

## Appendix L Vehicle Miles Traveled Screening Analysis

---

*This Page Intentionally Left Blank.*

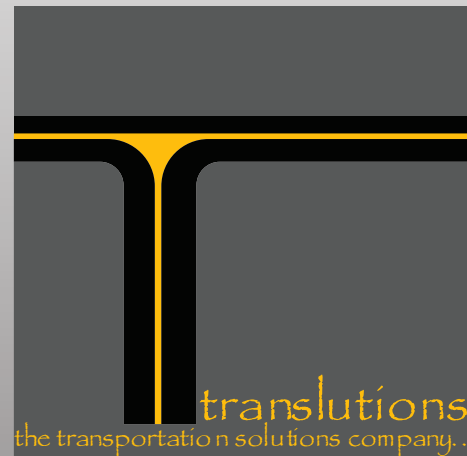
**TENNESSEE STREET  
AND LUGONIA AVENUE  
MIXED-USE**

**VEHICLE MILES TRAVELED  
ANALYSIS**

**MARCH 21, 2024**

**PREPARED FOR:**  
**Diversified Pacific Communities**  
**10621 Civic Center Drive**  
**Rancho Cucamonga, California**  
**91730**

**PREPARED BY:**



**translutions, inc.**

**17632 Irvine Boulevard, Suite 200**  
**Tustin, California 92780**  
**(949) 656-3131**



## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Purpose of the VMT Analysis .....	1
<b>2.0</b>	<b>PROJECT DESCRIPTION .....</b>	<b>1</b>
2.1	Project Trip Generation .....	1
<b>3.0</b>	<b>VMT SCREENING ANALYSIS.....</b>	<b>1</b>
<b>4.0</b>	<b>FOCUSED VMT ANALYSIS.....</b>	<b>6</b>
<b>5.0</b>	<b>SUMMARY &amp; CONCLUSIONS.....</b>	<b>6</b>

## FIGURES AND TABLES

### FIGURES

Figure 1: SBCTA Transit Priority Areas.....	4
Figure 2: SBCTA LOW VMT Area Screening Tool.....	5
Figure 3: San Bernardino County Transportation Authority VMT Tool (Residential Portion).....	7
Figure 4: San Bernardino County Transportation Authority VMT Tool (Entire Project) .....	8

### TABLES

Table A: Project Trip Generation.....	3
---------------------------------------	---

## 1.0 INTRODUCTION

This report presents the vehicle miles traveled (VMT) analysis for the proposed Tennessee Street and Lugonia Avenue mixed use development project. The project includes the construction of 404 multi-family residences and 17,899 square feet of retail uses. The project site is located on the northeast corner of Tennessee Street and Lugonia Avenue in the City of Redlands (City), San Bernardino County.

### 1.1 Purpose of the VMT Analysis

The City of Redlands has guidelines for Vehicle Miles Traveled and are in the City of Redlands CEQA Assessment VMT Analysis Guidelines. These guidelines include thresholds, screening criteria, and VMT reduction measures. The purpose of the screening criteria is to determine if a project can be screened out from conducting a detailed project-level VMT assessment. There are three types of screening criteria included in the City guidelines. The VMT screening analysis has been developed consistent with the City's VMT screening criteria. A Focused VMT analysis was conducted based on the San Bernardino County Transportation Authority (SBCTA) VMT Tool.

## 2.0 PROJECT DESCRIPTION

The proposed project includes Tentative Parcel Map No. 20688, which would include development of 460 new apartment units and approximately 17,899 square feet of commercial space. The project would consist of ten (10) three- and four-story buildings. Eight (8) of the proposed buildings would include only residential uses and two (2) of the proposed buildings would include mixed-uses that incorporate ground-floor commercial space with residential units on the floors above. The residential apartment units would range in size from one-bedroom to three-bedroom units. The project would include six (6) "Live/Work" units that incorporate retail/office uses on the ground floor and a residential unit on the second floor. In addition, approximately 5% of the proposed residential units would be designated as "very low-income" units, which would allow for a 20 percent density bonus in accordance with the "California Density Bonus Law". The very low-income units would be spread throughout the site to create a cohesive project that does not separate the market rate units from the very low-income units. Access to the project will be provided by the Pennsylvania Avenue extension and one full-access driveway on Tennessee Street.

