

Appendix C
Transportation Memorandum

MEMORANDUM

Date: December 9, 2020 Project #25538
To: City of Gardena
From: Michael Sahimi and Tim Erney, Kittelson & Associates, Inc.
Project: Hotel Development Standards General Plan & Zoning Code Amendment Project
Subject: Transportation Memorandum

This transportation memorandum summarizes the California Environmental Quality Act (CEQA) vehicle miles traveled (VMT) analysis for the proposed Hotel Development Standards General Plan Amendment and Zoning Code Amendment (Project) for the City of Gardena. The Project would apply to all properties within the City of Gardena that are designated General Commercial and Industrial and zoned General Commercial (C-3), Heavy Commercial (C-4), Industrial (M-1), and General Industrial (M-2), and that are located on an Arterial or Major Collector. The City of Gardena is proposing to amend the General Plan and Zoning Code to provide for new and revised development standards specific to amenity hotels, provide clean-up language to the General Plan Land Use Plan to incorporate previous amendments to the Zoning Code, and to provide other minor clean-up language to the Zoning Code.

The following sections and sub-sections are included in this memo:

- Project Description
- VMT Analysis
 - VMT Screening
 - VMT Impact Analysis
 - VMT Mitigation
- Summary and Conclusions

The contents of this assessment are based on the City's *SB 743 Implementation Transportation Analysis Updates* (June 2020).

PROJECT DESCRIPTION

The City of Gardena is proposing to amend its General Plan and Zoning Code to provide for new and revised development standards specific to amenity hotels. An amenity hotel would be defined as a hotel with amenities such as: indoor lobby/lounge area with complimentary Wi-Fi meant for guests to sit, relax, and work; spa facilities; outside lounge areas meant for guests to sit, relax, and work, including common area patios and rooftop decks; pool or other improved recreation areas; gym facilities; conference

centers; or other amenities of similar nature that are for the benefit of guests and located outside of the individual rooms.

The City is also proposing to clean-up language to the General Plan Land Use Plan to incorporate previous amendments to the Zoning Code, and other minor clean-up language to the Zoning Code. The Project would apply to all properties within the City that are designated General Commercial and Industrial and zoned General Commercial (C-3), Heavy Commercial (C-4), Industrial (M-1), and General Industrial (M-2), and that are located on an Arterial or Major Collector. Arterials and Major Collectors and shown in Figure 1 and defined in the City's General Plan Circulation Plan (updated in 2020).¹

With respect to the General Plan, the Project would include a General Plan Amendment to amend the Land Use Plan for the General Commercial and Industrial designations to allow for an increased floor area ratio (FAR) for specific uses or zones along major collectors and arterials. With respect to the Zoning code, the Project would include Zoning Code Amendments to amend the hotel development standards specific to amenity hotels and to provide minor clean-up and revisions to the Zoning code.

The descriptions for non-residential land uses specific to General Commercial and Industrial would be updated as follows as part of the General Plan Amendment:

- General Commercial
 - Maximum Permitted FAR: 0.5 in general
 - Higher FARs of up to 2.75 may be allowed under the Zoning Code for specific uses or zones along major collectors and arterials.
- Industrial
 - Maximum Permitted FAR: 1.0 in general
 - Higher FARs of up to 2.75 may be allowed under the Zoning Code for specific uses or zones along major collectors and arterials

In addition, amenity hotels would be added as a permitted use as part of the Zoning Code Amendments in the General Commercial (C-3), Heavy Commercial (C-4), Industrial (M-1) and General Industrial (M-2) zones.

Parcels that have been deemed possible amenity hotel sites are shown in Figure 1.

In addition to the commercial and industrial sites shown in Figure 1, one additional site located at the northeast corner of Rosecrans Avenue and Budlong Avenue has been identified as having the potential to accommodate an amenity hotel. The property owner has recently requested to redesignate the 4.59-acre property as General Commercial with a Mixed-Use Overlay in the Land Use Plan and rezone the property as General Commercial (C-3) with a Mixed-Use Overlay (MUO) designation; the 1108 W. 141st Street GPA & ZC Project is currently undergoing approval. The 1108 W. 141st Street GPA & ZC Project

¹ <https://www.cityofgardena.org/wp-content/uploads/2016/04/Circulation-Plan-2020-Update.pdf>

Mitigated Negative Declaration (MND) considered the potential for development of a four-story hotel (65 feet high) with up to 126 rooms within a single structure of approximately 68,000 square feet and a separate 5,000 square foot restaurant on 2.0 acres of the 4.59-acre site. As documented in the MND, the proposed site would not fully screen out of a detailed VMT analysis, which resulted in a project VMT impact and cumulative VMT impact and a mitigation measure of a \$3.67 per day per employee transit subsidy with a minimum of 27% hotel employee eligibility.

