



HEXAGON TRANSPORTATION CONSULTANTS, INC.

Technical Memorandum

Date: May 27, 2022
To: Mr. Matthew Moore, David J. Powers & Associates, Inc.
From: Gary Black, Jocelyn Lee
Subject: VMT Analysis for the San Bruno Housing Element Update in San Bruno, CA

Hexagon Transportation Consultants, Inc. has conducted a VMT analysis for the proposed residential developments under the San Bruno Housing Element in San Bruno, CA. This memorandum presents a summary of the vehicle miles traveled (VMT) methodology and analysis findings.

Project Description

The proposed project has a target of 2,708 residential units within San Bruno, California. The majority of the proposed housing developments would be located within the transit priority area (TPA). There are two developments located outside of the TPA: 851 Cherry Avenue and 2101 Sneath Lane.

VMT Analysis Methodology

Pursuant to Senate Bill (SB) 743, the Governor's Office of Planning and Research (OPR) published the finalized updates to the CEQA Guidelines in November 2017. The Technical Advisory on Evaluating Transportation Impacts in CEQA published by OPR in December 2018 provided recommendations regarding VMT estimation methodology, significance thresholds, and screening thresholds for land use projects. The City of San Bruno has yet to establish its own VMT guidelines; therefore, this study uses OPR guidelines.

Per the OPR VMT guidelines, if a project generates VMT above the defined threshold, it is deemed to have a significant impact. The thresholds are based on existing VMT. Per the OPR guidelines, projects located in existing low VMT areas where the baseline per-capita VMT is 15% below the County average are exempt from further CEQA transportation impact analysis as OPR deems these projects not likely to significantly increase VMT.

Baseline VMT Estimates

To identify whether a project would result in VMT impacts and whether the impacts can be mitigated, the City has created a heat map for residential development (Figure 1) that shows the current VMT per resident by location. Areas are color-coded based on the level of existing VMT:

- Green-filled areas are parcels with existing VMT below the threshold of significance, which is 15% below the current County average daily VMT per resident.
- Yellow-filled areas are parcels with existing VMT between the threshold of significance and the average VMT level.

