



AGENDA REPORT

Meeting Date

06/27/2023

Prepared By: Elaine Lister, Director of Community Development
Budgetary Review By: Cheryl Dyas, Director of Administrative Services / City Treasurer
Submitted By: Dennis Wilberg, City Manager

Agenda Title

General Plan Amendment GPA2021-35 - Revision to City-Initiated Petition Related to the City's Housing Element Update as Required by State Law to Address the State's 6th Housing Cycle for the Years 2021-2029

Recommended Action

(1) Review and discuss the revised Housing Element; (2) receive public input; and (3) direct staff to make additional clean-up and revision to the Housing Element based on recent communication with the California Department of Housing and Community Development (HCD) and submit to HCD for review.

Executive Summary

Background

The revised Housing Element was most recently considered by the Planning and Transportation Commission at a noticed public hearing on 6/12/23. After public comments and deliberation, the Commission adopted Resolution No. 2023-1493 recommending that the City Council adopt the revised Housing Element. A copy of the draft Meeting Minutes and Commission Resolution are attached for reference. At this time, however, staff is recommending that the City Council defer adoption until after HCD formally reviews and comments on the revised document.

Housing Element Overview

The Housing Element is one of seven mandated elements of the local general plan (Govt. Code Sec. 65302(c)). Unlike the other elements, state law requires local governments to update the Housing Element not less than once every eight years. The updates must demonstrate how cities and counties adequately plan to meet the existing and projected housing needs of everyone in their communities. The Housing Element includes analysis of local housing needs; resources for the production, improvement and preservation of the housing stock; constraints to the development and maintenance of housing; accomplishments during the previous planning period; and a program of actions for the new planning period. Additionally, the Housing Element must identify adequate sites for housing and make those sites available through appropriate zoning and land use controls (Govt. Code Sec. 65583 and 65583(c)(1)). State law also includes specific requirements regarding local policies and regulations to encourage and facilitate the provision of housing for various special needs groups, such as persons with disabilities and those in need of temporary housing.

The Regional Housing Needs Assessment ("RHNA") is the amount of new housing needed by income category in each jurisdiction to accommodate the region's projected population growth. The RHNA allocation identifies the amount of additional housing a jurisdiction would need at all price levels to fully accommodate its assigned share of the region's housing need during the 8-year planning period (2021-2029). The RHNA allocation is a planning target based on projected housing needs; it is not a construction quota or mandate. Local governments are not required to build housing or issue permits to achieve their RHNA allocations; however, some provisions in State law establish specific requirements when housing production falls short of RHNA allocations. Other than requirements for streamlined permit processing, there are currently no legal or financial penalties imposed on cities for failing to achieve their RHNA allocations if a Housing Element has been adopted in compliance with State law.

To assist the City of Mission Viejo during the 6th housing cycle process, which included consultation during the RHNA and preparation of the City's Housing Element update for the 2021-2029 Planning Period, the City hired housing consultant, JHD Planning, LLC, on January 15, 2019.

On March 22, 2021, the Southern California Association of Governments ("SCAG") adopted the region's final RHNA and assigned a RHNA target of 2,217 dwelling units, including 1,075 lower-income units, to the City of Mission Viejo.

On March 31, 2021, the City Council and the Planning and Transportation Commission conducted a joint public workshop to initiate the Housing Element update process. Public notice was provided for the online workshop, with an opportunity for the public to view the meeting on-line and provide real-time comments via telephone. Comments from the public, City Council, and Planning and Transportation Commission were considered during preparation of the City's draft Housing Element.

On May 24, 2021, the Planning and Transportation Commission held a noticed public meeting at which the Commission considered the draft General Plan Housing Element, received public testimony, and provided comments to staff. On June 8, 2021, the City Council held a noticed public meeting at which the Council considered the draft General Plan Housing Element Update, received public testimony, provided comments to staff, and continued the item. On June 20, 2021, the City Council held a second public meeting and directed staff to submit the revised draft Housing Element update to HCD. The draft Housing Element was made available for review at City Hall and on the City's website. Staff submitted the revised draft Housing Element to HCD on July 8, 2021. The City received a 'findings' review letter from HCD, dated September 7, 2021, identifying the necessary revisions to comply with state Housing Element Law.

On September 27, 2021, the Planning and Transportation Commission held a noticed public hearing at which time the Commission received public testimony and unanimously recommended the City Council approve the revised draft Housing Element update that was prepared in response to HCD's September 7, 2021, letter. The Commission's action included a recommendation to rezone 11 sites to accommodate Mission Viejo's RHNA of 2,217 units. The September 27, 2021, noticed public hearing was specifically scheduled to allow time to forward the draft update to City Council on October 12, 2021, and meet the state's statutory deadline for Housing Element adoption and rezoning of October 15, 2021. Rezoning by this date was necessary to ensure the City's housing sites would not become "By-Right," which potentially provides developers an over-the-counter review of housing projects and exemption from local development standards and public hearing process. On October 12, 2021, the City Council held a public meeting and adopted General Plan Amendment GPA2021-35; the related CEQA Addendum prepared for the project; Development Code Amendment DCA2021-19, amending Title 9 of the Mission Viejo Municipal Code to establish and define new high-density residential zoning districts; and Zone Change ZC2021-25 to modify the City Zoning Map as it pertains to the 11 designated sites for residential development as identified in the Housing Element. The City Council also directed staff to submit the revised Housing Element to HCD. Staff submitted the revised Housing Element to HCD on October 13, 2021, and received a second 'findings' review letter from HCD, dated January 10, 2022.

In September 2022, the City released the previous consultant from their contract and entered into a new agreement with Veronica Tam and Associates to assist the Housing Element update.

A. Housing Element Update

The current draft of the revised Housing Element is considered a substantial rewrite to the previous version; therefore, a redlined version of the document is not available for review. To provide guidance to the changes made to the Housing Element, staff prepared a matrix that outlines how the document addresses each of HCD's comments (see Attachment 3). The following is a summary of some of the significant additions to the Housing Element.

B.1 Sites Analyses

The previous housing sites inventory included 12 sites that would accommodate the City's new total RHNA obligation of 2,217 dwelling units, including 1,075 lower income units. Recent residential developments during this current planning period (Trumark's Saddleback Place, Shea's Neo, Morningstar Assisted Living, and accessory dwelling units) provides a credit of 329 units toward the City's RHNA obligation. After deducting the credits, the City has a remaining RHNA target of 1,888 units. The sites analyses provides a realistic development capacity of 2,427 units, providing a surplus of 539 dwelling units above the City's remain RHNA obligation. In addition, the revised Housing Element includes a program that identifies some supplementary parcels that allow for developer flexibility and provide additional capacity. The yield of dwelling units for each site is dependent on density, proposed at density ranges of up to 30, 50 and 80 dwelling units per acre, offering options for development of the 12 RHNA sites.

HCD requested an assessment of the feasibility of housing developments on the properties identified as RHNA housing sites. The revised Housing Element includes an evaluation of the potential capacity for additional housing based on land use plans, development regulations, other development constraints (such as infrastructure availability and environmental conditions), and real estate market trends. The City coordinated with Related California, a mixed-income developer, to assess the developability of the rezoned sites. The analyses determined if additional housing at targeted densities could be built consistent with City regulations. Related California concluded that all analyzed sites could be developed with housing at the targeted densities identified in Housing Element and in compliance with the development standards identified in the Mission Viejo Municipal Code and associated Housing Programs.

B.2 Appendix D: Affirmatively Furthering Fair Housing

All Housing Elements due on or after January 1, 2021, must contain an assessment of housing consistent with the core elements of the analysis required by the federal Affirmatively Furthering Fair Housing ("AFFH") Final Rule of July 16, 2015. Under state law, affirmatively furthering fair housing means "taking meaningful actions, in addition to combatting discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics" (CDH AFFH Guidance document, April 2021 Update). As a result, the City is required to provide an assessment of fair housing in the Housing Element, which includes a summary of fair housing issues and assessment of the City's fair housing enforcement and outreach capacity, an analysis of segregation patterns and disparities in access to opportunities, an assessment of contributing factors, and an identification of fair housing goals and actions. Appendix D of the revised Housing Element provides the required AFFH assessment and the findings of that assessment contributed to the development of programs contained within the Housing Element.

B.3 Housing Programs / Implementing Actions

The Housing Element is implemented through various housing programs that define specific actions the City will undertake to achieve

the stated goals and policies that address Mission Viejo's identified housing needs. The Housing Element proposes 16 programs to address the identified unmet housing needs. Key programs include the following:

Program 2: Surplus Land Act

The Mission Viejo Housing Authority and City will make considerations for all feasible arrangements to facilitate housing development on Site 3, including sale, lease, public-private partnerships, or other business structures. The City will comply with the requirements of the Surplus Land Act with regard to the development of Site 3.

Program 5: Expanding Housing Opportunities

On October 12, 2021, 12 sites were rezoned to provide sufficient capacity to fully accommodate the RHNA. However, to allow some flexibility in the development of the identified housing sites and potentially avoid "No Net Loss" penalties if the sites are built with fewer units than projected in the sites inventory, the City must ensure there is additional capacity to accommodate any unmet RHNA. The City has identified supplemental parcels for rezoning due to their potential for redevelopment within this planning period. These additional parcels are not subject to RHNA shortfall requirements as they are not needed to meet the City's RHNA. Proposed expanded sites:

Site 6: three additional parcels

- o 740-016-04, 0.890 acres, proposed zoning RPD 30, with an estimated capacity of 11 units
- o 740-016-01, 0.520 acres, proposed zoning RPD 30, with an estimated capacity of 7 units
- o 740-016-02, 1.050 acres, proposed zoning RPD 30, with an estimated capacity of 14 units

Site 10 – one additional parcel:

- o 740-121-30, 0.210 acres, proposed zoning RPD50, with an estimated capacity of 4 units

Program 12: Objective Design and Development Standards

In order to comply with SB 330, the City is currently in process of developing objective design and development standards to facilitate multi-family housing development. Objective design standards provide a safeguard that requires projects to achieve high quality building design that engages site planning and responds to the context of the site. The proposed approach will ensure that the City has a creative, economically feasible, and sustainable strategy toward new development.

Program 13: Zoning Code Amendments

The City will amend the Zoning Code to address the provision of special needs housing pursuant to State laws. These include:

- Low Barrier Navigation Centers (AB 101): AB 101 requires cities to allow a Low Barrier Navigation Center development by right in areas zoned for mixed uses and nonresidential zones permitting multi-family uses if it meets specified requirements. A "Low Barrier Navigation Center" is defined in the City of Mission Viejo 2021-2029 Housing Element V. Housing Plan 93 as "a Housing First, low-barrier, service-enriched shelter focused on moving people into permanent housing that provides temporary living facilities while case managers connect individuals experiencing homelessness to income, public benefits, health services, shelter, and housing." Low Barrier shelters may include options such as allowing pets, permitting partners to share living space, and provide storage for residents' possessions.
- Emergency Shelters: Establish an Emergency Overlay in the BP zone and identify emergency shelters and multi-family housing as permitted uses in the Overlay. Revise "Emergency Shelters" criteria to only require parking to accommodate staff working at the shelter and to remove the 10-bed limit for emergency shelters. Amend the separation requirement between two shelters to a maximum of 300 feet.
- Supportive Housing (AB 2162): AB 2162 requires supportive housing projects of 50 units or fewer to be permitted by right in zones where multi-family and mixed-use developments are permitted, when the development meets certain conditions. The bill also prohibits minimum parking requirements for supportive housing within one-half mile of a public transit stop.
- Employee Housing: Pursuant to the Health and Safety Code (Section 17021.5) Employee Housing Act, employee housing for six or fewer persons should be treated as a single-family residential use to be similarly permitted as single-family homes in the same zone.
- Residential Care Facilities (for Seven or More Persons): Allow large (greater than 6 clients) residential care facilities in all residential zones, subject to a Conditional Use Permit and develop objective standards for review of residential care facilities with seven or more clients that facilitate certainty in outcomes.
- Reasonable Accommodation: Amend the City's Reasonable Accommodation regulations (Chapter 9.60) of the Mission Viejo Development Code to remove items (c) and (d) (c) Whether the accommodation will have only incidental economic or monetary benefits to the applicant, and whether the primary purpose of the accommodation is to assist with real estate speculation or excess profit taking; (d) Whether the accommodation will create a substantial adverse impact on surrounding land uses, or a public nuisance, that cannot be reasonably mitigated;
- Senior Housing Overlay: The City's Senior Housing Overlay zone is applied to areas where the only residential use allowed is senior housing. The City will amend the Zoning Code to incentivize senior housing through parking incentives but will remove this overlay from the Zoning Code.
- SB 35 Processing: Establish procedures to implement SB 35 eligible projects for streamlined processing.
- SB 9: Adopt a local ordinance to implement SB 9, the California Housing Opportunity and More Efficiency (HOME) Act.

Program 14: Inclusionary Requirements

The City will conduct a feasibility study to explore an inclusionary housing program. Components of the program may include minimum affordability requirements; partnership with non-profit organizations such as Families Forward or South County Outreach to provide units and social services dedicated to persons at risk of homelessness; and/ or in-lieu housing options, such as payment of fees and off-site construction of community amenities. Within six months of completing the feasibility study, consider adoption of an inclusionary housing program.

B.5 Public Outreach

The City continued its conversations with community members regarding the Housing Element Update process. Since the receipt of the last review letter from HCD, the City hosted two Housing Element workshops at the Norman P. Murray Center on June 9 and June 10, 2022. After the current revised Housing Element was made available for review, an additional workshop was held on June 22, 2023, at the Norman P. Murray Center. At the workshops, staff gave a presentation on the process and status, solicited feedback, and answered questions from attendees

In June 2022, the City increased the online presence and outreach for the Housing Element. Staff created a new webpage dedicated to the Housing Element Update process. The new webpage could be accessed more efficiently and was specifically designed to serve as a resource hub about the Housing Element process to the public. For convenience, the City created two online housing needs surveys: one for the general public and a second survey that was specifically developed to assess senior housing needs. In June 2022, the surveys were made accessible from the City website and promoted at the Norman P. Murray Center, in the Murray Memo, and in various social media outlets. To further encourage participation, staff also attended a senior luncheon the Norman P. Murray Center and distributed written copies of the survey. The survey was made available to the public through June 5, 2023.

B. Environmental Determination

An environmental assessment, in the form of an Addendum to the previously certified 2013 Mission Viejo General Plan Program Environmental Impact Report (“Certified EIR”) for the Housing Element Update, related revisions to land use designations and zoning districts, and other Development Code amendments as required by state housing law was adopted by the City Council on October 12, 2021 (Attachment 4). The Addendum to the Certified EIR examined the potential impacts generated by the proposed project and concluded that the proposed project produces no greater impacts than those described in the Certified EIR. All potential impacts identified in the Certified EIR can be reduced to a less than significant level through the implementation of mitigation measures. Copies of the Certified EIR, and the Addendum, are available for review at the City of Mission Viejo Community Development Department, 200 Civic Center, Mission Viejo, CA 92691 and on the Housing page of the City’s website. Staff has reviewed and determined the current update to the Housing Element produces no greater impact than those described Mission Viejo General Plan Program EIR and supplemental review will not be required.

C. Public Notice

Notice of Planning and Transportation Commission and City Council Public Hearings was placed in the Saddleback Valley News and Orange County Register newspapers on June 1, 2023, and posted as required by state law. Notice was also sent to the cities of Lake Forest, Laguna Hills, Laguna Niguel, and San Juan Capistrano, as well as to the County of Orange, and all applicable utility companies and government agencies. Notice was furnished to interested parties and non-profit organizations. The public notice and housing element were available for review at City Hall and on the City’s website.

Fiscal Impact:

Amount Requested: \$n/a
Sufficient Budgeted Funds Available?: (If no, see attached fiscal analysis)
Prog/Fund #: Category: Pers. Optg. Cap. -or- CIP#: Fund#:

Previous Relevant Council Actions for This Item

Adoption of Resolution No. 21-34

Attachments

- 1) Revised Housing Element Update
- 2) HCD “Findings” Review Letter, dated January 2022
- 3) Staff response matrix.
- 4) Project CEQA Addendum
- 5) DRAFT June 12, 2023 Planning and Transportation Commission Meeting Minutes
- 6) Planning and Transportation Resolution No. 2023-1493.
- 7) Public Written Correspondence.



City of Mission Viejo

2021-2029 Housing Element

(Revised, June 2023)



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I. Introduction to the Housing Element

In 1965, the area known today as the City of Mission Viejo was ranch land, consisting of rolling hills and grazing cattle. After 2 years of master-planning, the ground was broken for the first homes in this newly approved planned community in county-unincorporated territory. In 1988, the Mission Viejo planned community was incorporated. The City of Mission Viejo is now almost completely built out, with a balanced provision of housing and jobs. The California Department of Finance estimated that the total number of dwelling units in the City was 34,135 with a population of 92,515 as of January 1, 2022.

A. Role and Organization of the Housing Element

State law recognizes the vital role local governments play in the availability, adequacy, and affordability of housing. Every jurisdiction in California is required to adopt a long-range General Plan to guide its physical development; the Housing Element is one of seven mandated elements of the General Plan. The Land Use Element is concerned with housing in a spatial context, while the Housing Element identifies housing policies and programs aimed at meeting the identified housing needs of the City's current and anticipated future population. This Housing Element builds upon goals and policies that are primarily concerned with where new housing is to be located and at what density it will be constructed.

Unlike the other elements of the General Plan, State law explicitly requires that the Housing Element be updated on an 8-year cycle linked to the Regional Transportation Plan (California Government Code §65588). Housing Element law mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community.

The California Legislature recognizes the important role of local general plans, especially housing elements, in implementing statewide housing goals, which call for the provision of decent and sound housing for all persons. In addition, the importance of continuing efforts toward providing housing that is affordable to all income groups is stressed. The major concerns of the Legislature regarding the preparation of housing elements are included in the California Government Code, which states:

- Local governments should recognize their responsibility in contributing to the attainment of the State's housing goals;
- Cities and counties should prepare and implement housing elements coordinated with State and Federal efforts in achieving the State's housing goal;
- Each local jurisdiction should participate in determining the necessary efforts required to attain the State's housing goals; and
- Each local government should cooperate with other local governments in addressing regional housing needs.

California's Housing Element law requires that each city and county develop local housing programs to meet its share of existing and future housing needs for all income groups. The Southern California Association of Governments (SCAG) is responsible for assigning these regional needs, in the form of a



Regional Housing Need Assessment (RHNA), to the six-county Southern California region (Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial). The 6th Cycle of the SCAG RHNA Allocation Plan, which was adopted in 2021, indicates that between 2021 and 2029, the City of Mission Viejo will need to accommodate the development of 2,217 units.

The Mission Viejo 2021-2029 Housing Element identifies strategies and programs that focus on: 1) conserving and improving existing affordable housing; 2) providing adequate sites for residential development; 3) assisting in the provision of affordable housing; 4) removing governmental and other constraints on housing development; and 5) affirmatively furthering fair housing.

The Housing Element is organized into the following main sections.

- Chapter II: Housing Needs Assessment – Includes a city profile and assessment of the City’s population, housing characteristics, employment trend and special housing needs. The Needs Assessment also includes the City’s share of the regional housing needs.
- Chapter III: Housing Constraints – Includes an analysis of actual and potential governmental and non-governmental constraints upon the development, improvement, or maintenance of housing, including construction costs, government regulations, financial costs, permit fees, and regional constraints.
- Chapter IV: Housing Resources – Identifies land suitable for residential development, opportunities for recycling, redevelopment, and rezoning as well as financial resources for the development of housing.
- Chapter V: Housing Plan – Includes the City’s goals, policies, and programs to be undertaken during the 2021-2029 period of the Housing Element are identified in this chapter.
- Appendix B: Review of Past Accomplishments under 2014-2021 Housing Element – Summarizes the City’s progress in implementing the 5th cycle Housing Element.
- Appendix D: Summary of Affirmatively Furthering Fair Housing (AFFH) – Includes an analysis of fair housing issues including fair housing enforcement and outreach, segregation patterns, access to opportunities, and disproportionate housing needs.



B. Changes in State Housing Law

In response to California’s worsening affordable housing crisis, in each of the last several years the State Legislature has enacted a series of bills aimed at increasing production, promoting affordability, and creating greater accountability for localities in addressing their housing needs. The items in Table I-1 represent substantive changes to state housing law since Mission Viejo’s last Housing Element was adopted and certified by the California Department of Housing and Community Development (HCD) in March 2013.