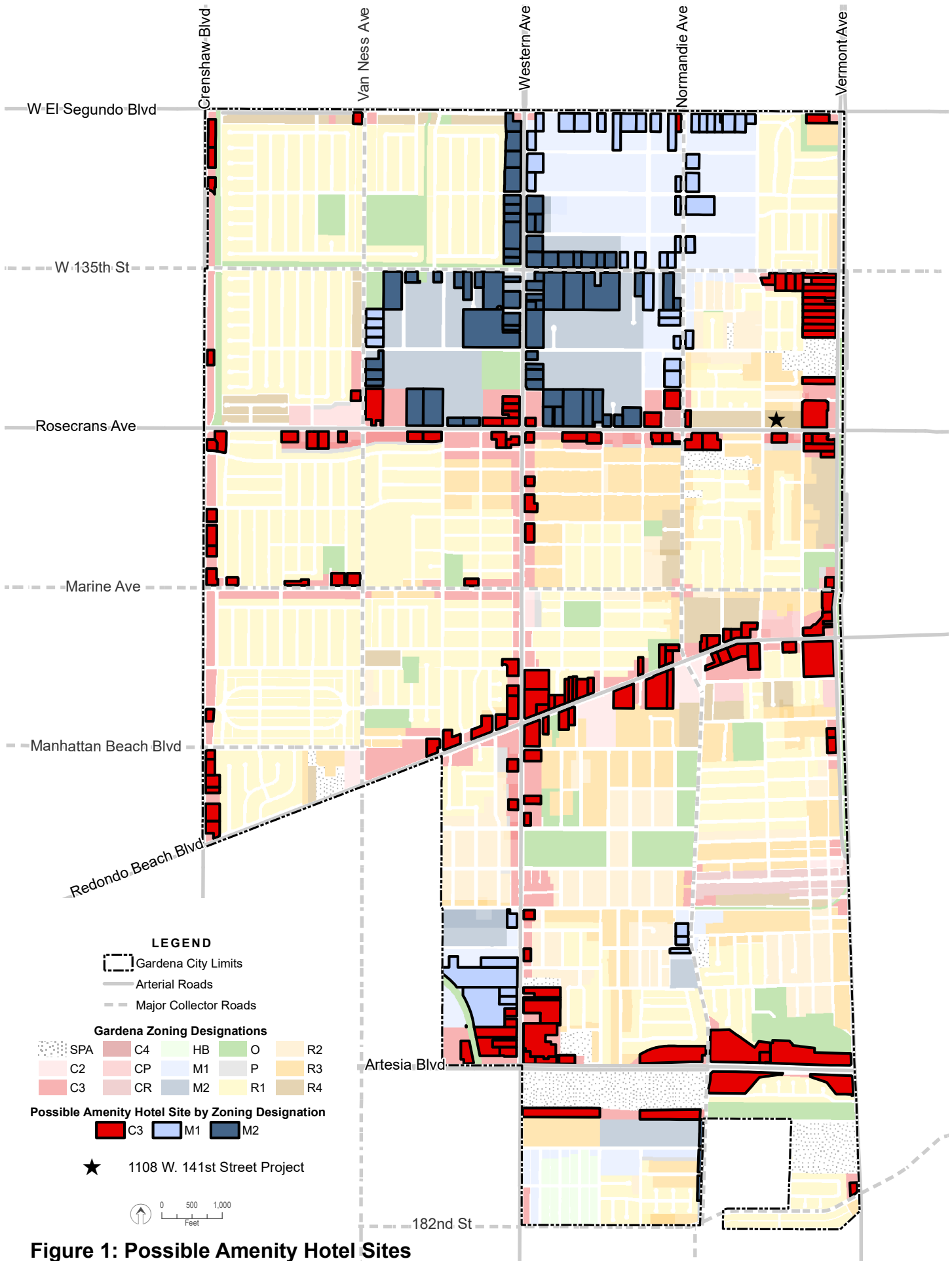


Figure 1: Possible Amenity Hotel Sites

VMT ANALYSIS

This section details the VMT analysis conducted for CEQA purposes in accordance with the City's adopted VMT standards and thresholds.

The Project does not involve site-specific development at this time, since the intent of the proposed modifications, specific to amenity hotels, is to encourage future development of amenity hotels within the City. The City anticipates that up to four amenity hotels with up to 450 hotel rooms in total could be accommodated on Arterials and Major Collector Streets within the General Commercial (C-3), Heavy Commercial (C-4), Industrial (M-1) and General Industrial (M-2) zones of the City.

The exact location and specific development characteristics of the potential amenity hotels are not currently known. Therefore, VMT analysis determined potential impacts and mitigation measures for the various areas of the city that could potentially accommodate an amenity hotel under this Project. The steps in this VMT analysis were as follows:

- Conduct a screening analysis to identify locations in the city where projects could be screened out of a detailed VMT analysis, either due to being in a low VMT area or in a high-quality transit area.
- Determine locations in the city where a hotel project would not be screened out through the transit screening or low VMT area screening criteria and determine the VMT impacts of locating hotel projects in those areas.
- Develop mitigation measures that could be implemented if a project would exceed the significance threshold for VMT impacts.

Note, the separate analysis conducted for the 1108 W. 141st Street GPA & ZC Project MND determined that the restaurant portion of that site would screen out under the Project Type screening criteria (local-serving retail project less than 50,000 square feet); while the site is located in a High-Quality Transit Area (HQTA), a hotel at this site would not qualify to screen out under the Transit Proximity screening criteria due to inconsistency with the Southern California Association of Governments (SCAG) Sustainable Communities Strategy (SCS). Therefore, the project's hotel component required a detailed VMT analysis of VMT per employee generated by the site, which resulted in a project VMT impact and a cumulative VMT impact for a hotel at this site. The MND documented that a mitigation measure of a \$3.67 per day per employee transit subsidy (with a minimum of 27% hotel employee eligibility) would reduce a significant project impact and significant cumulative impact at this site to less-than-significant with mitigation.

VMT Screening

The City's transportation analysis guidelines include criteria for individual project screening, which can be used to screen projects or components of mixed-use projects that are expected to generate low VMT out of a detailed VMT analysis. The City's three VMT screening criteria and determinations are listed below.

