

**APPENDIX I-2**  
*Vehicle Miles Traveled (VMT) Analysis*  
*Technical Memorandum*





TO: Jonathan Quezada, MPA, EIT; City of San Marcos

FROM: Jonathan Sanchez, PE, TE, PTOE; CR Associates  
Cristian Belmudez; CR Associates

DATE: December 11, 2023

RE: Hughes Circuits – Vehicle Miles Traveled (VMT) Analysis Technical Memorandum

This technical memorandum documents the results of the SB-743 compliant transportation impact analysis conducted for the proposed Hughes Circuits project (the “Proposed Project”). The analysis is based on the recently revised (January 2019) State California Environmental Quality Act (CEQA) Guidelines and the City of San Marcos Transportation Impact Analysis Guidelines (TIAG) Guidelines dated November 16, 2020.

## Project Description

The Hughes Circuits project (the “Project”) proposes to construct a building with 8,000 square feet (SF) of offices, 44,410 SF of warehouse, and 15,000 SF of manufacturing. The Project is located along South Pacific Street, approximately 800 feet south of the South Pacific Street & Linda Vista Drive intersection in the City of San Marcos (the “City”). The project site is currently vacant and designated as light industrial use. Per the City’s General Plan and Zoning Ordinance, the Project’s proposed land uses are permitted. The expected opening year of the Project is Year 2023. **Figure 1** displays the Project’s regional location. **Figure 2** displays the project site plan.