Table I-1 New State Housing Laws Relevant to Housing Element Update

Housing Bills	Bill Overview
Housing Element Sites Analysis and Reporting: AB 879 (2017); AB 1397 (2017); SB 6 (2019)	Requires cities to zone more appropriately for their share of regional housing needs and in certain circumstances require by-right development on identified sites. Site analysis must include additional justification for being chosen, particularly for sites identified to address lower income needs. Starting in 2021, an electronic spreadsheet of the sites must be submitted TO HCD.
No Net Loss Zoning: SB 166 (2017)	Requires cities to identify additional low-income housing sites in their housing element when market rate housing is developed on a site currently identified for low-income housing.
Affirmatively Furthering Fair Housing: AB 686 (2017)	All housing elements due on or after January 1, 2021 must contain an Assessment of Fair Housing (AFH), consistent with the federal Affirmatively Furthering Fair Housing (AFFH) Final Rule of July 16, 2015. These AFFH sections must include a summary of fair housing issues in the jurisdiction; a summary of available fair housing data including contributing factors to fair housing issues; analysis of Housing Element sites in relation to AFFH and an AFFH program that includes meaningful action.
Accessory Dwelling Units and Junior Accessory Dwelling Units: AB 494 (2017); SB 229 (2017); AB 68 (2019); AB 881 (2019); AB 587 (2019); SB 13 (2019); AB 670 (2019); AB 671 (2019); AB 3182 (2020)	The State enacted legislation in 2017 and 2019 to further assist and support the development of ADUs, including “by right” approval for one-bedroom units less than 850 square feet, two-bedroom units less than 1,000 square feet, and Junior ADUs less than 500 square feet.
Density Bonus: AB 1763 (2019); AB 2345 (2020)	Permits 100% affordable projects to be built denser and taller through three modifications to current Density Bonus Law. AB 2345 creates additional incentives and also requires the annual progress report to include whether density bonuses have been granted.
Housing Crisis Act of 2019: SB 330	Seeks to boost homebuilding by expediting approvals for housing development, including application processing times. SB 330 prevents jurisdictions from decreasing a site’s housing capacity through tools such as downzoning if that would preclude a jurisdiction from meeting its RHNA targets. Also, any project that includes demolition of housing units must replace or exceed that number of units. Any demolished units occupied by low-income households must be replaced with new units that are affordable to that same income level.
Surplus Land for Affordable Housing: SB 1486 (2019); AB 1255 (2019)	Expands definition of surplus land and puts additional restrictions on the disposal of surplus land. Jurisdictions must include information about surplus lands in the Housing Element and Annual



Housing Bills	Bill Overview
	Progress Reports. A central inventory of surplus lands must be submitted to HCD.
Emergency and Transitional Housing Act: AB 139 (2019)	Amends assessment method to show site capacity, including using the most up-to-date point-in-time count. Additionally, the bill modifies parking requirement for emergency shelters. The Housing Element must include all of this information as well as analysis of the jurisdiction’s special needs populations.
Supportive Housing Streamlined Approval: AB 2162 (2018)	Requires supportive housing to be a use by right and eliminates parking if close to transit.
Safety Element Changes: SB 1035 (2018); SB 99 (2019); SB 747 (2019)	Updates requirements for the General Plan Safety Element including expanded information on environmental hazards facing jurisdictions and analysis of emergency evacuation routes. These updates must occur at the same time as the Housing Element updates.
Housing Element: Emergency Shelters (2022); AB 2339	<p>The bill would require identified zoning designations where emergency shelters are allowed to include sites that meet at least one of certain prescribed standards. In this regard, the bill would require those sites to be 1) vacant and zoned for residential use; 2) vacant and zoned for nonresidential use if the local government can demonstrate how the sites are located near amenities and services that serve people experiencing homelessness; or 3) nonvacant if the site is suitable for use as a shelter in the current planning period, as specified.</p> <p>The bill also authorizes a local government to accommodate its need for emergency shelters on sites owned by the local government if it demonstrates that the sites will be made available for emergency shelter during the planning period, they are suitable for residential use, and the sites are located near amenities, as specified.</p>
Affordable Housing and High Road Jobs Act (2022) AB2011	This bill is intended to permit residential development on sites currently zoned and designated for commercial or retail uses. It creates a CEQA-exempt, ministerial approval process for multi-family housing developments on sites within a zone where office, retail, or parking is the principally permitted use. The law provides for slightly different qualifying criteria for 1) 100% affordable projects, and 2) mixed-income projects located in “commercial corridors.” AB 2011 projects must pay prevailing wages to construction workers, among other labor standards.
Middle-Class Housing Act (2022) SB6	This bill is intended to permit residential development on sites currently zoned and designated for commercial or retail uses. SB6 does not provide a ministerial approval pathway but allows residential use on commercially zoned property without requiring rezoning. To invoke the law, however, applicants must commit both to prevailing wages for workers and to “skilled and trained workforce” requirements.



C. Public Participation

The City of Mission Viejo solicited input from the public throughout the Housing Element update process. As required by State law, all economic segments of the community must be provided an opportunity to review and comment on the Housing Element. In compliance with this requirement, a City webpage specifically for the Housing Element update was established to: 1) provide an overview of the Housing Element process; 2) provide Housing 101 and FAQs; 3) allow for citizen input on potential housing sites, types of housing, density and policy suggestions; 4) provide other comments to the City; and 5) announce future events (e.g., hearings, workshops, survey). In addition, the Draft Housing Element document was linked to this site, and public comments and HCD letters to the City were available for viewing. The City also conducted both a Housing Element and Senior Needs survey and survey results were available on the webpage. This is the webpage link: <https://cityofmissionviejo.org/departments/housing-element/2021-2029-housing-element-update>.

Housing Element Website



Meetings, Public Workshops and Hearings

In addition, the City held a series of public workshops and public hearings throughout the development of the Housing Element. In all cases, the public was notified and provided with the opportunity to comment.

- On March 31, 2021, the City Council and the Planning and Transportation Commission held a joint workshop to kick off the Housing Element update. City staff and the City's Housing Element Consultant provided an overview of new requirements and responded to questions. (Note that due to the ongoing COVID 19 pandemic and restrictions on public gatherings in place at the time of this workshop, the City utilized a virtual format for engagement and community input.)
- On May 12, 2021, a virtual meeting was held with City staff, including the City Manager and the City Attorney, and the Mission Viejo Planning Partnership, a housing advocacy group, including representatives from the Kennedy Commission and South County Outreach. (Note that this meeting was requested by the Mission Viejo Planning Partnership and did not involve City public notification.)
- On May 24, 2021, the Planning and Transportation Commission conducted a public meeting to hear public input and provide update on the progress of the General Plan, focusing on development of the Housing Element sites inventory.
- On June 8, 2021, the City Council conducted a noticed public meeting for preliminary consideration of a draft update to the Housing Element.



- On June 22, 2021, the City Council conducted an additional noticed public meeting for preliminary consideration of a draft update to the Housing Element.
- On September 27, 2021, the Planning and Transportation Commission conducted a noticed public hearing to consider a comprehensive update to the City's General Plan Housing Element, as well as related action to the Land Use Element and the Zoning Map, to accommodate residential development during the 6th Housing Cycle.
- On October 12, 2021, the City Council conducted a noticed public hearing to consider a comprehensive update the City's General Plan Housing Element, as well as related action to the Land Use Element and Zoning Map, to accommodate residential development during the 6th Housing Cycle.
- On June 9, 2022 and June 10, 2022, City staff held two additional Community Workshops and gave an overview of the City's findings and strategies regarding opportunities for affordable housing and the City's ability to affirmatively further fair housing throughout the community.
- June 5, 2023, Noticed public hearing before Planning and Transportation Commission
- June 27, 2023, Noticed public hearing before City Council

The revisions to the adopted Housing Element were available for review on the City's website beginning May 27, 2023, at least seven days prior to resubmitting the Housing Element to HCD.

Property Owner Outreach: Staff conducted wide-ranging outreach to property owners of all identified candidate housing sites through a variety of means including phone, letter, email, virtual and in-person meetings, and public notice. In several cases, initial outreach was made to the City from the property owner, expressing interest in having their site included in the sites inventory. The primary focus of the City was to explain the purpose of the Housing Element, RHNA, the housing sites inventory, and the inclusion of a given candidate site in the inventory, through direct upzone or overlay. One property owner representative expressed opposition, and that site (Oaktree Village) was later removed from the sites inventory. Various candidate sites were considered at different times throughout the selection process, and in at least one case, a property owner expressed support but the site was not ultimately included in the final inventory.

Housing Element Surveys: As a part of the City's community outreach and engagement process, two housing surveys were circulated to Mission Viejo residents to determine what the community perceives as the City's most important housing needs and to gather feedback on their preferences for policy options. One survey specifically focused on the overall greater community and a second survey specifically targeted senior residents. The surveys were posted on the City's website for approximately 4 months, with a link advertised in the City's eNews, the City newsletter, and various social media outlets (i.e., Facebook, Instagram, Twitter). The City received a total of 49 responses to the survey, which closed on October 10, 2022.

The citywide survey consisted of 13 questions with the City receiving a total of 14 responses. Of the respondents, 64% have lived in Mission Viejo for over 21 years. Additionally, 64% stated that their homes were in excellent condition. Those needing some minor maintenance or modest rehabilitation accounted for 14% of the responses. The following summarizes additional input received from the citywide housing needs survey, with the complete survey results included in Appendix A.



- The survey identified 33% of the respondents as having experienced the following in the last 2 years:
 - An adult child living at home due to inability to afford housing
 - Lack of funding to make necessary home repairs
 - Too many people living in one home
- The following were identified as the top three housing priorities (out of six):
 - Encourage the maintenance and rehabilitation of housing in older neighborhoods.
 - Establish special needs housing for seniors, persons with disabilities, and/or veterans.
 - Focus new housing within existing developed areas and/or cluster/compact housing to preserve surrounding open space.
- The following were identified as the top three housing development strategies (out of 4):
 - Increase allowable housing densities on a limited number of housing sites to reduce the number of multi-family sites required.
 - Facilitate accessory dwelling units (granny flats).
 - Provide lower density zoning, requiring designation of a greater number of housing sites.
- The following were common write-in comments on strategies to create more housing opportunities:
 - The Shops at Mission Viejo (local mall)
 - Underused or distressed commercial properties
 - Open space should be preserved
 - Overall concerns about housing growth and future traffic congestion
 - Increase priority for mixed-use developments to mitigate traffic concerns

To ensure Mission Viejo's senior population were represented in the City's housing needs assessment, printed surveys targeting the senior population were promoted at the local senior center and distributed and collected at a senior luncheon. Like the citywide survey, an online version was posted on the City's website and the Housing Element Update webpage; published in the City eNews; advertised on social media; and promoted in the "Murray Memo," the senior center's monthly newsletter.

The senior housing survey consisted of seven questions. A total of 35 seniors completed the Housing Needs Survey, with 7 responding electronically and 28 submitting written responses. Highlights of the survey responses include:

- 97% of respondents visit the Senior Center and/or receive the Senior Center newsletter.
- 54% did not think adequate information was provided about housing programs for seniors such as senior housing, rental assistance, and help with housing maintenance.
- 58% of respondents stated they would like to learn more about home and property maintenance.
- Regarding housing issues in Mission Viejo, on scale of 1-5 (5 being highest):
 - 50% of respondents cited having senior housing near medical facilities and shopping centers as the most important issue.



- Additionally, 48% of respondents stated having senior housing near transit was another priority.

Noticing of Workshop and Study Sessions

Noticing for the public workshops and meetings was through advertisement in the local newspaper, posted on the City's website, and highlighted on the City's social media channels. Copies of the published notices and outreach mailing list are included in Appendix A. In addition, the community meeting notices were posted at City Hall, the Norman P. Murray Community and Senior Center, and Montanoso Recreation Center. The Agenda and staff reports were available at City Hall and at the Mission Viejo Library.

The City also maintained a stakeholder interest list who received email notification of all meetings. This stakeholder list included local housing service providers and housing advocacy organizations, property owners of candidate housing sites, local agencies, as well as any residents or other stakeholders and parties interested in the Housing Element.

Public Review of Housing Element

The Draft Housing Element was made available for public review on the City's website prior to the public hearings: www.cityofmissionviejo.org. The Agenda, staff report, and Housing Element were also available at City Hall and the Mission Viejo Library. The City received several comment letters on the Draft Housing Element, and has considered and, as deemed appropriate, addressed these comments in the Element. The City responded to community input by holding additional public meetings and a public workshop held on two different days, and by conducting a housing survey. The City further acknowledged community input by adding two additional housing sites for consideration and through programs, such as inclusionary housing, which were also included in the Housing Element.

D. Data Sources and Methods

In preparing the 2021-2029 Housing Element, various sources of information were consulted. The 2020 Department of Finance (DOF) and the American Community Survey (ACS) provide the basis for much of the population, households, and employment information. Other information sources used in this Housing Element include:

- Department of Housing and Urban Development (HUD) (Housing Affordability and Income measures)
- HUD Mapping Viewer
- California Department of Housing and Community Development
- California Community Care Licensing Division (licensed senior and adult care facility data)
- Orange County Analysis of Impediments to Fair Housing Choice (May 27, 2020)
- Orange County Housing & Community Development Utility Allowance Schedule (October 2022)
- Southern California Association of Governments (SCAG) Pre-Certified Housing Data Report, April 2021
- SCAG Affirmatively Furthering Fair Housing (AFFH) Data Viewer



- SCAG Data/Map Book for Mission Viejo, November 2019
- SCAG Profile of the City of Mission Viejo, May 2019
- SCAG Regional Accessory Dwelling Unit Affordability Analysis, December 2020
- Fair Housing Foundation (Annual Reports)
- California Housing Partnership Corporation
- Brown University (Dissimilarity Index)
- California School Dashboard (www.caschooldashboard.org)
- City of Mission Viejo: List of Affordable Apartment Communities, Assisted Housing
- City of Mission Viejo Community Opinion Survey (March, 2022)
- Development List, Principal Employer List, substandard housing estimate, Accessory Dwelling Unit counts, energy conservation standards and programs
- Urban Displacement Project (www.urbandisplacement.org)
- Orange County Point-In-Time Homeless Survey Count (February, 2022)
- Orange County Business Council (Workforce Housing Scorecard, 2019)
- Regional Center of Orange County (Developmental Disability data)
- Apartment Guide (www.apartmentguide.com) – survey of apartment rents, May 2022.
- Zillow (www.zillow.com) – Home Value Index data for 2019-2022, units for sale survey, May 2022.
- Related California (Site analysis – potential unit development)

E. Relationship to Other General Plan Elements

Mission Viejo's General Plan was last updated in 2013. The General Plan consists of the following elements: Land Use, Housing, Circulation, Conservation/Open Space, Public Safety, Noise, Economic Development, and Growth Management. The Land Use Element sets forth the amount and types of residential development permitted under the General Plan, thereby affecting housing opportunities in Mission Viejo. In addition, the Land Use Element contains policies directed at maintaining the existing housing stock, as well as ensuring the quality of new residential development. The Circulation Element contains policies to minimize roadway traffic into residential neighborhoods, and the Noise Element sets forth policies to minimize the level of noise in neighborhoods. The Conservation/Open Space Element establishes development standards to minimize the impact of residential development on sensitive resources, such as hillside areas, ecological habitat, and scenic viewsheds. The Public Safety Element sets forth policies to ensure the safety of the City's housing stock through such measures as code enforcement and mitigation of environmental hazard as a condition to development. Finally, the Economic Development Element, which was updated in 2022, sets forth a strategy aimed at the attainment of a jobs/housing balance in Mission Viejo. The 6th Cycle Housing Element and the other Elements of the General Plan have been reviewed to ensure that they are consistent with one another. Further, whenever any element of the General Plan is amended in the future, the Housing Element will be reviewed and modified, if necessary, to ensure continued consistency among General Plan elements.





II. Housing Needs Assessment

This section of the Housing Element discusses the characteristics of the City’s population and housing stock as a means of better understanding the nature and extent of unmet housing needs. The Housing Needs Assessment comprises the following components: A) Demographic Profile; B) Household Profile; C) Housing Stock Characteristics; and D) Regional Housing Needs.

A. Demographic Profile

Demographic changes such as population growth or changes in age can affect the types and amount of housing that are needed in a community. This section addresses characteristics of the population, age, race and ethnicity of Mission Viejo residents.

1. Historical Population Growth and Trends

Table II-1 displays population growth trends in Mission Viejo, surrounding cities, and Orange County from 1990 through 2020. Orange County experienced dramatic growth in the 1990s (18.1%), but the rate of growth reduced considerably in the 2000s and 2010s (5.8% and 5.9%, respectively). Mission Viejo, Laguna Niguel, and San Juan Capistrano also saw high growth rates in the 1990s, ranging from 27.9% to 38.4%. However, in the 2000s and 2010s, Mission Viejo experienced very low rates of growth of under 0.5%. Neighboring cities had slightly higher growth rates, in the 1.3% to 3.6% range.

Table II-1 Regional Population Growth Trends, 1990-2020*

	1990	2000	2010	2020	% Change		
					1990-2000	2000-2010	2010-2020
Laguna Hills	–	29,891	30,270	31,374	–	1.3%	3.6%
Laguna Niguel	44,723	61,891	62,979	64,355	38.4%	1.8%	2.2%
Lake Forest	–	58,707	77,395	85,858	–	31.8%	10.9%
Rancho Santa Margarita	–	47,214	47,853	47,949	–	1.4%	0.2%
San Juan Capistrano	26,183	33,826	34,593	35,196	29.2%	2.3%	1.7%
Mission Viejo	72,820	93,102	93,174	93,653	27.9%	0.1%	0.5%
Orange County	2,410,668	2,846,289	3,010,232	3,186,989	18.1%	5.8%	5.9%

Laguna Hills, Lake Forest, and Rancho Santa Margarita were incorporated after the 1990 Census.

*2000-2010 Census, per California Department of Finance; 2020 Census per SCAG

The cities of Laguna Hills, Lake Forest, and Rancho Santa Margarita were not incorporated cities at the time of the 1990 Census, so there is no growth rate data between 1990 and 2000. Rancho Santa Margarita and Laguna Hills experienced similar growth rates to the older cities in the 2000s and 2010s, but Lake Forest, due to its further annexation after the 2000 Census, shows large population growth of 31.8% in that decade, and also strong growth of almost 11% in the 2010s.

Population projections recently released by the California Department of Finance

<https://dof.ca.gov/forecasting/Demographics/estimates/e-5-population-and-housing-estimates-for-cities->



[counties-and-the-state-2020-2023/](#)) show that in the last year, population in Orange County, Mission Viejo and the surrounding cities has declined. Mission Viejo’s population is estimated in 2022 to be 92,515, down 1.2% from the 2020 Census.

SCAG projects that the population of Mission Viejo will grow to 98,578 by 2045. This represents a growth rate of about 5% between 2020 and 2045.

2. Age Characteristics

Table II-2 displays the age distribution of Mission Viejo’s population in 2000 and 2020, compared to Orange County as a whole. The most striking element of this table is that the population of Mission Viejo has become significantly older over the last 20 years: the proportion of the population over 65 has virtually doubled, from 10.8% to 21.3%, and the population under 24 has correspondingly declined, from 33.8% to 26.8%. This is evident in the steep increase in the City’s median age as well, from 37.4 in 2000 to 45.3 in 2020. Mission Viejo’s population age profile is also significantly older than the county, where 14.8% of the population is over 65 and the median age was 38.3 in 2020.

As noted in the previous section, the total population in the City is relatively stable with only marginal growth projected through 2045. A city with a stable and increasingly elderly population is partly a function of State demographic effects and may also reflect the challenge for younger families to afford housing in the State and the city.

Table II-2 Population by Age, Mission Viejo, 2000 versus 2020

	2000 Census	2020 ACS	
	Mission Viejo	Mission Viejo	Orange County
Preschool (<5 years)	6.8%	5.4%	5.9%
5-19 years	22.6%	16.7%	18.6%
20-24 years	4.4%	4.7%	6.6%
Young Adults (25-44 years)	30.9%	22.7%	27.5%
Middle Age (45-64 years)	24.6%	29.0%	26.7%
Seniors (65+ years)	10.8%	21.3%	14.8%
Median Age	37.4	45.3	38.3

3. Race and Ethnicity

Table II-3 displays the racial/ethnic composition of Mission Viejo’s population in 2000 and 2020, compared to Orange County as a whole. The city has become significantly more diverse in the last two decades, with the non-White population rising from 24.0% to 38.3% of the population. Hispanic and Asian populations in particular have risen as a proportion of the overall population, and conversely, the White population has declined from 76.0% to 61.7%. Compared to the City, Orange County has a lower proportion of White residents (37.6%). About 34.1% of County residents are Hispanic, compared to 19.2% of Mission Viejo residents.



Table II-3 Racial and Ethnic Composition, 2000 and 2020 Census

	2000 Census	2020 Census	
	Mission Viejo	Mission Viejo	Orange County
Non-Hispanic White	76.0%	61.7%	37.6%
Non-Hispanic Black	1.5%	1.9%	2.2%
Hispanic	12.1%	19.2%	34.1%
Non-Hispanic Asian	9.2%	14.8%	24.4%
Other Race	1.3%	2.3%	1.7%

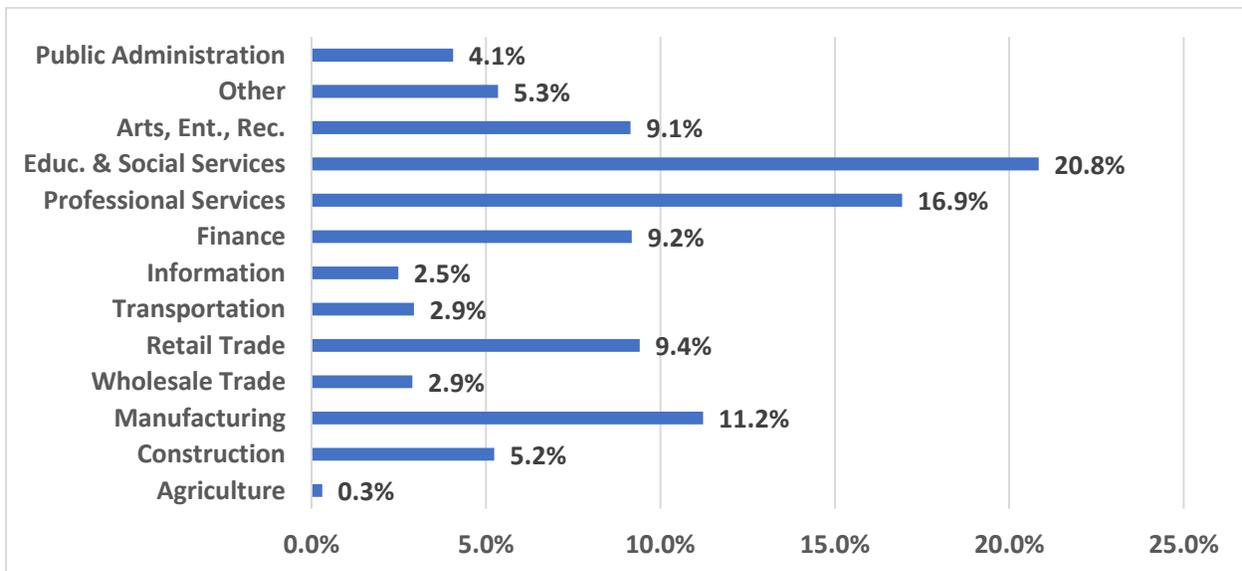
Source: Brown University Dissimilarity Index study
<https://s4.ad.brown.edu/projects/diversity/segregation2020/Default.aspx?msa=11244>
 Percentages do not add to 100% because Multi-Racial Category is not included.

4. Employment

The housing stock of a city should ideally reflect the different socio-economic levels of the population and the employment opportunities present. Mission Viejo is a master-planned community, with most of its land area occupied by housing, in particular single-family housing (see Figure D-3, Appendix D), but there are employment centers along the I-5 corridor on the western edge of the City, as well as numerous commercial/retail centers located along major thoroughfares, such as Marguerite Parkway.

Per SCAG’s Pre-Certified Local Housing Data report, the breakdown of the city’s employment by sector/industry was as follows (Figure II-1).

Figure II-1 Mission Viejo: Employment by Industry (ACS Estimates, 2014-2018)



The largest sector of employment is Education and Social Services at 20.8%. This is consistent with large employers in the City, including Saddleback College and the two school districts that serve the City (Capistrano Unified and Saddleback Valley Unified). After Education and Social Services, the most prevalent employment sectors are Professional Services (16.9%), Manufacturing (11.2%), and Retail (9.4%). The SCAG report also shows that almost half of all jobs in the City (49.9%) are in Management, 24.3% in Sales, and 14.7% in Services.