### 2.1 Project Trip Generation

Trip generation for the project is based on trip generation rates from the Institute of Transportation Engineers' (ITE) Trip Generation (11th Edition) for Land Use 220 "Multifamily Housing (Low-Rise)", Land Use 221 "Multifamily Housing (Mid-Rise)", and Land Use 822 "Strip Retail Plaza (<40k)". The project includes a mix of retail and residential uses and therefore, will have trips that are internal to the project (e.g., a trip from the residential use to the retail use). Internal trips were calculated using the ITE internal capture methodologies. In addition, retail uses typically draw some of its trips from the adjacent street traffic. Such trips are not actually "new" trips from the project on the adjacent circulation system. These trips are referred to as "pass-by" trips. By definition, pass-by trips are trips that are on the roadway immediately adjacent to the project which make intermediate stops on the way from an origin to a primary trip destination without route diversion. Table A shows a summary of the project trip generation. As shown in Table A, after accounting for internal and pass-by trips, the project is anticipated to generate 195 net external trips during the a.m. peak hour, 245 net external trips during the p.m. peak hour, and 2,708 net external daily trips.

## 3.0 VMT SCREENING ANALYSIS

The City VMT guidelines include screening criteria, thresholds of significance, methodologies, and mitigation measures for development projects. The screening criteria enables a variety of projects to be screened out of complicated VMT analyses and therefore a less-than-significant VMT impact. There are three types of screening criteria that can be applied to screen projects from project-level assessment. The screening steps are summarized below:

- 1) **Transit Priority Area (TPA) Screening:** Projects located within a TPA may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:
  - (a) Has a floor area ratio of less than 0.75.
  - (b) Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking).
  - (c) Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization).
  - (d) Replaces affordable residential units with a smaller number of moderate or high-income residential units.

**Figure 1 shows the location of the nearest Transit Priority Areas near the project. As shown in Figure 1, the project is not within a Transit Priority Area. Therefore, the Transit Priority Area Screening does not apply to the project.**

- 2) **Low VMT Area Screening:** Residential and office projects within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.

**The online SBCTA VMT screening tool was updated after the guidelines were adopted. Figure 2 shows the results of the Low VMT Area Screening. The VMT impact threshold is 28.5 (15% below County Baseline), whereas the TAZ VMT is per service population is 33.5. With the updated VMT Screening tool, the project does not screen out of a VMT analysis.**

- 3) **Project Type Screening:** Local serving retail projects with stores less than 50,000 square feet may be presumed to have a less than significant impact absent substantial evidence to the contrary. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel. Additional screening for retail projects is discussed below.

In addition to local serving retail, the following uses can also be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local-serving K-12 schools.
- Local parks.
- Day care centers.
- Local-serving gas stations.
- Local-serving banks.
- Local-serving hotels (e.g. non-destination hotels).
- Student housing projects on or adjacent to college campuses.
- Local-serving assembly uses (places of worship, community organizations).
- Community institutions (Public libraries, fire stations, local government).
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS.
- Affordable or supportive housing.
- Assisted living facilities.
- Senior housing (as defined by HUD).