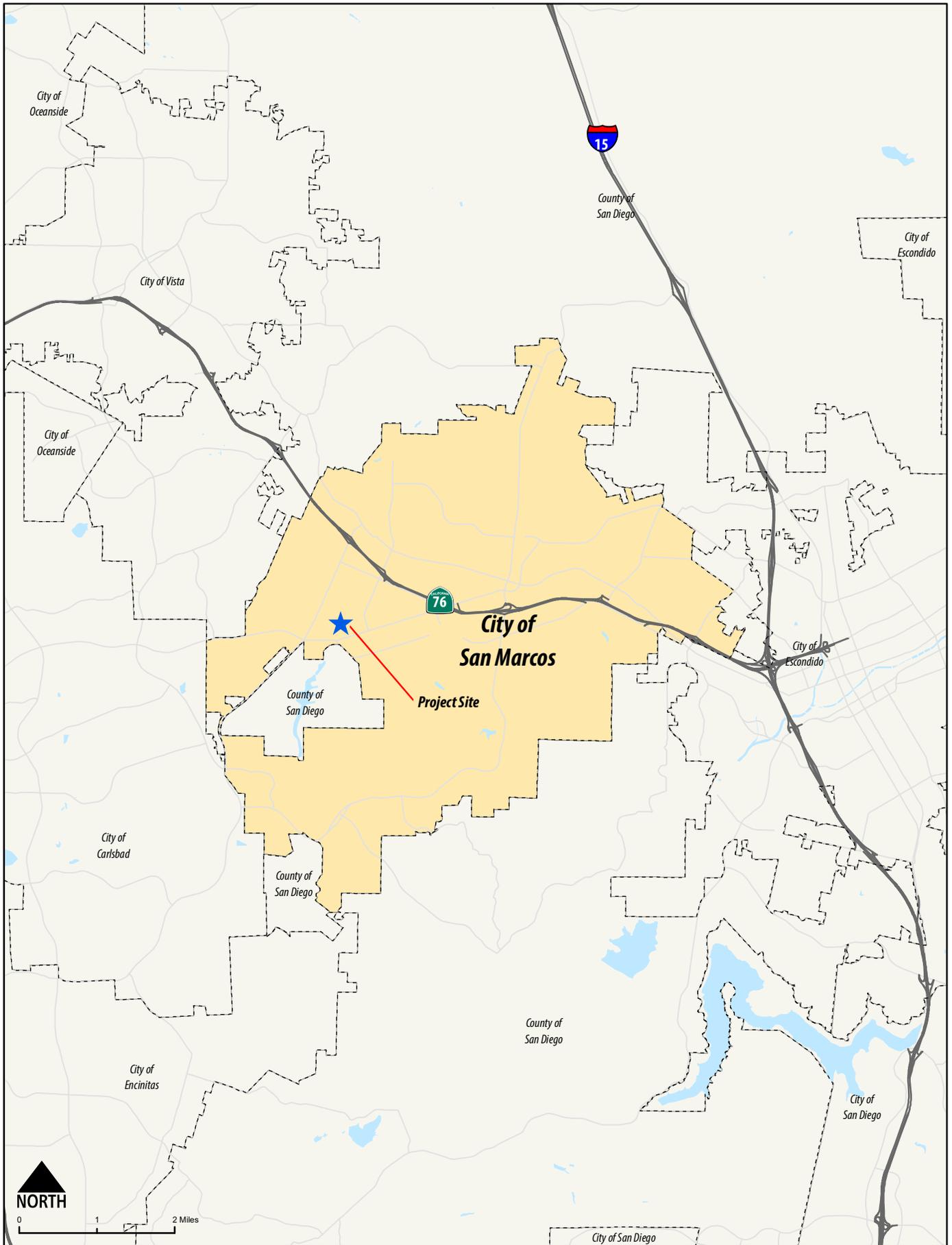
## Project Trip Generation

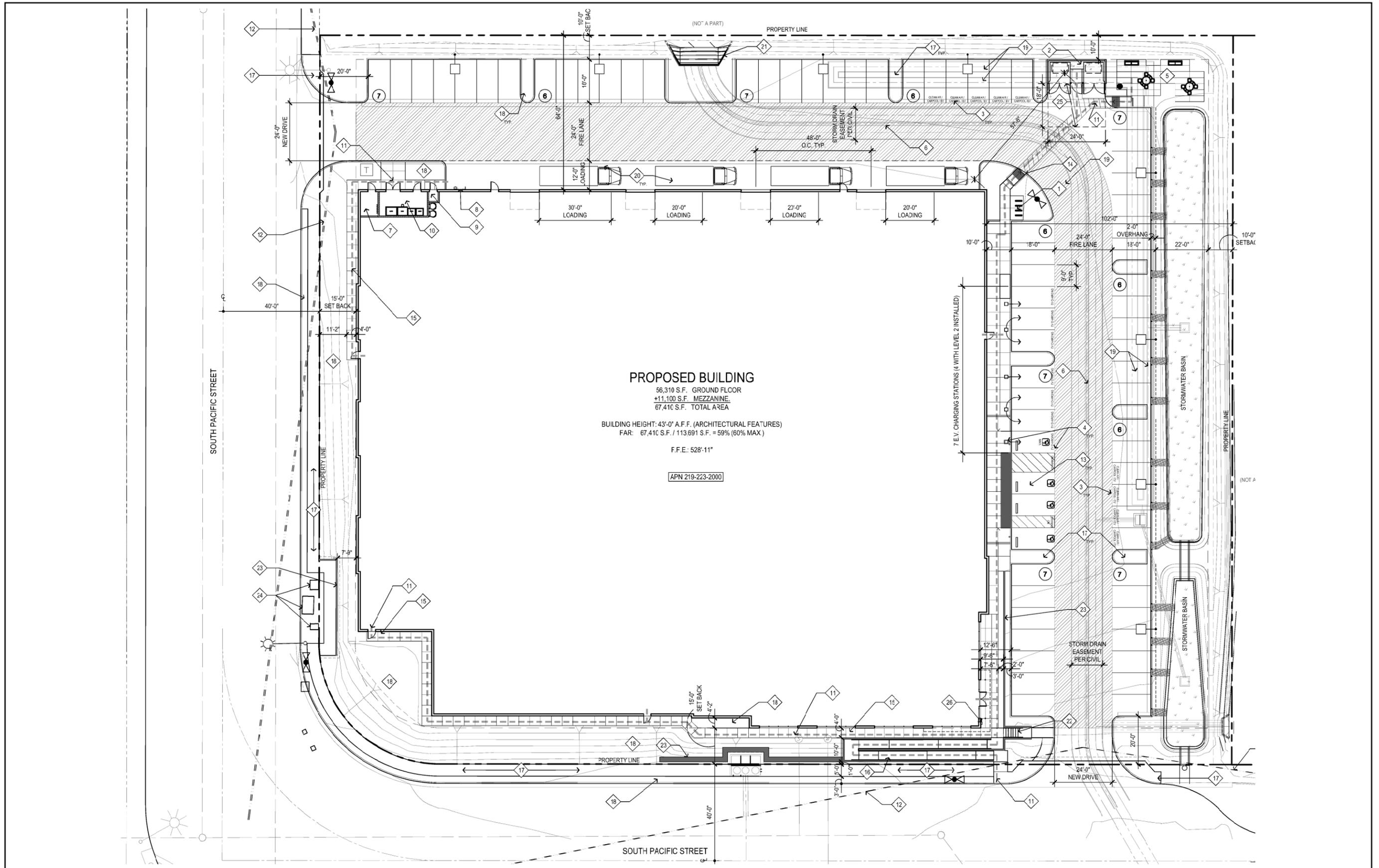
Per the City’s Transportation Analysis Guidelines (City’s TIAG), trip generation rates should be derived from SANDAG’s (*not so*) *Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region* (April 2002). However, the Project is acting as an “expansion” of the existing Hughes Circuits facility located across the street from the project site, with similar operations except the Project will operate with two shifts instead of three (two 8-hour shifts, 5 days a week). Therefore, a trip generation study was conducted at the existing Hughes Circuits facility. Driveway counts were collected over a three-day period (Tuesday, March 1, Wednesday, March 2, and Thursday, March 3) to determine daily traffic and peak hour trip generation rates for the Project. **Table 1** displays the projected daily, as well as AM and PM peak hour, project trip generation. Driveway counts and project trip generation calculations are provided in **Attachment A**.

**Table 1 – Project Trip Generation**

Land Use	ADT	AM Peak Hour			PM Peak Hour		
		Trips	In	Out	Trips	In	Out
Hughes Circuits	348	38	32	6	43	9	34

Source: CR Associates (2022)





As shown, the Project is anticipated to generate a net total of 348 daily trips, including 38 trips (32-in/6-out) during the AM peak hour and 43 (9-in/34-out) during the PM peak hour.

## Analysis Methodology

On September 27, 2013, Governor Edmund G. Brown, Jr. signed SB-743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. Related revisions to the State's CEQA Guidelines include elimination of auto delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts, and replacement with Vehicle Miles Traveled (VMT) as the preferred CEQA transportation metric.