(1) Project Type Screening

Projects that generate less than 110 daily trips, local-serving retail projects less than 50,000 square feet, and affordable housing projects may be screened from conducting a VMT analysis. None of these conditions would apply to this Project. It should be noted that a 100-room hotel would generate 836 daily trips, based on Institute of Transportation Engineers (ITE) trip generation rates.

(2) Transit Proximity Screening

Projects located within a HQTAs would be screened from a detailed VMT analysis if the project does not have certain characteristics. This screening criteria cannot be applied if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75 (for office, retail, hotel, and industrial projects) or less than 20 units per acre (for residential projects).
- Includes more parking for use by residents, customers, or employees than required by the City (unless additional parking is being provided for design feasibility, such as completing the floor of a subterranean or structured parking facility, or if additional parking is located within the project site to serve adjacent uses).
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the City).
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

According to Figure 3 in the City's guidelines, the majority of potential hotel sites are located in a frequent transit area (within a half-mile radius of an existing or planned major transit stop, or an existing stop along a high-quality transit corridor, which has fixed route bus service with service intervals no longer than 15 minutes during peak commute hours). In addition, this Project would meet the other criteria necessary to screen out due to transit proximity:

- Hotels will have FARs of at least 0.75.
- The City has indicated that supplying parking in excess of minimum requirements would be prohibited.
- The Project is consistent with the Southern California Association of Governments (SCAG) Sustainable Communities Strategy (SCS) since no land use changes are proposed and the number of residential units in the city would not be affected.
- Hotels would not replace residential units.

Under the transit proximity screening criteria, 260 of the 268 potential hotel site parcels would screen out of a VMT analysis. The following areas and parcels would not screen out:

- North side of Marine Avenue between Van Ness Avenue and Wadkins Avenue
 - APN 4064-015-020
 - APN 4064-023-018
 - APN 4064-023-034

- APN 4064-030-019
- West side of Normandie Avenue between 166th Street and W. 170th Street
 - APN 6106-027-039
 - APN 6106-027-028
 - APN 6106-030-011
- The 1108 W. 141st Street site (as documented in the GPA & ZC Project MND)

(3) Low VMT Area Screening

Projects that are assessed using home-based work VMT per employee (such as hotels) in a low-VMT generating area may be screened from a VMT analysis. According to Figure 1 in the City's guidelines, several potential sites are located in areas with a daily home-based work VMT per employee that is below 85% of the regional average. However, most of these sites are already covered under the areas screened out under the transit proximity screening criteria, as shown in Figure 2. However, parcel 4064-015-020 (north side of Marine Avenue between Wadkins Avenue and Miller Avenue) was not screened out under the transit proximity criteria but is screened out under the low VMT area screening criteria, as shown in the figure.

Screening Analysis Results

The results of the VMT screening are shown in Figure 2. Based on the VMT screening, 261 of the 268 potential hotel site parcels would screen out of a VMT analysis; hotels located at these sites would result in a **less-than-significant** VMT impact and would not require mitigation measures.

The following areas and parcels are not screened out and would require a VMT analysis:

- North side of Marine Avenue between Van Ness Avenue and Wadkins Avenue
 - APN 4064-023-018
 - APN 4064-023-034
 - APN 4064-030-019
- West side of Normandie Avenue between 166th Street and W. 170th Street
 - APN 6106-027-039
 - APN 6106-027-028
 - APN 6106-030-011

Therefore, a VMT impact analysis must be conducted for projects that may be located in the six parcels that were not screened out.