Per SCAG’s 2019 City Profile (the last date SCAG published profiles), which used categories that do not align with ACS industry sectors, the highest salary job sector in Mission Viejo is Finance, Insurance and Real Estate, with an annual salary average of \$94,000, followed by Wholesale (\$81,000), and Construction (\$73,000). The lowest income sectors are Leisure & Hospitality (\$21,000), Retail (\$31,000), and Other Services (\$39,000). As shown in Table D-15 in Appendix D, the median income in Mission Viejo is \$121,299.

Through various economic development initiatives, the City is actively recruiting new businesses, particularly those that will generate additional sales tax revenue. Sales tax receipts in the Fourth Quarter of 2021 were \$5,546,732, up 13.8% from the previous year (which was impacted by the COVID pandemic). Consumer goods, automotive/transportation, and restaurants/hotels were major sources of sales tax revenue in the city.

Economic development is a priority for the City, with an emphasis on business attraction and retention. Over the last few years, the City has seen the arrival of several new businesses, including an Amazon Distribution Facility, Floor and Décor, Dick’s Sporting Goods, Amazon Fresh, Raising Canes, and Pirch. In addition, Providence Mission Hospital saw the development and opening of the Leonard Cancer Institute. Several construction projects were recently completed, including a Morningstar assisted living facility and the new Alicia Landing retail complex within an existing Target center. During the height of pandemic, the City spent approximately \$850,000 of General Fund money on emergency business grants to help retain business most impacted by COVID.

Table II-4 below shows the top ten employers in Mission Viejo in 2021, versus 2012. The overall employment structure of the City has not changed significantly in the last 9 years. However, two new entrants – Amazon Delivery Station and James Hardie Building Products – have added to the diversity of employment opportunities, and Mission Hospital Regional Center supplanted Saddleback College as the largest employer.

Table II-4 Top Ten Principal Employers, 2012 vs. 2021

Employer	2021		2012	
	Rank	% of Total City Employment	Rank	% of Total City Employment
Mission Hospital Regional Center	1	5.8%	2	2.3%
Saddleback College	2	3.0%	1	3.4%
Saddleback Valley USD	3	1.9%	3	2.2%
Target Corp.	4	1.1%	6	0.5%
James Hardie Building Products	5	0.9%	–	–
Capistrano USD	6	0.9%	4	1.5%
Nordstrom Department Store	7	0.8%	5	0.7%
Amazon Delivery Station	8	0.6%	–	–
Macy’s Department Store	9	0.5%	7	0.4%
City of Mission Viejo	10	0.5%	9	0.4%
U.S. Post Office	–	–	8	0.4%
Vocational Visions	–	–	10	0.3%

Source: City of Mission Viejo, MUNI Services LLC, 2021



According to another SCAG publication, the 2019 Profile for Mission Viejo, approximately 36,000 Mission Viejo workers commute elsewhere to work, with the main destinations being Irvine, Santa Ana, Lake Forest, and Los Angeles. There appears to be a high degree of commuting among southern Orange County cities, as well as an inflow from neighboring Riverside and San Bernardino counties.

There could be many reasons for such an inflow. As a medium-sized city with a largely residential land base occupied by relatively affluent households, there may not be sufficient professional/technical employment opportunities for the population within the city limits; conversely, lower paying service and retail jobs in the city (Retail and Leisure/Hospitality sectors alone comprise 31% of all jobs in the City) may be filled to a degree by workers who cannot afford to live or find suitable housing within the City.

Workforce Housing Scorecard

One source of regional housing and economic trends is the periodic publication of the Workforce Housing Scorecard by the Orange County Business Council, with the most recent edition published in 2019, before the short-term impact of the COVID pandemic on the world economy.

The Scorecard points out that the major issue affecting the commuting and job patterns described briefly above in Orange County (and indeed, in many parts of the State) is the shortfall in housing (the report estimates a shortfall of 58,160 units), and especially the lack of affordable housing. It identifies the county as one of the country's most expensive housing markets, which shows little sign of cooling down, reaching all-time highs in housing costs, both for owner-occupied and rental housing. Since the report was created, rising interest rates in recent years (2021-2022) have begun to cool the housing markets, and while prices have fallen, they are still prohibitively high for many segments of the community.

The report notes, as has been discussed above, that the county's population is aging, in part due to the inability of younger families to enter the housing market, and identifies that while the county is often referred to as "built out," opportunities exist in "converting retail-only space into multi-family housing, or mixed-use space combining retail, dining, housing and other uses." It is precisely this approach that Mission Viejo is proposing in many of its Housing Element sites.

According to the Scorecard, the number of housing permits issued in the county has been falling, from 11,982 in 2016 to just 7,545 in 2018, while neighboring counties like San Bernardino and Riverside have seen growth as younger families move for more affordable housing – but endure commutes to Orange and Los Angeles counties for employment.

The Scorecard examines Orange County jurisdictions on factors such as job growth, jobs-to-housing ratio, change in housing density and their proportion of the county's total housing stock, and ranks cities on a composite score. Out of 35 jurisdictions, Mission Viejo was 29th, scoring best on its jobs-to-housing ratio (15) and worst on job growth (30). In terms of generating new jobs and the supply of housing appropriate to house these new workers, Mission Viejo was ranked 24th out of 34 cities plus the unincorporated area for the 2016-2030 period. Mission Viejo is projected to move up the table to 23rd place in the Scorecard's 2030-2045 calculation, as it is expected to significantly improve its job-to-housing ratio.

The report maps the composite score by jurisdiction, and it shows that a number of southern Orange County jurisdictions score in the lower half of the rankings, so Mission Viejo is not an outlier on this index within its region.



B. Household Profile

Housing need is a function of a jurisdiction’s demographics, in terms of household type and size, income levels, special needs populations, and other characteristics. This section details the various household characteristics affecting housing needs in Mission Viejo.

1. Household Type

Using data from the ACS, 2010 and 2020 Series (Table II-5 below), the number of households in Mission Viejo actually decreased from 33,599 to 33,000 over the 10--year period, and the average household size increased from 2.74 to 2.85; the county as a whole had a larger average household size, at 3.01, and a larger family size compared to Mission Viejo.

The proportion of family households increased in Mission Viejo between 2010 and 2020 by five percentage points to 66.2%, largely in the married couple family category, significantly higher than the county’s 54.5%. Non-family households fell to 22.3%, as did the proportion of households living alone. It is somewhat surprising that the proportion of households over 65 living alone fell over 10 years, given data presented in the AFFH section of this Housing Element that point to an increasingly elderly population in Mission Viejo.

Table II-5 Household Characteristics, 2010-2020* – Mission Viejo and Orange County

	2010		2020			
	Mission Viejo		Mission Viejo		Orange County	
	Number	%	Number	%	Number	%
Total Households	33,599	–	33,000	–	1,040,001	–
Family Households	24,462	72.8%	25,655	77.7%	742,140	71.4%
Married Couple Households	20,702	61.6%	21,833	66.2%	566,920	54.5%
Single Parent Households	3,760	11.2%	3,822	11.6%	175,220	16.8%
Non-Family Households	9,137	27.2%	7,345	22.3%	297,861	28.6%
Householder Living Alone	7,224	21.5%	5,676	17.2%	220,480	21.2%
Householder 65+ Alone	3,259	9.7%	3,036	9.2%	95,680	9.2%
Average Household Size	2.74		2.85		3.01	
Average Family Size	3.22		3.22		3.51	

*ACS 2010 Series; ACS 2020 Series

2. Household Income

Table II-6 below shows the median income for Orange County, and income limits for different-sized households and categories of income as defined by the California Department of Housing and Community Development (HCD) in its memo of December 31, 2021 (<https://www.hcd.ca.gov/grants-funding/income-limits/state-and-federal-income-limits/docs/income-limits-2021.pdf>). For comparison, Table II-7 shows data for Mission Viejo in a slightly different categorization from the 2015-19 ACS data, including Orange County for comparison.

The December 31, 2021 memo states that the new category of Acutely Low income limit equals 15% of the County’s Area Median Income (AMI): the Moderately Low income limit is set at 120% of AMI. Another HCD memo (<https://www.hcd.ca.gov/docs/grants-and-funding/inc2k22.pdf>) notes that the calculation of Extremely Low, Very Low, and Low income limits are adjusted for counties in certain special situations, and



notes that some calculations could “produce unintended anomalies inconsistent with statutory intent” or can result in “low income limits exceeding MFI in certain counties.”

Table II-6 State Income Limits, 12/31/21 by Household Size: Orange County

Income Level	1 person	2 persons	3 persons	4 persons
Median Income: \$106,700				
Acutely Low	\$11,200	\$12,800	\$14,400	\$16,000
Extremely Low	\$28,250	\$32,300	\$36,350	\$40,350
Very Low	\$47,100	\$53,800	\$60,550	\$67,250
Low	\$75,300	\$86,050	\$96,800	\$107,550
Median	\$74,700	\$85,350	\$90,650	\$106,700
Moderate	\$89,650	\$102,450	\$115,250	\$128,050

Source: HCD Revised State Income Limits Memo, 12/31/2021

Table II-7 Mission Viejo and Orange County Household Income Distribution

Income Level	Mission Viejo		Orange County	
	Households	%	Households	%
< 30% HAMFI	3,455	10.3%	174,610	16.8%
31-50% HAMFI	2,955	8.8%	140,735	13.6%
51-80% HAMFI	5,200	15.5%	195,180	18.8%
81-100% HAMFI	3,690	11.0%	111,090	10.7%
> 100% HAMFI	18,265	54.4%	415,875	40.1%
Total	33,565	–	1,037,490	–

Source: HUD Comprehensive Housing Affordability Strategy, 2015-2019 ACS
HAMFI = HUD Area Median Family Income

Table II-7 above shows that Mission Viejo is relatively affluent when compared to the county as a whole, with 54.4% of households earning above 100% of HUD’s Area Median Family Income (HAMFI), compared to 40.1% in Orange County as a whole, and 19.1% of households earning less than 50% of HAMFI, compared to 30.4% for the county as a whole. As shown in Table D-15 in Appendix D, the City does not have an income distribution significantly different from some of its surrounding cities. Over time, compared to the County as a whole, Mission Viejo’s median household income has increased at a slightly lower rate in the last 10 years, but is significantly above the County median (Table II-8).

Table II-8 Change in Median Household Income

Jurisdiction	2000	2010	2020	Percent Change, 2010-2020
Mission Viejo	\$78,248	\$92,838	\$121,299	36.4%
Orange County	\$58,820	\$70,880	\$94,441	40.1%

Source: 2000 Census, 2010 and 2020 ACS

It can be useful to examine the differing income profiles of owner and renter households and their susceptibility to overpayment and overcrowding (discussed later in this section). Table II-9 below shows tenure type by income level. Approximately 77% of Mission Viejo’s households are owner occupiers, and 70.6% of them are in the Moderate/Above Moderate income level. For renters, more than double the proportion of owner households are in the Extremely Low Income category (17.2%, versus 8.2%).



Table II-9 Household Income Levels by Tenure

Income Level	Owner		Renter		Total	
	Households	Percent	Households	Percent	Households	Percent
< 30% HAMFI (Extremely Low Income)	2,120	8.2%	1,335	17.2%	3,455	10.3%
31-50% HAMFI (Very Low Income)	2,080	8.1%	875	11.3%	2,955	8.8%
51-80% HAMFI (Low Income)	3,390	13.1%	1,810	23.4%	5,200	15.5%
>81% HAMFI (Moderate/Above Moderate Income)	18,235	70.6%	3,720	48.1%	21,955	65.4%
Total	25,825	100%	7,740	100%	33,565	100%

Source: HUD, 2015-19 ACS

Extremely Low Income Households

Examining the characteristics of Extremely Low Income (ELI) households can be a useful indicator of determining housing need, as this category will undoubtedly experience severe challenges in finding affordable housing. Mission Viejo’s ELI households are 48% elderly and 38% renters, whereas the citywide proportion of renter households is approximately 23%. Appendix D also notes that the elderly population of Mission Viejo has grown significantly and now stands at just over 21% of the total population (Table D-2, Appendix D). By definition, the ELI population will have to spend a very large proportion of their income on basic needs, such as housing; over 77% of Mission Viejo’s ELI households spend over half their income on housing, compared with just 0.8% of households making over 100% of the area median income.

The federal Section 8 Housing Choice Voucher program is one of the largest sources of assistance for lower-income renters. Unfortunately, funding levels for this program do not match the level of need, and long waiting lists are the norm. As shown in Appendix D, Mission Viejo has more Section 8 Housing recipients than surrounding cities, and accounts for about 10% of the county total, even though the city comprises about 3% of the total county population. Programs to facilitate the production of new affordable rental units can help to alleviate overpayment. Chapter 5 of the Housing Element identifies programs such as Density Bonus, Affordable Housing Outreach, Mortgage Revenue Bonding Financing, and Development Fees to assist in producing housing for lower-income households.

As shown in Appendix D, a high proportion of workers commute into Mission Viejo from other jurisdictions, in part because low-to-moderate income workers cannot afford to live in the City. This is not unique to Mission Viejo; as the Appendix D analysis shows, many Orange and Los Angeles County jurisdictions have high proportions of workforce commuters, with some coming from lower cost counties like Riverside and San Bernardino. The analysis of housing costs and affordability presented later in this section compares current market rents and sale prices in Mission Viejo with the amount that different income levels can afford to pay for housing.

3. Special Needs Populations

As part of the analysis of housing need, attention must be paid to households identified as having special needs that can result in them having challenges in finding adequate and affordable housing. Special needs populations include the elderly, persons with disabilities, female-headed households, large households, and farmworkers. These populations may have lower incomes because of their condition. Table II-10 summarizes these special needs populations in Mission Viejo. Note that the table is compiled from different data sources with different time series.



Table II-10 Special Needs Populations

	Persons	Households	Percent
Seniors 65+	20,079	–	21.1% (of total population)
With a Disability	5,798	–	28.9% (of Seniors 65+)
Senior Households (65+)	–	10,507	
Renter	–	1,630	15.5% (of Senior HH)
Owner	–	8,877	84.5% (of Senior HH)
Persons with Disabilities	9,371		9.9% (of total population)
Large Households (5+ Persons)	–	3,498	
Renter	–	1,027	29.4% (of Large HH)
Owner	–	2,471	70.6% (of Large HH)
Households in Poverty	–	785	
Female-Headed Households	–	313	39.9% (of Female-Headed HH)
With Children	–	238	76.0% (of Female-Headed HH)
Farmworkers (Total)	74		0.1% (of total population)
Total Population	95,134		

Sources:

2020 ACS Series Sex by Age by Disability, Table S1810

SCAG Pre-Certified Local Housing Data, Housing Tenure by Age, p 4 (ACS 2014-18 Series)

SCAG Pre-Certified Local Housing Data, Households by Household Size, p 5 (ACS 2014-18 Series)

SCAG Pre-Certified Local Housing Data, Households by Poverty Status, p 6 (ACS 2014-18 Series)

Senior Households

Approximately 21% of Mission Viejo’s population (per ACS 2020 Series data) was over the age of 65, which, as stated in Appendix D, Table D-2, is the highest proportion among Mission Viejo’s neighboring cities, and higher than the county as a whole, which stands at 15.3%. Table II-10 above shows that almost 29% of Seniors are identified as having some type of disability, which may impact their ability to live independently. Approximately 84% of the city’s Senior households own their home, which is higher than the citywide percentage of approximately 77%.

The elderly are more likely to have several special needs including housing, transportation, health care, and other services. For the portion of the Senior population that are renters, rising rents will be a source of housing anxiety, because many will be on fixed incomes. As noted in Appendix D, 48% of Mission Viejo’s ELI Households are Senior households, with relatively little extra disposable income for rent increases. As shown Table II-21, out of the two affordable subsidized housing developments, Mission Viejo has one project serving seniors, providing 142 rental units to a mix of very low and low-income households. In addition, 119 out of Mission Viejo’s 236 Housing Choice Vouchers are identified as being utilized by seniors.

The State of California Community Care Licensing Division identifies 157 currently licensed senior care facilities within the City, with a total capacity of 1,515, and a further 6 facilities pending licenses. Out of the 157 licensed facilities:

- 153 have a capacity for 6 or fewer residents
- 4 are large facilities, with capacities of 110 to 225. The four large facilities – Atria del Sol, Heritage Pointe, La Vida, and Sunrise – offer independent living, assisted living and memory care options.

A significant proportion of those seniors living on their own will have limited incomes and physical limitations, reducing their ability to maintain their homes or perform minor repairs. The City offers a Residential Rehabilitation Program that provides grants to lower income homeowners, including seniors



and disabled households. The program provides funding for necessary material and supplies for home repairs and improvements, which can enable senior households to install age-appropriate improvements such as grab bars or other assistance devices.

The City of Mission Viejo coordinates a number of senior activities, many of them taking place at the City's Norman P. Murray Community and Senior Center. Programs offered include recreational and social activities, continuing education, a meals program, food distribution, preventive healthcare, and transportation services. Newsletters and activity calendars are available on the City's website. The Center is also a location where information on the City's housing rehabilitation program is disseminated via flyers and leaflets, as well as outreach from The Fair Housing Foundation, which Mission Viejo contracts with for housing outreach services (details in Appendix D).

Large Households

Large households consist of five or more persons and are considered a special needs population due to the limited availability of affordable and adequately sized housing for their larger-than-average households, which could result in overcrowding if insufficient rental units are available to adequately accommodate larger households.

There were 3,498 large households in Mission Viejo per Table II-10 above (roughly 10% of the 34,982-household total in SCAG's SoCal Atlas housing statistics). The proportion of large households that rent (29.4%) is a little higher than the citywide figure of 23%. Renter overcrowding, at 2.4% of all renter households (SCAG Pre-Certified Housing Data), is significantly less in Mission Viejo than in the entire SCAG region, where it is 6.4%. This data suggests that large household overcrowding due to lack of suitably sized housing is not as intense an issue as general housing affordability. Approximately 70% of the housing units in the City of Mission Viejo have 3 or more bedrooms, and 34% have 4 or more bedrooms (ACS, 2018). However, housing needs are often mismatched with the housing supply in a community due to affordability issues.

Female-Headed Households

Female-headed households, totaling 2,915 households, or 8.7% of Mission Viejo's total households, per SCAG's Pre-Certified Housing Data, especially those with children, tend to have lower incomes, which can impact housing options, and the ability to pay for services such as childcare while the head of household is working. Table II-10 above (from SCAG Pre-Certified Housing Data, page 6) estimates 785 households in poverty in Mission Viejo (roughly 2.2% of the total number of households), with 313 of them (40%) female-headed, and 76% of female-headed households in poverty have children. The City supports the Kids Factory after-school childcare program with a subsidy of \$125,000 per year from the General Fund. Other housing resources include Housing Choice Vouchers offered by the Orange County Housing Authority.

Persons with Disabilities

A disability is defined as a long-lasting physical, mental, or emotional condition that impairs an individual's mobility, ability to work, or ability for self-care. Disabled persons often have special housing needs as a consequence of their specific disability (mobility issues, or mental/emotional conditions) that may impact an individual's ability to work and take care of themselves, greatly impacting their ability to afford housing due to limited or fixed incomes, much of which may be directed to paying healthcare costs.



As shown in Table II-10 above, per 2020 ACS Series data, Mission Viejo has 9,371 disabled individuals out of a total population of 95,134 (9.9%). As reported in SCAG's Pre-Certified Housing Data, which reports 2018 ACS Series data, the most prevalent disabilities are related to ambulatory issues, and cognitive and hearing issues. Some individuals may have multiple disabilities.

Almost 29% of Mission Viejo's Senior population are identified as having a disability. As previously discussed, a high proportion of the City's population is elderly, and this has grown significantly in the last decade. As the population in general ages, issues of disability as it relates to housing need will become an important issue. Appendix D describes the outreach performed by the City's contracted agency, the Fair Housing Foundation, to provide protected populations such as seniors and the disabled with assistance and information on housing matters.

Housing needs of disabled individuals will depend on the type/severity of the disability. Many can live independently at home and may require minimal assistance. Physical changes may need to be made to their homes to accommodate the disability, which may be a challenging expense for a segment of the population on a fixed income. As has been mentioned, the City offers grants to households to make accessibility-related home improvements. Individuals may have to have access to income support if unable to work or may require in-home supportive services depending on the severity of the disability. Accessible housing can also be provided via senior housing developments. A number of senior housing developments in Mission Viejo include modified characteristics, including Heritage Villas apartments and Heritage Pointe.

In addition to accessible housing, persons with disabilities may require supportive housing and assistance. For those persons who may require or prefer assistance with care and supervision, licensed community care facilities offer special residential environments for persons with physical, mental, and/or emotional disabilities.

Mission Viejo has 13 Adult Residential Care facilities:

- 11 licensed adult residential facilities, all approved for a capacity of 4-6 individuals (total capacity of 62). Adult residential facilities are defined as a residential home for adults aged 18-59 with mental health care needs or who have physical or developmental disabilities and require or prefer assistance with care and supervision.
- 1 pending adult residential facility (capacity of 4).
- 1 adult residential facility for persons with special healthcare needs (capacity of 5). This facility is defined as a residential home that provides 24-hour services for up to 5 adults with developmental disabilities who have special healthcare and intensive support needs and who would otherwise need to reside in an institution.

Additionally, 79 out of Mission Viejo's 236 Housing Choice Vouchers are identified as being utilized by (non-Senior) disabled residents, which will also include those with developmental disabilities described below.

Developmental Disabilities

A developmental disability is defined as a disability that originates before 18 years old and that will likely continue for the rest of the individual's life. Development disabilities include conditions such as mental retardation, cerebral palsy, epilepsy, and autism. Developmentally disabled persons can often live and work independently within a conventional housing environment, but more severely disabled individuals will require a group living environment where supervision is provided. The most severely affected individuals may require an institutional environment where medical attention and physical therapy are provided.



Providing supportive housing as a developmentally disabled individual transitions to adulthood to permit them to live as independently as possible is a particularly important need.

Per its website, “The Regional Center of Orange County (RCOC) is one of 21 private, nonprofit organizations contracted by the State of California to coordinate lifelong services and supports for individuals with developmental disabilities and their families.” RCOC serves approximately 23,000 individuals statewide. According to the California Department of Developmental Services, which contracts with RCOC and the other nonprofits within Mission Viejo’s two ZIP codes (92691, 92692) as of December 2021, there were 496 consumers of RCOC services over the age of 18. The housing needs of these consumers were not specified, but approximately 68% of all consumers (including those under 18) lived with a parent or guardian, 9% were in independent living environments, and 21% were in community or intermediate care facilities.