In December 2018, the California Resources Agency certified and adopted revised CEQA Guidelines, including the new section 15064.3. Under Section 15064.3, vehicle miles traveled (VMT), which includes the amount and distance of automobile traffic attributable to a project, is identified as the "most appropriate measure of transportation impacts." As of July 1, 2020, all CEQA lead agencies must analyze a project's transportation impacts using VMT. On November 16, 2020, the City of San Marcos adopted its Transportation Impact Analysis Guidelines.

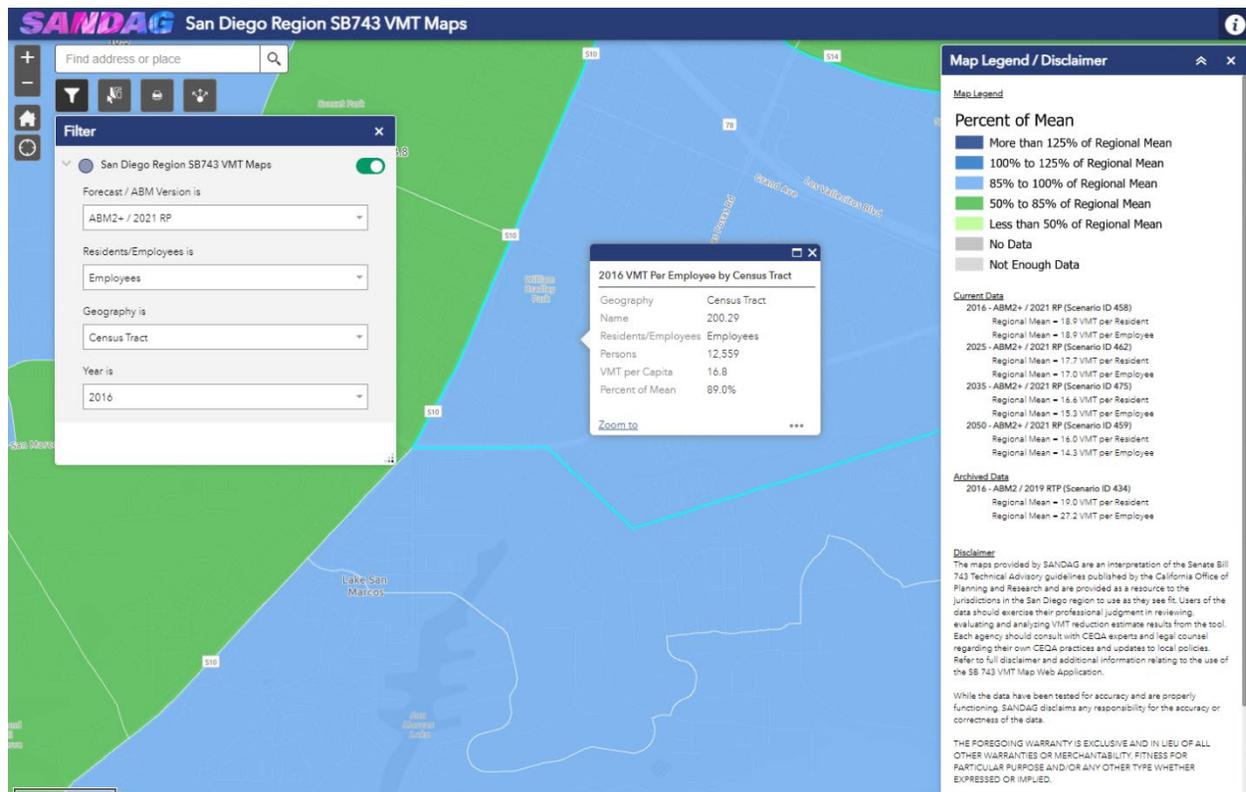
### Screening Thresholds

Many agencies use these screening thresholds to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The TIAG suggest that a detailed transportation VMT analysis applies to all land development projects, except those that meet at least one of the screening criteria. Relevant screening criteria for the Proposed Project is described below:

- *Map-Based Screening* – Residential and employment projects located in areas that generate VMT below adopted City threshold can be presumed to have a less-than-significant transportation impact. This determination must be made by SANDAG's online residential and employment VMT maps for existing year or model baselines year VMT (whichever is available at the time analysis is being conducted), which show census tracts in the city where the VMT is below the regional average.

Based on the map-based screening and Section 2.1.2.5 of the City's TIAG, the Proposed Project is not located in an efficient VMT per employee area (less than 85% of the regional average) and would not be screened out from completing a detailed VMT analysis. **Figure 3** displays the Project's location on the latest SANDAG VMT screening maps.

Figure 3 – VMT per Employee



## VMT Analysis

### Analysis Metrics

Consistent with the City’s TIAG, the Proposed Project shall be analyzed using the VMT per employee metric. When determining potentially significant impacts using efficiency metrics, such as VMT per employee, the following analysis methods should be used:

- The project’s VMT per employee should be looked up using the latest SANDAG online mapping tool and the census tract containing the project site, or should be generated for the project TAZ if the latest version of the base year SANDAG travel demand model has been run to include the project.
- The existing countywide averages for VMT per employee are determined using the SANDAG online mapping tool or the latest version of the base year SANDAG travel demand model.
- An employee project is determined to have a significant impact if the project generates VMT per employee exceeding a level of 15 percent below the existing countywide average.