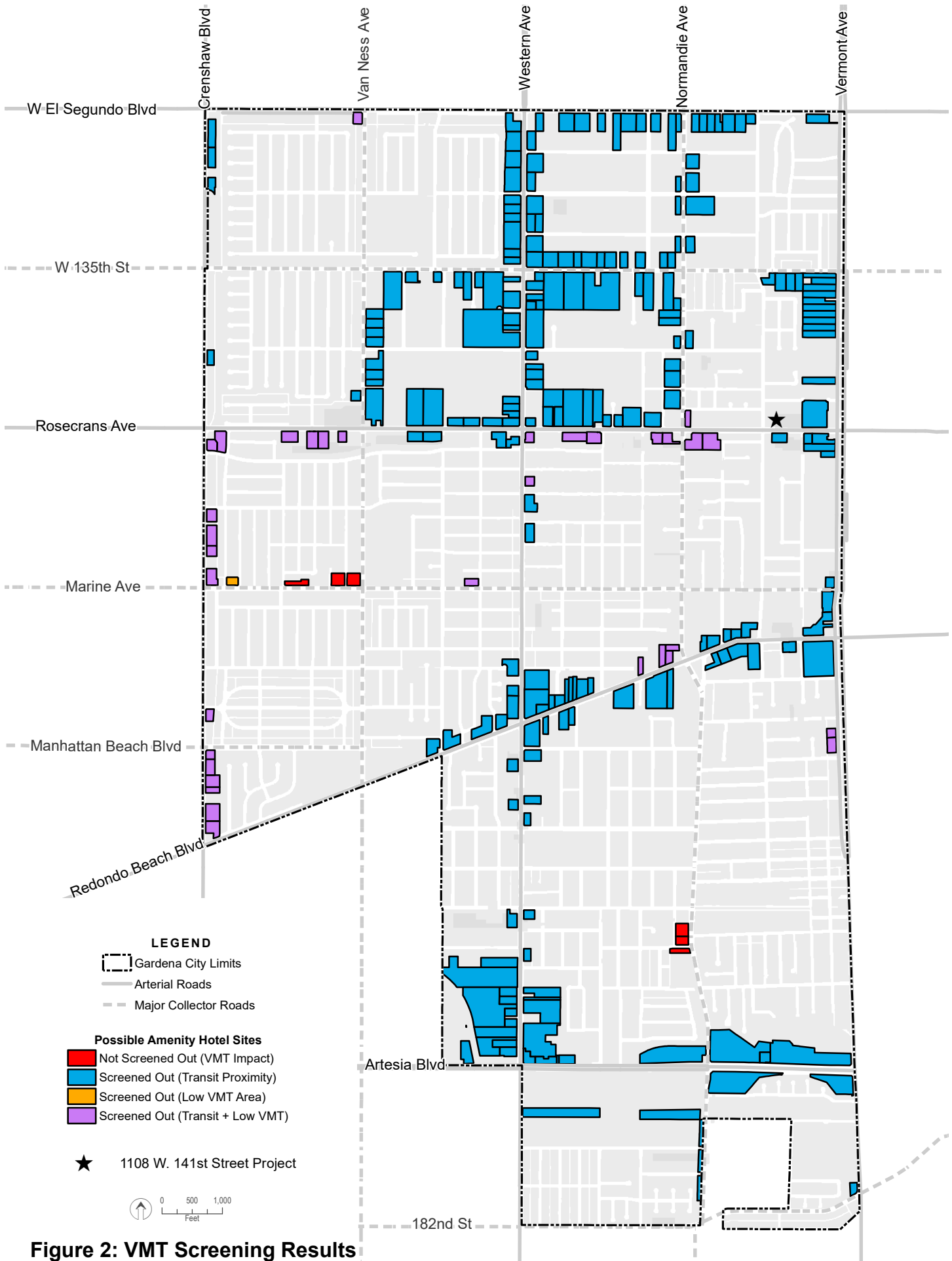


Figure 2: VMT Screening Results

VMT Impact Analysis

According to the City's guidelines, the following VMT impact thresholds are applicable to hotel projects:

- **Project Threshold:** A significant impact will occur if the project generates daily home-based work VMT per employee in excess of the impact threshold of 14.65 VMT per employee.
- **Cumulative Threshold:** A significant impact will occur if the project threshold is exceeded or if the project is determined to be inconsistent with the SCAG SCS.

To determine project-related VMT impacts resulting from projects located in the non-screened areas in the city, existing home-based work VMT per employee for the sites were extracted from the City's spreadsheet-based VMT estimating tool. This tool provides existing (2020) residential and employment VMT estimates for the region, the city, and the city's transportation analysis zones (TAZs) interpolated from the base year and cumulative year SCAG regional travel demand models. A screenshot of the tool with the relevant VMT data is included as an attachment to this memo.

APN 4064-023-018/4064-023-034/4064-030-019 (North side of Marine Avenue)

These parcels are located in TAZ 21221100. According to the City's tool, a hotel project at these sites is expected to generate 15.12 VMT per employee. The sites' expected home-based work VMT per employee would exceed the threshold of 14.65 VMT per employee. Since a hotel at these sites is estimated to generate daily home-based work VMT per employee higher than the threshold, it would result in a **significant** VMT impact.

Since the project threshold is exceeded, a hotel project at these sites would also result in a **significant cumulative** VMT impact.

APN 6106-027-039/6106-027-028/6106-030-011 (West side of Normandie Avenue)

These TAZs are located in TAZ 21229100. According to the City's tool, a hotel project at these sites is expected to generate 15.72 VMT per employee. The sites' expected home-based work VMT per employee would exceed the threshold of 14.65 VMT per employee. Since a hotel at these sites is estimated to generate daily home-based work VMT per employee higher than the threshold, it would result in a **significant** VMT impact.

Since the project threshold is exceeded, a hotel project at these sites would also result in a **significant cumulative** VMT impact.

VMT Mitigation

Given that the expected home-based work VMT per employee that would be generated by a hotel project at these parcels is higher than the threshold of 14.65 VMT per employee, hotel projects located at these parcels would result in a significant project impact and significant cumulative impact. Project VMT must be reduced to 14.65 VMT per employee with mitigation in the following areas:

- **APN 4064-023-018/4064-023-034/4064-030-019:** Project VMT must be reduced from 15.12 VMT per employee to 14.65 VMT per employee, representing a 3.1% decrease.
- **APN 6106-027-039/6106-027-028/6106-030-011:** Project VMT must be reduced from 15.72 VMT per employee to 14.65 VMT per employee, representing a 6.8% decrease.

The City of Gardena’s guidelines recommend mitigating VMT impacts by reducing the number of single-occupant vehicles generated by a site. This can be accomplished by changing the proposed land use or by implementing Transportation Demand Management (TDM) strategies. The guidelines include recommended mitigation measures for residential, office, retail, and mixed-use developments based on research documented in the California Air Pollution Control Officers Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures* (2010).

Given that hotels are employment projects with home-based work VMT as the metric, the commute-focused mitigation measures provided in Table 1 were selected from the City’s list of recommended measures. Note, more recent research published by the San Diego Association of Governments (SANDAG) in June 2019 in the *Mobility Management VMT Reduction Calculator Tool – Design Document*² provides updates to the maximum VMT reductions for an employer transit pass subsidy based on information that has been made available since the publication of the 2010 CAPCOA documentation as well as accounts for as inflation. Therefore, SANDAG’s transit subsidy VMT reduction methodology has been substituted for CAPCOA’s.

