30, *Use Cleaner-Fuel Vehicles*. All below discussion related to combining measures and determining maximums does not apply to this measure, which is part of the Clean Vehicles and Fuels subsector.

VMT Reduction Mitigation Measures

Mitigation Measure (from CAPCOA Report)	Feasibility
TDM-T-7-Implement Commute Trip Reduction Marketing	Yes - However, not quantifiable for the Proposed Project due to the implementation requirements or measure description in relation to Proposed Project's land use (i.e., a residential project rather than an employment project).
TDM-T-8-Provide Ridesharing Program	No - Not financially feasible for project to host and implement a ridesharing program.
TDM-T-9-Implement Subsidized or Discounted Transit Program	No - Not financially feasible for project to implement discounted transit program.
TDM-T-10-Provide End-of-Trip Bicycle Facilities	Yes - However, not quantifiable for the Proposed Project due to the implementation requirements or measure description in relation to Proposed Project's land use (i.e., a residential project rather than an employment project).
TDM-T-14-Provide Electric Vehicle Charging Infrastructure	No - Although project is providing EV ready infrastructure as well as several EV charging ready visitor guest parking, the requirements to implement this feature are not met. Project must provide EV charging ready spaces beyond what is required per Cal Green building requirement. Additionally, EV charging infrastructure only reduces gas emissions and does not reduce VMT.
TDM-T-15-Limit Residential Parking Supply	No - Not feasible to reduce parking for this residential project.
TDM-T-18-Provide Pedestrian Network Improvement	No - Although the project is providing pedestrian improvements within project site and project frontage, it is not financially feasible to provide pedestrian network improvements beyond the project site.
TDM-T-21-A-Implement Conventional Carshare Program	No - Not financially feasible for project to implement a carshare program.
TDM-T-21-B-Implement Electric Carshare Program	No - Not financially feasible for project to implement an electric carshare program.
TDM-T-22-A-Implement Pedal (Non-Electric) Bikeshare Program	No - Not financially feasible for project to implement a pedal bikeshare program.
TDM-T-22-B-Implement Electric Bikeshare Program	No - Not financially feasible for project to implement an electric bikeshare program.
TDM-T-22-C-Implement Scootershare Program	No - Not financially feasible for project to implement a scootershare program.