11.6 VMT Analysis

TECHNICAL MEMORANDUM

To:	Mr. Matthew Sinacori City of Dana Point	Date:	April 13, 2021
From:	Richard E. Barretto, P.E., Principal Zawwar Saiyed, P.E., Associate Principal Linscott, Law and Greenspan, Engineers	LLG Ref:	2.20.4334.1
Subject:	***Doheny Village Overlay Project, Dana Point*** ***Vehicle Miles Traveled (VMT) Analysis***		

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit this Vehicle Miles Traveled (VMT) Analysis Technical Memorandum for the proposed Doheny Village Overlay project (herein after referred to as "Project") in the City of Dana Point, California. This Technical Memorandum presents the VMT screening criteria, analysis methodology, significance thresholds and VMT analyses. It should be noted that the approach and methodology outlined in this Technical Memorandum is generally consistent with the *Technical Advisory for Evaluating Transportation Impacts In CEQA,* published by the Governor's Office of Planning and Research (OPR), December 2018 (OPR Technical Advisory), which provides additional detail on the language and analysis procedures described in this Technical Memorandum.

The Project site, commonly referred to as Doheny Village, is generally located north of Pacific Coast Highway, south of Stonehill Drive, east of the OCTA Metrolink Railroad tracks, and west of the I-5 Freeway in the City of Dana Point, Orange County, California. The project site is currently developed with a wide range of commercial, industrial, institutional, and residential land uses totaling 55.96± acres

The following sections of this Technical Memorandum provide a brief history of Senate Bill 743 (SB 743), summarize the Project description, present OPRs VMT screening criteria, analysis methodology and thresholds, Project VMT and Cumulative VMT.

HISTORY OF SENATE BILL 743 (SB 743)

On September 27, 2013, Governor Jerry Brown signed Senate Bill 743 (SB 743). SB 743 created a process to change the way analysis of transportation impacts under the California Environmental Quality Act (CEQA) is conducted. The Governor's Office of Planning and Research (OPR) was tasked to amend the CEQA Guidelines to provide an alternative to the traditional metric of automobile delay which would promote three statutory goals: 1) the reduction of greenhouse gas (GHG) emissions; 2) the development of multimodal transportation networks; and 3) a diversity of land uses. OPR concluded that the use of Vehicle Miles Traveled (VMT), with thresholds linked to GHG reduction targets, would adequately analyze a project's transportation impacts while supporting all three statutory goals.

LINSCOTT LAW & GREENSPAN engineers

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law & Greenspan, Engineers
2 Executive Circle
Suite 250
Irvine, CA 92614
949.825.6175 T
949.825.5939 F
www.llgengineers.com

Pasadena
Irvine
San Diego
Woodland Hills

OPR released a preliminary evaluation of alternative methods for transportation analysis in December 2013, and by August 2014, released a preliminary discussion draft of potential updates to the CEQA Guidelines, which specified VMT as the selected metric for analysis. In 2016, OPR released a draft of the proposed revisions to the CEQA Guidelines. At the same time, OPR released a new *Technical Advisory for Evaluating Transportation Impacts In CEQA*, which provides technical recommendations regarding the implementation of VMT analysis state-wide in a document external to the CEQA statute.

After extensive stakeholder outreach, OPR transmitted the final proposed revisions to the CEQA Guidelines and the current draft of the *Technical Advisory* to the California Natural Resources Agency (the body responsible for certifying, adopting, and amending the CEQA Guidelines) in November 2017. Beginning in January 2018, the California Natural Resources Agency initiated the formal rulemaking process to adopt the proposed revisions, including the new Section 15064.3 which specifies VMT as the metric for transportation analysis. On December 28, 2018, the California Office of Administrative Law filed the revised CEQA Guidelines with the Secretary of the State on behalf of the Natural Resources Agency, thereby formally implementing vehicle miles traveled as the metric for transportation analysis under CEQA. Pursuant to the adopted Section 15064.3, a lead agency may elect to implement the new criteria for analyzing transportation impacts immediately. Beginning on July 1, 2020, the criteria must be applied state-wide.

PROJECT DESCRIPTION

The Project study area, commonly referred to as Doheny Village, is generally located north of Pacific Coast Highway, south of Stonehill Drive, east of the OCTA Metrolink Railroad tracks, and west of the I-5 Freeway in the City of Dana Point, Orange County, California. The Project site is currently developed with a wide range of commercial, industrial, institutional, and residential land uses totaling 55.96± acres. ***Figure 1*** presents a vicinity map for the Project site***.*** ***Figure 2*** presents an existing aerial of the Project site.

Existing Land Uses and Entitlements

Based on the City of Dana Point General Plan Land Use Map, the Project site is currently designated for Community Commercial (CC), Commercial/Residential (C/R), Residential 22-30 DU/AC (Res 22-30), Community Facility (CF) and Recreation/Open Space (R/OS) and is situated within the Coastal Overlay Boundary. ***Figure 3*** presents the existing General Plan land use map for the study area.

Based on the City of Dana Point Zoning Map, the Project site is zoned for Community Commercial/Vehicle (CC/V), Community Commercial/Pedestrian

(CC/P), Commercial/Residential (C/R), Residential Multiple Family 30 DU/AC (RMF 30), Community Facilities (CF), and Recreation (REC) and is situated within the Floodplain Overlay (FP-2) district. ***Figure 4*** presents the existing zoning map for the study area.

The City of Dana Point provided their GIS database which was utilized to document existing land use information, building square footages, residential dwelling unit (DU) and acreages on a parcel-by-parcel basis. ***Column (1)*** of ***Table 1*** presents the existing development totals within each of the proposed Zoning Districts of the Project. As shown in the last row of *Table 1, Column (1)*, the existing development includes 137,729 SF industrial land uses, 57,187 SF office land uses, 172,501 SF commercial land uses, 273 DU multifamily housing, 46,690 SF of church, 13 DU single family detached housing, 160 DU mobile homes and 101,300 SF of other land uses.

Proposed Project Development

The purpose of the Project is to preserve and enhance the eclectic combination of commercial, light industrial, and residential mixed-use in the area and achieve an integrated neighborhood-serving business and residential environment. Residential uses in the area provide housing near sources of employment or commercial and professional services, which is intended to add to the City's supply of affordable housing, reduce commutes between home and work, and promote a strong, stable, and desirable pedestrian-oriented environment.