Table 1: Applicable Mitigation Measures

Measure	Description	Source
Price Workplace Parking	Pricing workplace parking may include charging for parking, implementing above market rate pricing, validating parking only for invited guests, not providing employee parking and transportation allowances, and educating employees about available alternatives. This strategy focuses on implementing market rate and above market rate pricing to provide a price signal for employees to consider alternative modes for their work commute.	CAPCOA Measure 3.4.14
Rideshare Program	A rideshare program includes TDM strategies designed to increase average vehicle occupancy by encouraging carpooling and vanpooling. Carpooling and vanpooling can be encouraged through programmatic features, such as a platform or database that matches potential riders (e.g. Zimride), and through incentives, such as payments to individuals who participate in each mode.	CAPCOA Measure 3.4.3

² This document can be found online at: https://www.icommutesd.com/docs/default-source/planning/tool-design-document_final_7-17-19.pdf?sfvrsn=ec39eb3b_2

Measure	Description	Source
Employee Transit Subsidies	Transit subsidies are direct payments to individuals for use of public transit.	SANDAG Measure 1D
Promotions and Marketing	Commute trip reduction marketing programs are part of a traditional TDM program and often focus on advertising non-driving options to individuals. This may include direct outreach, help with trip planning, and development of promotional materials. This strategy can include the deployment of products, such as TransitScreen, that provide real-time transit and other transportation information in common spaces of a development. This strategy's efficacy is affected by the level of investment in the program, the staff involved, and the other measures implemented.	CAPCOA Measure 3.4.7

These select measures were compared to the VMT reductions necessary for hotel projects in each of the two areas. A menu of mitigation measures (or a combination of measures) that could be applied at each location are detailed below, along with the assumptions necessary to reduce VMT per employee below the threshold of 14.65 VMT per employee. Detailed calculations are provided as an attachment to this memo.

Note, the CAPCOA and SANDAG methodologies provide reductions which are sensitive to an area's land use and transportation context (urban, suburban-center, or suburban). For calculation purposes, the city's land use and transportation context were characterized as suburban-center. Definitions for each setting type are provided as an attachment to this memo.

APN 4064-023-018/4064-023-034/4064-030-019

Project VMT must be reduced from 15.12 VMT per employee to 14.65 VMT per employee, representing a 3.1% decrease. Individual TDM measures are sufficient to achieve this reduction, as provided below:

- Implement Price Workplace Parking for a reduction of 3.7%. This assumes 100% of employees would be subject to a \$2 per day parking charge.
 - To achieve the necessary 3.1% reduction, a minimum of 84% of employees must be subject to a \$2 per day parking charge.
- Implement Rideshare Program for a reduction of 10%. This assumes 100% of employees would be eligible for this program.
 - To achieve the necessary 3.1% reduction, a minimum of 31% of employees must be eligible for this program.
- Implement Employee Transit Subsidies for a reduction of 5.2%. This assumes 100% of employees would be eligible for this program.
 - To achieve the necessary 3.1% reduction, a minimum of 60% of employees must be eligible for this program.
 - This assumes an LA Metro EZ Pass subsidy of approximately \$3.67 per day per employee.
- Implement Promotions and Marketing for a reduction of 4.0%. This assumes 100% of employees would be eligible for this program.

- To achieve the necessary 3.1% reduction, a minimum of 78% of employees must be eligible for this program.

It should be noted that the Price Workplace Parking measure should be complemented by other measures to prevent employee parking spillover onto adjacent streets or residential areas.

Based on the available menu of mitigation measures outlined above, VMT mitigation measures could be applied to hotels at these sites to reduce the significant project impact and significant cumulative impact to **less-than-significant with mitigation**.

APN 6106-027-039/6106-027-028/6106-030-011

Project VMT must be reduced from 15.72 VMT per employee to 14.65 VMT per employee, representing a 6.8% decrease. The following individual TDM measures are sufficient to achieve this reduction:

- Implement Price Workplace Parking for a reduction of 6.8%. This assumes 100% of employees would be subject to a \$6 per day parking charge.
 - To achieve the necessary 6.8% reduction, a minimum of 100% of employees must be subject to a \$6 per day parking charge.
- Implement Rideshare Program for a reduction of 10%. This assumes 100% of employees would be eligible for this program.
 - To achieve the necessary 3.1% reduction, a minimum of 68% of employees must be eligible for this program.

It should be noted that the Price Workplace Parking measure should be complemented by other measures to prevent employee parking spillover onto adjacent streets or residential areas.

The following combination of measures can also achieve the necessary 6.8% VMT reduction:

- Implement Employee Transit Subsidies and Promotions and Marketing for a reduction of 9%. This requires 100% of employees being eligible for both programs. This assumes an LA Metro EZ Pass subsidy of approximately \$3.67 per day per employee.

Based on the available menu of mitigation measures outlined above, VMT mitigation measures could be applied to hotels at these sites to reduce the significant project impact and significant cumulative impact to **less-than-significant with mitigation**.

SUMMARY AND CONCLUSIONS

Under the City's transit proximity screening criteria, 261 of the 268 potential hotel site parcels would screen out of a VMT analysis; hotels located at these sites would result in a **less-than-significant** VMT impact and would not require mitigation measures.

The following areas and parcels are not screened out and would require a VMT analysis:

- North side of Marine Avenue between Van Ness Avenue and Wadkins Avenue
 - APN 4064-023-018
 - APN 4064-023-034
 - APN 4064-030-019
- West side of Normandie Avenue between 166th Street and W. 170th Street
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 - APN 6106-030-011
- The 1108 W. 141st Street site (as documented in the GPA & ZC Project MND)

Hotels in the above-listed parcels would result in a **significant** VMT impact and a **significant cumulative** VMT impact. The following menu of mitigation measures provides options for reducing the VMT impact of potential hotel projects in those areas to **less-than-significant with mitigation**.