The Proposed Project’s VMT per employee was obtained from the latest SANDAG VMT screening maps, displayed previously in Figure 3. The existing countywide average for VMT per employee was determined using the SANDAG Series 14 ABM2+/2021 RP Year 2016 Base model. **Table 2** summarizes the VMT analysis results.

**Table 2 - VMT Impact Analysis – Office Component**

Metric	VMT per Employee
Regional Average	18.90 <sup>1</sup>
Significant Impact Threshold (85%)	16.07 <sup>2</sup>
Proposed Project	16.80 <sup>1</sup>
Significant Impact	Yes

Source: CR Associates (2023)

Notes:

<sup>1</sup> Source = SANDAG Series 14 ABM2+/2021 RP Year 2016 Base Model

<sup>2</sup> Regional Average x 85%

As shown, the Proposed Project is anticipated to generate a VMT per employee of 16.80 miles, which exceeds the significance threshold of 16.07 miles. Therefore, the Proposed Project would have a significant VMT impact and mitigation measures are required to reduce the VMT per employee.

## VMT Mitigation

The Proposed Project’s VMT per employee is not anticipated to fall under the significant threshold as the project site is located in an area primarily composed of industrial and commercial land uses where employees travel longer-than-average distances for work compared to the region. As noted in the VMT analysis, the Proposed Project would have a significant VMT impact and mitigation measures are required to reduce the VMT per employee. The Project’s total VMT per employee is 16.80 miles. To mitigate the Project’s VMT to less than significant levels, mitigation measures would be required to reduce the total VMT per employee by 4.4% from 16.80 miles to 16.07 miles.

To reduce the average VMT per employee, it is recommended that the Project implements a Transportation Demand Management (TDM) Program. A TDM program would facilitate increased opportunities for walking and bicycling, as well as provide the resources, means and incentives for ridesharing and carpooling. The SANDAG Mobility Management Guidebook/VMT Reduction Tool was taken into consideration initially, however, the California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA Report) is a more recent document (December 2021) and deemed appropriate to use for the Project’s mitigation evaluation. The following mitigation measures presented in the CAPCOA Report are recommended:

- *Provide Ridesharing Program (CAPCOA T-8)*– This measure will implement a ridesharing program for employees. The program shall include desirable parking spaces for ridesharing vehicles, adequate passenger loading/unloading and waiting areas for ridesharing vehicles, and an app/website for ride coordination. This measure would reduce up to **2.0% Employee VMT** with 50% employee eligibility.
- *Provide End-of-Trip Bicycle Facilities (CAPCOA T-10)* – This measure will install and maintain end-of-trip facilities for employee use, including bike parking, bike lockers, showers, and personal lockers. This measure would reduce up to **0.6% Employee VMT**.
- *Expand Bikeway Network (CAPCOA T-20)* – This measure will increase the length of a city or community bikeway network by providing bicycle infrastructure (Class I, Class II, or Class IV). More specifically, the Project will construct 0.5 miles of Class II bicycle facilities along South Pacific Street between Linda Vista Drive and West San Marcos Boulevard. This bicycle facility will increase the existing bicycle lane miles within the City of San Marcos from 41.1 miles to 41.6 miles. The bike facility will provide additional opportunities to ride within the City and provide a direct connection between the Class I Bike Paths proposed along Linda Vista Drive and West San Marcos Boulevard. The proposed Class II bicycle lanes will have a 1 ½-foot buffer where on-street parking is allowed and a 3-foot buffer where on-street parking is prohibited. This measure would reduce up to **0.0001% Employee VMT**.

The CAPCOA Report notes that when determining overall VMT reduction associated with a project, the VMT reduction for each individual strategy should be dampened, that is adjusted to reflect the fact that some of the strategies may be redundant or applicable to the same populations.

The CAPCOA Report provides the following dampening formula.

$$\text{Overall \% VMT Reduction} = 1 - (1 - 1^{\text{st}} \text{ Strategy}) * (1 - 2^{\text{nd}} \text{ Strategy}) * (1 - 3^{\text{rd}} \text{ Strategy})...$$

The Project would have the following overall VMT reduction:

$$\text{Overall \% VMT Reduction} = 1 - (1 - 0.02) * (1 - 0.006) * (1 - 0.000001)$$

**Overall % VMT Reduction = 2.6%**

See **Attachment B** for a full list of VMT mitigation measures taken into consideration and the determination of feasibility for the Project, details on the VMT reduction calculations for the feasible measures, and excerpts from the CAPCOA Report. **Table 3** summarizes the Proposed Project’s trip reductions and mitigation results.