As such, the proposed Project includes a zoning ordinance for a new overlay, and proposes the following amendments to the City's zoning code:

- Rezone commercial to commercial/light industrial mixed-use,
- Rezone commercial frontage to vertical commercial/residential mixed-use,
- Rezone existing vertical commercial/residential mixed-use to horizontal mixed-use,
- Increase residential density from 10 du/ac to 30-50 du/ac, and
- Flexible development standards, including parking reductions.

Upon implementation of the proposed Project, five (5) zoning districts have been established in the overlay area which include Village Commercial/Industrial (V-C/I), Village Main Street (V-MS), Village Commercial/Residential (V-C/R), Community Facilities (CF), and Recreation (REC). ***Figure 5*** illustrates the updated zoning districts as part of the Project. Parcels zoned for CF and REC will maintain their existing zoning district. The other three (3) districts are new as part of the zoning code update and consist of the following:

- **Village Commercial/Industrial (V-C/I)** – The V-C/I district includes a mixture of commercial, office and light industrial uses.
- **Village Main Street (V-MS)** – The V-MS district is intended to accommodate mixed-use buildings with neighborhood serving retail, service, and other uses on the ground floor, and commercial or residential uses above non-residential space.
- **Village Commercial/Residential (V-C/R)** – The V-C/R district includes a mixture of commercial, office and residential uses.

The implementation of the proposed Project would also require a General Plan Amendment to reflect the new zoning district classifications via appropriate land use designations, development intensity, and density standards

Future land use sizes were determined based on proposed residential densities and floor-to-area ratios (FAR), which consist of the following:

Zoning District	Residential Density	FAR
▪ Village Commercial/Industrial (V-C/I)	--	1.1:1.0 [a]
▪ Village Main Street (V-MS)	10 DU/AC	0.25:1.0 [b]
	30 DU/AC	0.25:1.0 [b]
▪ Village Commercial/Residential (V-C/R)	30 DU/AC	0.25:1.0 [b]
	50 DU/AC	0.25:1.0 [b]
▪ Community Facilities (CF)	30 DU/AC	0.7:1.0 [c]
▪ Recreation (REC)	--	0.1-0.2:1.0

Notes:
[a] = Approved FAR range is 0.75-1.5:1.0
[b] = FAR was not provided, therefore a ratio of 0.25:1.0 has been assumed as part of the Project
[c] = Approved FAR range is 0.4-1.0:1.0

Figure 5 also includes the proposed land use designations, intensities, and densities. Review of ***Column (2)*** of ***Table 1*** indicates that for future development, parcels within the V-C/I district are assumed to be a mixture of industrial, commercial and office use. Parcels within the V-C/R and V-MS districts are assumed to be a mixture of residential and commercial uses. Parcels within CF and REC districts are assumed to remain as existing. The proportion for V-C/I future land uses were determined based on coordination with City Staff whereas proportions for V-C/R future land uses were determined based on existing land use information. Please note that V-C/R also allows for office uses, however, only commercial uses were assumed to be conservative. The V-MS district is planned for ground floor commercial with residential above and therefore future land use splits are not required.

As shown in the last row of *Table 1*, the future development potential of the Project includes up to 251,533 SF industrial land uses, 68,599 office land uses, 364,902 SF commercial land uses, 1,256 DU multifamily housing, 2 DU single family detached housing, and 11,204 SF church. Comparison of the proposed uses to the existing uses shows that the Project would result in an "net" increase of 113,804 SF of general light industrial uses, 11,412 SF of general office building uses, 192,401 SF of commercial uses, 983 DU of multifamily housing and a reduction of 35,486 SF of church space and 11 single family units, 160 DU mobile home park and 101,300 SF of other land uses.

PROJECT SCREENING CRITERIA

Under the VMT methodology, screening is used to determine if a project will be required to conduct a detailed VMT analysis. Since the City of Dana Point currently doesn't have adopted VMT screening criteria, the following section discusses the various screening methods recommended by the State of California in the *OPR Technical Advisory* and whether the Project will screen-out, either in its entirety, or partially based on individual land uses.

Proximity to Transit Facilities

As noted previously, the CEQA Guidelines were amended to include section 15064.3, "Determining the Significance of Transportation Impacts". Subsection (b)(1) states in part:

> *"Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact."*

Pursuant to the statute, development projects may be screened out of VMT analysis based on proximity to certain transit facilities due to the presumption of less than significant impacts. The *Technical Advisory* reiterates this screening criteria, but also highlights certain project-specific or location-specific characteristics which may indicate the project will still generate "significant levels of VMT", even when located within one-half mile of a major transit stop or a stop along a high-quality transit corridor. These characteristics relate to the project's floor area ratio (FAR), parking supply, and number of dwelling units, as well as consistency with the applicable Sustainable Communities Strategy (SCS). If the project has any characteristics which indicate that the presumption of less than significant impacts as stated in the CEQA Guidelines may not be appropriate, the *OPR Technical Advisory* recommends that the project should not be screened out of further VMT analysis.

Based on the above, the proposed Project will not screen-out since it is not within one-half mile of neither an existing major transit stop[1] nor a stop along an existing high-quality transit corridor[2].

Small Projects

The *OPR Technical Advisory* recommends that VMT analyses be conducted for projects which are forecast to generate 110 or more average daily trips (ADT). The CEQA Guidelines provide a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet[3]. OPR states that "typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact." OPR thus reasons that projects which are forecast to generate fewer than 110 daily trips would be comparable to categorically exempt projects and could be presumed to cause less than significant impacts.

Based on the above, the proposed Project will not screen-out since it generates more than 110 daily trips.

Map-Based Screening

An additional screening methodology is provided for residential and office land use projects. Lead agencies may prepare maps based on a regional travel demand model or travel survey data to illustrate areas that are currently below the selected VMT threshold. OPR reasons that if a project has similar characteristics to the existing area (i.e., density, mix of uses, transit service, etc.), it will tend to exhibit similar VMT. Therefore, if a project is fully located within an area identified as having a below-threshold VMT, it may be presumed to also have less than significant VMT impacts and be screened out from requiring a detailed VMT analysis.

Based on the above, the proposed Project will not screen-out since no map-based screening is available.

[1] *Public Resources Code Section 21064.3*: "'Major Transit Stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods."

[2] *Public Resources Code Section 21155*: "For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."