- **APN 4064-023-018/4064-023-034/4064-030-019:** Project VMT must be reduced from 15.12 VMT per employee to 14.65 VMT per employee, representing a 3.1% decrease. Projects would need to implement one of the following measures to reduce VMT to less-than-significant levels:
 - Implement Price Workplace Parking.
 - Implement Rideshare Program.
 - Implement Employee Transit Subsidies.
 - Implement Promotions and Marketing.
- **APN 6106-027-039/6106-027-028/6106-030-011:** Project VMT must be reduced from 15.72 VMT per employee to 14.65 VMT per employee, representing a 6.8% decrease. Projects would need to implement one of the following to reduce VMT to less-than-significant levels:
 - Implement Price Workplace Parking.
 - Implement Rideshare Program.
 - Implement Employee Transit Subsidies and Promotions and Marketing.

The separate analysis conducted for the 1108 W. 141st Street GPA & ZC Project MND determined that a hotel at this site would result in a **significant** VMT impact and a **significant cumulative** VMT. The MND documented that implementing employee transit subsidies would reduce impacts to **less-than-significant with mitigation**.

Attachment A: City of Gardena VMT Spreadsheet Tool Screenshot

Attachment B: CAPCOA and SANDAG Place Type Definitions

Attachment C: VMT Mitigation Calculations

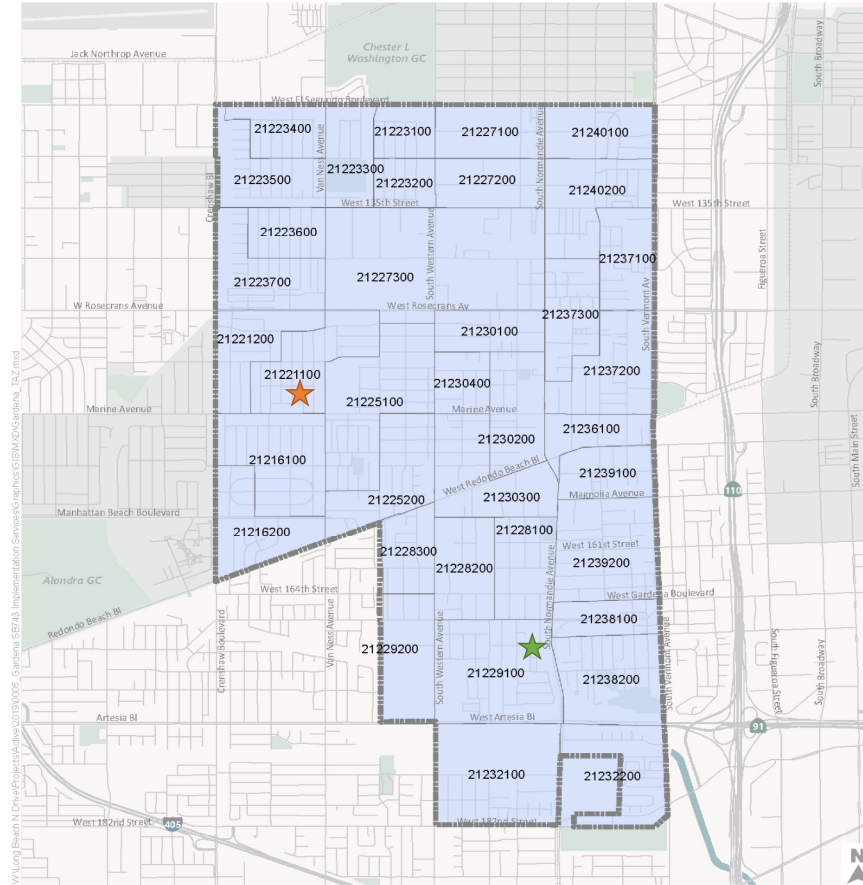
Attachment A: City of Gardena VMT Spreadsheet Tool Screenshot

2020 VMT Summary

SCAG Tier 2 TAZ ID	Population	Employment	Home-Based Work VMT Summary			
			Home Based Work VMT	Home Based Work VMT per Employee	Regional Home Based Work VMT per Employee	Regional Home Based Work VMT per Employee % Difference
21216100	2,415	266	3,741	14.06	17.23	-18.4%
21216200	1,821	646	9,529	14.76	17.23	-14.4%
21221100	1,986	248	3,743	15.12	17.23	-12.3%
21221200	1,225	747	10,204	13.66	17.23	-20.8%
21223100	918	187	3,188	17.02	17.23	-1.2%
21223200	567	238	4,097	17.25	17.23	0.1%
21223300	997	86	982	11.37	17.23	-34.1%
21223400	1,262	65	807	12.38	17.23	-28.2%
21223500	1,182	313	4,737	15.11	17.23	-12.3%
21223600	1,506	39	427	10.95	17.23	-36.5%
21223700	1,887	746	11,742	15.74	17.23	-8.7%
21225100	3,166	717	10,099	14.08	17.23	-18.3%
21225200	1,438	1,143	17,890	15.66	17.23	-9.2%
21227100	317	782	13,652	17.46	17.23	1.3%
21227200	333	1,279	23,159	18.11	17.23	5.1%
21227300	404	5,622	96,726	17.20	17.23	-0.2%
21228100	1,538	413	6,994	16.92	17.23	-1.8%
21228200	1,465	1,037	15,264	14.72	17.23	-14.6%
21228300	1,065	534	9,125	17.08	17.23	-0.9%
21229100	3,115	1,156	18,163	15.72	17.23	-8.8%
21229200	897	722	12,005	16.62	17.23	-3.6%
21230100	2,319	299	4,242	14.17	17.23	-17.8%
21230200	2,701	663	8,451	12.75	17.23	-26.0%
21230300	1,511	1,706	25,936	15.20	17.23	-11.8%
21230400	1,506	127	1,929	15.22	17.23	-11.7%
21232100	1,677	1,791	32,911	18.37	17.23	6.6%
21232200	1,260	803	14,835	18.48	17.23	7.3%
21236100	1,605	1,844	29,149	15.81	17.23	-8.3%
21237100	1,615	938	13,938	14.86	17.23	-13.8%
21237200	3,616	655	10,652	16.26	17.23	-5.6%
21237300	2,305	159	2,273	14.32	17.23	-16.9%
21238100	1,925	395	6,318	16.00	17.23	-7.2%
21238200	2,370	488	7,745	15.88	17.23	-7.9%
21239100	1,394	1,948	31,732	16.29	17.23	-5.5%
21239200	3,098	599	7,871	13.14	17.23	-23.8%
21240100	1,412	732	12,946	17.68	17.23	2.6%
21240200	2,155	558	10,519	18.86	17.23	9.4%