There are several community-based housing types appropriate for persons living with a developmental disability, including licensed community care facilities and group homes; supervised apartment settings with support services; SB 962 homes (for persons with special healthcare and intensive support needs); and for persons able to live more independently, rent subsidized homes, inclusionary housing, and Section 8 rental vouchers. As stated at the end of the Persons with Disabilities section above, 79 Housing Choice Vouchers are designated as being used by (non-Senior) disabled persons, which would also include those with developmental disabilities.

In addition to services offered through the Regional Center, Vocational Visions in Mission Viejo serves almost 500 individuals a year with developmental disabilities to help them “increase the level of functioning for many of these men and women, thus maximizing their quality of life vocationally, economically and socially” (<https://www.vocationalvisions.org/>), helping them gain the necessary skills to live independently.

Mission Viejo supports the provision of housing for persons with disabilities. This Housing Element includes program actions to amend the Zoning Code to facilitate the provision of community care facilities and supportive housing and has adopted provisions for reasonable accommodation. Housing Element programs to facilitate affordable housing can also assist residents with developmental disabilities, with funding available through the State’s Supportive Housing Multifamily Housing Program (MHP).

Individuals Experiencing Homelessness

Every 2 years, the Orange County Housing and Community Development/Homeless Prevention and its partners conduct a Point-In-Time Homeless Count and Survey to collect data on the number and characteristics of the homeless in Orange County. The 2022 Survey identified 5,718 homeless individuals in the County and identified the following major characteristics summarized in Table II-11 below.

Table II-11 2022 Orange County Point in Time Homeless Survey

	Unsheltered	% Region Total	Sheltered	% Region Total	Total
By Region					
North	1,113	46.0%	1,306	54.0%	2,419
Central	1,522	56.1%	1,192	43.9%	2,714
South (includes Mission Viejo)	422	72.1%	163	27.9%	585
Total	3,057	53.5%	2,661	46.5%	5,718
Mission Viejo	26	—	2	—	—



	Unsheltered	% Unsheltered Adults	Sheltered	% Sheltered Adults	Total
Subpopulations and Disabling Conditions* (Adults)					
Adults	2,936	–	2,060	–	4,996
Chronic Homelessness	1,617	55.1%	791	38.4%	2,408
Substance Use	1,217	41.5%	416	20.2%	1,633
Physical Disability	945	32.2%	512	24.9%	1,457
Mental Health	867	29.5%	578	28.1%	1,445
Developmental Disability	419	14.3%	39	1.9%	458
Domestic Violence	289	9.8%	226	11.0%	515
HIV/AIDS	52	1.8%	77	3.7%	129

*Some adults may identify more than one condition

	Unsheltered	% Total Unsheltered	Sheltered	% Total Sheltered	Total
Demographics					
Under 18	121	4.0%	601	22.6%	722
18-24	109	3.6%	126	4.7%	235
25-39	1,021	33.4%	559	21.0%	1,580
40-49	618	20.2%	375	14.1%	993
50-54	388	12.7%	208	7.8%	596
55-61	500	16.4%	374	14.1%	874
62+	300	9.8%	418	15.7%	718
Total	3,057	–	2,661	–	5,718
Race					
American Indian or Alaska Native	118	3.9%	93	3.5%	211
Asian	96	3.1%	99	3.7%	195
Black or African American	190	6.2%	293	11.0%	483
Native Hawaiian or Other Pacific Islander	31	1.0%	26	1.0%	57
White	2,000	65.4%	2,056	77.3%	4,056
Multiple or Other Races	622	20.3%	94	3.5%	716
Total	3,057	–	2,661	–	5,718
Ethnicity					
Hispanic or Latino	1,046	34.2%	1,455	54.7%	2,501
Non-Hispanic/Non-Latino	2,011	65.8%	1,206	45.3%	3,217
Total	3,057	–	2,661	–	5,718
Household Status					
Individuals 18+	2,806	–	1,704	–	4,510
Families: Households with at least 1 adult and 1 child	94	–	295	–	389
Children in Family Household	121	–	594	–	715
Unaccompanied Youth	–	–	7	–	7

- Approximately 53% of the homeless counted were unsheltered, with 47% in shelter facilities, including emergency shelters and transitional housing programs. This is an improvement on the previous survey in 2019, where 58% were unsheltered.
- Among the adult unsheltered population, chronic homelessness, substance abuse issues, and physical disability were the top three disabling conditions reported, with chronic homelessness and



substance abuse up from 2019; among sheltered adults, there was a sharp rise in those chronically homeless and physically disabled.

- The 2022 survey found that under 18s comprised 13% of the total homeless population, and over 62s accounted for 13%. The 25-39 age category accounted for the largest share, at 28%.
- Hispanic or Latino individuals made up 44% of the total survey count. Hispanics/Latinos account for 34% of the countywide population, per Brown University's tabulation of 2020 Census racial/ethnic data.

The South Service Planning Area, which includes Mission Viejo, had a total of 585 individuals included in the survey count, comprising 10% of the total homeless population in the County. Mission Viejo had a total of 28 individuals counted, with 26 unsheltered and 2 sheltered. Cities neighboring Mission Viejo generally had similar counts, although Lake Forest and San Juan Capistrano were higher than the other neighboring cities, with counts of 76 and 65, respectively.

Focusing on youth homelessness, Mission Viejo participates in bi-monthly meetings of a county-coordinated Transitional Youth Homelessness subcommittee.

"2-1-1 Orange County" was established in 2005 to provide a comprehensive information and referral system to link County residents with community health and human services support. The service is available 7 days a week, 24 hours a day. Callers are connected with certified, multi-lingual information and referral specialists who utilize a database to provide information on services including shelter and housing resources, food, and substance abuse assessment and treatment.

There are limited resources in southern Orange County that provide emergency shelter and/or housing support services to residents of the region. There is only one "low barrier" shelter serving South County with limited beds (Friendship Shelter, Laguna Beach). There are rescue missions and shelters and advice on housing programs available in Tustin, Irvine, and Santa Ana, and a crisis center in San Clemente.

The City of Mission Viejo contracts with Mercy House Living Centers to perform homeless outreach in the City on a full-time basis. The staff work directly with the Orange County Sheriff's Department (specifically, the City's two Quality of Life Deputies and others assigned to the Homeless Outreach Team).

The purpose of the Mercy House program is to conduct outreach and engagement with the goal of placing homeless or unsheltered individuals residing in Mission Viejo into housing. Outreach workers from Mercy House partner with law enforcement, City staff, and local non-profits to conduct field surveys, provide case management services, and provide rehoming services designed to return homeless individuals to residences when possible. Mercy House staff conduct field visits in conjunction with the Sheriff's Department for safety purposes and they track the number of individuals given prevention, diversion or housing resources, and the number of individuals rehoused.

Mercy House and the City's Quality of Life Deputies also work with various local non-profits that receive funding from the City of Mission Viejo for the purpose of homeless outreach and housing services. The City works together with the non-profits to form an unofficial Mission Viejo Homeless Collaborative, which aims to meet on a quarterly basis. The purpose of the group is to brainstorm opportunities to help homeless individuals in Mission Viejo and to coordinate the activities of the non-profits for greater efficiency.



Farmworkers

Farmworkers are identified as one of the special populations to consider and analyze as part of the development of the Housing Element. The often temporary, migratory and transitional nature of farm work means that workers have special housing needs, and in addition, farm workers usually have below average incomes.

According to the Pre-Certified Local Housing Data compiled by SCAG, a total of 74 Mission Viejo workers (0.15% of the City’s workforce) are employed in farming, fishing, or forestry occupations. No land within Mission Viejo is designated for agricultural use, as is the case for neighboring cities. Because farmworkers make up a tiny proportion of Mission Viejo’s workforce, no specially tailored housing programs are provided by the City for this population, but farmworkers may be eligible for other programs available to residents based on other qualifying characteristics. Countywide, according to the U.S. Department of Agriculture’s 2017 Census of Agriculture, there were 1,772 farmworkers, with 666 identified as seasonal (working fewer than 150 days).

C. Housing Stock Characteristics

This section identifies the characteristics of Mission Viejo’s physical housing stock, including an analysis of housing growth trends, housing conditions, housing prices and rents, and housing affordability.

1. Housing Growth

Table II-12 shows housing production in Mission Viejo, compared to neighboring cities and Orange County as a whole between 2000 and 2020 (Data sources: SCAG Pre-Certified Housing Data for individual cities, and California Department of Finance figures for Orange County). It should be noted that Lake Forest’s growth over 20 years is partly distorted by annexations that increased the size of the city.

Mission Viejo and all neighboring cities experienced lower rates of housing unit growth in the last decade compared to the decade before, with the City’s 2010-2020 rate of 2.4% the second lowest of the six cities. Orange County as a whole experienced a much larger and consistent rate of growth across both decades, at around 8%.

There are a number of residential projects either underway or very recently completed in Mission Viejo, including Shea Homes (42 units, including 5 affordable units), Morningstar (132 units), and Trumark (91 units).

Table II-12 Housing Growth Trends, 2000-2020 (Number of Housing Units)

	2000	2010	2020	Percent Change	
				2000-2010	2010-2020
Laguna Hills	10,324	10,989	11,298	6.4%	2.8%
Laguna Niguel	23,885	25,312	26,236	6.0%	3.7%
Lake Forest	20,486	27,161	30,244	32.6%	11.4%
Rancho Santa Margarita	16,515	17,260	17,346	4.5%	0.5%
San Juan Capistrano	11,320	11,940	12,558	5.5%	5.2%
Mission Viejo	32,985	34,155	34,959	3.5%	2.4%
Orange County	969,484	1,046,118	1,129,785	7.9%	8.0%



As measured by the 2016-2020 American Community Survey (Comparative Housing Characteristics, Table CP04), the residential vacancy rate in Mission Viejo was slightly higher than the 5% benchmark, at 6.4%, while owner-occupied units had a vacancy rate of 0.3%. The rental vacancy rate of 6.3% is in line with other cities, and suggests something of an equilibrium between supply and demand indicating a healthy market, while the owner-occupied vacancy rate is very low and may be indicative of a pent up demand for owner-occupied units that is not being met by the supply, which could lead to price increases making housing less affordable to average income households.

2. Housing Type and Tenure

Table II-13 shows the different housing types in Mission Viejo, and how the mix has changed in the last 10 years. Approximately 83% of the City’s housing stock in 2020 was single family, and 71% single-family detached units – a slight drop from 2010, when the figure was 84.4%. The largest change to the City’s housing stock has been in multi-family units with 5 or more units, which now accounts for just over 14% of the total units, up from 12.8% in 2010. In general, the overall mix of single-family, multi-family and other types of housing units is largely unchanged in the last decade, although it is encouraging that multi-family construction saw the largest percentage change since 2010.

Table II-13 Mission Viejo – Housing Type, 2010-2020

	2010		2020	
	Units	Percent	Units	Percent
Single Family	28,830	84.4%	29,058	83.1%
Detached	24,718	72.4%	24,801	70.9%
Attached	4,112	12.0%	4,257	12.2%
Multi-Family	5,274	15.4%	5,850	16.7%
2-4 Units	910	2.7%	910	2.6%
5+ Units	4,364	12.8%	4,940	14.1%
Mobile Homes/Other	51	0.1%	51	0.1%
Total	34,155		34,959	

Source: California Department of Finance Estimates

Developed as a master-planned community, single-family housing dominates Mission Viejo’s housing profile. Single-family units tend to have much lower turnover rates than multi-family housing, impacting residential mobility. Demographic analysis in the AFFH section of the Housing Element reveals that Mission Viejo is an aging community, with residents largely “aging in place” in their single-family homes. Mission Viejo’s housing is approximately 77% owner-occupied, compared to 57% for the County as a whole. The home ownership rate in Mission Viejo has not changed markedly in the last couple of decades.

3. Housing Age and Condition

As part of the analysis of housing conditions for the Housing Element, one factor to examine is the age of the housing stock, because it can indicate the potential need for repair or rehabilitation if the housing stock consists largely of older units. Housing over 30 years old usually will begin to need rehabilitation work in areas such as roofing and plumbing, among other repairs. Table II-14 displays the age of Mission Viejo’s *occupied* housing stock by owner/renter tenure as of 2020.

The table shows that over 93% of the City’s occupied housing stock was built in the 1960s to 1990s – the time residential development first began in this part of Orange County, through to the years immediately



after the incorporation of Mission Viejo in 1988. Since the beginning of the 21st century, rental housing has comprised a greater share of the stock built than owner-occupied housing.

Although much of the City’s housing stock is over 40 years old, the stock is well-maintained and there are no significant problems with deterioration or housing blight, with neighborhoods generally very well maintained. Based on observations and service records of the Code Enforcement division, the City’s Building Division estimates that under 1% of Mission Viejo’s housing stock (fewer than 350 units) could be classified as “substandard.” A significant proportion of housing in the City is in Homeowner Associations (approximately 65%), which often enforce standards of appearance and are responsible for maintaining physical property in common, such as roofs, exterior appearance, and external plumbing. However, with an aging population, which may experience increasing difficulty in maintaining their property, code enforcement and housing rehabilitation programs will become more important and will be focused on older areas of the city.

Table II-14 Physical Housing Characteristics for Occupied Housing Units, 2020

Year Built	Owner-Occupied	% Owner	Renter-Occupied	% Renter	Total	Total %
2014 or later	29	0.1%	207	2.8%	236	0.7%
2010-2013	119	0.5%	255	3.4%	374	1.1%
2000-2009	466	1.8%	616	8.2%	1,082	3.3%
1980-1999	10,192	40.0%	3,274	43.6%	13,466	40.8%
1960-1979	14,291	56.1%	3,065	40.8%	17,356	52.6%
1940-1959	332	1.3%	63	0.8%	395	1.2%
1939 or earlier	59	0.2%	32	0.4%	91	0.3%
Total	25,488	–	7,512	–	33,000	–

Source: Table S2504, 2020 American Community Survey

4. Housing Costs and Affordability

Rental Housing Market

To ascertain a general picture of rents in Mission Viejo, although admittedly an unscientific sample, the major national rentals website apartmentguide.com was searched (May 2022) for units for rent in the City of Mission Viejo. Table II-15 presents the results of the rent survey by unit type, including apartments/condominiums/townhomes and single-family homes.

Table II-15 Units for Rent in Mission Viejo, May 2022

Unit Type & Bedrooms	# Units Advertised	Rental Range	Median Rent
Apartments/Townhomes/Condos			
1	14	\$1,995-\$2,800	\$2,450
2	14	\$1,300-\$3,850	\$3,250
3	2	\$4,210-\$4,950	–
Single Family Homes			
2	7	\$2,685-\$3,800	\$3,295
3	6	\$3,500-\$5,200	\$3,600
4	7	\$4,000-\$12,000	\$6,500
5 & 6	2	\$4,950-\$7,800	–

Source: apartmentguide.com, May 2022



A total of 52 units were advertised for rent, comprising 25 apartments and 5 units identified as townhomes or condominiums, and 22 single family homes. Among apartment rentals, one- and two-bedroom units were by far the most common listed for rent. Median rent for 1-bedroom apartments was \$2,450 and \$3,250 for 2-bedroom apartments; the two 3-bedroom units listed were over \$4,000.

The single-family homes for rent had a larger variety of number of bedrooms, ranging from 2 to 6. Interestingly, the median rent for a 3-bedroom single-family home was lower than that for 3-bedroom apartments, although the sample size was very small for the latter. Median rents for single-family homes ranged from \$3,295 for a 2-bedroom home, to \$6,500 for a 4-bedroom single-family home.

Accessory Dwelling Units

Trends in accessory dwelling unit production in Mission Viejo is covered in the Housing Resources section of this Housing Element, but in terms of affordability, SCAG has published a of “Regional Accessory Dwelling Unit Affordability Analysis” document (https://scag.ca.gov/sites/main/files/file-attachments/adu_affordability_analysis_120120v2.pdf?1606868527) which developed assumptions for local governments to use when including ADUs as part of their RHNA in their Sixth Cycle Housing Element. This was based on a survey of 150 ADUs across the SCAG region, including 46 in Orange County.

Examining rented ADUs, SCAG conducted surveys to estimate what proportion of ADUs were in various income categories (Extremely Low, Very Low, Low, Moderate, and Above Moderate) and to estimate rents paid. SCAG acknowledged that approximately 15% of ADUs are provided rent-free, and made the assumption that those ADUs could be designated as affordable to extremely low income (ELI) households.

SCAG produced separate affordability assumptions for different SCAG regions, one of which was Orange County. Table II-16 presents SCAG’s Orange County ADU affordability assumptions in Orange County, which Mission Viejo will use to provide the basis for assigning affordability to its projected ADUs the Housing Element Update. As shown below, 68% of all ADUs and 63% of rented ADUs in Orange County are estimated by SCAG to be affordable to lower income households.

Table II-16 Affordability Assumptions for All ADUs in Orange County

Category	Affordability Assumptions for Rented ADUs ¹ (85% of Total)	Affordability Assumptions for Non-Rented ADUs ² (15% of Total)	Affordability Assumptions for All ADUs ³ (100% of Total)
Extremely Low Income	0%	100%	15%
Very Low Income	12%	0%	10%
Low Income	51%	0%	43%
Moderate Income	35%	0%	30%
Above Moderate Income	2%	0%	2%

Source: Southern California Association of Governments, “SCAG Regional Accessory Dwelling Unit Affordability Analysis, December 2020

1. Used Step D in analysis to combine proportions from Step C into single breakdown of rented ADUs by income category.
2. Based on SCAG research of non-rented ADUs, it was determined that 15% of ADUs will be available at rents affordable to Extremely Low Income households
3. Combined by multiplying rented ADUs by 85% and non-rented ADUs by 15%.



Homeownership Market

Because approximately 77% of Mission Viejo’s housing units are owner-occupied, examining real estate prices for this segment of the housing stock is appropriate in the context of developing the Housing Element. The real estate website Zillow.com has developed a home valuation model to estimate the “typical” (not median) market value of properties, to produce a “Home Value Index” for a particular geographic area. Table II-17 shows the March 2019, 2020, 2021 and 2022 Home Value Indices for Mission Viejo, surrounding cities, and Orange County as a whole. This time series was chosen to see if there is any apparent impact on the index before and after the COVID pandemic.

Zillow describes this index as representing “the middle of the market for all homes. It is smoothed to soften short-term variability, and seasonally adjusted to remove the effect of the seasonal cycle of housing (and instead focus on longer term trends)”... and that it “represents the ‘typical’ home value for a region.” Zillow also gives the following technical explanation of the index:

- The average Zestimate within some range of home values determines the index level, meaning the index retains its interpretation as the dollar value of a typical home.
- Monthly changes in the index are now calculated using a weighted mean of the appreciation of individual homes, as proxied by changes in the Zestimate. The weight of each home in the index is proportional to its Zestimate in the first month of any monthly pair.
- For any geography or cut, index appreciation can now be interpreted as the *market’s* total appreciation. In other words, the Zillow Home Value Index (ZHVI) appreciation can now be viewed as the theoretical financial return that could be gained from buying all homes in a given subset (by geography and/or home type) in one period and selling them in the next period.

Table II-17 Zillow Home Value Index, 2019-2022

	March 2019	March 2020	March 2021	March 2022	Percent Change		
					2019-2020	2020-2021	2021-2022
Laguna Hills	\$761,131	\$778,943	\$858,102	\$1,099,292	2.3%	10.2%	28.1%
Laguna Niguel	\$877,686	\$895,816	\$982,426	\$1,295,296	2.1%	9.7%	31.8%
Lake Forest	\$738,948	\$757,374	\$828,403	\$1,060,324	2.5%	9.4%	28.0%
Rancho Santa Margarita	\$652,422	\$668,104	\$734,092	\$946,884	2.4%	9.9%	29.0%
San Juan Capistrano	\$797,495	\$819,068	\$891,068	\$1,165,893	2.7%	8.8%	30.8%
Mission Viejo	\$744,839	\$765,172	\$843,709	\$1,089,815	2.7%	10.3%	29.2%
Orange County	\$741,830	\$765,784	\$836,676	\$1,055,189	3.2%	9.3%	26.1%

It can be seen that in the year before the impact of the pandemic, the Home Value Index (HVI) for Mission Viejo, neighboring cities, and the county as a whole rose by around 2%-3%. Almost counter-intuitively, in the peak year of the pandemic, 2020-21, the HVI for all jurisdictions jumped by 9%-10%, and the year after the peak it increased across the region by a dramatic 30%, as the economy returned to normal, aided by government stimulus. The typical HVI in the region is now around \$1,000,000, which clearly has major implications for affordability for even above-moderate income earners.

The Zillow HVI is a measure of “typical” home values in Mission Viejo and the surrounding area; it is also useful to summarize the actual private homes on the market in the City, by type (single-family versus condo/townhome), number of bedrooms, and price, to get a sense of the actual costs of home ownership



in the City. As the index shows, housing prices over the last few years in the region (and the State) have dramatically increased, making affordability challenging for even higher income households.

As a snapshot of the Mission Viejo housing market, houses for sale in May 2022 were tallied. There were 94 units on the market at the time the survey of homes for sale as listed on Zillow.com was undertaken, with 13 condos/townhomes and 81 single-family homes for sale. The distribution of units for sale by type and number of bedrooms, is shown in Table II-18 below.

Table II-18 Units for Sale by Number of Bedrooms, May 2022

	Number of Bedrooms						Total
	2	3	4	5	6	7	
Condo/Townhome	9	4	–	–	–	–	13
Single Family	10	31	26	11	2	1	81
Total	19	35	26	11	2	1	94

Source: Zillow.com, May 2022

Three- and four-bedroom units were the most common, but there were a number of single-family units for sale with 5-7 bedrooms. Condos and townhomes tend to be smaller in square footage, and therefore tend to have fewer bedrooms.

In terms of cost, the median price per square foot across the entire sample was \$594. There are variations in square footage cost by bedroom size, as Table II-19 below shows.

Table II-19 Units for Sale by Price per Square Foot, May 2022

	Price Range per Square Feet, # Bedrooms					
	2	3	4	5	6	7
Condo/Townhome	\$500-\$693	\$498-\$583	–	–	–	–
Single Family	\$555-\$747	\$481-\$909	\$462-\$842	\$487-\$814	\$538	\$501

Source: Zillow.com, May 2022

There are some wide variations in the cost per square foot by bedroom caused by a few outliers, but in general owner-occupied homes are currently costing in the mid \$500s per square foot in Mission Viejo. Condos and townhomes range from \$585,000 to \$925,000, and single-family homes range from \$730,000 to \$2,200,000, with one outlier at \$3,695,000. As the Zillow HVI shows, prices have been increasing in the region, and even smaller units with just two bedrooms would require an average family to have saved approximately \$20,000 for a typical “earnest money” downpayment, and to be able to pay approximately \$2,800 per month on a mortgage at 5.65%, with an additional monthly HOA fee for condos. The analysis of private rented accommodation above, as shown for two- and three-bedroom apartments, can be well over \$2,000 per month.