**Table A - Project Trip Generation**

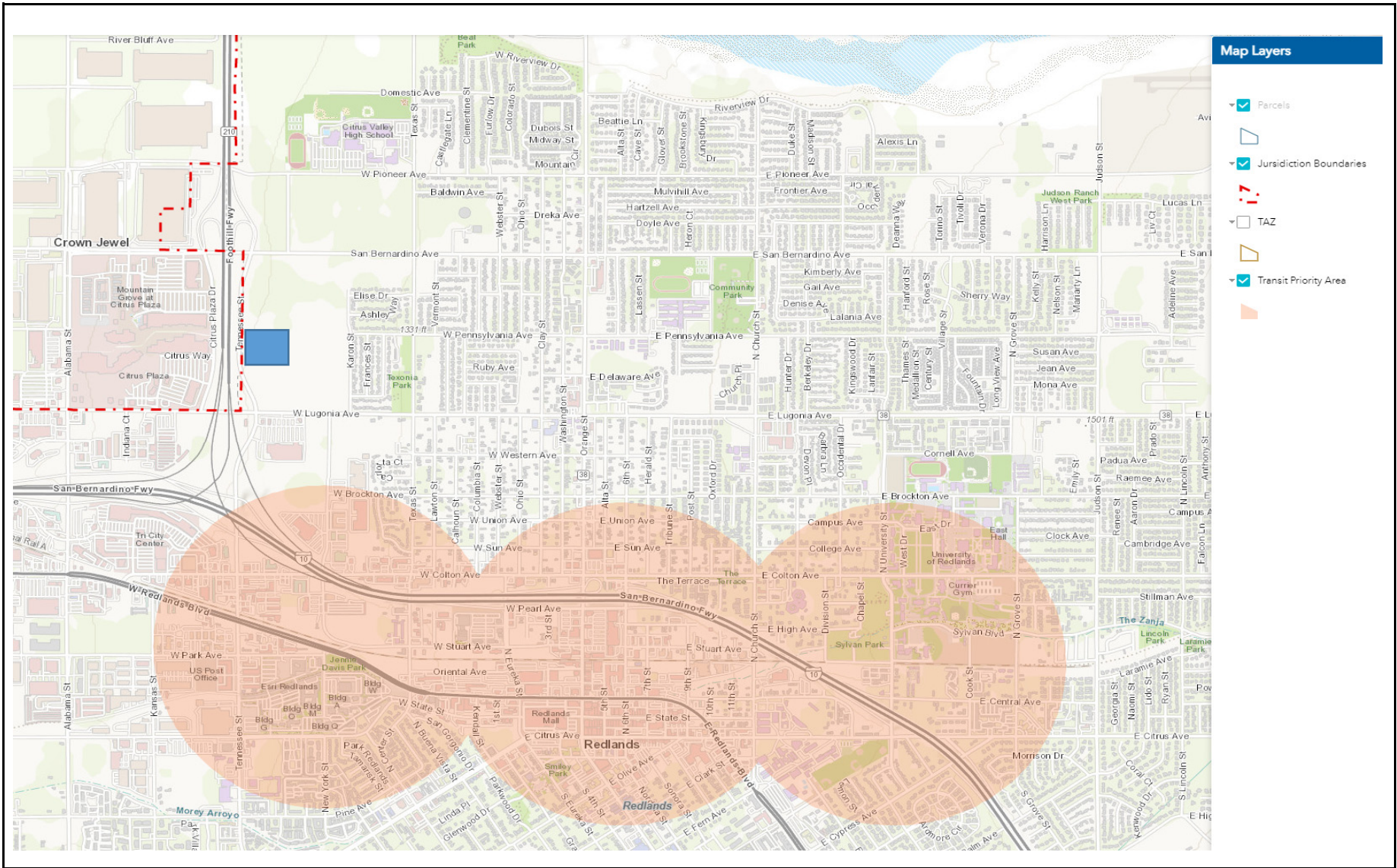
Land Use	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Residential</b>								
Trip Generation Rates <sup>1</sup>		0.10	0.30	0.40	0.32	0.19	0.51	6.74
Trip Generation	135 DU	13	41	54	43	26	69	910
Internal Trips		(1)	(1)	(2)	(3)	(2)	(5)	(80)
Net Trip Generation		12	40	52	40	24	64	830
<b>Residential</b>								
Trip Generation Rates <sup>2</sup>		0.09	0.28	0.37	0.24	0.15	0.39	4.54
Trip Generation	325 DU	28	92	120	77	50	127	1,476
Internal Trips		(1)	(1)	(2)	(6)	(5)	(11)	(131)
Net Trip Generation		27	91	118	71	45	116	1,345
<b>Retail</b>								
Trip Generation Rates <sup>3</sup>		1.42	0.94	2.36	3.30	3.30	6.59	54.45
Trip Generation	17,899 TSF	25	17	42	59	59	118	975
Internal Trips		0	0	0	(4)	(6)	(10)	(86)
Net Trip Generation		25	17	42	55	53	108	889
Pass By Rate <sup>A</sup>				40%			40%	40%
Pass By Trips		(8)	(9)	(17)	(21)	(22)	(43)	(356)
Net After Pass-By		17	8	25	34	31	65	533
<b>Total Net Trip Generation</b>		<b>56</b>	<b>139</b>	<b>195</b>	<b>145</b>	<b>100</b>	<b>245</b>	<b>2,708</b>