[3] CEQA Guidelines Section 15301, Subsection (e)(2).

Additional Screening Considerations

OPR provides additional recommendations on when the presumption of less than significant impacts may be appropriate, in addition to the formally recommended screening criteria described above. For instance, in the discussion regarding retail projects, the *OPR Technical Advisory* advises lead agencies that because local serving retail projects tend to improve retail destination proximity, shorten trips, and reduce VMT, they may be presumed to have less than significant impacts. Agencies may choose to define what constitutes local serving retail in their jurisdiction, although OPR suggests a threshold size of 50,000 square feet or less. Thus, lead agencies may choose to screen out projects based on the type and size of the land use(s) being proposed.

Further, OPR states that mixed-use projects should analyze each land use individually.

Based on the above, the proposed Project will not screen-out, thus requiring a full VMT analysis as presented in this Technical Memorandum.

Additionally, the *OPR Technical Advisory* cites research that could support the presumption of less than significant impacts for 100% affordable housing projects, on the basis that low-wage workers are more likely to choose housing close to their workplaces, thus reducing commute distances and VMT.

Based on the above, the proposed Project will not screen-out since it is not a 100% affordable housing project.

Flow Chart 1 presents the recommended screening criteria, as discussed above, for land use projects consistent with the *OPR Technical Advisory*. It should be noted that a land use project only needs to satisfy one of the screening criteria of the flow chart to qualify for screening.

VEHICLE MILES TRAVELED (VMT) ANALYSIS METHODOLOGY

According to OPR, Projects that do not screen out based on the aforementioned criteria shall complete a full VMT analysis. In the absence of the City of Dana Point VMT guidelines, the VMT analysis methodology as provided by OPR has been utilized. The following summary of the guidelines has been prepared based on a review of the revisions to the CEQA Guidelines and OPR's current *Technical Advisory*.

It should be noted that according to OPR, "vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project. Here, the term "automobile" refers to on-road passenger vehicles, specifically cars, and light trucks.

The primary reason being, as mentioned previously, is to align with the State's three statutory goals; (1) reduction of GHG emissions; (2) development of multi-modal networks; and (3) a diversity of land uses.

OPR's Guidance on Methodology for Project Impacts

According to OPR, tour-based and trip-based approaches offer the most viable methods for determining VMT from residential projects, office project and retail projects, and for comparing those results to VMT thresholds. These approaches also offer the simplest methodology for determining VMT reductions from mitigation measures for residential projects, office project and retail projects.

Based on the above, a full VMT analysis utilizing the Orange County Transportation Analysis Model (OCTAM) has been used to determine the VMT for the Project and for the City of Dana Point average and will provide the following:

- Home-based average VMT per Capita for residential land uses.
- Employment-based average VMT per Employee for office land uses.
- Net increase in Total VMT for retail land uses.

Finally, the Project average VMT will then be compared to the City of Dana Point average to determine whether or not the Project will have a significant impact based on the significance thresholds defined in this Technical Memorandum.

OPR's Guidance on Methodology for Cumulative Impacts

OPR states that a Project's cumulative impacts are based on a determination of whether the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." When using an absolute VMT metric, i.e., total VMT, analyzing the combined impacts for a cumulative impact analysis may be appropriate. A project that falls below the threshold that is aligned with long-term goals and relevant plans has no cumulative impact distinct from the Project impact. Accordingly, a less than significant Project impact would imply a less than significant cumulative impact, and vice versa.

VEHICLE MILES TRAVELED (VMT) SIGNIFICANCE THRESHOLDS

As previously discussed, a project that meets the screening criteria will require preparation of a detailed transportation analysis. The project VMT will be evaluated in order to determine if the project is expected to cause a significant transportation impact. Under the VMT methodology, a transportation impact is considered significant if the project-related VMT is equal to or exceeds the thresholds.

Mitigation of project transportation impacts is required whenever VMT generated by the proposed development causes an increase of the analyzed VMT by an amount greater than the predetermined significance thresholds.

The following section discusses the VMT impact thresholds recommended by the State for residential projects, office project and retail projects.

OPR's Guidance on Thresholds

Public Resources Code Section 21099 provides the criteria for determining the significance of transportation impacts. There are three statutory goals that the significance criteria must promote: (1) reduction of GHG emissions; (2) development of multi-modal networks; and (3) a diversity of land uses. The *OPR Technical Advisory* provides OPR's recommendations for quantitative thresholds of significance, which align with the State's three statutory goals. The recommended significance thresholds were developed from legislative mandates and state policies (i.e., AB 32, SB 375, SB 391 and a number of Executive Orders) that established quantitative GHG emissions reduction targets.

The *OPR Technical Advisory* states that a fifteen percent (15%) reduction in VMT is achievable for development projects in a variety of place types and is consistent with SB 743's direction to OPR to select a threshold that aligns with the State's three statutory goals.

Residential Projects

For residential projects, the existing VMT per capita may be measured from city or regional averages. If city VMT per capita is used as a basis for a significance threshold in a Metropolitan Planning Organization (MPO) area, the project should not cumulatively exceed the population or number of units specified in the SCS for that city and should be consistent with the SCS. Exceeding the population or the number of units specified in the SCS would undermine the GHG reduction targets stated in SB 375.

For residential projects located in unincorporated county areas, the Technical Advisory provides additional recommendations as a basis for significance thresholds:

- "The local agency can compare a residential project's VMT to (1) the region's VMT per capita, or (2) the aggregate population-weighted VMT per capita of all cities in the region."

The Technical Advisory applies the thresholds for residential projects to either household (i.e., tour-based) VMT or home-based (i.e., trip-based) VMT assessments. It should be noted that the metric used to determine project VMT and the city-wide or regional VMT must be consistent (i.e., "apples to apples" comparison).

Office Projects

For office projects, the existing VMT per employee may be measured from the regional average. However, if a region is substantially larger than the geography over which most workers would be expected to live, a smaller geography to develop significance thresholds may be utilized, which in this case is the City of Dana Point.

Similar to residential projects, the *OPR Technical Advisory* applies the thresholds for office projects to either tour-based VMT or home-based (i.e., trip-based) VMT assessments. The metric used to determine project VMT and the city-wide or regional VMT must be consistent (i.e., "apples to apples" comparison).