Source: SCAG 2016 RTP/SCS Travel Demand Model; 2020 results interpolated based on 2012 Baseline and 2040 Futu

- At least 15% below SCAG Regional Average
- 0-15% below SCAG Regional Average
- Higher than SCAG Regional Average



SCAG Tier 2 TAZ ID

Attachment B: CAPCOA and SANDAG Place Type Definitions

The definitions used by CAPCOA and SANDAG to define each setting category are as follows:

Low-density suburb: Dispersed, low-density, single-use, automobile-dependent land use patterns, usually outside of the central city. Other characteristics may include: 20+ miles from regional central business district; more housing than jobs; buildings are one to two stories; curvilinear (cul-de-sac) street patterns; parking between street and office or retail and large-lot residential parking is common; ample parking and largely surface lot-based; no parking prices; limited bus service with peak headways 30+ minutes.

Suburban center: Cluster of multi-use development within dispersed, low-density, automobile-dependent land use patterns. Serves the population of a suburb with office, retail, and housing that is denser than the surrounding suburb. Other characteristics may include: 20+ miles from regional central business district; balanced jobs/housing ratio; buildings are two stories; grid street pattern; 0–20-foot setbacks; somewhat constrained parking supply on street and ample off-street; low to no parking prices; bus service at 20–30-minute headways; and/or a commuter rail station.

Urban: Located within a central city with multi-family housing and nearby office and retail. Other characteristics may include: within or less than five miles from the central business district; jobs/housing ratio > 1.5; buildings are at least six stories; grid street pattern; minimal setbacks; constrained parking supply; high parking prices; and high-quality rail service and/or comprehensive bus service.

Source: San Diego Association of Governments (SANDAG) *Mobility Management VMT Reduction Calculator Tool – Design Document* (June 2019)

Attachment C: VMT Mitigation Calculations

APN 4064-023-018/4064-023-034/4064-030-019 -- Reduce VMT per Employee by 3.1%

Mitigation Measure and Source	Formula and Variables	Relevant Tables and Other Info	Assumptions	Reduction (100% Employees Eligible)	Minimum % of Employees for Necessary Reduction																								
Price Workplace Parking (CAPCOA 3.4.14)	<p>% VMT Reduction = A * B</p> <p>Where A = Percentage reduction in commute VMT B = Percent of employees subject to priced parking</p>	<p>A:</p> <table border="1"> <thead> <tr> <th rowspan="2">Project Location</th> <th colspan="4">Daily Parking Charge</th> </tr> <tr> <th>\$1</th> <th>\$2</th> <th>\$3</th> <th>\$6</th> </tr> </thead> <tbody> <tr> <td>Low-Density Suburb</td> <td>0.5%</td> <td>1.2%</td> <td>1.9%</td> <td>2.8%</td> </tr> <tr> <td>Suburban Center</td> <td>1.8%</td> <td>3.7%</td> <td>5.4%</td> <td>6.8%</td> </tr> <tr> <td>Urban</td> <td>6.9%</td> <td>12.5%</td> <td>16.8%</td> <td>19.7%</td> </tr> </tbody> </table>	Project Location	Daily Parking Charge				\$1	\$2	\$3	\$6	Low-Density Suburb	0.5%	1.2%	1.9%	2.8%	Suburban Center	1.8%	3.7%	5.4%	6.8%	Urban	6.9%	12.5%	16.8%	19.7%	Suburban Center; daily parking charge of \$2	3.7%	84%
Project Location	Daily Parking Charge																												
	\$1	\$2	\$3	\$6																									
Low-Density Suburb	0.5%	1.2%	1.9%	2.8%																									
Suburban Center	1.8%	3.7%	5.4%	6.8%																									
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Rideshare Program (CAPCOA 3.4.3)	<p>% VMT Reduction = Commute * Employee</p> <p>Where Commute = % reduction in commute VMT Employee = % employees eligible</p>	Commute: 5% (low density suburb), 10% (suburban center), 15% (urban) annual reduction in commute VMT	Suburban Center	10.0%	31%																								
Employee Transit Subsidies (SANDAG 1D)	<p>% change in VMT = % of employees eligible × % change in commute VMT</p> <p>Where: % of employees eligible will usually be 100%. % change in commute VMT differs by place type (low-density suburb, suburban center, or urban) and level of daily transit subsidy (\$1 to \$4)</p>	<p>Change in Commute VMT:</p> <table border="1"> <thead> <tr> <th rowspan="2">Place Type</th> <th colspan="4">Subsidy Level Per Day</th> </tr> <tr> <th>\$1</th> <th>\$2</th> <th>\$3</th> <th>\$4</th> </tr> </thead> <tbody> <tr> <td>Low-Density Suburb</td> <td>-0.1%</td> <td>-0.2%</td> <td>-0.4%</td> <td>-0.6%</td> </tr> <tr> <td>Suburban Center</td> <td>-1.1%</td> <td>-2.4%</td> <td>-4.1%</td> <td>-5.8%</td> </tr> <tr> <td>Urban</td> <td>-2.2%</td> <td>-4.7%</td> <td>-7.8%</td> <td>-10.9%</td> </tr> </tbody> </table>	Place Type	Subsidy Level Per Day				\$1	\$2	\$3	\$4	Low-Density Suburb	-0.1%	-0.2%	-0.4%	-0.6%	Suburban Center	-1.1%	-2.4%	-4.1%	-5.8%	Urban	-2.2%	-4.7%	-7.8%	-10.9%	Suburban Center; EZ Pass subsidy of approximately \$3.67, interpolated between \$3 and \$4.	5.2%	60%
Place Type	Subsidy Level Per Day																												
	\$1	\$2	\$3	\$4																									
Low-Density Suburb	-0.1%	-0.2%	-0.4%	-0.6%																									
Suburban Center	-1.1%	-2.4%	-4.1%	-5.8%																									
Urban	-2.2%	-4.7%	-7.8%	-10.9%																									
Promotions and Marketing (CAPCOA 3.4.7)	<p>% Commute VMT Reduction = A * B * C</p> <p>Where A = % reduction in commute vehicle trips B = % employees eligible C = Adjustment from commute VT to commute VMT</p>	A: 4% C: 1.0	n/a	4.0%	78%																								