<sup>1</sup> Trip generation based on rates for Land Use 220 - "Multifamily Housing (Low-Rise)" from Institute of Transportation Engineers' (ITE) Trip Generation (11th Edition).

<sup>2</sup> Trip generation based on rates for Land Use 221 - "Multifamily Housing (Mid-Rise)" from Institute of Transportation Engineers' (ITE) Trip Generation (11th Edition).

<sup>3</sup> Trip generation based on rates for Land Use 822 - "Strip Retail Plaza(<40k)" from Institute of Transportation Engineers' (ITE) Trip Generation (11th Edition).

<sup>A</sup> Daily Pass-by rates for Land Use 822 (Strip Retail Plaza) are based on pass-by rates for Land Use 821 (Shopping Plaza) from ITE Trip Generation (11th Edition). Rates for a.m. peak hour and daily are assumed to be same as p.m. peak hour rate.



**Map Layers**

- Parcels
- Jurisdiction Boundaries
- TAZ
- Transit Priority Area

 Project Location

**FIGURE 1**

**Tennessee Street and Lugonia Avenue Mixed Use  
SBCTA Transit Priority Areas**





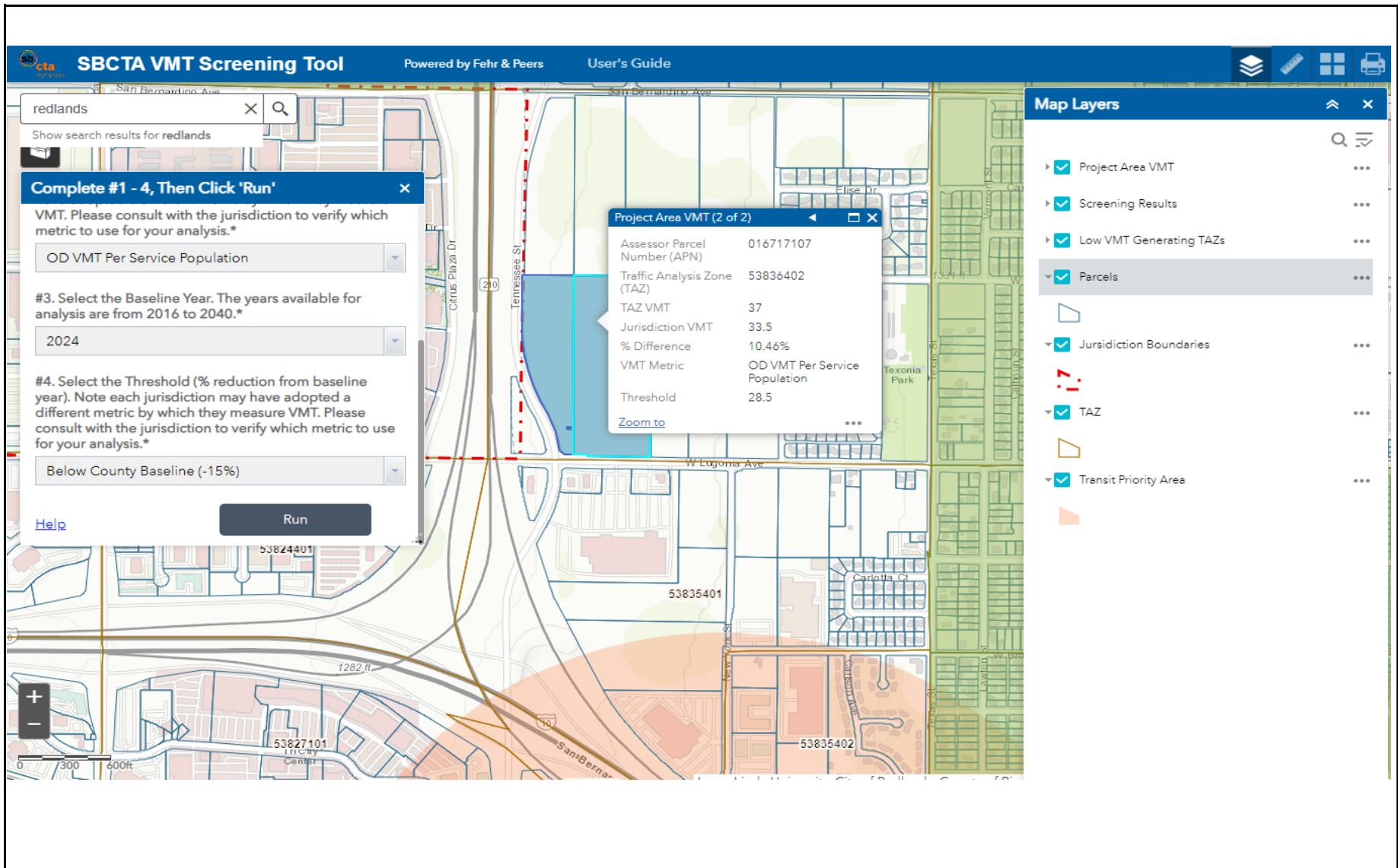


FIGURE 2

Tennessee Street and Lugonia Avenue Mixed Use  
SBCTA Low VMT Area Screening Tool

Projects which generate less than 3,000 MT CO<sub>2</sub>e per year can be presumed to have a less than significant impact on VMT. Projects which generate less than 3,000 MT CO<sub>2</sub>e per year include the following:

- Single-family residential – 167 dwelling units or fewer.
- Multifamily residential (1-2 stories) – 232 dwelling units or fewer.
- Multifamily residential (3+ stories) – 299 dwelling units or fewer.
- Office – 59,100 square feet or less.