Retail Projects

While residential and office projects typically create new trips, retail projects typically redistribute trips. Therefore, the *OPR Technical Advisory* recommends analyzing the change in VMT for retail projects (i.e., the difference in total VMT in the area affected with and without the project). If the retail project causes a net decrease in the total VMT, the project is not expected to create a significant transportation impact.

It should be noted that the threshold only applies to regional-serving retail, not local-serving retail. As local-serving retail developments typically shorten trips and reduce VMT, they are not expected to create a significant transportation impact. On the other hand, regional-serving retail developments may create a significant transportation impact due to substitution of longer trips for shorter ones. Accordingly, the recommended threshold for retail developments would apply only to regional-serving retail.

As a general classification, the *OPR Technical Advisory* suggests that retail projects up to 50,000 square feet might be considered local-serving. Retail projects larger than 50,000 square feet might be considered regional-serving. However, the classification between local-serving retail and regional-serving retail is to be determined by the lead agency as they have a better understanding of the likely travel behaviors of future patrons to the retail project.

Thresholds of Significance

It should be noted that the *OPR Technical Advisory* provides recommendations for thresholds of significance for only three types of development, focusing only on the project types which tend to have the greatest effect on VMT. The *OPR Technical Advisory* does not provide recommendations on thresholds for other kinds of development projects. The three main development project types, residential, office, and retail may be considered proxies for developments which exhibit certain trip/travel characteristics as shown below:

- "Residential" may be considered a proxy for a development which generates new trips.
- "Office" may be considered a proxy for a development which generates primarily work trips.
- "Retail" may be considered a proxy for a development which primarily attracts already existing trips, leading to a diversion of trips rather than generating new trips.

If a project can be demonstrated to match one of these proxy categories, the applicable thresholds may be utilized. Thus, the proposed Project components are expected to generate new trips and have been analyzed under the residential, office and retail thresholds as listed below:

- A proposed Residential project exceeding a level of 15% below average existing regional (in this case City of Dana Point) VMT per capita may indicate a significant transportation impact.
- A proposed Office project exceeding a level of 15% below existing regional (in this case City of Dana Point) VMT per employee may indicate a significant transportation impact.
- A proposed Retail project with a net increase in total VMT may indicate a significant transportation impact.

VEHICLE MILES TRAVELED (VMT) ANALYSIS

Summarized below are the average VMT per Capital, average VMT per Employee and Total VMT values utilizing OCTAM for the City of Dana Point and the proposed Project. It should be noted that the Project is located in Traffic Analysis Zone (TAZ) 1706 and the Project development totals were converted into Socio-Economic Data (SED) and inputted into OCTAM. ***Figure 6*** presents the TAZ Map from OCTAM.

City of Dana Point				
Year	**2016 Existing**	**2045 Entitled**	**2045 Proposed**	**Threshold (15% below 2045 Entitled)**
VMT per capita	21.5	21.3	--	18.11
VMT per employee	20.0	20.4	--	17.34
Total VMT	1,353,350.2	1,464,172.1	1,526,267.7	62,095.60[4]

[4] Net increase in total VMT since the 15% below 2045 Entitled metric not applicable.

Project (TAZ 1706)				
Year	**2016 Existing**	**2045 Entitled**	**2045 Proposed**	**Compared to Threshold (2045 Entitled)**
VMT per capita	16.8	16.8	16.6	8.34% Lower
VMT per employee	20.4	20.5	18.6	***7.27% Higher***
Total VMT (Citywide)	1,353,350.2	1,464,172.1	1,526,267.7	***4.24% Higher***

Project VMT Significance Thresholds

As shown above, the proposed Project VMT per employee is ***7.27%*** above the City of Dana Point average VMT per employee threshold (18.6 – 17.34) ÷ 17.34 x 100% = 7.27%). Based on the criteria outlined in this memorandum, the proposed Project VMT per employee will exceed a level of 15% below the City of Dana Point average VMT per employee threshold. It should be noted that with the implementation of the Transportation Demand Management (TDM) strategies presented in the forthcoming section, the VMT per employee will decrease to less than the threshold, will not exceed a level of 15% below the City of Dana Point average VMT per employee and thus will not have a significant Project VMT impact for the office/commercial land uses.

Additionally, as presented above and based on the criteria outlined in this report, the proposed Project does not exceed a level of 15% below City of Dana Point average VMT per capita threshold as the Project is 8.34% below the City of Dana Point average VMT per capita threshold and thus does not have a significant Project VMT impact for the residential land uses.

Further, as shown above, the proposed Project net total VMT is ***4.24%*** above the City of Dana Point total VMT. Based on the criteria outlined in this memorandum, the proposed Project net total VMT will exceed the City of Dana Point total VMT threshold. It should be noted that with the implementation of the Transportation Demand Management (TDM) strategies presented in the forthcoming section, the net total VMT will decrease to less than the threshold, will not exceed the City of Dana Point total VMT and thus will not have a significant Project VMT impact for the retail land uses.

Cumulative VMT Significant Impact

As previously mentioned, and according to the *OPR Technical Advisory*, a less than significant Project impact would imply a less than significant Cumulative impact. Thus, with the implementation of the Transportation Demand Management (TDM) strategies presented in the forthcoming section, the VMT per employee and net total VMT will decrease to less than the threshold, will not exceed the City of Dana Point average VMT per employee total VMT and thus will not have a significant Cumulative VMT impact for the office or retail land uses

VEHICLE MILES TRAVELED (VMT) MITIGATION MEASURES

To reduce the VMT per employee and net total VMT to below the thresholds, mitigation can be achieved by changing the proposed land uses, modifying project design features or by implementing Transportation Demand Management (TDM) strategies.

The California Air Pollution Control Officers Association's *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* Report, Chapters 6 & 7, August 2010, (CAPCOA Report) quantifies the reduction in vehicle miles traveled (VMT) associated with a particular mitigation measure. The CAPCOA VMT reduction strategies include built environment changes and TDM actions.

It should be noted that there are rules and combined maximums for calculating the VMT reduction when applying multiple mitigation measures. The CAPCOA Report rules should be considered and the combined Global Maximum Reductions[5] should not be exceeded the maximums stated.