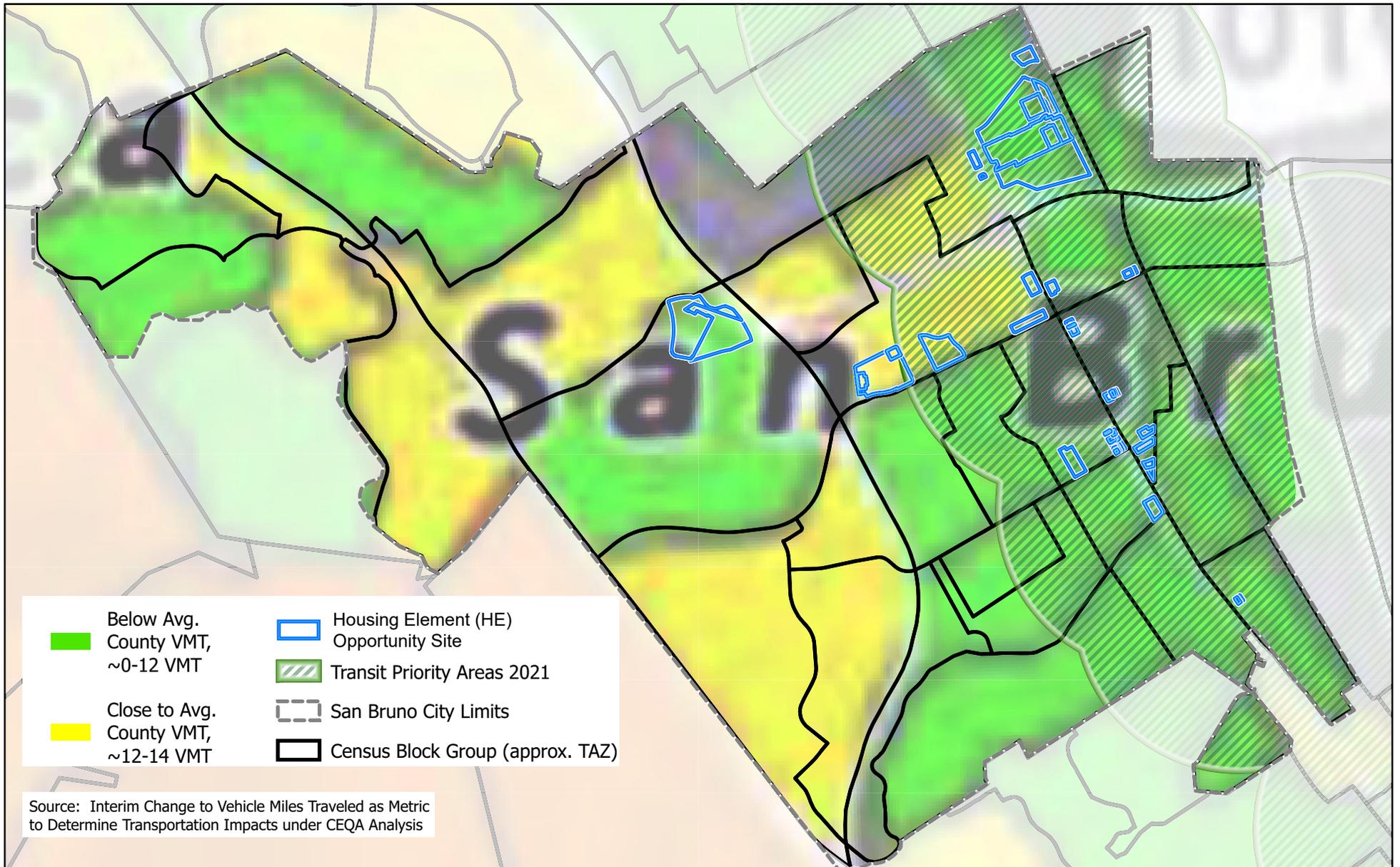


Figure 1
VMT Heat Map for Residents in San Bruno

The threshold of significance for residential development projects is based on the existing countywide average VMT level.

As shown in Figure 1, the majority of the developments would be located in a green area for residents and/or within the transit priority area. However, there is one development that is not within the transit priority area and within a yellow area, which means that the current VMT level per capita in the project area is above the threshold of significance.

Screening for VMT Analysis

OPR guidelines include additional screening criteria for projects that are expected to result in less-than-significant VMT impacts based on the project description, characteristics and/or location. The types of development projects that may meet screening criteria include the following:

- (1) small projects that generate fewer than 110 trips per day
- (2) residential and office projects in low VMT areas
- (3) transit priority areas: areas within 1/2-mile of a major transit stop
- (4) affordable residential housing

The majority of the residential developments would be located within the transit priority area. To meet the screening criteria, these developments would also be required to meet the following requirements:

- Have a Floor Area Ratio greater than 0.75
- Provide less than or equal to the maximum parking required by the City
- Be consistent with Plan Bay Area
- Not replace affordable housing units with a smaller number of moderate- or high-income residential units

The proposed residential development at 851 Cherry Avenue is not located within the transit priority area. This development is also not in a low VMT area. The project would not provide 100% restricted affordable housing. Therefore, the proposed residential use would not meet the VMT screening criteria, and a VMT analysis is required for the site.

Thresholds of Significance

For a project that does not meet the screening criteria, a project's VMT impact is determined by comparing the project VMT to the appropriate threshold of significance based on the type of development. Based on OPR guidelines, the VMT threshold of significance used herein is 15% below the existing County average VMT for residential uses.

For residential development, the current County average VMT per resident is 13.8 daily miles, according to the City/County Association of Governments in San Mateo County (C/CAG) VMT estimation tool. Therefore, the threshold of significance is 11.73 daily miles per resident.

If a project is found to have a significant impact on VMT, the impact must be reduced by modifying the project to reduce its VMT to an acceptable level and/or mitigating the impact through multimodal transportation improvements or establishing a trip cap.

C/CAG VMT Estimation Tool

To assist in evaluating CEQA transportation impacts related to VMT, the City/County Association of Governments in San Mateo County (C/CAG) has developed a VMT estimation tool for residential, office, and industrial projects.