- Local serving retail center – 112,400 square feet or less (no stores larger than 50,000 square feet).
- Warehousing – 463,600 square feet or less.
- Light Industrial – 74,600 square feet or less.

**The retail component of the project (17,899 square feet) will screen out based on the size of the project. However, the proposed project will include 460 multifamily dwelling units in buildings 3 to 4 stories tall. The number of residential units is greater than the thresholds; therefore, the Project Type Screening does not apply to the project.**

#### 4.0 FOCUSED VMT ANALYSIS

A focused analysis has been conducted using the SBCTA VMT Tool. The VMT Tool uses the project land use information to determine the Project VMT per service population based on the proposed land use type. The SBCTA VMT Tool outputs are shown in Figures 3 and 4. As shown in Figure 3, the Project VMT per service population is forecast to be 21.0 for the residential portion of the project. This reduction from the online screening tool is primarily because the project includes multifamily units whereas the existing uses in the TAZ are all single-family homes. Further, as shown in Figure 4, the Project VMT per service population is forecast to be 24.9 with the retail site. It should be noted that the retail portions of the project screens out of a VMT analysis based on the size of the retail center. The VMT impact threshold is 28.5 (15% below County Baseline), which is higher than the project VMT per service population. Since the Project VMT per service population is less than the City's threshold, the project does not have a significant VMT impact.