Given that the City of Dana Point is considered a "Suburban" setting, the maximum VMT reduction values utilizing the CAPCOA measures for suburban areas shall apply to proposed land use projects within the City as shown below:

- 5% Land Use/Location Maximum Reduction
- 10% Transportation Measures Cross-Category Maximum Reduction
- 15% Transportation Measures Global Maximum Reduction

The Transportation Demand Management (TDM) strategies are sub-categorized into the following:

1) Land Use/Location
2) Neighborhood/Site Design
3) Parking Policy/Pricing
4) Trip Reduction Programs
5) Transit System Improvements
6) Road Pricing/Management

[5] According to the CAPCAO report, global maximum reductions are provided for any combination of; 1) land use/location; 2) neighborhood/site enhancements; 3) parking policy/pricing; 4) commute trip reduction and; 5) transit system improvement strategies. This excludes reductions from road-pricing measurements. The total project VMT reduction across these five subcategories categories, which can be combined through multiplication, should be capped at these levels based on empirical evidence.

Table 2[6] presents the TDM strategies that are applicable to land use projects within the City of Dana Point. The first column indicates the CAPCOA Report section that discusses the methodology for quantifying the VMT reduction associated with the corresponding measure. A measure's range of effectiveness in VMT reduction is indicated in the last column.

Measures that show a numerical range are primary strategies that can be implemented as a stand-alone strategy, while measures that indicate "N/A" are grouped or support strategies that must be paired with other strategies within the category.

Based on the above and utilizing one or a combination of the TDM strategies in *Table 2*, the proposed Project will offset the 7.27% change in VMT per employee to less than the threshold, and thus will not have a significant Project or Cumulative VMT impact.

Further, based on the above and utilizing one or a combination of the TDM strategies in *Table 2*, the proposed Project will offset the 4.24% net increase in total VMT to less than the Citywide total VMT threshold, and thus will not have a significant Project or Cumulative VMT impact.

The Project applicant will work closely with the City staff to get concurrence and approval on the selected recommended TDM strategies and their applicability.

CONCLUSION

Consistent with the *OPR Technical Advisory* and based on the VMT methodology, criteria, guidelines, thresholds, results and implementation of TDM strategies outlined in this Technical Memorandum, the proposed Project will not have a significant Project or Cumulative VMT impact for the residential, office and retail land uses.

* * * * * * * * * * *

We appreciate the opportunity to provide this Technical Memorandum. Should you have any questions regarding the memorandum, please contact us at (949) 825-6175.

cc: File

[6] California Air Pollution Control Officers Association's *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures* Report, Chapters 6 & 7, August 2010, (CAPCOA Report).

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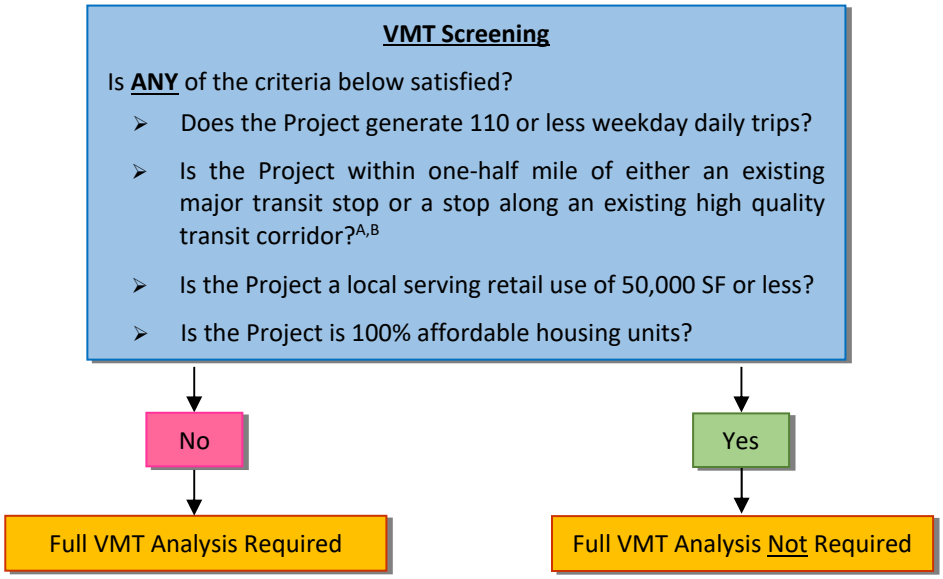
FLOW CHART 1
VMT SCREENING CRITERIA FLOW CHART



Notes:

A. "Major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

B. "High-quality transit corridor" means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

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TABLE 1
TOTAL PROJECT DEVELOPMENT SUMMARY

Proposed Project Zoning District	Land Use	(1) Existing Development within Proposed Zoning District	(2) Future Development within Proposed Zoning District
❑ Village Commercial/Industrial (V-C/I)	General Light Industrial	135,879 SF	251,533 SF (55.0%)
	General Office Building	16,649 SF	68,599 SF (15.0%)
	Commercial	6,940 SF	137,201 SF (30.0%)
	Other Land Uses[7]	64,307 SF	--
❑ Village Main Street (V-MS) (30 DU/AC)	Commercial	113,948 SF	118,060 SF
	Multifamily Housing (Mid-Rise)	--	325 DU
❑ Village Main Street (V-MS) (10 DU/AC)	Commercial	27,411 SF	23,017 SF
	Multifamily Housing (Mid-Rise)	--	21 DU
❑ Village Commercial/Residential (V-C/R) (50 DU/AC)	Commercial	8,558 SF	42,429 SF (29.0%)
	Multifamily Housing (Low-Rise)	--	477 DU (71.0%)
	Mobile Home Park	160 DU	--
❑ Village Commercial/Residential (V-C/R) (30 DU/AC)	Commercial	15,644 SF	44,195 SF (29.0%)
	Multifamily Housing (Low-Rise)	273 DU	298 DU (71.0%)
	Single-Family Detached Housing	11 DU	--
	General Office Building	40,538 SF	--
	General Light Industrial	1,850 SF	--
	Church	35,486 SF	--
	Other Land Uses[7]	17,693 SF	--
❑ Community Facilities (CF)	Multifamily Housing (Low-Rise)	--	135 DU
	Church	11,204 SF	11,204 SF
	Single Family Detached Housing	2 DU	2 DU
	Other Land Uses[7]	19,300 SF	--
❑ ***Total Development Potential***	***General Light Industrial***	***137,729 SF***	***251,533 SF***
	General Office Building	***57,187 SF***	***68,599 SF***
	Commercial	***172,501 SF***	***364,902 SF***
	Multifamily Housing (Mid-Rise)	***--***	***346 DU***
	Multifamily Housing (Low-Rise)	***273 DU***	***910 DU***
	Church	***46,690 SF***	***11,204 SF***
	Single Family Detached Housing	***13 DU***	***2 DU***
	Mobile Home Park	***160 DU***	***--***
	Other Land Uses[7]	***101,300 SF***	***--***

[7] Other Land Uses consist of boat storage and museum for V-C/I, fire station, daycare, and athletic club for V-C/R, and bus storage for CF.