Housing Affordability

Having examined housing cost information for Mission Viejo, those market rents and sales prices can be compared with what households of different sizes and income levels can afford to pay, which can reveal overpayment and overcrowding issues. According to HUD and the California Department of Housing and Community Development, housing is considered “affordable” if the monthly payment is no more than 30%



of a household's gross income for renters and for owners, except for median and moderate income homeowners, where the threshold is 35%.

Table II-20 below performs this comparison, based on assumptions about utility, tax, insurance, and homeowners' association costs, calculating affordable rents or home prices for differing household sizes and income levels.

With home prices in Mission Viejo around \$1 million, as measured by the Zillow Home Value Index in Table II-17 above, it is clear that home ownership is out of the range of Mission Viejo residents with even moderate incomes. Additionally, the rental information for Mission Viejo collected for Table II-15 above reveals that affordable rentals are difficult to find for lower income households in the City, resulting in likely overcrowding (such as larger families renting small units) or having to pay beyond the 30% of household income threshold, resulting in overpayment issues. Each income level is examined in detail below.

- **Extremely Low Income (ELI) Households** – ELI households earn 30% or less than the Area Median Income (AMI). The affordable home price for an ELI household ranges from \$78,437 for a 1-person household, to \$97,034 for a 5-person household, making homeownership out of reach for Mission Viejo ELI households. Affordable rents range from \$547 to \$753, and based on the rental information in Table II-20, even a 1-bedroom unit is unaffordable for ELI households.
- **Very Low Income (VLI) Households** – VLI households earn between 30% and 50% of the AMI. The affordable home price for a VLI household ranges from \$159,592 for a 1-person household, to \$222,299 for a 5-person household, making homeownership out of reach for Mission Viejo VLI households. Affordable rents range from \$1,021 to \$1,484, and based on the rental information in Table II-20, VLI households would have to pay rent that is significantly more than the affordability threshold of 30% of their income.
- **Low Income Households** – Low-income households earn between 50% and 80% of the AMI. The affordable home price for a low-income household ranges from \$281,432 for a 1-person household, to \$410,305 for a 5-person household, making homeownership out of reach for Mission Viejo low-income households. Affordable rents range from \$1,732 to \$2,582, and based on the rental information in Table II-20, some 1- and 2-bedroom units might fall within the affordable rent range, but larger families would likely experience overpayment or overcrowding issues.
- **Moderate Income Households** – Moderate-income households earn between 80% and 120% of the AMI. The affordable home price for a moderate-income household ranges from \$384,856 for a 1-person household, to \$569,831 for a 5-person household, making homeownership out of reach for Mission Viejo even for moderate income households. Affordable rents range from \$2,336 to \$3,513, and based on the rental information in Table II-20, 1-bedroom and most 2-bedroom units would fall within the affordable rent range, but larger families again would likely experience overpayment or overcrowding issues.



Table II-20 Estimated Affordable Housing Price by Income and Household Size (2022)

Income Category/ Household Size	Annual Income Limits	Affordable Monthly Housing Cost	Utility Allowance (2023)	Taxes, Insurance and HOA	Affordable Home Price	Affordable Rent
Extremely Low Income (0-30% AMI)						
1-Person	\$28,500	\$713	\$166	\$249	\$78,437	\$547
2-Person	\$32,550	\$814	\$180	\$285	\$92,092	\$634
3-Person	\$36,600	\$915	\$227	\$320	\$96,918	\$688
4-Person	\$40,650	\$1,016	\$283	\$356	\$99,504	\$733
5-Person	\$43,950	\$1,099	\$346	\$385	\$97,034	\$753
Very Low Income (30-50% AMI)						
1-Person	\$47,450	\$1,186	\$166	\$415	\$159,592	\$1,021
2-Person	\$54,200	\$1,355	\$180	\$474	\$184,810	\$1,176
3-Person	\$61,000	\$1,525	\$227	\$534	\$201,413	\$1,298
4-Person	\$67,750	\$1,694	\$283	\$593	\$215,562	\$1,411
5-Person	\$73,200	\$1,830	\$346	\$641	\$222,299	\$1,484
Low Income (50-80% AMI)						
1-Person	\$75,900	\$1,898	\$166	\$664	\$281,432	\$1,732
2-Person	\$86,750	\$2,169	\$180	\$759	\$324,208	\$1,989
3-Person	\$97,600	\$2,440	\$227	\$854	\$358,156	\$2,213
4-Person	\$108,400	\$2,710	\$283	\$949	\$389,649	\$2,427
5-Person	\$117,100	\$2,928	\$346	\$1,025	\$410,305	\$2,582
Moderate Income (80 -120% AMI)						
1-Person	\$100,050	\$2,501	\$166	\$875	\$384,856	\$2,336
2-Person	\$114,300	\$2,858	\$180	\$1,000	\$442,193	\$2,678
3-Person	\$128,600	\$3,215	\$227	\$1,125	\$490,916	\$2,988
4-Person	\$142,900	\$3,573	\$283	\$1,250	\$537,399	\$3,290
5-Person	\$154,350	\$3,859	\$346	\$1,351	\$569,831	\$3,513

Assumptions: 2022 HCD income limits; 30.0% gross household income as affordable housing cost; 35.0% of monthly affordable cost for taxes and insurance, 10% down payment; and 3.0% interest rate for a 30-year fixed-rate mortgage loan. Utilities based on Orange County Housing and Community Development Utility Allowance Schedule.

Sources:

1. HCD, 2022
2. Orange County Housing and Community Development Utility Allowance Schedule, October 2023 (Effective October 1, 2022)
3. Veronica Tam and Associates, 2023

5. Assisted Housing At-Risk of Conversion

California’s Housing Element Law requires jurisdictions to analyze the potential of housing developments with affordability assistance to convert to market-rate housing, and to propose programs to preserve or replace any units “at-risk” of conversion. Table II-21 below identifies two housing developments in Mission Viejo with affordability assistance, and their potential for conversion, with a total of 297 affordable units. None of these units will be eligible to convert from low-income housing uses due to termination of subsidy contracts, mortgage repayments or expiration of restrictions on use in the next 10 years. Previously, the City had three other housing developments – 120-unit Alicia Viejo, 183-unit Heritage Pointe, and 166-unit Eaves Mission Viejo – that were funded with Mortgage Revenue Bonds. The 1986 Tax Reform Bill required the setting aside of 20% of the units for low-income households for 15 years. The affordability requirements for these units have long expired.



Table II-21 Assisted Housing Developments in Mission Viejo

Project Name	Active Programs	Total Units	Affordable Units	Household Type	Risk Level	Estimated Affordability End Date
Arroyo Visa	LIHTC; CalHFA; Local	155	155	Family	Low	2049
Heritage Villas	LIHTC; Local	143	142	Senior	Low	2070

Source: California Housing Preservation Commission

6. Housing Problems

Housing Element analysis requires consideration of “housing problems.” Measures of this include housing overpayment and overcrowding.

Overpayment

Housing overpayment is defined as spending more than 30% of income on housing; severe overpayment is spending greater than 50% of income. Table II-22 below shows overpayment information for Mission Viejo and neighboring cities.

Table II-22 Overpayment for Renters and Owners, Mission Viejo and Neighboring Cities

	Renters		Owners
	Overpayment	Severe Overpayment	Overpayment
Laguna Hills	26.5%	38.1%	60.9%
Laguna Niguel	28.1%	32.6%	41.9%
Lake Forest	28.7%	26.6%	34.4%
Rancho Santa Margarita	29.1%	26.4%	37.0%
San Juan Capistrano	23.8%	46.2%	48.5%
Mission Viejo	32.3%	26.3%	33.5%

Source: SCAG Pre-Certified Housing Data, 04/2021, pp 14 & 16

"Overpayment": 30%-49.9% of income on housing

"Severe Overpayment": 50% or above

The table shows that 32.3% of renters in Mission Viejo were spending between 30% and 50% of their total income on housing. This was the highest rate of overpayment among the cities surrounding Mission Viejo. At the Severe Overpayment level, Mission Viejo fared better, with the lowest level of severe overpayment (26.3%) among the neighboring cities.

Among owner households, 33.5% were overpaying in Mission Viejo, which again was the lowest rate among the neighboring cities. Laguna Hills had by far the highest rate, at 60.9%.

Focusing on lower-income households (<80% AMI), overpayment is most pronounced. Table II-23 below shows overpayment and severe overpayment rates for renters in different income ranges for Mission Viejo and surrounding cities.



Table II-23 Percent of Renter Households in Overpayment and Severe Overpayment Category by Income Level

	< \$20,000	\$20,000- \$34,999	\$35,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999	> \$100,000
Overpayment						
Laguna Hills	3.4%	4.0%	30.0%	58.5%	42.3%	11.2%
Laguna Niguel	7.6%	4.2%	19.9%	69.5%	54.8%	7.0%
Lake Forest	5.8%	6.2%	37.2%	72.6%	28.8%	7.5%
Rancho Santa Margarita	1.7%	0.0%	64.6%	69.0%	38.7%	7.2%
San Juan Capistrano	3.4%	5.4%	25.6%	43.9%	44.6%	21.6%
Mission Viejo	0.0%	4.9%	43.2%	70.0%	64.3%	19.8%
Severe Overpayment						
Laguna Hills	89.7%	96.0%	66.1%	27.5%	2.9%	0.0%
Laguna Niguel	86.2%	92.9%	78.0%	19.2%	6.5%	0.3%
Lake Forest	86.6%	93.8%	60.6%	11.4%	0.9%	0.0%
Rancho Santa Margarita	75.7%	94.5%	33.6%	14.1%	1.3%	0.0%
San Juan Capistrano	93.5%	90.0%	70.0%	26.0%	20.4%	0.0%
Mission Viejo	96.8%	91.8%	53.9%	21.5%	0.5%	0.0%

Source: SCAG Pre-Certified Housing Data, 04/21, p. 15

“Overpayment” = 30%-49.9% of income on housing; “Severe Overpayment” = 50% or above of income on housing

Almost 97% of all renter households in Mission Viejo earning less than \$20,000 a year are in the Severe Overpayment category. For this income range, neighboring cities have overpayment/ severe overpayment totals ranging from 77.3% for Rancho Santa Margarita, to 93%-97% for other neighboring cities. Unsurprisingly, as household income increases, the level of overpayment declines, but almost 20% of renter households in Mission Viejo making over \$100,000 a year still fall into the overpayment category, second only to San Juan Capistrano among the neighboring cities.

As previously discussed, a high proportion of households with special needs (seniors, persons with disabilities, female-headed households with children) will be in the lower income categories, and thus have heightened vulnerability to potential loss of housing due to inability to pay the high rents in many Southern Orange County cities. The proportion of the renter population in the overpayment category represents a significant housing need in Mission Viejo and is addressed through Housing Element programs for Section 8 Rental Assistance, Affordable Housing Development Assistance, Accessory Dwelling Units, and Affordable Housing Density Bonus.

Examining lower income owner overpayment (households spending more than 30% of their income on housing), Table II-24 below shows that, unsurprisingly, overpayment is near total among owner households making under \$20,000 a year across all the cities surrounding Mission Viejo, and households in every city around Mission Viejo making less than \$75,000 per year all experience very high rates of overpayment, ranging from 73% to 100%. Programs to assist homeowners in adding an accessory dwelling unit to their properties can help to provide added rental income, and housing rehabilitation grants can assist lower income homeowners with insufficient discretionary incomes to maintain their homes.



Table II-24 Percent of Owner Households in the Overpayment Category by Income Level

	< \$20,000	\$20,000- \$34,999	\$35,000- \$49,999	\$50,000- \$74,999	\$75,000- \$99,999
Overpayment					
Laguna Hills	100.0%	97.5%	95.6%	81.1%	27.7%
Laguna Niguel	100.0%	94.2%	94.1%	73.4%	27.6%
Lake Forest	100.0%	92.6%	88.7%	80.4%	18.8%
Rancho Santa Margarita	90.1%	100.0%	100.0%	80.8%	26.4%
San Juan Capistrano	100.0%	100.0%	93.7%	79.4%	31.5%
Mission Viejo	100.0%	96.6%	88.6%	81.5%	19.5%

Source: SCAG Pre-Certified Housing Data, 04/21, p. 16
“Overpayment” = 30%-49.9% of income on housing

Housing problems and cost burden for the City of Mission Viejo are presented in Table II-26 by tenure, household type, and household income. Among all households, regardless of income, renter-occupied elderly households experience housing problems at the highest rate compared to other household types (68.5%). Approximately 57% of large renter households also experience one or more housing problems compared to 55% of renters citywide. Elderly households are more likely to be cost burdened due to fixed incomes. Similarly, large households may experience overcrowding at higher rates compared to other households such as small households. All renter-occupied household types included below, elderly, small, and large, are more likely to experience housing problems and cost burden compared to the respective owner-occupied household types.

Overcrowding

As discussed in Appendix D, overcrowding is defined by the State as a housing unit occupied by more than 1.01 persons per room (excluding kitchens, porches and hallways), and a unit with more than 1.51 occupants per room is considered severely overcrowded. Overcrowding in a jurisdiction may imply the lack of an adequate supply of appropriately sized housing units. The incidence of overcrowded housing is a general measure of whether there is an available supply of adequately sized housing units.

Examining differences in overcrowding by tenure for Mission Viejo and neighboring cities in Table II-25 below shows a marked difference in rates of overcrowding between owned and rented units. For Mission Viejo, the City’s owner households had an overcrowding rate of 0.6% and a severe overcrowding rate of 0.2%, compared with 5.6% and 2.4%, respectively, for renter households. Mission Viejo experienced some of the lowest overcrowding rates compared to its neighboring cities, where renter overcrowding reached double digits in Laguna Hills, Lake Forest, and San Juan Capistrano. Overcrowding is not as severe an issue in Mission Viejo, based on these figures.



Table II-25 Percent of Owner and Renter Households Experiencing Overcrowding or Severe Overcrowding

	Owner Households		Renter Households	
	Overcrowding	Severe Overcrowding	Overcrowding	Severe Overcrowding
Laguna Hills	1.8%	0.1%	11.5%	4.0%
Laguna Niguel	0.7%	0.1%	7.6%	2.2%
Lake Forest	2.1%	0.2%	10.7%	4.8%
Rancho Santa Margarita	1.2%	0.1%	5.5%	2.0%
San Juan Capistrano	3.0%	0.3%	14.0%	3.0%
Mission Viejo	0.6%	0.2%	5.6%	2.4%

Source: SCAG Pre-Certified Housing Data, 04/2021, p 13



Table II-26 Percent of Owner and Renter Households Experiencing Housing Problems or Cost Burden – Mission Viejo

	Renter-Occupied				Owner-Occupied				Total Households
	Elderly Household	Small Household	Large Household	Total	Elderly Household	Small Household	Large Household	Total	
Extremely Low Income (<30% MFI)	485	450	130	1,335	1,325	465	25	2,120	3,455
With any housing problem	82.5%	90.0%	100.0%	88.8%	72.1%	87.1%	100.0%	74.3%	79.9%
Cost burden >30%	73.2%	85.6%	100.0%	86.9%	70.9%	87.1%	96.0%	73.6%	78.7%
Cost burden >50%	57.7%	85.6%	100.0%	82.8%	50.9%	78.5%	80.0%	57.5%	67.3%
Very Low Income (30-50% MFI)	365	345	105	875	1,315	490	65	2,080	2,955
With any housing problem	91.8%	98.6%	100.0%	95.4%	55.1%	72.4%	100.0%	61.1%	71.2%
Cost burden >30%	91.8%	98.6%	100.0%	95.4%	59.3%	72.4%	84.6%	60.3%	70.7%
Cost burden >50%	42.5%	63.8%	23.8%	51.4%	28.5%	50.0%	53.8%	42.5%	45.2%
Low Income (50-80% MFI)	280	805	245	1,810	1,690	1,185	265	3,390	5,200
With any housing problem	80.4%	75.8%	73.5%	76.2%	38.5%	62.9%	69.8%	52.1%	60.5%
Cost burden >30%	80.4%	72.0%	73.5%	74.6%	38.5%	59.9%	66.0%	50.6%	58.9%
Cost burden >50%	17.9%	6.8%	0.0%	6.4%	13.0%	19.8%	5.7%	15.0%	12.0%
Moderate and Above Moderate Income (>80% MFI)	520	2,105	345	3,720	5,270	10,100	1,830	18,235	21,955
With any housing problem	32.7%	20.7%	15.9%	23.0%	10.9%	12.3%	17.2%	13.1%	14.7%
Cost burden >30%	27.7%	18.3%	4.1%	19.7%	10.7%	12.3%	10.9%	12.3%	13.6%
Cost burden >50%	0.8%	0.0%	0.0%	0.1%	0.7%	0.6%	0.8%	0.9%	0.7%
All Households	1,650	3,705	825	7,740	9,600	12,240	2,185	25,825	33,565
With any housing problem	68.5%	48.3%	57.0%	55.0%	30.3%	22.4%	27.0%	27.1%	33.5%
Cost burden >30%	64.2%	45.6%	52.0%	52.7%	30.6%	22.1%	20.8%	26.3%	32.4%
Cost burden >50%	29.6%	17.8%	18.8%	21.6%	13.6%	7.4%	3.9%	10.7%	13.2%

Source: HUD CHAS Data (based on 2015-2019 ACS), 2021.



D. Regional Housing Needs Allocation

The Regional Housing Needs Allocation (RHNA) is a State-mandated process that determines the amount of future housing growth each city and county must plan for in their housing elements. This “fair share” allocation concept seeks to ensure that each jurisdiction accepts responsibility for the housing needs of not only its resident population, but also for the jurisdiction’s projected share of regional housing growth across all income categories. Regional growth needs are defined as the number of units that would have to be added in each jurisdiction to accommodate the forecasted number of households, as well as the number of units that need to be added to compensate for anticipated demolitions and changes to achieve an “ideal” vacancy rate.

The RHNA process begins with the California Department of Housing and Community Development’s (HCD) projection of future statewide housing growth need, and the apportionment of this need to regional councils of government throughout the State. As Southern California’s designated Council of Government, the Southern California Association of Governments (SCAG) is the agency responsible for developing an allocation methodology to allocate the region’s assigned share of statewide need to cities and counties by income level. The main determining factors in SCAG’s methodology are: household growth (based on Connect SoCal growth forecast), job accessibility, and transit accessibility. After a RHNA total is calculated, a social equity adjustment is applied to determine the four income categories (very low, low, moderate and above-moderate incomes).

The State has allocated 1.34 million new housing units to the SCAG region as part of the 6th Cycle RHNA. This level of housing growth represents the largest allocation the region has ever received, resulting in much higher RHNA allocations for SCAG cities and counties. The City appealed the City’s RHNA allocation and methodology, but the appeal was denied by SCAG’s RHNA Appeals Board. In fact, of the 52 appeals filed by California cities, only two appeals were approved, with all appeals by Orange County cities being denied. On March 4, 2021, SCAG’s Regional Council adopted the final RHNA allocation, resulting in a final RHNA of 2,217 housing units for the City of Mission Viejo broken down into the following income categories.

Table II-27 Regional Housing Needs Assessment (RHNA) for Mission Viejo, 2021-2029

Income Level	% of Area Median Income	Units	% of Units
Extremely Low*	0 - 30%	337	15.2%
Very Low*	31 - 50%	337	15.2%
Low	51 - 80%	401	18.1%
Moderate	81 - 120%	397	17.9%
Above Moderate	Over 120%	745	33.6%
Total	–	2,217	–

*Local jurisdictions must consider Extremely Low Income households as part of the Very Low Income Allocation. The Mission Viejo Housing Element assumes that 50% of the City’s Very Low Income housing needs are for Extremely Low Income households (337 units), earning less than 30% AMI.

The RHNA represents the minimum number of housing units each community is required to provide “adequate sites” for through zoning and is one of the primary threshold criteria necessary to achieve State approval of the Housing Element. As the RHNA represents a planning target for new residential growth and not a building quota, so long as a jurisdiction provides sufficient sites and does not impose constraints to development, it is not penalized for falling short of its RHNA target. Mission Viejo will continue to provide



sites for a mix of single-family and multi-family housing, supported by a variety of programs to enhance affordability, to accommodate its RHNA, and to contribute towards addressing the growing demand for housing in the southern California region.



III. Housing Constraints

This section of the Housing Element provides an analysis of existing and potential constraints upon the maintenance, improvement, or development of housing for all income levels. Governmental and nongovernmental constraints are considered in the analysis. This analysis will help focus the goals, policies and programs in the most efficient and effective manner.

A. Governmental Constraints

The intent of local government regulations is to protect public health and safety and ensure a decent quality of life for the residents. Land use controls, site improvement requirements, building codes, fees, processing procedures, and other local programs intended to improve the overall quality of housing may serve as potential constraints to the development and improvement of housing. The following section assesses potential and governmental constraints to the maintenance, improvement, and development of housing for all income levels and for special housing needs and the City's efforts to address or limit those constraints.

1. Land Use Plans and Regulations

a. General Plan

Each city and county in California must prepare a comprehensive, long-term General Plan to guide its future. The land use element of the General Plan establishes the basic land uses and density of development within the various areas of the city.

The Mission Viejo General Plan Land Use Element provides for six residential land use designations, as shown in Table III-1. Two new residential land use designations were established in 2021: Residential 50, to accommodate residential projects with a density range of 30.01 to 50 dwelling units per acre (du/ac); and Residential 80, to accommodate residential projects with a density range of 30.01 to 80 du/ac.

In addition, the General Plan contains seven mixed-use designations that allow residential development as shown in Table III-1. These mixed-use designations allow any of the listed use categories to exist individually on a site, or to be combined with one or both of the other categories in a mixed-use project.



Table III-1 Residential and Mixed-Use Land Use Categories – Mission Viejo General Plan

Designation	Maximum Density*	Description
Residential 3.5	3.5	Low density detached and attached single family dwellings
Residential 6.5	6.5	Low to medium density detached and attached single-family dwellings (duplexes, condominiums, and townhomes)
Residential 14	14.0	Medium and higher density detached and attached single family dwellings and multi-family apartments
Residential 30	30.0	High density single family attached and multi-family dwelling units
Residential 50	50.0	High density single family attached and multi-family dwelling units
Residential 80	80.0	High density single family attached and multi-family dwelling units
Commercial Neighborhood/ Community Facility/ Residential 14	14.0	Commercial, community facilities or residential units, either individually or combined
Office Professional/ Residential 30/ Business Park	30.0	Commercial, community facilities or residential units, either individually or combined
Commercial Highway/ Residential 30	30.0	Commercial and residential units, either individually or combined
Commercial Highway/ Residential 50	50.0	Commercial and residential units, either individually or combined
Commercial Regional/ Residential 80	80.0	Commercial and residential units, either individually or combined
Business Park/ Residential 30	30.0	Commercial and residential units, either individually or combined

Source: City of Mission Viejo General Plan, 2021.