#### 5.0 SUMMARY & CONCLUSIONS

As seen above, the project does not screen out of a VMT analysis. Based on the SBCTA VMT Tool, the Project VMT per service population is forecast to be 21.0 for the residential portion of the project. The Project VMT per service population is forecast to be 24.9 for the entire project including the retail site. The VMT impact threshold is 28.5 (15% below County Baseline), which is higher than the project VMT per service population for both cases. Since the Project VMT per service population is less than the City's threshold, the project does not have a significant VMT impact.



# San Bernardino County Transportation Authority VMT Tool

## Project Information

Project Name

Sample Project Name

Parcel Number ( SBTAM TAZ#53836402 )

Analysis Year

16717107

2024

## Screening Criteria for Redlands

Use the online *SBCTA VMT Tool* to determine the following

Is the Project screened by Transit Priority Area or located in a low VMT generating zone?

No

Is the Project one of these land use types?

(show land use types)

No

Cannot review the small project screening criteria for this jurisdiction

(enter project land use in the section below)

N/A

The Project does not meet screening criteria. Please Continue

## Project Land Use Information

Residential : Single Family Homes

Unit

Dwelling Units

Residential : MultiFamily Homes

460

Dwelling Units

Office

0

1,000 Square Feet

Retail

0

1,000 Square Feet

Industrial

1,000 Square Feet

Private School

0

Students

University

0

Students

Hotel

Rooms

Optional Additional Land Use 1

0

land use unit

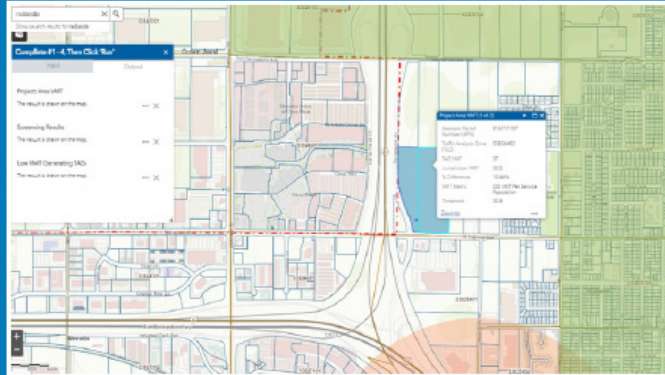
Optional Additional Land Use 2

0

land use unit

## Project Trips, VMT, and TAZ SED Information

Project Location



Select VMT Methodology

Origin Destination (OD)

Analysis Year Daily Trips: 2844 Average Trip Length: 8.5 Service Population: 1150

Project VMT per Service Population: 21.0

## Project Location TAZ Socioeconomic Data

Land Use ?

SFDU 133 DU

MFDU 0 DU

K12 0 STU

COLLEGE 0 STU

AG 1 EMP

CONST 0 EMP

MANU 0 EMP

WHOLE 1 EMP

RET 0 EMP

## Baseline Year 2016 SBCTA Model

Land Use

TRANS 0 EMP

INFOR 0 EMP

FIRE 0 EMP

PROF 0 EMP

EDUC 15 EMP

ARTENT 1 EMP

OTHSER 4 EMP

PUBADMN 0 EMP

## Project VMT Thresholds Comparison

Select the VMT Thresholds for comparison to project VMT

- Below Existing
- Better than General Plan Buildout
- OPR Guidance (15% Below Existing)
- County Threshold (4% Below Existing)

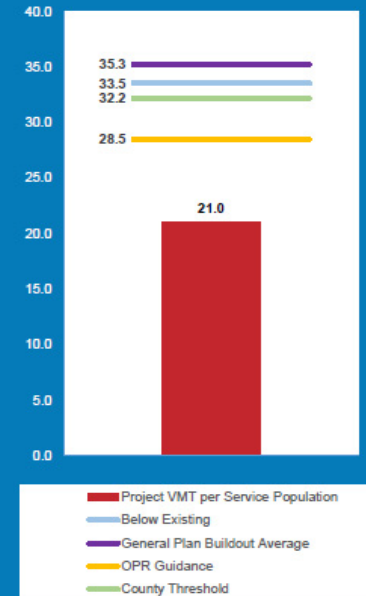


FIGURE 3

Tennessee Street and Lugonia Avenue Mixed Use  
SBCTA VMT Tool Outputs (Residential)





# San Bernardino County Transportation Authority VMT Tool

## Project Information

Project Name  
 Sample Project Name  
 Parcel Number ( SBTAM TAZ#53836402 ) Analysis Year  
 16717107 2024

## Screening Criteria for Redlands

Use the online [SBCTA VMT Tool](#) to determine the following  
 Is the Project screened by Transit Priority Area or located in a low VMT generating zone?