Based on the assessor's parcel number (APN) of a project, the VMT estimation tool identifies the existing average daily VMT per resident and the existing average daily VMT per employee for the specific location. Based on the type of development, project description, and proposed trip reduction measures, the VMT estimation tool calculates the project VMT. Projects located in areas where the existing VMT is above the established threshold are referred to as being in "high-VMT areas". Projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the extent possible.

The VMT estimation tool evaluates a list of selected VMT reduction measures that can be applied to a project to reduce the project VMT. There are four strategy tiers whose effects on VMT can be calculated with the VMT estimation tool:

1. Project characteristics (e.g., density, diversity of uses, design, and affordability of housing) that encourage walking, biking and transit uses.
2. Multimodal network improvements that increase accessibility for transit users, bicyclists, and pedestrians,
3. Parking measures that discourage personal motorized vehicle-trips, and
4. Transportation demand management (TDM) measures that provide incentives and services to encourage alternatives to personal motorized vehicle-trips.

The first three strategies – land use characteristics, multimodal network improvements, and parking – are physical design strategies that can be incorporated into the project design. TDM includes programmatic measures that aim to reduce VMT by decreasing personal motorized vehicle mode share and by encouraging more walking, biking, and riding transit. TDM measures should be enforced through annual trip monitoring to assess the project's status in meeting the VMT reduction goals.

Housing Element VMT Impact Analysis

The entire San Bruno Housing Element site consists of multiple sites around San Bruno. As previously described, the majority of sites would be located within the Transit Priority Area and within green filled areas on the residential heat map. Most sites are within 1/2-mile of the San Bruno Bart Station, the San Bruno Caltrain Station, and/or bus stops along El Camino Real, all of which are considered major transit stops. As a whole, the residential developments within the Housing Element would have an approximate weighted average VMT of 11.67 per resident. Thus, the project as a whole would be below the threshold of 11.73 VMT per capita.

Site Specific VMT Impact Analysis

One of the housing element sites would be located in a high VMT area and outside of the transit priority corridor: 851 Cherry Avenue. This site was evaluated with the VMT Tool to determine effective mitigation measures.

Table 1 provides a summary of the project VMT estimated by the C/CAG estimation tool for the site. The estimated project VMT is lower than the existing VMT for residential use in the TAZ. This is because the project would result in an increase in residential density. The project VMT would be below the threshold, and therefore, would not result in a significant VMT impact.

**Table 1
Project-Level VMT Summary**

Site Address	TAZ	Existing VMT ¹	Project VMT ¹	Above/Below Threshold ²
851 Cherry Avenue	1646	12.1	10.9	Below

Notes:

1. The existing and project VMT are determined by the VMT estimation tool developed by the City/County Association of Governments in San Mateo County (C/CAG).
2. The threshold of significance for residential developments is 15% below the current County average daily VMT per resident.

Appendix A

C/CAG Estimation Tool Summary Reports

Project Details

Timestamp of Analysis: May 27, 2022, 10:01:44 AM

Project Name: 851 Cherry Avenue

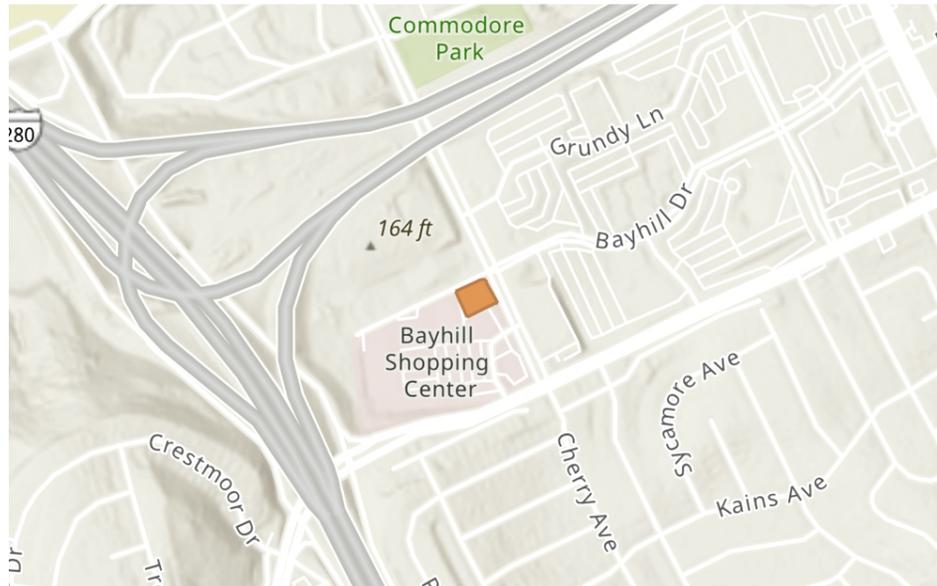
Project Description: 210 residential dwelling units

Project Location

jurisdiction:	apn	TAZ
San Bruno	020012120	1646

Inside a TPA?