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TABLE 2
TRANSPORTATION DEMAND MANAGEMENT (TDM) STRATEGIES

Category	Measure Number	Strategy	Grouped With #	Range of Effectiveness	
				Percent Reduction in GHG Emissions	Basis
Land Use / Location	LUT-6	Integrate Affordable and Below Market Rate Housing		0.04-1.20%	VMT
	LUT-9	Improve Design of Development		3.0-21.3%	VMT
Neighborhood / Site Design	SDT-1	Provide Pedestrian Network Improvements		0-2%	VMT
	SDT-2	Traffic Calming Measures		0.25-1.00%	VMT
	SDT-3	Implement a Neighborhood Electric Vehicle (NEV) Network		0.5-12.7%	VMT
	SDT-4	Urban Non-Motorized Zones	SDT-1	NA	
	SDT-5	Incorporate Bike Lane Street Design (on-site)	LUT-9	NA	
	SDT-6	Provide Bike Parking in Non-Residential Projects	LUT-9	NA	
	SDT-7	Provide Bike Parking in Multi-Unit Residential Projects	LUT-9	NA	
	SDT-9	Dedicate Land for Bike Trails	LUT-9	NA	
Parking Policy / Pricing	PDT-1	Limit Parking Supply		5-12.5%	
	PDT-2	Unbundle Parking Costs from Property Cost		2.6-13%	
	PDT-3	Implement Market Price Public Parking (On-Street)		2.8-5.5%	
	PDT-4	Require Residential Area Parking Permits	PDT-1, 2 & 3	NA	

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TABLE 2 (CONTINUED)
TRANSPORTATION DEMAND MANAGEMENT (TDM) STRATEGIES

Category	Measure Number	Strategy	Grouped With #	Range of Effectiveness	
				Percent Reduction in GHG Emissions	Basis
Trip Reduction Programs	TRT-1	Implement Voluntary CTR Programs		1.0-6.2%	Commute VMT
	TRT-2	Implement Mandatory CTR Programs – Required Implementation/Monitoring		4.2-21.0%	Commute VMT
	TRT-3	Provide Ride-Sharing Programs		1-15%	Commute VMT
	TRT-4	Implement Subsidized or Discounted Transit Prog.		0.3-20.0%	Commute VMT
	TRT-5	Provide End of Trip Facilities	TRT-1, 2 & 3	NA	
	TRT-6	Telecommuting and Alternative Work Schedules		0.07-5.50%	Commute VMT
	TRT-7	Implement Commute Trip Reduction Marketing		0.8-4.0%	Commute VMT
	TRT-8	Implement Preferential Parking Permit Program	TRT-1, 2 & 3	NA	
	TRT-9	Implement Car-Sharing Program		0.4-0.7%	VMT
	TRT-10	Implement School Pool Program		7.2-15.8%	School VMT
	TRT-11	Provide Employer-Sponsored Vanpool/Shuttle		0.3-13.4%	Commute VMT
	TRT-12	Implement Bike-Sharing Program	SDT-5, LUT-9	NA	
	TRT-13	Implement School Bus Program		38-63%	School VMT
	TRT-14	Price Workplace Parking		0.1-19.7%	Commute VMT
	TRT-15	Implement Employee Parking "Cash-Out"		0.6-7.7%	Commute VMT

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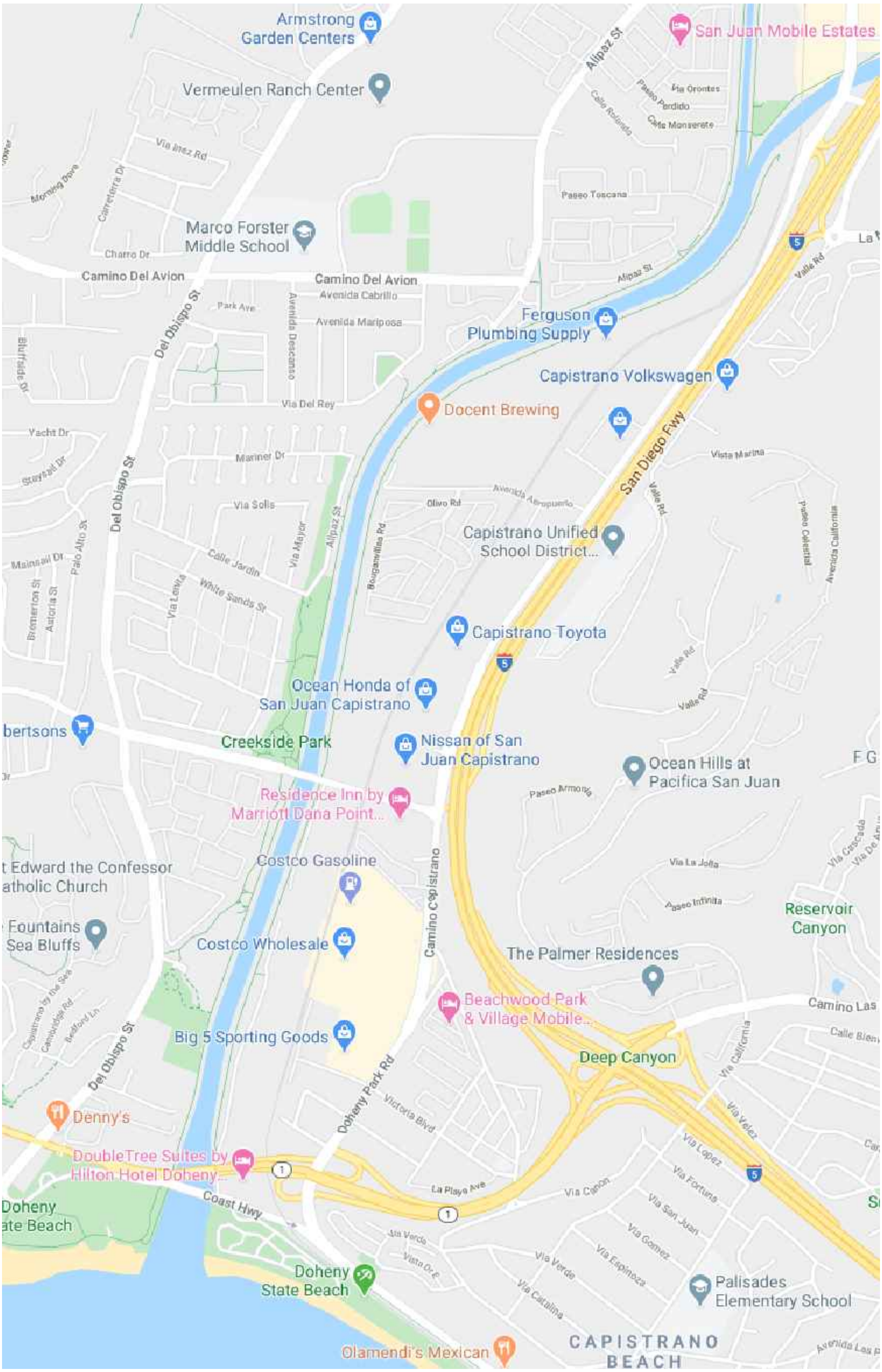
TABLE 2 (CONTINUED)
TRANSPORTATION DEMAND MANAGEMENT (TDM) STRATEGIES