*Density expressed in dwelling units per gross acre.

The City of Mission Viejo General Plan is not considered to be a constraint to the goals and policies of the Housing Element, because the City’s zoning is consistent with the General Plan and adequate sites with appropriate densities have been identified and zoned to facilitate construction commensurate with the City’s fair share of new housing units during the planning period (See Section IV – Resources and Opportunities).

b. Zoning Designations

The City regulates the type, location, density, and scale of residential development through the Development Code, a part of the City’s Municipal Code. The Development Code, which contains the City’s zoning regulations, serves to implement the General Plan and is designed to protect and promote the health, safety, and general welfare of residents. The Development Code also helps to preserve the character and integrity of existing neighborhoods. The Development Code sets forth residential development standards for each zoning district.



The General Plan Land Use designations cited in the previous section are implemented by the following zoning districts that allow residential units as a permitted use.

- RPD 3.5** Residential Planned Development 3.5
- RPD 6.5** Residential Planned Development 6.5
- RPD 14** Residential Planned Development 14
- RPD 30** Residential Planned Development 30
- RPD 30A** Residential Planned Development By-Right (Affordable)
- RPD 50** Residential Planned Development 50
- RPD 80** Residential Planned Development 80

A summary of the residential development standards for these zoning districts is provided in Table III-2. These development standards continue to be viewed as reasonably necessary to protect the public health, safety, and welfare and maintain the quality of life, and are not considered to be constraints on the development of housing.

Table III-2 Residential Development Standards

Development Standard	Zoning District Designations					
	RPD 3.5	RPD 6.5	RPD 14	RPD 30 RPD 30A	RPD 50 ³	RPD 80 ³
Maximum Density (du/ac) ¹	3.5	6.5	14.0	30.0	50	80
Minimum Lot Area (sq. ft.)	5,000	5,000	5,000	5,000	20,000	30,000
Minimum Front Yard (ft.)	20	20	30	30	40	50
Minimum Side Yard (ft.)	5	5	10	15	25	35
Minimum Rear Yard (ft.)	10	10	30	30	40	50
Maximum Lot Coverage (%)	60	60	50	50	50	50
Maximum Building Height (ft.)	35 ²	35 ²	35 ²	35 ²	50 ²	65 ²

Source: City of Mission Viejo Development Code

1. Density expressed in dwelling units per gross acre.
2. In the RPD 30, RPD 30A, RPD 50 and RPD 80 Districts, building height may be modified by the Director of Community Development with an application for a Minor Exception.
3. Applicable development standard for residential overlay areas.

The City’s Development Code was adopted in October 1998 and has been reviewed and amended over time to ensure that it remains current and consistent with State law, and that it continues to facilitate development. Amendments to the Development Code included updates for reasonable accommodation, density bonus, emergency shelters, and development and parking standards for accessory dwelling units. City staff meets regularly with housing developers and routinely engages in discussion regarding the City Development Code standards.

City parking requirements are discussed later in subsection e. Feasibility analyses for each of the housing sites demonstrate proposed densities can be achieved within the City’s development standards. Furthermore, the City facilitates the development of higher density multi-family housing through RPD 50 and RPD 80 zoning. RPD 50 allows a building height of 50 feet (four stories), and RPD 80 allows up to 65 feet (five stories). Additionally, The Shops – Macy’s site, located within the RPD 80 district, is also within a Commercial Intensive Height Overlay zoning district, which has a maximum height limit of 70 feet or seven stories, whichever is less. However, properties within this district can increase the maximum allowable height limit up to 150 feet or 15 stories, whichever is less, through a planned development permit.



Feasibility studies demonstrate how the housing sites can meet Development Code standards while also achieving targeted densities. The Shops – Macy’s site is 11.32 acres and can yield 906 units at an above-grade height of 65 feet, thus achieving a density of 80 units/acre. The Burlington site is 6.9 acres and estimated to be developed with 345 multi-family apartment units at a height of 55 feet. If needed, structure heights can be increased by up to 15% of the standard with a minor exception approved by the Director of Community Development. Additionally, this Housing Element includes a program to expand its Commercial Intensive Height Overlay zoning district to include the Commercial Highway/Residential 50 properties to ensure maximum density can be achieved. The City’s development standards and height limits can facilitate higher density multi-family.

Table III-3 Comparable Developments

Project	Address	# of Units (% Low Income)	Site Acreage	Permitted Density	Built Density	Max Building Height
Skye at Laguna Niguel	28100 Cabot Road	142 (10%)	2.13 acres	40-50 du/ac; 120 du/ac with density bonus	67 du/ac	120 feet
Apex Laguna Niguel	27960 Cabot Road	284 (10%)	3.31 acres	40-50 du/ac; 120 du/ac with density bonus	86 du/ac	80 feet
Broadstone Cavora	26033 Cape Drive	351 (10%)	5.0 acres	40-50 du/ac; 120 du/ac with density bonus	70 du/ac	120 feet
Blu II Laguna Niguel	25887 Crown Valley Parkway	192 (12.5%)	3.76 acres	40-50 du/ac; 120 du/ac with density bonus	51 du/ac	50 feet
South Forbes	27942 Forbes Road	309 (0%)	2.6 acres	40-50 du/ac; 120 du/ac with density bonus	119 du/ac	120 feet

Furthermore, the City’s Development Code also allows for a minor exception process to allow adjustments to the Code of up to 15% for setbacks, height, parcel dimensions, and modifications of up to 30% for on-site circulation and parking. These provisions address special hardship circumstances and help facilitate development while avoiding the administrative requirements of seeking a variance. The City’s standards are not generally seen as an obstacle to affordable housing development. In addition, the City has demonstrated a willingness to accommodate alternative development standards in order to provide infill residential development, as evidenced by the recently approved residential projects. Several affordable housing development projects have been approved in recent years, and some have been granted a density bonus or modification to development standards such as building height to enhance project feasibility. Heritage Villas, an affordable senior housing project, was approved with one parking space per unit based on a study analyzing parking need at similar projects. The Adagio-on-the-Green project, located in an RPD 30 zoning district, was approved with a 20% density bonus, including a building height and parking modification for the 256-unit apartment project, producing a density of 36 units per acre.

As stated in the Development Code, the standards listed above shall apply unless modified by a Planned Development Permit issued by the Planning and Transportation Commission. The Planned Development



Permit process allows nontraditional or unique site plan design if found appropriate by the Planning and Transportation Commission. The development standards were analyzed to ensure that the maximum housing densities for a zone could be attained. Results from the analysis indicated that the maximum densities could be achieved.

Densities range from 3.5 dwelling units per gross acre in the RPD 3.5 District to a maximum of 80.0 units per gross acre in the RPD 80 District. In addition, State law allows a potential density bonus above the allowable density specified in the Code. Nonresidential zoning districts with residential overlays have the flexibility to develop as commercial, residential, or mixed use. The General Plan contains seven mixed-use designations which allow any of the listed use categories to exist individually on a site, or to be combined with another category in a mixed-use project. The overlay allows 100% residential projects where residential is not otherwise permitted. Non-residential land use is subject to noncommercial standards and residential development is able to benefit from the reduced setbacks and higher building heights. Parcels designated with a Residential Overlay would receive density increases above the base density, along with a variety of development incentives, in exchange for development of either 20% lower income units in a rental project, or 20% moderate income units in an ownership project.

Three additional zoning districts – the Commercial Community District (CC) District, the Commercial Highway District (CH), and the Office/Professional District (OP) – allow congregate care/senior housing when combined with the Senior Housing Overlay Zone (SH). All senior housing developments are subject to a conditional use permit. However, the City is proposing to remove the Senior Housing Overlay, because senior housing should be treated the same as other multi-family housing and permitted where multi-family is permitted. The City will develop specific objective development standards, such as reduced parking requirements, for senior housing development.

A summary of residential development permitted by the City's Zoning Ordinance is provided in Table III-4.

The Development Code provides for a variety of housing types including single-family homes, multi-family (both rental and condominiums), manufactured housing, mobile homes, and accessory dwelling units (ADUs). Low income housing can be accommodated in all residential districts. ADUs, which are an important tool in facilitating affordable housing, are permitted by-right in any residential zone with an existing single-family home.



Table III-4 Permitted Residential Development by Zoning District

Housing Type Permitted	RPD	RPD	RPD	RPD	RPD	RPD	RPD	BP	Overlay		
	3.5	6.5	14	30	30A	50	80		CC	CH	OP
Residential Uses											
Single-Family Detached	D	D	D	D	P	D	D	–	D	D	D
Single-Family Attached	D	D	D	D	P	D	D	–	D	D	D
Multi-Family Dwellings	–	–	D	D	P	D	D	–	D	D	D
Manufactured Housing	D	D	D	D	P	D	D	–	D	D	D
Mobile Home Parks	D	D	D	D	D	D	D	–	D	D	D
Accessory Dwelling Units	P	P	P	P	P	P	P	–	P	P	P
Special Needs Housing											
Emergency Shelters ^{3, 4}	–	–	–	C	C	C	C	P	–	–	–
Transitional Housing ³	–	–	–	C	C	C	C	–	–	–	–
Residential Care Facilities (6 or fewer persons) ³	P	P	P	P	P	P	P	–	–	–	–
Residential Care Facilities (7 or more persons) ³	C	C	C	C	C	C	C	–	–	–	–
Congregate Care/Senior Housing	–	–	C ¹	C ¹	–	C ¹	C ¹	–	C ²	C ²	C ²
Single Room Occupancy	–	–	–	–	–	–	–	–	–	–	C

Source: Mission Viejo Development Code

P = Permitted; D = Planned Development Permit; C = Conditional Use Permit

1. Congregate Care/Senior Citizen Housing is subject to the development standards set forth in §9.10.020 of the Development Code.
2. Use is allowed only when combined with the Senior Housing Overlay Zone (SH).
3. Use is permitted in accordance with existing state law.
4. Emergency shelters are permitted in the Business Park/Industrial zones.

The RPD 30A District, adopted in 2007, was created to provide suitable zoning for Parcels A, B and C identified in this Housing Element, Section IV: Housing Resources, as potential sites for affordable housing. The district permits residential development by-right in accordance with housing element law and waives the need for any type of discretionary permit. The RPD 30A District also contains affordability criteria that require a percentage of the units within Parcels A, B and C to be affordable to low- or very low-income households. The percentage of residential units in Parcels A, B, and C required to be affordable are as follows:

- Parcel A – 15% (minimum and maximum)
- Parcel B – 15% (minimum)
- Parcel C – 20% (minimum)

Residential Care Facilities

Residential care facilities refer to any family home, group home, or rehabilitation facility that provides non-medical care to persons in need of personal services, protection, supervision, assistance, guidance, or training essential for daily living. Section 9.01.050 (129) of the Mission Viejo Development Code defines the term *residential care facility* as “a family home or group care facility for 24-hour non-medical care of persons in need of personal services, supervision or assistance for sustaining the activities of daily living or for protection : “Small” residential care facilities (those serving six or fewer clients) are allowed by-right in the residential zones and subject to the same development standards and permit processing requirements as other residential uses in those zones, pursuant to the California Lanterman Developmental Disabilities



Services Act. “Large” residential care facilities (those serving seven or more clients) are conditionally permitted in all residential zones. Findings for approval are:

- a) That the proposed use is conditionally permitted within the subject zoning district and complies with all the applicable provisions of this code.
- b) That the proposed use is consistent with the general plan.
- c) That the approval of the conditional use permit for the proposed use is in compliance with the requirements of the California Environmental Quality Act and Article 6 of the Municipal Code.
- d) That the location, size, design, and operating characteristics of the proposed use are compatible with the existing and known future land uses and will not create significant noise, traffic or other conditions or situations that may be objectionable or detrimental to other permitted uses in the vicinity or adverse to the public interest, health, safety, convenience, or welfare of the city.
- e) That the proposed use would not impair the integrity and character of the zoning district in which it is to be located.
- f) That the subject site is physically suitable for the type and intensity of use being proposed.
- g) That there are adequate provisions for water, sanitation, and public utilities and services to ensure that the proposed use will not be detrimental to public health and safety.

Some of these findings, such as findings d) and e), may be considered subjective, although the City is not aware of these findings being constraining to the development of large facilities. Nevertheless, a program action is included in the Housing Plan to update the Zoning Code to provide objective standards for review and approval of permits for group homes for seven or more persons.

Housing for Persons with Disabilities

Both the federal Fair Housing Act and the California Fair Employment and Housing Act impose an affirmative duty on local governments to make reasonable accommodations (i.e., modifications or exceptions) in their zoning laws and other land use regulations when such accommodations may be necessary to afford disabled persons an equal opportunity to use and enjoy a dwelling. The Building Codes adopted by the City of Mission Viejo incorporate accessibility standards contained in Title 24 of the California Administrative Code. For new construction, the City’s building code requires new housing to comply with the 1988 amendment to the Fair Housing Act, with multi-family development also subject to the Americans with Disabilities Act (ADA) standards. New apartment buildings are subject to requirements for unit “adaptability” on ground floor units. Adaptable units are built for easy conversion to disabled access, such as doorway and hallway widths, and added structural support in the bathroom to allow the addition of handrails. Additionally, Chapter 9.60 of the City’s Municipal Code addresses reasonable accommodation pursuant to SB 520. The purpose is to provide reasonable accommodation in the application of zoning and building laws, and policies and procedures for persons with disabilities seeking fair access to housing. The Code provides a mechanism through which the City can grant reasonable adjustments to its zoning regulations to avoid unequal treatment towards individuals with disabilities.

Any person seeking reasonable accommodation because of a disability may file an application with the Director of Community Development. There is no fee required. The Director shall review the application for completeness within 5 days of receipt, and shall make a determination on the request within 30 days of



receipt of a complete application. In making a determination about the reasonableness of a requested accommodation, the following factors shall be considered:

- a) Whether the accommodation is reasonable considering the nature of the applicant's disability, the surrounding land uses, and the rule, standard, policy, or practice from which relief is sought;
- b) Whether the accommodation is necessary to afford the applicant equal opportunity to enjoy and use a specific dwelling in the City;
- c) Whether the accommodation is reasonably feasible considering the physical attributes of the property and structures;
- d) Whether there are alternative accommodations which may provide an equivalent level of benefit to the applicant, while minimizing adverse impacts on surrounding land uses and lessening the financial and/or administrative burden on the City;
- e) Whether the requested accommodation would impose an undue financial or administrative burden on the City; and
- f) Whether the requested accommodation would constitute a fundamental alteration of the zoning or building laws, policies or procedures of the City.

Factors relating to surrounding land uses or physical attributes of the property and structures are not based on objective performance standards. Therefore, a program action is included in the Housing Plan to amend the Reasonable Accommodation provisions to ensure they are objective and facilitate certainty in outcomes.

The California courts have invalidated the following definition of "family" within jurisdictions' Zoning Ordinances: a) an individual, b) two or more persons related by blood, marriage or adoption, or c) a group of not more than a certain number of unrelated persons as a single housekeeping unit. Court rulings state that defining a family does not serve any legitimate or useful objective or purpose recognized under the zoning and land planning powers of the city, and therefore violates rights of privacy under the California Constitution. A zoning ordinance also cannot regulate residency by discrimination between biologically related and unrelated persons. Mission Viejo's Zoning Code, 9.01.050 (75) contains the following definition of "family": *"One or more persons related or unrelated, living together as a single nonprofit housekeeping unit, as distinguished from a group occupying a boarding or lodging house, hotel, club, or similar dwelling for group use. A family may include domestic servants employed by the family but shall not include a fraternal, religious, social, or business group."*

Family also means the persons living together in a licensed residential facility as that term is defined in Health & Safety Code §1502(a)(1) that serves six or fewer persons, excluding the licensee, the members of the licensee's family, and persons employed as facility staff who reside at the facility.

Concentration Requirements

Care facilities or group homes are not subject to any minimum spacing requirements.

Site Planning Requirements

No special site planning requirements are applied to care facilities or group homes that are not applicable to other residential uses in the same zone. Also, as noted above, modifications to zoning and building regulations may be granted under the City's Reasonable Accommodation provisions.



Parking Requirements

Modified parking requirements may be reviewed and approved under the Reasonable Accommodation Ordinance.

Compliance with building codes and the provisions of the federal Americans with Disabilities Act (ADA) could have the potential to increase the cost of housing production and can also impact the viability of rehabilitation of older properties required to be brought up to current code standards. However, these regulations provide minimum standards that must be complied with to ensure the development of safe and accessible housing.

Agricultural Employee and Employee Housing

As discussed in Section 2.5.5, the City of Mission Viejo is not located within a major agricultural area, has no agricultural zoning, and has no significant need for permanent on-site farm worker housing. The City's overall efforts to provide and maintain affordable housing opportunities will help to support any agricultural workers who reside in Mission Viejo. Health and Safety Code §17021.5 requires that employee housing for six or fewer workers be allowed as a single-family structure and permitted in the same manner as other dwellings of the same type in the same zone. A program action is included in the Housing Plan to amend City regulations in conformance with this law.

Housing for the Elderly – Senior Housing

Senior citizen housing developments, identified in the Zoning Code as a housing development that has been designed to meet the physical and social needs of senior citizens, can include independent living facilities in single- or multi-family housing units or through group or assisted living such as residential care facilities, which are described above. Many seniors in Mission Viejo reside in State-licensed care facilities with six or fewer residents, which are permitted by-right in all residential zones. Additionally, a program action is included in the Housing Plan to amend the City Zoning Code regulations to remove special standards for senior citizen housing developments within the RPD 14 and RPD 30 Districts and also within the Senior Housing Overlay Zone. The amendment will amend the Code in conformance with state law, allowing senior housing and multi-family housing in the same zones. Consideration for parking concessions, in conjunction with senior housing, will however, be retained, and will be written into Section 9.25 of the City's Zoning Code, Off-Street Parking Standards.

Emergency Shelters

Emergency shelters are facilities that provide a safe alternative to acute homelessness either in a shelter facility or through the use of motel vouchers. Emergency shelter is short-term, usually for 30 days or less. In 2009, the City's Zoning Code was amended to allow emergency shelters by-right in the Business Park (BP) zone. The sites within this zone are located within walking distance of shopping, medical, civic offices, employment, and public transportation. The City's Zoning Code provides for Emergency Shelters as required by Government Code §65583(a)(4). For the purposes of this chapter, "emergency shelter" shall have the meaning set forth in Government Code §65582. The City shall not require a conditional use permit or other discretionary permit for the construction of an *emergency shelter*. Emergency shelters in the BP zone are subject to ministerial review and approval, and compliance with objective standards consistent with the requirements identified in Government Code §65583(a)(4). No emergency shelters are currently



located within Mission Viejo. The City may not disapprove an *emergency shelter* unless it is unable to make written findings, based upon substantial evidence in the record, as to one of the following:

Development standards are appropriate to facilitate emergency shelters, and are summarized as follows:

- Setbacks: 25 feet front/25 feet rear/15 feet side
- Height: 35 feet maximum
- Floor Area Ratio: 1.0 maximum
- Maximum Beds: 10
- Parking: Based on staffing needs
- Management plan and on-site supervision/security required
- Minimum separation from another emergency shelter: 250 feet
- Maximum length of stay: 180 days

As of 2022, the Orange County Point-in-Time Count reports 28 homeless persons in Mission Viejo, including 26 unsheltered and 2 sheltered persons. With the 10-bed limit, the City would need 3 shelters to accommodate its unsheltered population. The Business Park (BP) zone encompasses more than 165 acres (787 parcels) and some parcels and buildings are currently vacant in these zones that could accommodate shelters. The BP zone is located near Jeronimo Road and Los Alisos Boulevard, with access to services such as shopping, religious institutions, Social Security Administration, and medical services.

However, new State law AB 2339 (effective April 1, 2023) mandates that the zone(s) designated to permit emergency shelters by right must be areas that are suitable for human habitation, permitting residential uses. Currently, the BP zone does not allow residential uses. AB 139 also specifies that the separation requirement between two shelters can only be a maximum of 300 feet. The City’s current requirement of minimum 250 feet does not comply with State law. AB 139 also only allows cities to require sufficient parking to accommodate staff working in the emergency shelter, provided that the standards do not require more parking for emergency shelters than other residential or commercial uses within the same zone.

Within the BP zone, there are parcels that are underutilized with areas that can be intensified with additional uses or buildings that have vacancy issues, providing opportunities for new construction or adaptive reuse into live/work housing. Specifically, two parcels have vacant building spaces and vacant green space that can accommodate additional uses. These sites are also located adjacent to one of the RHNA sites.

Location	APN	Parcel Size (acres)	Developable Area (acres)	Property Description
26941 Cabot Road	63601501	8.85	0.49	Business Park/Industrial site – office/industrial buildings
27194 Camino Capistrano	63602112	5.69	0.46	Business Park/Industrial site – public storage facility

Therefore, to comply with various new State laws, a program action is included in the Housing Plan to amend the Zoning Code:

- Establish an Emergency Shelter Overlay in the BP zone and include emergency shelters and multi-family residential use as permitted uses



- Remove the 10-bed limit
- Revise the separation requirement to 300 feet maximum
- Establishing parking standards based on staffing level but not higher than other similar uses in the same zone

Transitional/Supportive Housing

SB 2 (2007) requires that local jurisdictions address the provision of transitional and supportive housing. SB 745 (2013) requires that these housing types be treated as a residential use and only subject to those restrictions that apply to other residential uses of the same type in the same zone. For example, if the transitional housing is a multi-family use proposed in a multi-family zone, then zoning should treat the transitional housing the same as other multi-family uses in the proposed zone.

Transitional housing is a type of housing that facilitates the movement of homeless individuals and families into permanent housing. Transitional housing is longer-term housing, typically up to 2 years. Transitional housing requires that the resident participate in a structured program to work toward established goals so that they can move on to permanent housing. Residents are often provided with an array of supportive services to assist them in meeting goals.

Transitional housing is defined in Section 50675.2(h) of the *Health and Safety Code* as follows:

“Transitional housing” and “transitional housing development” means buildings configured as rental housing developments, but operated under program requirements that call for the termination of assistance and recirculation of the assisted unit to another eligible program recipient at a predetermined future point in time that shall be no less than six months from the beginning of assistance.