Yes (Pass)



Analysis Details

Data Version: C/CAG Travel Model

Analysis Methodology: TAZ

Baseline Year: 2015

Project Land Use

Residential:

Single Family DU:

Multifamily DU: 210

Total DUs: 210

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

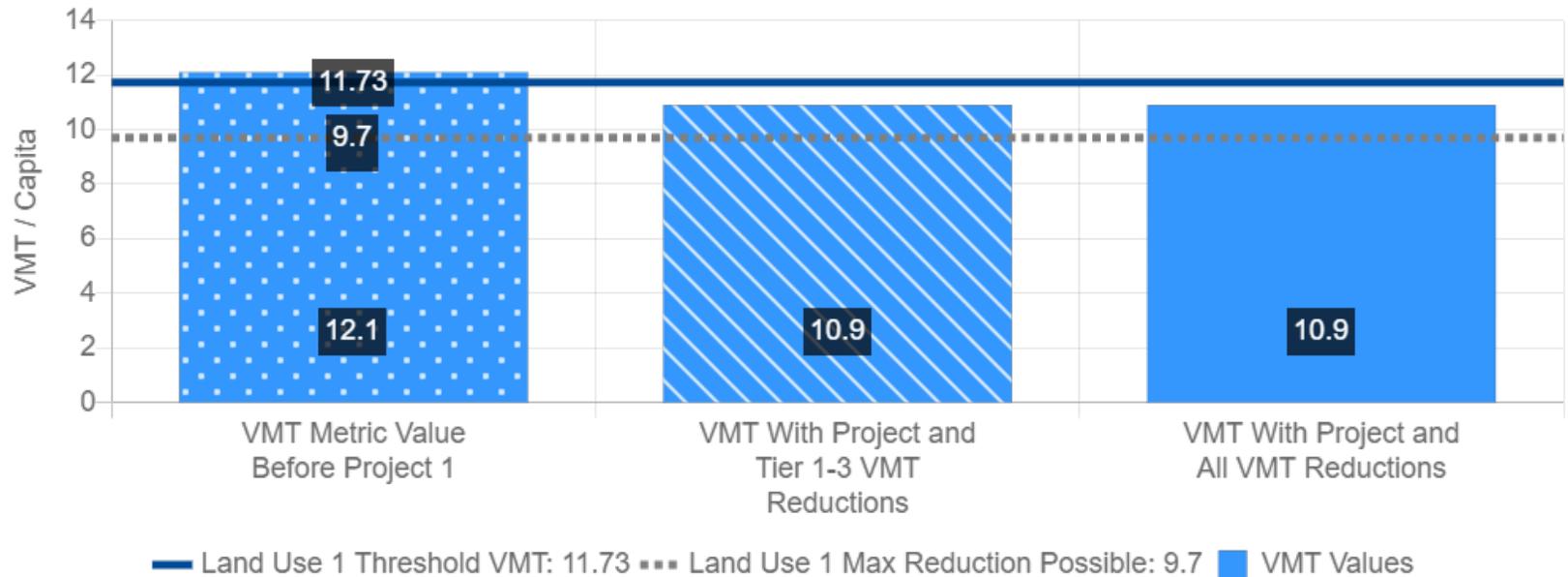
Motor Vehicle Parking:

Bicycle Parking:

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project 1:	Home-Based VMT per Resident
VMT Baseline Description 1:	County Average
VMT Baseline Value 1:	13.8
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	12.1	10.9	10.9
Low VMT Screening Analysis	No (Fail)	Yes (Pass)	Yes (Pass)



Tier 1 Project Characteristics

PC01 Increase Residential Density

Existing Residential Density:	8.25
With Project Residential Density:	60.75