Category	Measure Number	Strategy	Grouped With #	Range of Effectiveness	
				Percent Reduction in GHG Emissions	Basis
Transit System Improvements	TST-1	Provide a Bus Rapid Transit System		0.02-3.2%	VMT
	TST-2	Implement Transit Access Improvements	TST-3, TST-4	NA	
	TST-3	Expand Transit Network		0.1-8.2%	VMT
	TST-4	Increase Transit Service Frequency/Speed		0.02-2.5%	VMT
	TST-5	Provide Bike Parking Near Transit	TST-3, TST-4	NA	
	TST-6	Provide Local Shuttles	TST-3, TST-4	NA	
Road Pricing / Management	RPT-1	Implement Area or Cordon Pricing		7.9-22.0%	VMT
	RPT-2	Improve Traffic Flow		0-45%	VMT
	RPT-3	Require Project Contributions to Transportation Infrastructure Improvement Projects	RPT-2, TST-1 to 6	NA	
	RPT-4	Install Park-and-Ride Lots	RPT-1, TRT-11, TRT-3, TST-1 to 6	NA	



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SOURCE: GOOGLE

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N NO SCALE

FIGURE 1

VICINITY MAP

DOHENY VILLAGE OVERLAY VMT, DANA POINT

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SOURCE: GOOGLE

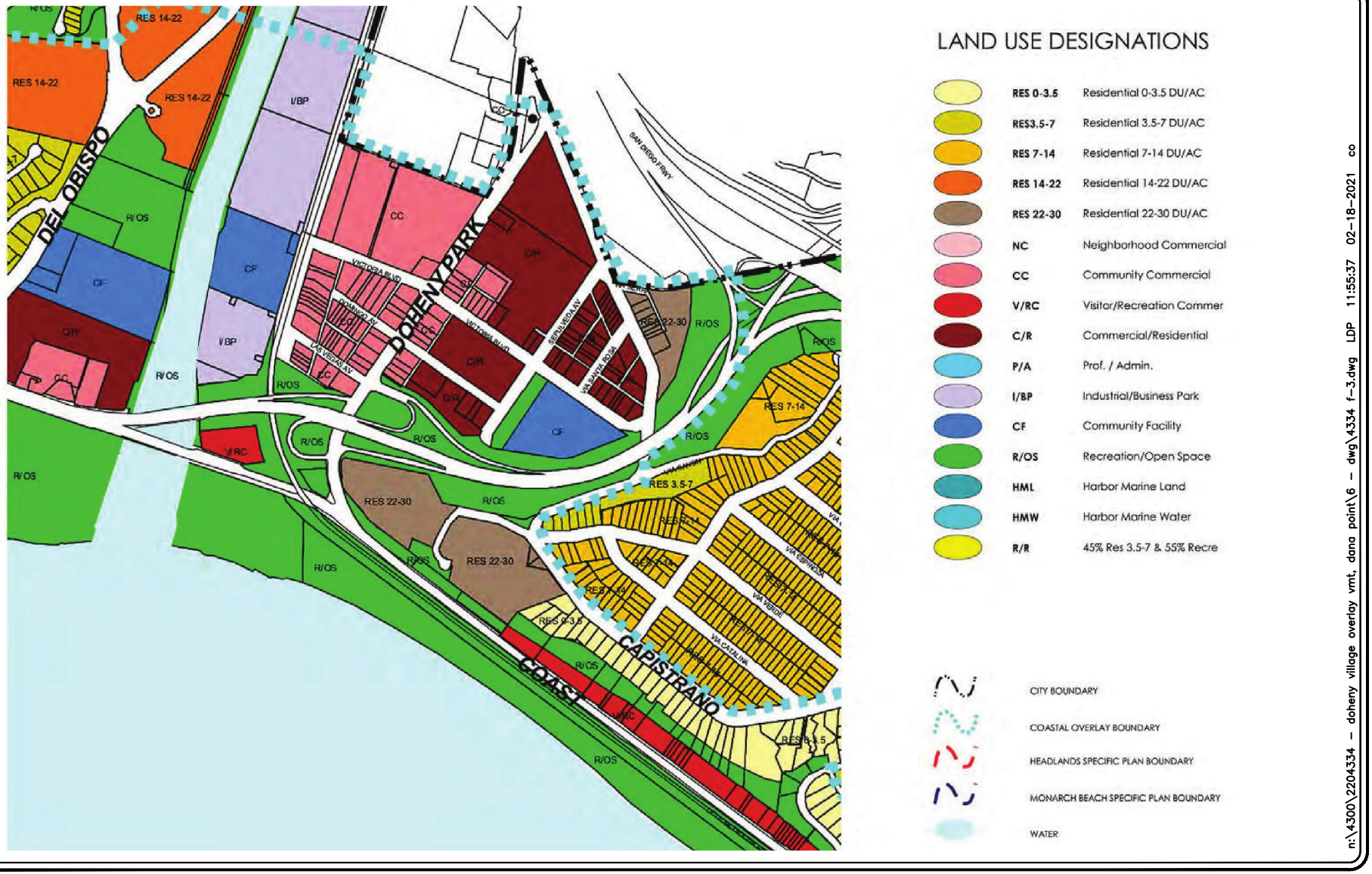
KEY

= PROJECT SITE

FIGURE 2

EXISTING SITE AERIAL

DOHENY VILLAGE OVERLAY VMT, DANA POINT



SOURCE: CITY OF DANA POINT