**Table 3 – Proposed Project VMT Mitigation**

VMT/Employee <sup>1</sup>	Threshold <sup>2</sup>	Mitigation Measure	VMT/Employee Reduction	Net VMT/Employee <sup>3</sup>	Mitigated?
16.80	16.07	CAPCOA T-8 (2.0%) CAPCOA T-10 (0.6%)	-2.6%	16.36	No

Source: CR Associates (2023)

Notes:

<sup>1</sup> SANDAG Series 14 ABM2+/2021 RP Year 2016 Base Model (Figure 3)

<sup>2</sup> Regional Average x 85%

<sup>3</sup> [Net VMT per Employee] = [VMT per Employee] X [VMT per Employee Reduction]

Based on the VMT reduction results, implementation of the TDM Program is anticipated to reduce the VMT per employee generated by 2.6%. Thus, with the implementation of the TDM program, the Project is anticipated to generate 16.36 VMT per employee. The resulting 16.36 miles per employee exceeds the 16.07 threshold. Therefore, since the mitigation measures would not reduce the VMT per employee to less than significant levels, the impact is only partially mitigated, and the Proposed Project is considered to have a significant and partially mitigated impact. It should be noted that the City of San Marcos is currently going through the process of adopting a TDM ordinance which would make the VMT reduction measures identified above be required and not optional VMT reduction measures, which would make the 2.6% reduction in VMT mandatory, however, the transportation impact significance findings would be the same regardless of whether the measures are optional or required.

## Other (Non-Quantifiable) VMT Measures

### Transit Program and Micro Mobility Parking

Based on discussion with the project applicant, the property manager will also provide transit information to employees and make a good faith effort in offering transit passes or fares. The Project will also provide micro mobility parking on site. It should be noted that the Project, as a manufacturing, packing, and distribution facility, will operate on a 2 shift/5 days per week schedule, which would not allow employees to work remotely.

### Electric Vehicle Infrastructure

Additionally, the Project will implement the following measure which has the potential to reduce Greenhouse Gas (GHG) emissions, however, it is not considered a mitigation measure as it does not reduce VMT:

- *Provide Electric Vehicle Charging Infrastructure (CAPCOA T-14)* – Install electric vehicle charging stations at EV parking spaces. The Project will install 4 electric vehicle charging stations and 3 EV-ready parking spaces. There are also 9 parking spaces designated for clean air vehicles.

## **Attachment A**

# Driveway Counts and Project Trip Generation Calculations

## 24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 03/01/22 TUESDAY  
JOB #: ETD22-0304-01

AREA: SAN MARCOS  
LOCATION: SOUTH PACIFIC ST AT DWY-1

AM TIME	ENTER							TOTAL	EXIT							TOTAL	PM Time	ENTER							TOTAL	EXIT							TOTAL
	1	2	3	4	5	6			1	2	3	4	5	6				1	2	3	4	5	6			1	2	3	4	5	6		
0:00	1	0	0	0	0	0	1	1	1	0	0	0	0	0	1	12:00	3	0	0	0	0	0	3	2	0	0	0	0	0	2			
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	5	0	0	0	0	0	5	1	1	0	0	0	0	2			
0:30	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	12:30	4	0	0	0	0	0	4	3	0	0	0	0	0	3			
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	1	1	0	0	0	0	2	2	0	0	0	0	0	2			
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1			
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	2	0	0	0	0	0	2	2	1	1	0	0	0	4			
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	8	0	0	0	0	0	8	9	0	0	0	0	0	9			
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	2	1	0	0	0	0	3	2	0	0	0	0	0	2			
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:00	4	2	0	0	0	0	6	2	1	0	0	0	0	3			
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	7	0	0	0	0	0	7	4	0	0	0	0	0	4			
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2:45	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	14:45	1	0	0	0	0	0	1	4	0	0	0	0	0	4			
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5:30	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	3	0	0	0	0	0	3			
5:45	3	0	0	0	0	0	3	3	1	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
6:00	1	0	0	0	0	0	1	1	2	0	0	0	0	0	0	18:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1			
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6:45	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	18:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1			
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9:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	21:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0			
9:15	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	21:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1			
9:30	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:45	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
10:00	1	1	0	0	0	0	2	2	3	0	0	0	0	0	0	22:00	0	0	0	0	0	0	0	7	0	0	0	0	0	7			
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11:15	6	0	0	0	0	0	6	6	3	1	0	0	0	0	0	23:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1			
11:30	1	0	0	0	0	0	1	1	1	1	0	0	0	0	0	23:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1			
11:45	2	1	0	0	0	0	3	3	3	0	0	0	0	0	0	23:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0			
<b>TOTAL</b>	<b>94</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>99</b>	<b>99</b>	<b>30</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>TOTAL</b>	<b>68</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>109</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>117</b>			

**AM PEAK HOUR** 4:30 AM  
**AM PEAK VOLUME** 19

**AM PEAK HOUR** 11:00 AM  
**AM PEAK VOLUME** 14

**PM PEAK HOUR** 1:30 PM  
**PM PEAK VOLUME** 24

**PM PEAK HOUR** 2:15 PM  
**PM PEAK VOLUME** 23

CLASS 1	CLASS 4
CLASS 2	CLASS 5
CLASS 3	CLASS 6

<b>DAILY TOTAL</b>	162	10	0	0	0	0	172	139	10	1	0	0	0	150
<b>% OF TOTAL</b>	94.2%	5.8%	0.0%	0.0%	0.0%	0.0%	100.0%	92.7%	6.7%	0.7%	0.0%	0.0%	0.0%	100.0%



**24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)**

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 03/03/22  
JOB #: ETD22-0304-01