Supportive housing is defined in Section 50675.14(b)(2) of the *Health and Safety Code* as follows:

“Supportive housing” means housing with no limit on length of stay, that is occupied by the target population, and that is linked to an onsite or offsite service that assists the supportive housing resident in retaining the housing, improving his or her health status, and maximizing his or her ability to live and, when possible, work in the community.

City regulations permit transitional and supportive housing subject to the same standards and procedures as other residential uses of the same type in the same zone in conformance with SB 745. For example, if the transitional housing is a multi-family use proposed in a multi-family zone (RPD 14 or RPD 30), the City’s Development Code treats the transitional housing the same as other multi-family uses proposed in the zone.

In 2018 AB 2162 amended state law to require that supportive housing be a use by-right in zones where multi-family and mixed uses are permitted, including non-residential zones permitting multi-family uses, if the proposed housing development meets specified criteria. A program action is included in the Housing Plan to amend the Development Code in compliance with this requirement.

Low Barrier Navigation Center (LBNC)

In 2019 the California Legislature adopted AB 101 establishing requirements related to local regulation of low barrier navigation centers, which are defined as “Housing first, low-barrier, service-enriched shelters



focused on moving people into permanent housing that provides temporary living facilities while case managers connect individuals experiencing homelessness to income, public benefits, health services, shelter, and housing.” *Low Barrier* means best practices to reduce barriers to entry, and may include, but is not limited to:

- The presence of partners if it is not a population-specific site, such as for survivors of domestic violence or sexual assault, women, or youth
- Accommodation of residents’ pets
- The storage of possessions
- Privacy, such as partitions around beds in a dormitory setting or in larger rooms containing more than two beds, or private rooms

AB 101 codified as Government Code §§65660-65668 requires jurisdictions to permit by-right low barrier navigation centers in areas zoned for mixed-use and nonresidential zones permitting multi-family uses if it meets specified requirements. The City’s Zoning Code does not address LBNC. A program action is included in the Housing Plan to update the Zoning Code to address AB 101.

Single Room Occupancy

Single room occupancy facilities are small studio-type units and are allowed by conditional use permit in the Office/Professional (OP) zones. These are considered housing types suitable to meet the needs of extremely low-, very low-, and low- income households. Many communities are exploring the use of SRO housing to meet affordable housing needs for specific segments of the community (e.g., students, seniors, and single workers). Development standards for these uses are no more restrictive than for other uses allowed in these districts.

c. Off-Street Parking Requirements

The City’s parking requirements are also governed by the City’s Municipal Code and its application to residential uses vary by residential type. Single-family attached and detached dwellings require two covered parking spaces per unit. Multi-family dwellings require 1.5 parking spaces for studio and 1-bedroom units, 2 spaces for 2-bedroom units, and 2.5 spaces for 3- or more bedroom units. Senior projects require one covered parking space for each dwelling unit for the exclusive use of the senior residents and one uncovered parking space for each dwelling unit for employee and guest use. Parking requirements are summarized in Table III-5.



Table III-5 Residential Parking Requirements

Dwelling Type	Minimum Parking Space Required
Single-Family Dwellings	2 covered spaces within an enclosed garage
Planned unit developments, including single-family dwellings and condominiums	2 covered spaces within an enclosed garage
Apartment Development	
Studio and one bedroom	1.5 covered
Two Bedrooms	2 covered
Three or more bedrooms	2 covered and 0.5 uncovered
Guest Parking*	1 guest space for every 3 units, unless Planning and Transportation Commission applies another guest parking requirement pursuant to a Planned Development Permit.
Mobile Home Parks	2 covered spaces within an enclosed garage.

Source: Mission Viejo Development Code §9.25.020

*Guest parking requirements may be adjusted by Planning and Transportation Commission pursuant to a Planned Development Permit or other discretionary action.

Table III-5 above summarizes the City’s residential zoning districts and the applicable parking requirements. Required parking for a project must be provided entirely onsite or through an alternative means, which is generally approved concurrently with the overall development. Approval of parking alternatives provides a benefit to the development and does not adversely impact development or surrounding areas.

Recent studies have identified seniors and low-income households as having fewer cars on average than higher-income households.¹ The City of Mission Viejo Planning and Transportation Commission has the ability to grant reduced parking for senior housing and other affordable housing projects through the conditional use permit process. In addition, State density bonus law establishes parking standards for qualifying affordable developments that pre-empts local parking requirements for density bonus projects. Program actions are included in the Housing Plan will amend the City’s Off-Street Parking Requirements to include parking allowance for senior projects, and also in compliance with this State Emergency Shelter regulations.

d. Accessory Dwelling Units

Accessory dwelling units (ADUs) are small, self-contained units with a kitchen, a bathroom, and a sleeping area, and can be attached to the main home, with a separate entrance, or located in the rear of the property or above a garage. In response to State-mandated requirements and local needs, the City of Mission Viejo allows for the development of accessory dwelling units (ADUs) by-right (i.e., building permit only, with no discretionary approval required) in all residential zones. Minimum development standards for accessory dwelling units include:

1 Comparative data to support reduced parking need for low-income and senior housing is available from the Non-Profit Housing Association of Northern California. Additional resources include the *Parking Requirements Guide for Affordable Housing Developers* provided by the Southern California Association of Non-Profit Housing <http://www.scanph.org> and *Parking Standards*, Davidson and Dolnick, American Planning Association Planning Advisory Service, Report Number 510/511.



- Permitted unit sizes include 850 square feet for a studio and a one-bedroom ADU; 1,000 square feet for an ADU with more than one bedroom. Units that exceed these sizes may be approved through the Planning Commission review process.
- The maximum lot coverage on any single-family parcel is 60% and 50% for any multi-family parcel. However, the lot coverage requirement cannot preclude the creation of a statewide exemption ADU (800-square-foot attached ADU and 850-square-foot detached ADU).
- A property can have both one detached ADU and one attached JADU

ADUs serve to augment resources for senior housing, or other low- and moderate-income segments of the population. In 2019, 3 applications were received, and 2 were approved; in 2021, 14 applications were received, 7 have been approved, and another 4 are being processed; up to July 2022, 9 applications have been received, 1 has been approved, and 8 are being processed. While there is not a great deal of data for ADUs to draw assumptions about, it is apparent that applications are on the rise in the last 2 years.

In addition, the City has become more efficient in processing ADU applications, including eliminating the requirement for Neighbor Awareness signatures and proof of Homeowner Association approval, and the time between application submittal and permit issuance has narrowed significantly. Per AB 671, the Housing Element includes a program to further incentivize the production of affordable ADUs, including pre-approved ADU plans to streamline the project application and review process and reduce upfront project costs, as well as promotion of ADUs through handouts, simplified application forms and an ADU website page.

In recent years, the California Legislature has adopted extensive changes to ADU law in order to encourage housing production. Among the most significant changes is the requirement for cities to allow one ADU plus one “junior ADU” on single-family residential lots by-right subject to limited development standards. In October 2021, the City of Mission Viejo amended the Development Code regarding Accessory Dwelling Units and is in full compliance with state law. All requests for ADUs of any type or nature specified in California Government Code §65852.2 and §65852.22, and all related sections, including but not limited to JADUs, are processed and permitted pursuant to California Government Code §65852.2 and §65852.22. Based on this record, the City’s ADU development standards are not considered to present any unreasonable constraints. Because ADUs are limited to a maximum of 640 square feet, they would be expected to rent within the very-low- or low-income category. A program action is included in the Housing Plan to monitor state law and make any necessary amendments to the City’s Zoning Code to remain in compliance hereafter.

e. Density Bonus

Under *California Government Code* §§65915-65918, a density increase over the otherwise maximum allowable residential density under the Municipal Code is available to developers who agree to construct housing developments with units affordable to low- or moderate-income households or senior citizen housing development. The City of Mission Viejo allows density bonuses and other incentives for housing and/or childcare facilities in accordance with the requirements of the law. The City grants a density bonus on a sliding scale if a development provides a percentage of the units at rates that are affordable to very low-, low-, and moderate-income households. For example, Watermarke’s Adagio-on-the-Green project was approved with a 20% density bonus and building height and parking modification for their 256-unit apartment project on Oso Parkway. AB 2345 of 2019 amended State law to revise density bonus incentives



for affordable housing developments. In October 2021, the City of Mission Viejo adopted California Government Code §65915 through and including §65918, and is in full compliance with state law. A program action included in the Housing Plan is a commitment to monitor state law and make any necessary amendments to the City's Zoning Code to remain in compliance hereafter.

f. Mobile Homes/Manufactured Housing

The manufacturing of homes in a factory is typically less costly than the construction of individual homes on-site, thereby lowering overall housing costs. State law precludes local governments from prohibiting the installation of mobile homes on permanent foundations on single-family lots. State law also declares a mobile home park to be a permitted land use on any land planned and zoned for residential use, and prohibits requiring the average density in a new mobile home park to be less than that permitted by the Municipal Code. A city or county may, however, require use permits for mobile home parks. Although there are no mobile home parks in the City of Mission Viejo, manufactured housing is allowed in all residential zones as a permitted use provided the installation complies with the site development standards for the applicable zoning district.

g. Building Codes and Their Enforcement

State law prohibits the imposition of building standards that are not necessitated by local geographic, climatic, or topographic conditions and requires that local governments making changes or modifications in building standards must report such changes to the Department of Housing and Community Development and file an expressed finding that the change is needed.

The City's building codes are based upon the California Building, Plumbing, Mechanical, Electrical and Fire Codes, as well as the Green Building Standards, Historical Building, International Swimming Pool and Spa Code, and International Property Maintenance Code. These are considered to be the minimum necessary to protect the public's health, safety, and welfare. On December 13, 2022, at a noticed Public Hearing, the City of Mission Viejo adopted the 2022 Update to the Building and Fire Codes, amending Title 8 of the Mission Viejo Municipal Code. These Codes became effective January 1, 2023. No additional regulations have been adopted by the City beyond the minimum requirements of the state codes. Thus, the City's building codes and their enforcement are determined to not impose a housing constraint that would unnecessarily add to housing costs.

h. Inclusionary Requirements

There are currently no citywide inclusionary requirements although the City has included a program action in the Housing Plan to explore the feasibility of adopting an inclusionary requirement for housing development.

i. Short-Term Rental Requirements

A short-term vacation rental (also called a vacation rental) is a rental of a residential dwelling unit or accessory building for periods of fewer than 30 consecutive days. Over the past few years, short-term rentals have become an increasingly popular form of lodging throughout the country. The City of Mission Viejo recognizes the potential land use issues that can arise from operating short-term rentals in neighborhoods, such as parking and noise, and continues to monitor any complaints. At this time, however, Mission Viejo does not have a code prohibiting short-term rentals. The number of short-term rentals in the City accounts for less than 1% of the total number of residential units (over 35,000 total units) and is



considered to have an insignificant impact on the amount of housing stock available for permanent occupancy.

j. Growth Controls

There are no City growth controls or voter initiatives.

2. Local Processing and Permit Procedures

State Planning and Zoning Law establishes permit processing requirements for residential developments. The time and cost associated with the processing and review can be a constraint to housing development if the process is considered significant or lengthy review is required. Within the framework of State requirements, the City has structured its development review process to minimize the time required to obtain permits while ensuring that projects receive a thorough and efficient review.

a. Residential Permit Processing

There are three levels of review authority in Mission Viejo, listed from lowest to highest authority:

1) Director of Community Development, 2) Planning and Transportation Commission, and 3) City Council. The Director has final approval authority for Certificates of Occupancy, Minor Modifications, Minor Exceptions, Lot Line/Boundary Adjustments, and Planned Development Permits involving no more than one unit. The Commission has the power to grant final approval for Variances, Planned Development Permits for residential permits encompassing two or more units, Conditional Use Permits, Architectural Review Permits, and Tentative Tract and Parcel Maps. The Council has final determination for legislative acts including Specific Plans, General Plan Amendments, Zoning Map Amendments, Development Code Amendments, and Development Agreements.

Processing times vary but, generally, are not necessarily dependent on the designated approval body. The factor that impacts development review is primarily dependent on the size and complexity of the project. Projects are reviewed for compliance with the City's ordinances and completeness of the application. Projects approved by the Director of Community Development typically require 2 to 3 months to process, while projects approved by the Planning and Transportation Commission typically require 3 to 4 months to process. All project approvals are final unless appealed. Projects approved by the City Council typically require about 6 months to process.

The City's development review process for multi-family residential projects involves the following steps:

1. Submittal of an application for a Planned Development Permit (PDP) to the Planning Division for design review. A PDP is held as a public hearing before the Planning and Transportation Commission.
2. Review of application completeness by staff. Application is reviewed within 14 days of submittal. If the application is complete, the project is scheduled for the next Development Review Committee (DRC) meeting. If incomplete, the applicant has two weeks to complete and still remain on schedule for the next Planning Commission.
3. After the project is reviewed by the DRC, then the project is scheduled for the next Planning and Transportation Commission meeting. Once an application is deemed complete, the project is presented to the Commission within four to six weeks.



All development applications are reviewed by staff, the DRC, and then scheduled for a public hearing before the Planning and Transportation Commission for approval. The application only proceeds to the City Council if it also requires a legislative act such as a General Plan Amendment or a Development Code Amendment, or if it is appealed. Projects that require City Council approval usually entail two public hearings: 1) review and recommendation by the Planning Commission and 2) final review and approval by the City Council. Residential projects in Mission Viejo generally receive concurrent processing of various development applications (e.g., subdivision and zoning approvals), and therefore, significantly reducing review time and minimizing related holding costs.

Prior to approval of an application for a Planned Development Permit, the approving body shall consider the following findings:

1. That the proposed development is one permitted within the subject zoning district and complies with all of the applicable provisions of this code, including prescribed development standards and design guidelines.
2. That the subject site is physically suitable for the type and intensity of the land use being proposed.
3. That the proposed development would be harmonious and compatible with existing and future developments within the zoning district and general area.
4. That the proposed development is harmonious and compatible with the land uses presently on the subject property.
5. That there are adequate provisions for water, sanitation, and public utilities and services to ensure that the proposed development is not detrimental to public health and safety.
6. That there is adequate public access to serve the proposed development.
7. That there are no significant harmful effects upon the environmental quality and natural resources.
8. That the negative impacts of the proposed development shall be mitigated.
9. That the proposed development is consistent with the general plan.
10. That the location, size, design, and operating characteristics of the proposed development are not detrimental to the public interest, health, safety, convenience, or welfare of the city.

Certain steps of the development process are required by State rather than local laws. The State has defined processing deadlines to limit the amount of time needed for review of required reports and projects. To provide an efficient permit processing system, the City has implemented the following time and cost saving developmental processes:

- Prepared permit processing guidelines to assist residential builders in applying for development permits for single-family residences, multi-family residential developments and subdivisions.
- Located all City divisions involved in permitting process in one central location.
- Developed “early consultation” pre-application process to identify issues as soon as possible and reduce processing time. No fee is required for this service.



- Allowed processing fees to be reduced, postponed or supplemented with housing funds for affordable projects meeting City priorities.
- Provided a GIS application on the City's website with land use information and links to important planning documents such as General Plan and Development Code.
- Encouraged concurrent processing of applications.
- Assigned a point-person and liaison to facilitate communication and timely inter-agencies review of development projects.
- Established electronic plan check review services and on-line access to permit forms and applications.

In addition, as identified in the Housing Plan, the City will develop objective design standards for all multi-family housing development. The standards will provide applicants and developers with a clear understanding of the City's expectations for multi-family residential project design. Until the objective design standards are adopted, the City will apply existing objective standards to all housing development applications. Consistency with the written, objective standards in the Guidelines is essential to the review and approval process for multi-family residential development projects as there are no approval findings required for a finding of consistency with the design standards. To ensure multi-family development projects meet the City's goal of expedited review and approval, the Design Guidelines provide a clear set of design policies to the development community by clearly stating the community's expectations for quality design of multi-family residential development. These processes help to ensure that the development review process does not act as a constraint to housing development.

b. SB 35 Streamlining

SB 35 (Government Code §65913.4) is a statute that streamlines the development process for qualifying development projects with a specified proportion of affordable housing units in jurisdictions where production of new housing has not met the state-mandated Regional Housing Needs Allocation targets. The City must review applications for qualifying housing developments within a statutory time frame. Ministerial review is based on compliance with set, objective standards and cannot involve subjective judgment. Qualifying projects are also not subject to environmental review under the California Environmental Quality Act. Since the adoption of this section of the Government Code, the City has not yet received an application under these provisions. The City has included a program in the Housing Element to prepare an SB 35 checklist and written procedures for processing SB 35 applications.

c. Environmental Review

Environmental review is required for all development projects under the California Environmental Quality Act (CEQA). Today, the City is nearly built-out, and there are no significant vacant areas left to develop (see Land Inventory discussion in Section IV). Most infill residential projects in Mission Viejo are either Categorically Exempt or require only an Initial Study and Negative Declaration. A Negative Declaration typically takes 4 to 6 weeks to prepare, depending on complexity of the project and required technical studies, followed by a State-mandated public review period. Categorically Exempt developments require a minimal amount of time, which does not add to the length of the development process. As a result, environmental review does not pose a significant constraint to housing development.



d. Site Improvements, Development Fees, and Other Exactions

Various fees and assessments are charged by the City and other public agencies to cover the costs of processing permit applications and providing services and facilities such as schools, parks, and infrastructure. Almost all of these fees are assessed through a pro rata share system, based on the magnitude of the project's impact or on the extent of the benefit that will be derived. For new residential projects, developers may be required to pay one or more of the following fees depending on the location, type, and size of the project.

- **Planning, Building, and Environmental Fees:** Developers pay fees to the City of Mission Viejo to process applications, standard plan check fees, building permits, tentative tract maps, conditional use permits, variances, environmental initial studies, and/or other permits or processes associated with specific types of development projects. Additional fees may be required for project-specific environmental review.
- **City Impact Fees:** The City can charge impact fees to finance new or expanded infrastructure and public facilities required to serve residents. City impact fees offset the future impact of development on various city services, community facilities, parks, and traffic and circulation. Assessed impact fees correlate with cost of increased demand on these services. are assessed based on equitable to the infrastructure costs and represent the marginal cost of improvements required to serve residents of the new residential projects. The City has not adopted any fees to offset impacts to public streets, drainage facilities, water quality, and parks. Fees and assessments may apply in the future, if adopted.
- **Other Impact Fees:** Other impact fees include water and sewer fees collected by regional water districts and school districts. Water impact fees are used to mitigate the impacts of development on water and sanitary sewer systems. School fees collected by school districts are allowed by State law to finance the construction and expansion of schools to accommodate student enrollment. The water and school districts assess and establish fee levels. The City of Mission Viejo does not have the authority to adjust these fees

Table III-6 details the City's Planning Department processing fees for development project entitlements, and Table III-7 describes the fee schedule for residential building permits. One or more of the entitlements would be required to process a residential project depending on the scale and complexity of the project and a building permit is required for each residential structure.

Table III-8 provides a list of fees the City of Mission Viejo charges for new residential development.



Table III-6 Planning and Development Fees, City of Mission Viejo

Fee Category	Fee or Deposit Amount ¹
Planning and Application Fees	
Accessory Dwelling Unit	\$147.82
Pre-Application Review	None
Design Review	None
Parcel Map	\$6,200
Tentative Tract Map	\$7,600
Vesting Tentative Tract Map	\$7,600
Planned Development Permit (Community Development Director Approval)	\$3,000
Planned Development Permit (Planning and Transportation Commission Approval)	\$5,500
Conditional Use Permit	\$3,500
Specific Plan	\$7,500 deposit
General Plan Amendment	\$7,500 deposit
Development Agreement	\$7,500 deposit
Zone Change	\$7,500 deposit
Environmental	
Initial Study/Negative Declaration (review and preparation)	\$1,500
Environmental Impact Report (review) ²	\$10,000 deposit
Impact Fees	
School Fees	CUSD: \$4.79/s.f. SVUSD: \$4.79/s.f.
Park Fees	= (# of proposed dwelling units) x (park land acres per dwelling unit ²) x (fair market land value per acre)
Transportation Fees ³	<p><u>SCR Fee:</u> Single-Family: \$1,129/unit Multi-Family: \$905/unit</p> <p><u>El Toro Fee:</u> < 2 du/ac: \$2,269/unit 2-6.5 du/ac: \$1,898/unit > 6 du/acre: \$1,170/unit</p> <p><u>FCCP Road Fee:</u> <i>(Zone 3):</i> <i>Participating Landowners</i> Single-Family: \$2,663/unit Multi-Family: \$2,134/unit <i>Non-Participating Landowners</i> Single-Family: \$4,145/unit Multi-Family: \$3,322/unit</p> <p><i>(Zone 5):</i> <i>Participating Landowners</i> Single-Family: \$4,677/unit Multi-Family: 3,738/unit <i>Non-Participating Landowners</i> Single-Family: \$6,108/unit Multi-Family: \$4,884/unit</p>



Fee Category	Fee or Deposit Amount ¹
	<p><u>Moulton Niguel Pkwy</u> Single-Family: \$615/unit Multi-Family: \$360/unit</p> <p><u>Laguna Niguel Fee:</u> Single-Family: \$337/unit Multi-Family: \$194/unit</p> <p><u>Foothill/Eastern:</u> (Zone A): Single-Family: \$6,327/unit Multi-Family: \$3,694/unit</p> <p>(Zone B): Single-Family: \$4,502/unit Multi-Family: \$2,625/unit</p>
Water and Sewer Fees	<p>Assessed by applicable water district: El Toro Water District Moulton Niguel Water District Santa Margarita Water District</p>

Source: City of Mission Viejo Community Development Department, 2021

- 1 Items with deposits are based on actual processing costs which may exceed initial deposit amount.
- 2 As shown in the table of section 9.85.070.
- 3 Depending on location of development, all fees may not apply.

The residential building permit fees described in Table III-7 and Table III-8 are based on a hypothetical 52-unit multi-family development and an 1,800-square-foot single-family detached dwelling unit with a 400-square-foot garage. Assumptions were based on one of the evaluated multi-family sites and adjacent single-family neighborhood and project valuations based on the national average. As described in Figure H-1, the median home price in Mission Viejo in 2018 was \$700,000. Therefore, development fees for a typical single-family house represent just 5% of median home values, and development fees for a typical multi-family unit represent 3% of the median sales price.