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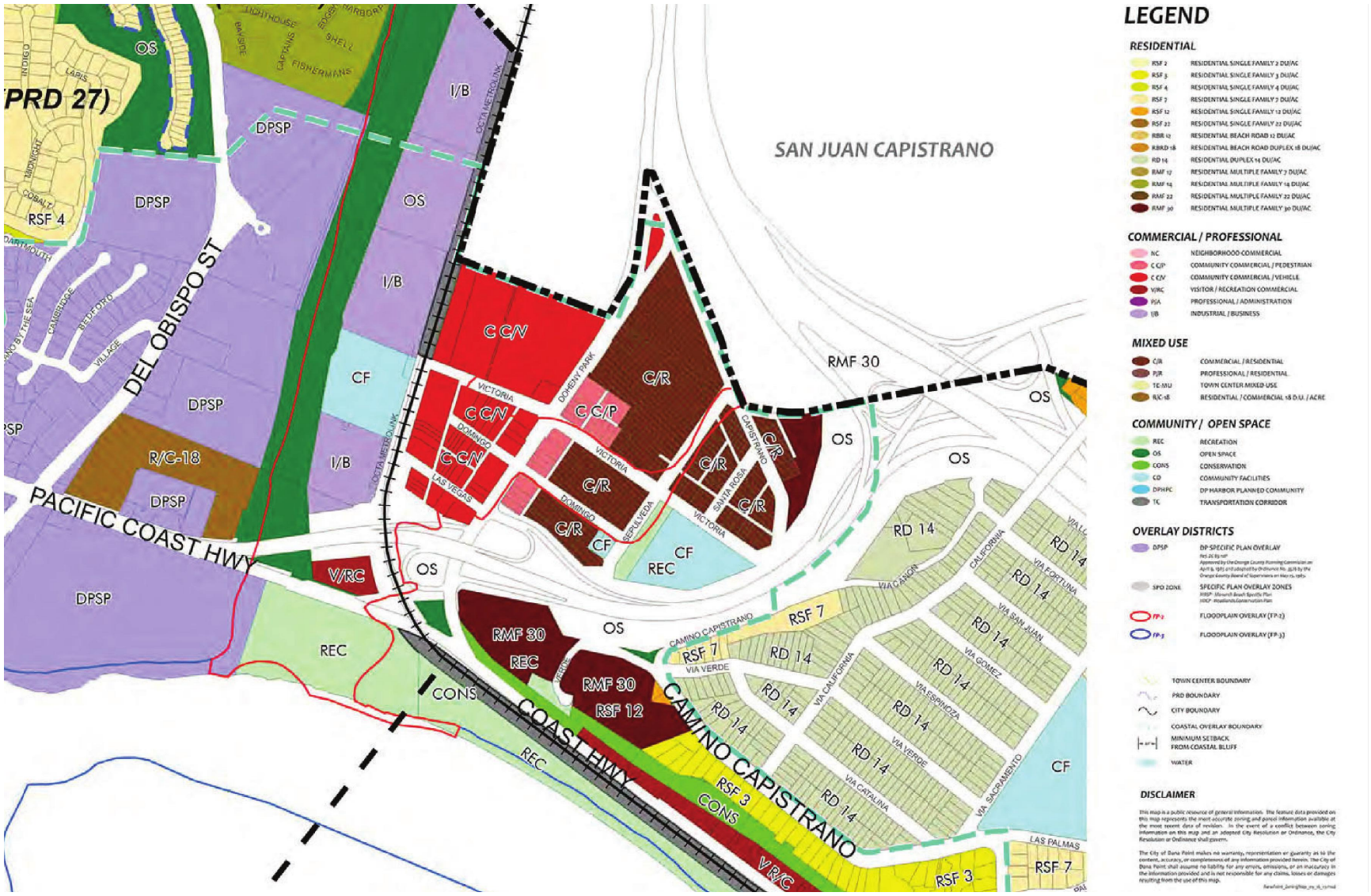
N NO SCALE

FIGURE 3

EXISTING GENERAL PLAN LAND USE MAP

DOHENY VILLAGE OVERLAY VMT, DANA POINT



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SOURCE: CITY OF DANA POINT

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FIGURE 4

EXISTING ZONING MAP

DOHENY VILLAGE OVERLAY VMT, DANA POINT

ZONING DISTRICT	DENSITY	FAR
VILLAGE COMMERCIAL/INDUSTRIAL (V-C/I)	–	1.1:1.0 [A]
VILLAGE MAIN STREET (V-MS)	30 DU/AC	0.25:1.0 [B]
VILLAGE MAIN STREET (V-MS)	10 DU/AC	0.25:1.0 [B]
VILLAGE COMMERCIAL/RESIDENTIAL (V-C/R)	30 DU/AC	0.25:1.0 [B]
VILLAGE COMMERCIAL/RESIDENTIAL (V-C/R)	50 DU/AC	0.25:1.0 [B]
COMMUNITY FACILITIES (CF)	30 DU/AC	0.7:1.0 [B]
RECREATION (REC)	–	0.1-0.2:1.0 [C]

NOTES
[A] = APPROVED FAR IS 0.75-1.5:1.0
[B] = FAR WAS NOT PROVIDED, THEREFORE A RATIO OF 0.25:1.0 HAS BEEN ASSUMED
[C] = APPROVED FAR IS 0.4-1.0:1.0

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FIGURE 5

PROJECT ZONING DISTRICTS AND LAND USE DESIGNATIONS

DOHENY VILLAGE OVERLAY VMT, DANA POINT

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SOURCE: GOOGLE

KEY
= PROJECT SITE

FIGURE 6

TAZ MAP

DOHENY VILLAGE OVERLAY VMT, DANA POINT