THURSDAY

AREA: SAN MARCOS  
LOCATION: SOUTH PACIFIC ST AT DWY-1

AM TIME	ENTER							TOTAL	EXIT							TOTAL	PM Time	ENTER							TOTAL	EXIT							TOTAL
	1	2	3	4	5	6	1		2	3	4	5	6	1	2			3	4	5	6	1	2	3		4	5	6					
0:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1	12:00	4	0	0	0	0	0	4	3	0	0	0	0	0	3				
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	1	1	0	0	0	0	2	2	2	0	0	0	0	7				
0:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	12:30	3	0	0	0	0	0	3	5	0	2	0	0	0	4				
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	4	0	0	0	0	0	4	4	0	0	0	0	0	4				
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	1	0	0	0	0	0	1	2	0	0	0	0	0	2				
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	3	0	0	1	0	0	4	2	0	0	0	0	0	2				
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	3	0	0	0	0	0	3	19	0	0	0	0	0	19				
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	4	0	0	0	0	0	4	7	0	0	0	0	2	9				
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	2	0	0	0	0	0	2	3	0	0	0	0	0	3				
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	6	1	0	0	0	0	7	9	2	0	0	0	0	11				
2:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	11	0	0	0	0	0	11				
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0	7	0	0	0	0	0	7				
3:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0				
3:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	5	0	0	0	0	0	5				
3:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:45	1	0	0	0	0	0	1	3	0	0	0	0	0	3				
4:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0	16:00	1	0	0	0	0	0	1	8	0	0	0	0	0	8				
4:15	2	0	0	0	0	0	2	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	6	0	0	0	0	0	6				
4:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	16:30	1	0	0	0	0	0	1	6	3	0	0	0	0	9				
4:45	9	0	0	0	0	0	9	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	5	0	0	0	0	0	5				
5:00	7	0	0	0	0	0	7	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2				
5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:15	1	0	0	0	0	0	1	3	0	0	0	0	0	3				
5:30	3	0	0	0	0	0	3	1	0	0	0	0	0	1	17:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1				
5:45	6	0	0	0	0	0	6	2	0	0	0	0	0	2	17:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1				
6:00	3	0	0	0	0	0	3	1	0	0	0	0	0	1	18:00	2	0	0	0	0	0	2	1	0	0	0	0	0	1				
6:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	18:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1				
6:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	18:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2				
6:45	4	0	0	0	0	0	4	0	0	0	0	0	0	0	18:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1				
7:00	5	0	0	0	0	0	5	0	0	0	0	0	0	0	19:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1				
7:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	19:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1				
7:30	6	0	0	0	0	0	6	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2				
7:45	4	1	0	0	0	0	5	0	0	0	0	0	0	0	19:45	2	0	0	0	0	0	2	1	0	0	0	0	0	1				
8:00	0	1	0	0	0	0	1	1	0	0	0	0	0	1	20:00	2	0	0	0	0	0	2	1	0	0	0	0	0	1				
8:15	5	0	0	0	0	0	5	0	0	0	0	0	0	0	20:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0				
8:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	20:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1				
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20:45	3	0	0	0	0	0	3	0	0	0	0	0	0	0				
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0				
9:15	0	1	0	0	0	0	1	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9:30	2	0	0	0	0	0	2	2	0	0	0	0	0	2	21:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0				
9:45	2	0	0	0	0	0	2	1	0	0	0	0	0	1	21:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1				
10:00	5	0	0	0	0	0	5	5	0	0	0	0	0	5	22:00	0	0	0	0	0	0	0	7	0	0	0	0	0	7				
10:15	5	2	0	0	0	0	7	2	1	0	0	0	0	3	22:15	0	0	0	0	0	0	0	2	0	0	0	0	0	2				
10:30	1	0	0	0	0	0	1	4	0	0	0	0	0	4	22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10:45	4	0	0	0	0	0	4	3	1	0	0	0	0	4	22:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1				
11:00	2	1	1	0	0	0	4	6	0	0	0	0	0	6	23:00	0	0	0	0	0	0	0	3	0	0	0	0	0	3				
11:15	4	0	0	0	0	0	4	4	0	0	0	0	0	4	23:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1				
11:30	5	0	0	0	0	0	5	2	0	0	0	0	0	2	23:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0				
11:45	4	0	0	0	0	0	4	1	0	0	0	0	0	1	23:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1				
<b>TOTAL</b>	106	6	1	0	0	0	113	36	2	0	0	0	0	38	<b>TOTAL</b>	53	2	0	1	0	0	56	142	7	2	0	0	2	153				

AM PEAK HOUR 4:45 AM  
AM PEAK VOLUME 19

AM PEAK HOUR 10:30 AM  
AM PEAK VOLUME 18

PM PEAK HOUR 1:45 PM  
PM PEAK VOLUME 13

PM PEAK HOUR 2:15 PM  
PM PEAK VOLUME 32

CLASS 1	CLASS 4
CLASS 2	CLASS 5
CLASS 3	CLASS 6

<b>DAILY TOTAL</b>	159	8	1	1	0	0	169	178	9	2	0	0	2	191
<b>% OF TOTAL</b>	94.1%	4.7%	0.6%	0.6%	0.0%	0.0%	100.0%	93.2%	4.7%	1.0%	0.0%	0.0%	1.0%	100.0%