APN 6106-027-039/6106-027-028/6106-030-011 -- Reduce VMT per Employee by 6.8%

Mitigation Measure and Source	Formula and Variables	Relevant Tables and Other Info	Assumptions	Reduction (100% Employees Eligible)	Minimum % of Employees for Necessary Reduction																								
Price Workplace Parking (CAPCOA 3.4.14)	<p>% VMT Reduction = A * B</p> <p>Where A = Percentage reduction in commute VMT B = Percent of employees subject to priced parking</p>	<p>A:</p> <table border="1"> <thead> <tr> <th rowspan="2">Project Location</th> <th colspan="4">Daily Parking Charge</th> </tr> <tr> <th>\$1</th> <th>\$2</th> <th>\$3</th> <th>\$6</th> </tr> </thead> <tbody> <tr> <td>Low-Density Suburb</td> <td>0.5%</td> <td>1.2%</td> <td>1.9%</td> <td>2.8%</td> </tr> <tr> <td>Suburban Center</td> <td>1.8%</td> <td>3.7%</td> <td>5.4%</td> <td>6.8%</td> </tr> <tr> <td>Urban</td> <td>6.9%</td> <td>12.5%</td> <td>16.8%</td> <td>19.7%</td> </tr> </tbody> </table>	Project Location	Daily Parking Charge				\$1	\$2	\$3	\$6	Low-Density Suburb	0.5%	1.2%	1.9%	2.8%	Suburban Center	1.8%	3.7%	5.4%	6.8%	Urban	6.9%	12.5%	16.8%	19.7%	Suburban Center; daily parking charge of \$6	6.8%	100%
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Mitigation Measure and Source	Formula and Variables	Relevant Tables and Other Info	Assumptions	Reduction (100% Employees Eligible)	Combined Reduction																								
Employee Transit Subsidies (SANDAG 1D)	<p>% change in VMT = % of employees eligible × % change in commute VMT</p> <p>Where: % of employees eligible will usually be 100%. % change in commute VMT differs by place type (low-density suburb, suburban center, or urban) and level of daily transit subsidy (\$1 to \$4)</p>	<p>Change in Commute VMT:</p> <table border="1"> <thead> <tr> <th rowspan="2">Place Type</th> <th colspan="4">Subsidy Level Per Day</th> </tr> <tr> <th>\$1</th> <th>\$2</th> <th>\$3</th> <th>\$4</th> </tr> </thead> <tbody> <tr> <td>Low-Density Suburb</td> <td>-0.1%</td> <td>-0.2%</td> <td>-0.4%</td> <td>-0.6%</td> </tr> <tr> <td>Suburban Center</td> <td>-1.1%</td> <td>-2.4%</td> <td>-4.1%</td> <td>-5.8%</td> </tr> <tr> <td>Urban</td> <td>-2.2%</td> <td>-4.7%</td> <td>-7.8%</td> <td>-10.9%</td> </tr> </tbody> </table>	Place Type	Subsidy Level Per Day				\$1	\$2	\$3	\$4	Low-Density Suburb	-0.1%	-0.2%	-0.4%	-0.6%	Suburban Center	-1.1%	-2.4%	-4.1%	-5.8%	Urban	-2.2%	-4.7%	-7.8%	-10.9%	Suburban Center; EZ Pass subsidy of approximately \$3.67, interpolated between \$3 and \$4.	5.2%	9%
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Note: Combined VMT reduction calculated using the formula Total VMT Reduction % = 1-(1-Measure A reduction)*(1-Measure B reduction).