Is the Project one of these land use types?   
 (show land use types)

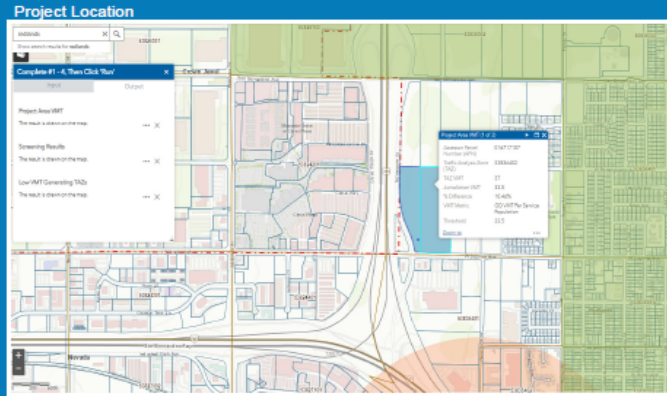
Cannot review the small project screening criteria for this jurisdiction (enter project land use in the section below)

The Project does not meet screening criteria. Please Continue

## Project Land Use Information

		Unit
Residential : Single Family Homes		Dwelling Units
Residential : MultiFamily Homes	460	Dwelling Units
Office	0	1,000 Square Feet
Retail	17.9	1,000 Square Feet
Industrial		1,000 Square Feet
Private School	0	Students
University	0	Students
Hotel		Rooms
Optional Additional Land Use 1	0	land use unit
Optional Additional Land Use 2	0	land use unit

## Project Trips, VMT, and TAZ SED Information



Select VMT Methodology   
 Analysis Year Daily Trips: 3520 Average Trip Length: 8.5 Service Population: 1204  
 Project VMT per Service Population: 24.9

## Project Location TAZ Socioeconomic Data

Land Use	Unit
SFDU	133 DU
MFDU	0 DU
K12	0 STU
COLLEGE	0 STU
AG	1 EMP
CONST	0 EMP
MANU	0 EMP
WHOLE	1 EMP
RET	0 EMP

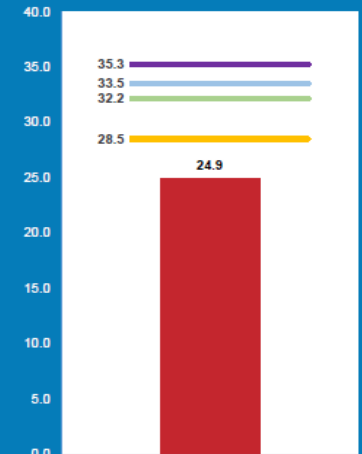
## Baseline Year 2016 SBCTA Model

Land Use	Unit
TRANS	0 EMP
INFOR	0 EMP
FIRE	0 EMP
PROF	0 EMP
EDUC	15 EMP
ARTENT	1 EMP
OTHSER	4 EMP
PUBADMN	0 EMP

## Project VMT Thresholds Comparison

Select the VMT Thresholds for comparison to project VMT

- Below Existing
- Better than General Plan Buildout
- OPR Guidance (15% Below Existing)
- County Threshold (4% Below Existing)



Legend:  
█ Project VMT per Service Population  
█ Below Existing  
█ General Plan Buildout Average  
█ OPR Guidance  
█ County Threshold

FIGURE 4

Tennessee Street and Lugonia Avenue Mixed Use  
 SBCTA VMT Tool Outputs (Entire Project)