### 24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 03/03/22  
JOB #: ETD22-0304-01

THURSDAY

AREA: SAN MARCOS  
LOCATION: SOUTH PACIFIC ST AT EAST DWY-4

AM TIME	ENTER							TOTAL	EXIT							TOTAL	PM Time	ENTER							TOTAL	EXIT							TOTAL
	1	2	3	4	5	6	1		2	3	4	5	6	1	2			3	4	5	6	1	2	3		4	5	6	1	2	3	4	
0:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	12:00	2	1	0	0	0	0	3	2	0	0	0	0	0	2	
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1	
0:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	12:30	2	1	0	0	0	0	3	1	0	0	0	0	0	1	
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	5	0	0	0	0	0	5	1	1	0	0	0	0	2	
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	4	1	0	0	0	0	5	0	1	0	0	0	0	1	
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	0	0	0	1	0	0	1	6	0	0	0	0	0	6	
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1	
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:00	1	0	0	0	0	1	2	3	1	0	0	0	0	4	
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	2	1	0	0	0	0	3	2	0	0	0	0	0	2	
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	0	0	0	0	0	0	0	3	0	0	0	0	0	3	
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:00	2	0	0	0	0	0	2	4	0	0	0	0	0	4	
3:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	15:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1	
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30	1	0	0	0	0	0	1	5	1	0	0	0	0	6	
3:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
4:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
4:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	16:15	2	1	0	0	0	0	3	4	0	0	0	0	0	4	
4:30	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	16:30	2	2	0	0	0	0	4	2	0	0	0	0	0	2	
4:45	7	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
5:00	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
5:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
5:30	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	17:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
5:45	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:00	6	0	0	0	0	0	6	2	1	0	0	0	0	0	0	0	3	18:00	1	0	0	0	0	0	1	3	0	0	0	0	0	3	
6:15	5	0	0	0	0	0	5	2	0	0	0	0	0	0	0	0	2	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:30	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:45	5	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00	4	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	2	19:00	0	0	0	0	0	0	0	1	1	0	0	0	0	2	
7:15	5	0	0	0	0	0	5	0	0	3	0	0	0	0	0	0	3	19:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
7:45	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0	
8:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	20:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
8:45	0	1	0	0	0	0	1	0	1	1	0	0	0	0	0	0	2	20:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:30	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	21:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1	
9:45	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	21:45	1	0	0	0	0	0	1	3	0	0	0	0	0	3	
10:00	2	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	3	22:00	0	0	0	0	0	0	0	3	0	0	0	0	0	3	
10:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45	2	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	1	22:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
11:00	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	23:00	1	0	0	0	0	0	1	2	0	0	0	0	0	2	
11:15	3	0	0	0	0	0	3	3	0	1	0	0	0	0	0	0	4	23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30	7	0	0	0	0	0	7	5	0	0	0	0	0	0	0	0	5	23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	4	0	0	0	0	0	4	2	1	0	0	0	0	0	0	0	3	23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>TOTAL</b>	79	2	0	0	0	0	81	25	8	6	0	0	0	0	0	39	<b>TOTAL</b>	34	7	0	1	0	1	43	64	5	0	0	0	0	69		

AM PEAK HOUR 6:00 AM  
AM PEAK VOLUME 17

AM PEAK HOUR 11:00 AM  
AM PEAK VOLUME 13

PM PEAK HOUR 12:30 PM  
PM PEAK VOLUME 14

PM PEAK HOUR 3:30 PM  
PM PEAK VOLUME 13

CLASS 1	CLASS 4
CLASS 2	CLASS 5
CLASS 3	CLASS 6

<b>DAILY TOTAL</b>	113	9	0	1	0	1	124	89	13	6	0	0	0	108
<b>% OF TOTAL</b>	91.1%	7.3%	0.0%	0.8%	0.0%	0.8%	100.0%	82.4%	12.0%	5.6%	0.0%	0.0%	0.0%	100.0%

Class 1:	Passenger Vehicles: <ul style="list-style-type: none"><li>• All 2-axle cars, trucks, vans or motorcycles</li></ul>
Class 2:	2 axle trucks, inc: <ul style="list-style-type: none"><li>• Box Trucks, Flat Beds, Work Vans &amp; Work Pick-Up Trucks</li><li>• All box type of trucks including USPS, UPS &amp; Fedex type of trucks.</li><li>• Pick-up trucks with flat bed or bucket lift</li><li>• Pick-up trucks or Vans that are clearly identified as work vehicles with equipment.</li></ul>
Class 3:	All 3 axle trucks: <ul style="list-style-type: none"><li>• Includes a 2-axle truck with a 1-axle trailer</li></ul>
Class 4:	All 4 or more axle trucks: <ul style="list-style-type: none"><li>• 2-axle truck with a 2 or more axle trailer</li><li>• 3-axle truck with 1 or more axle trailer.</li></ul>
Class 5:	All RV's regardless of the number of axles.
Class 6:	All bus or extra large passage vans regardless of the number of axles.

AM Peak Hour Trips (Drwy 1)												
Class	Enter						Exit					
	1	2	3	4	5	6	1	2	3	4	5	6
Tuesday	23	2	0	0	0	0	3	0	0	0	0	0
Wednesday	22	1	1	0	0	0	4	0	0	0	0	0
Thursday	23	2	0	0	0	0	1	0	0	0	0	0
<b>Average</b>	<b>23</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

PM Peak Hour Trips (Drwy 1)												
Class	Enter						Exit					
	1	2	3	4	5	6	1	2	3	4	5	6
Tuesday	8	0	0	0	0	0	25	3	0	0	0	0
Wednesday	3	2	0	0	0	0	34	2	0	0	0	0
Thursday	4	0	0	0	0	0	32	3	0	0	0	0
<b>Average</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

AM Peak Hour Trips (Drwy 4)												
Class	Enter						Exit					
	1	2	3	4	5	6	1	2	3	4	5	6
Tuesday	25	1	0	0	0	0	5	1	0	0	0	0
Wednesday	21	1	0	0	0	0	3	2	1	0	0	0
Thursday	19	1	0	0	0	0	2	1	4	0	0	0
<b>Average</b>	<b>22</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>

PM Peak Hour Trips (Drwy 4)												
Class	Enter						Exit					
	1	2	3	4	5	6	1	2	3	4	5	6
Tuesday	6	2	0	0	0	0	17	1	0	0	0	0
Wednesday	5	2	0	0	0	0	21	2	0	0	0	0
Thursday	4	3	0	0	0	0	14	0	0	0	0	0
<b>Average</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

AM Peak Hour Trips												
Class	Enter						Exit					
	1	2	3	4	5	6	1	2	3	4	5	6
Peak Hour Trips	45	3	0	0	0	0	6	1	2	0	0	0

PM Peak Hour Trips												
Class	Enter						Exit					
	1	2	3	4	5	6	1	2	3	4	5	6
Peak Hour Trips	10	3	0	0	0	0	47	4	0	0	0	0

AM Peak Hour Trips		PM Peak Hour Trips	
In	Out	In	Out
48	9	13	51

Assumes only two shifts			
AM Peak Hour Trips		PM Peak Hour Trips	
In	Out	In	Out
32	6	9	34

AM Peak Hour Trips												
Class	Enter						Exit					
	1	2	3	4	5	6	1	2	3	4	5	6
Peak Hour Trips	30	2	0	0	0	0	4	1	1	0	0	0

PM Peak Hour Trips												
Class	Enter						Exit					
	1	2	3	4	5	6	1	2	3	4	5	6
Peak Hour Trips	7	2	0	0	0	0	31	3	0	0	0	0

AM Peak Hour Trips		PM Peak Hour Trips	
In	Out	In	Out
32	6	9	34

 Passenger Vehicles  
 Heavy Vehicles

Vehicle Classification	Driveway 1 (Daily)			Driveway 2 (Daily)		
	Tuesday	Wednesday	Thursday	Tuesday	Wednesday	Thursday
Class 1	301	342	337	214	214	202
Class 2	20	16	17	13	19	22
Class 3	1	1	3	1	3	6
Class 4	0	0	1	1	0	1
Class 5	0	0	0	0	0	0
Class 6	0	0	2	1	0	1
<b>Total</b>	<b>322</b>	<b>359</b>	<b>360</b>	<b>230</b>	<b>236</b>	<b>232</b>

	Driveway 1	Driveway 2
<b>Average Total</b>	<b>347</b>	<b>233</b>
<b>Average PV &amp; 2-Axle Trucks</b>	<b>344</b>	<b>228</b>
<b>Average HV</b>	<b>3</b>	<b>5</b>

<b>Total Both Driveways</b>	<b>580</b>
<b>Total Both Driveways, PV &amp; 2-Axle Trucks</b>	<b>572</b>
<b>Total Both Driveways, HV</b>	<b>8</b>

Existing Site (Three Shifts)	Sq.ft.	Trip Gen
Office	12,500	580
Warehouse	32,500	
Manufacturing	30,000	
<b>Total</b>	<b>75000</b>	<b>580</b>

Trip Gen (PV)	Trip Gen (HV)
7.63/1,000 sq.ft.	0.11/1,000 sq.ft.

Trip Gen (PV)	Trip Gen (Trucks)
7.63	0.11

Proposed Site (Two Shifts)	Sq.ft.	Trip Gen
Office	8000	347.8
Warehouse	44410	
Manufacturing	15000	
<b>Total</b>	<b>67410</b>	<b>348</b>

**Attachment B**  
VMT Reduction Calculations

## VMT Reduction Mitigation Measures

Mitigation Measure (from CAPCOA Report)	Considered/Feasible?
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	Yes - Project will host and implement a ridesharing program with up to 50% of employee eligibility.
TDM-T-9-Implement Subsidized or Discounted Transit Program	Yes - However, there are no transit routes that serve the project. Additionally, because of the different shifts, not all workers would be able to participate.
TDM-T-10-Provide End-of-Trip Bicycle Facilities	Yes - Project will install and maintain end-of-trip facilities for employee use, including bike parking, bike lockers, showeres, and personal lockers.
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 applicable for this project.
TDM-T-18-Provide Pedestrian Network Improvement	No - Not applicable for this project.
TDM-T-21-A-Implement Conventional Carshare Program	No - Not applicable for this project.
TDM-T-21-B-Implement Electric Carshare Program	No - Not applicable for this project.
TDM-T-22-A-Implement Pedal (Non-Electric) Bikeshare Program	No - Not applicable for this project.
TDM-T-22-B-Implement Electric Bikeshare Program	No - Not applicable for this project.
TDM-T-22-C-Implement Scootershare Program	No - Not applicable for this project.