Table III-7 Total Fees for Typical Multi-Family Housing, City of Mission Viejo

Types of Fees	52-Unit Multi-Family Development
Planning Fees	
Project Application Review	\$3,000.00
Environmental Initial Study/Negative Declaration (review and preparation)	<u>\$1,500.00</u>
Total Planning Fees	\$4,500.00
Building Fees	
Plan Check	\$7,613.13
Permit Issuance	\$25.00
Permit Inspection	\$4,190.86
Electrical	\$65,866.67
Mechanical	\$54,080.00
Plumbing	\$59,540.00
Energy	<u>\$469.00</u>
Total Building Fees	\$191,785.00



Types of Fees	52-Unit Multi-Family Development
Transportation Fees	
FCPP 8	\$285,844.00
FCPP 3	\$172,744.00
Foothill/Eastern B	<u>\$136,500.00</u>
Total Transportation Fees	\$595,088.00
School Fees (\$4.79/square foot)	\$195,000.90
Total Fees	\$986,373.56
Total Fees per Unit	\$18,968.72
Additional Fees	
Water	Determined by Water District
Parks Fee	= (# of proposed dwelling units) x (park land acres per dwelling unit ²) x (fair market land value per acre)

The City reviewed fees for a single-family development based on the current average square footage for a single-family unit. With homes of this size projected to sell in the low \$1 million range, the fees below represent approximately 2% of the sale price.

Table III-8 Total Fees for Typical Single-Family Housing, City of Mission Viejo

Types of Fees	1,800-Square-Foot Single Family Home
Building Fees	
Plan Check	\$1,947.05
Permit Issuance	\$25.00
Permit Inspection	\$1,198.18
Electrical	\$555.75
Mechanical	\$676.50
Plumbing	\$429.42
Energy	<u>\$135.78</u>
Total Building Fees	\$6,382.03
Transportation Fees	
FCPP 8	\$6,854.00
FCPP 3	\$4,145.00
Foothill/Eastern B	<u>\$4,502.00</u>
Total Transportation Fees	\$15,501.00
School Fees	\$8,622.00
Total Fees	\$35,005.03
Additional Fees	
Water	Determined by Water District
Parks Fee	= (# of proposed dwelling units) x (park land acres per dwelling unit ²) x (fair market land value per acre)

The City's Capital Improvement Program (CIP) contains a schedule of public improvements including streets, bridges, and other public works projects to facilitate the continued build-out of the City's General Plan. The CIP helps to ensure that construction of public improvements is coordinated with private development. The new Saddleback Place development on El Toro Road was approved with the condition to



reconstruct the median on El Toro Road to provide a turn pocket into the new residential development, and install new sidewalks with ADA ramps. The Target – Lennar townhome development was required to install a right-turn pocket from Jeronimo into the development. Required improvements benefit the specific development as well as the overall community.

Although development fees and improvement requirements can impact the cost of housing, the City of Mission Viejo strives to keep such fees to a minimum and actively pursues other sources of revenue to fund public improvements that are coordinated with private development. The City evaluates the actual cost of processing the development permits when revising its fee schedule. The most recent revisions to the fee schedule were adopted in June 2019.

e. Transparency in Development Process, Zoning and Development Standards

To increase transparency and certainty in the development application process as required by law, the City posts planning and development regulations and resources online.

- General Plan:
<https://cityofmissionviejo.org/departments/community-development/planning/general-plan>
- Planning Forms:
https://cityofmissionviejo.org/document-center?title=&field_dpt_target_id=40&field_document_type_value=All
- Zoning Code:
https://library.municode.com/ca/mission_viejo/codes/code_of_ordinances?nodeId=MUCO_TIT9LAUSZ_OSURE
- Planning Fee Schedule:
<https://cityofmissionviejo.org/sites/default/files/PlanningFees.pdf>

B. Non-Governmental Constraints

California Government Code §65583(5) requires an analysis of potential and actual nongovernmental constraints upon the maintenance, improvement, or development of housing for all income levels including the availability of financing, the price of land, and the cost of construction. This analysis is provided below. Numerous factors affect the development of new housing and the maintenance of existing units for all income levels. Mission Viejo shares many of the same constraints that challenge the typical Southern California community, such as market conditions, land and building costs, infrastructure requirements, and environmental considerations.

1. Market Constraints

The high cost of renting or buying adequate housing is the primary ongoing constraint to providing affordable housing in the City of Mission Viejo. High construction costs, labor costs, land costs, and market financing constraints all contribute to increases in the price of housing.



2. Construction Costs

Construction cost is determined primarily by the cost of labor and materials, as well as general market conditions. The International Code Council (ICC) provides estimates for the average cost of labor and materials for typical protected wood-frame housing. Estimates are based on “good-quality” construction, providing for materials and fixtures well above the minimum required by state and local building codes. The Construction Industry Research Board estimates construction cost to be \$150 to \$200 per square foot or more. The ongoing COVID-19 pandemic, related labor shortages, and supply chain material constraints, as well as recent inflation levels, have together resulted in a significant increase in construction costs. These cost hikes in turn significantly affect the cost of housing and the ability of consumers to pay for housing. Higher water and energy prices further add to the cost burden. The City has no influence over material and labor costs, and the building codes and development standards in Mission Viejo are not substantially different than most other cities in Orange County. Although construction costs are a substantial portion of the overall development cost, they are consistent throughout the region and therefore are not considered a major constraint to housing production.

3. Land Costs

Land represents one of the most significant components of the cost of new housing, and land values fluctuate with market conditions. Residential land costs in southern Orange County can range from \$3.5 to \$6 million per acre, depending on allowable residential density.

The high price of land throughout Orange County poses a significant challenge to both market rate development and subsidized lower-income housing. Per-unit land cost is directly affected by density – higher density allows the cost to be spread across more units, reducing the total price. The Development Code allows up to 80 units per acre, excluding density bonus, which helps to reduce per-unit land cost.

4. Cost and Availability of Financing

Financing is critical to any housing market, and the availability of financing in a community depends on several factors, including the types and number of lending institutions active, lending practices, interest rates and fees, and laws and regulations governing banking and financial institutions. With the recent hikes in mortgage interest rates, coupled with high home prices, lower income households continue to be priced out of ownership housing market.

In addition to the constraints on market rate housing, financing for affordable housing is highly competitive and can be even more challenging to secure. Multiple funding sources are typically needed to construct an affordable housing project, because substantial subsidies are required to make the units affordable to extremely low, very low, and low-income households. It is not unusual to see multiple funding sources assembled to make a project pencil financially. Each of these sources may have different requirements and application deadlines, and some sources may require that the project has already successfully secured financing commitments. Tax credits are often a fundamental source of financing for affordable housing. Because of the importance of California Tax Credit Allocation Committee (TCAC) funding, as noted in the Resources section of this Housing Element, Mission Viejo contracted with the Related Company to analyze the TCAC amenity score for each site in the Sites Inventory.



C. Environmental Constraints

Portions of Mission Viejo are exposed to a variety of environmental conditions that may constrain the development of lower-priced residential units. Although these constraints are primarily physical and hazard-related, they are also related to the conservation of the City's natural resources. To meet the City's RHNA of 2,217 units, the City has identified various sites within its boundary that are most suitable for new or increased residential development. Most of these sites are infill locations within existing developed areas, although undeveloped Site 3 is also included. While very few of the sites identified in the land inventory (Appendix C) have environmental constraints, Site 3, the City-owned land, does have environmental constraints, such as steep slopes or geotechnical issues. However, feasible methods exist to address such constraints, and when fully mitigated and combined with the development potential of the unconstrained land, would not preclude the assumed level of development. To confirm this assumption, the City engaged consultants to perform preliminary geotechnical, environmental, and grading analyses of Site 3. This analysis has concluded that no significant geotechnical concerns are expected, including stability issues. Any proposed development would occur at a pad elevation well above the Trabuco Creek floodplain, so there is no flood risk. The limits of grading would be outside the sensitive riparian area; and although some quality habitat would be disturbed, it could be readily mitigated through standard offsite habitat establishment and/or restoration. In conclusion, none of the sites identified in the Sites Inventory, including Site 3, have significant environmental constraints that impede their development. Following is a more detailed discussion of these environmental constraints and hazards that affect, in varying degrees, existing and future residential developments.

1. Flood Hazards

The Public Safety Element identifies those areas in the City that are subject to periodic flooding based on Flood Insurance Rate Maps prepared for the area. These areas include Arroyo Trabuco and Tijeras Canyon in the eastern portion of the city, Oso Creek in the central area, Aliso Creek along the northwest boundary, and the area along the Orange County Transportation Authority (OCTA) and Metrolink Railroad Line (formerly Atchison, Topeka & Santa Fe) from Alicia Parkway south of the Oso Parkway/Interstate 5 interchange. General Plan policies require specific mitigation measures for development within these flood-prone areas.

2. Seismic Hazards

Like the entire Southern California region, Mission Viejo is located within an area of high seismic activity. Movement of the San Andreas, San Jacinto, Elsinore-Whittier, and Newport-Inglewood faults generates the primary seismic activity in the city. Although the inactive Capistrano Fault crosses through the City, it poses little or no threat to the region. Potential seismic hazards include ground ruptures, ground shaking, liquefaction, landslides, and seiches. Of these five hazards, Mission Viejo is more susceptible to ground shaking, liquefaction, and seiches in the event of an earthquake. The entire City can be expected to experience ground shaking during the occurrence of an earthquake along the region's four major faults. Soils susceptible to potential liquefaction within the City are located along Arroyo Trabuco and other major streams. Seiche damage potential is greatest along Lake Mission Viejo, Upper Oso Reservoir, and El Toro Reservoir. The Public Safety Element sets forth policies to address these seismic hazards in Mission Viejo.



3. Hazardous Materials

Hazardous materials can be classified into four basic categories: toxins, flammables, irritants, and explosives. Because of their widespread use, it is assumed that each type of hazardous material is transported through, used, or stored to some degree within Mission Viejo. The transportation of hazardous materials to and from sites poses potential risks of upset. The major transportation routes within the study area include the San Diego Freeway, the arterial roadways serving the commercial areas, and the OCTA and Metrolink Railroad Line along the western margin. The potential threats posed by transportation accidents involving hazardous material include explosion, physical contact by emergency response personnel, exposure to large segments of the population via airborne exposure, or release into drinking water sources. Further recommendations, restrictions, and safety precautions are outlined in the Public Safety Element.

4. Urban/Wildland Fires

Urban fires have the potential to result in personal injury or loss of life and damage or destruction of structures at high monetary costs. Certain urban development scenarios pose more difficult fire protection problems. These scenarios include multi-story, wood frame, high-density apartment development; multi-story office buildings; large continuous developed areas with combustible roof materials; residential developments in outlying hillside areas with limited fire flows; and uses that store, handle, and use hazardous materials on-site.

The Orange County Fire Authority (OCFA) is responsible for providing fire protection services to Mission Viejo. The City and OCFA worked with residents to identify a framework for addressing future losses due to wildfires in and around the city. The California Department of Forestry and Fire Protection (CAL FIRE) identified and mapped several hazard areas based on weather, topography, vegetation, probable ember travel, and fire history and required the City to adopt these zones and apply regulations to address the hazard. While there was general agreement that these areas were at risk, there was also recognition that much had been done by the City and residents to mitigate that risk. There was also a shared concern with unintended consequences of adopting these maps, including the potential for decreased home values and increases in insurance rates. As a result, in July 2012 the City Council rejected the maps and all Very High, High, and Moderate Fire Hazard Severity Zones. To meet state requirements for map rejection and to continue to focus on the mitigation measures that will improve community safety, a "Special Fire Protection Area" was created. The Special Fire Protection Area Map provides residents and City staff with a tool to improve community safety by: 1) making the information available to residents so they can take action to protect their homes and families from wildfire through OCFA's Ready, Set, Go program; 2) guiding future planning decisions within the City; 3) focusing OCFA fire prevention efforts through vegetation management and public education; and 4) defining geographical areas in which specific wildfire construction standards contained within City building codes can be applied to new home construction projects.

5. Natural Resources

In addition to seismic hazards, floodplains, and hazardous materials, areas with significant plant and animal species are present in Mission Viejo. Areas of high sensitivity contain threatened or endangered plant or animal species as determined by state or federal laws.

The area with the highest sensitivity in Mission Viejo is the Arroyo Trabuco because of its significance as a prime bird nesting/foraging habitat and major wildlife movement corridor. Other highly sensitive areas



include the waterfowl habitat near Oso Reservoir; the riparian habitat for birds and other wildlife in Tijeras Canyon; the prime bird of prey foraging/wintering habitats along the ridgelines of Tijeras Canyon and O'Neill Regional Park; and the undisturbed bird of prey foraging/wintering area in Plano Trabuco. The City of Mission Viejo protects these highly sensitive areas through its development review procedures. Development standards will necessarily be more stringent in these sensitive areas to minimize potential adverse impacts to natural resources.

D. Infrastructure Constraints

Another potential constraint that can add to the cost of new construction is the provision of adequate infrastructure. Infrastructure, including streets, curbs, gutters and sidewalks, water and sewer lines, storm drains, and street lighting, are all necessary to accommodate future residential development. The cost of these facilities is typically borne by developers, added to the cost of new housing units, and ultimately passed on to the homebuyer. To accommodate the City's RHNA of 2,217 units, the City has identified various sites within the City that are most suitable for new or increased residential development. As noted in the Resources chapter of this Housing Element, with the exception of Site 3, public infrastructure and services are readily available for all the sites included in the sites inventory, and have the capacity to accommodate the City's RHNA. Regarding Site 3, it is feasible to supply the same infrastructure as envisioned in the preliminary study performed for the City by the Related Company, but the infrastructure does not currently exist. While this adds to the development cost of Site 3, it does not present a constraint that cannot be addressed and overcome, especially given the fact it is ideally located from a TCAC site amenity standpoint. Following is a discussion of the availability of water, sewer, solid waste, and educational services in Mission Viejo to accommodate additional growth.

1. Wastewater

Senate Bill 1087 mandates priority sewage collection and treatment service to housing developments providing units affordable to lower income households. The City will provide a copy of the Housing Element to its water and sewer providers in compliance with Government Code §65589.7 and SB 1087. Sewage collection and treatment in Mission Viejo is provided by the Santa Margarita Water District (SMWD), the Moulton-Niguel Water District (MNWD), and the El Toro Water District (ETWD). Both the Santa Margarita and Moulton-Niguel Water Districts operate water reclamation plants that provide reclaimed water for use on greenbelts and golf courses located in the City. Most of the sewage generated in Mission Viejo is treated at the South East Regional Reclamation Authority (SERRA) treatment facility in Dana Point. Sewer infrastructure improvements are typically installed in conjunction with new developments, and sewer lines are extended as necessary. Sewage treatment capacity is available to serve the City's remaining developable area, and therefore does not constrain development. None of the identified land inventory sites have wastewater service limitations that would preclude the level of development described in Appendix C, Land Inventory Summary.

2. Water

Senate Bill 1087 requires that water providers develop written policies that grant priority to proposed development that includes housing affordable to lower income households. The legislation also prohibits water providers from denying or conditioning the approval of development that includes housing affordable to lower income households, unless specific written findings are made. Water for City residents



is supplied by the SMWD, which serves the eastern portion of the city, the MNWD, which serves the western portion of the city, the ETWD, which serves the western area formerly in Community Service Area 12, and the TCWD, which serves a very small northeastern portion of the City. The four districts treat and distribute water purchased from the Metropolitan Water District, which imports water from northern California and the Colorado River. As with sewer lines, water transmission, pumping, and storage facilities are expanded as necessary to accommodate future growth. Domestic water supply is not expected to limit development during the planning period. None of the identified land inventory sites have water service limitations that would preclude the level of development described in Appendix B, Sites Inventory Summary.

3. Storm Water Drainage

The City maintains a Master Drainage Plan that identifies existing facilities and deficiencies and outlines a program to correct known problem areas. The Orange County Flood Control District (OCFCD) is responsible for the regional flood control system and maintains several facilities within Mission Viejo. The City works closely with OCFCD to identify improvements needed to accommodate proposed development projects. Development proposals are reviewed for consistency with approved development plans and with the Master Drainage Plan. With these existing facilities and review procedures in place, the City’s flood control system is not expected to limit development during the planning period. None of the sites identified in the land inventory have storm water drainage limitations that would preclude the level of development described in Appendix C, Sites Inventory Summary.

4. Requests to Develop at Densities Below Those Permitted

New California Housing Element law now requires the non-governmental constraints analysis to evaluate developer requests to build at densities below the density identified in the Housing Element sites inventory. A review of the more recent housing developments approved and built, or being built, in the City was conducted to compare permitted versus built densities. Table III-9 summarizes the range of built densities among the four most recent multi-family sites.

Table III-9 Permitted versus Built Densities

	Zoning	Max Density (du/ac)	Density Range (du/ac)	Built Density (du/ac)
Shea – Mission Foothills	RPD 30	30	14.1-30	15.6
Trumark Homes – Saddleback Place	RPD 30	30	14.1-30	14.3
Adagio on the Green	RPD 30	30	14.1-30	35.92 ¹
Los Alisos Apartments	RPD 30	30	14.1-30	29.6 ²
Average Density	–	–	–	23.9

du/ac = dwelling units per acre

1 Includes 20% density bonus

2 Includes 15% height increase

As shown, while Mission Foothills and Saddleback Place were built to the lower end of the density range for RPD 30, Adagio-on-the-Green and Los Alisos Apartments were built at close to the maximum permitted density. Average density for RPD 30 is 22 du/ac; however, the combination of all four sites averages a density of 23.9 du/ac. Several factors contribute to this underbuilding. As City staff heard from several developers, 30 unit/acre densities typically necessitate podium parking unless unit sizes are reduced,



thereby significantly adding to project costs. Both the Mission Foothills and Saddleback Place developments include individual garages and surface parking; however, Adagio-on-the-Green and Los Alisos Apartments include tuck-under parking and a parking structure, allowing an increase in density. Based on the market demand in Mission Viejo, residential homebuilders have historically requested lower densities for townhome type projects. To incentivize development that better implements densities planned in the Housing Element sites inventory, the City established Residential Overlay zoning. Parcels designated with an Affordable Housing Overlay would receive density increases above the base density, along with a variety of development incentives, in exchange for development of either 20% lower income units in a rental project, or 20% moderate income units in an ownership project. The City also rezoned land to RD 50 and RD 80 to facilitate higher density apartment projects.



IV. Housing Resources

This section discusses resources available for the development, rehabilitation, and preservation of housing in the City of Mission Viejo, to help the City meet its RHNA. This includes factors such as the availability and adequacy of land resources for the development of affordable housing; financial resources available to support housing in the community; local, county and state governmental resources available to assist in implementing housing programs; and resources for energy conservation and reducing greenhouse gas emissions.

A. Regional Housing Needs Allocation

The Regional Housing Needs Allocation (RHNA) is a critical part of State housing element law (Government Code §65580). The process for determining the RHNA is briefly described below:

- The California Department of Housing and Community Development (HCD) uses the California Department of Finance (DOF) growth projection and other factors to determine the number of housing units that are needed statewide over an 8-year planning period (for Mission Viejo and other Southern California jurisdictions, this time period is years 2021-2029).
- This statewide housing unit number (called the Regional Housing Needs Determination, or RHND), is divided into regions. Mission Viejo is located within the Southern California Association of Government (SCAG) region.
- SCAG is responsible for creating a methodology to distribute the RHND among all of its cities and counties. Each jurisdiction's housing unit number is called the Regional Housing Needs Allocation (RHNA).
- The RHNA is the number of units that a jurisdiction must plan for in the Housing Element update. The units are divided into four categories based on median income: very low (earn ≤50% of the area median income, or AMI), low (earn between 51% and 80% of AMI), moderate (earn between 81% and 120% of AMI) and above moderate (earn more than 120% of AMI).
- Almost all jurisdictions in the SCAG region received a significantly larger RHNA this cycle compared to the last housing element cycle, primarily due to changes in State law that led to a considerably higher RHNA compared to previous cycles.

RHNA for Mission Viejo

For the 2021-2029 Housing Element, the City of Mission Viejo has been assigned a RHNA of 2,217 new units by SCAG. This allocation is distributed into four income categories, as shown below in Table IV-1.



Table IV-1 Housing Needs for 2021-2029

Income Category (% of County AMI)	Number of Units	Percent
Extremely Low/Very Low (50% or less)*	674	30.4%
Low (51 to 80%)	401	18.1%
Moderate (81 to 210%)	397	17.9%
Above Moderate (Over 120%)	745	33.6%
Total	2,217	100.0%

Source: SCAG 6th Cycle Final RHNA Allocation Plan, 7/1/2021

*The City has a RHNA allocation of 674 very low income units (inclusive of extremely low income units). While the RHNA did not separately define housing needs for extremely low income households, the very low income allocation can be split evenly between very low- and extremely low income households (i.e. 337 extremely low and 337 very low income households).

B. Strategies for Meeting RHNA

The City of Mission Viejo plans to fulfill its 2021-2029 RHNA via a number of methods:

- Residential developments already approved, entitled, or permitted with occupancy post 6/30/2021
- Projection of Accessory Dwelling Units
- Development of vacant sites
- Redevelopment of existing uses on sites zoned for residential or mixed-use development via an overlay

Table IV-2 below summarizes the potential number of units possible from each of these elements, compared to Mission Viejo’s 2021-2029 RHNA. Detailed site information, including acreages, Assessor Parcel Numbers, and other pertinent information is available in Appendix C. Table IV-2 shows that the City can meet 329 units out of its RHNA target of 2,217 from residential development already approved and projected Accessory Dwelling Unit development, based on previous ADU approval history and projections based on recent activity, leaving 1,888 units to meet the RHNA target.

Table IV-2 Potential Housing Units for the 2021-2029 Planning Cycle

Income Levels	Extremely/ Very Low	Low	Moderate	Above Moderate	Total
RHNA Target	674	401	397	745	2,217
---Credits	21	33	19	256	329
Entitled Projects (post 6/30/2021 occupancy)	5	5	0	255	265
Accessory Dwelling Units	16	28	19	1	64
Remaining RHNA	653	368	378	489	1,888
---Inventory Sites (No Rezoning required)	743	439	435	810	2,427
Non-Vacant Sites	678	400	396	738	2,212
Vacant Sites	65	39	39	72	215
Credits + Inventory Sites	764	472	454	1,066	2,756
Surplus over Remaining RHNA	90	71	57	321	539

1. Projects with Entitlements

While the Housing Element planning period covers October 15, 2021 through October 15, 2029, the RHNA projection period begins on June 30, 2021. Therefore, units approved, entitled, or permitted but not finalized until after June 30, 2021 can be credited toward the RHNA.



Mission Viejo has three projects with development entitlements that will contribute towards addressing its future RHNA, as described below:

- **Trumark.** A 6.36-acre site, of which 4.2 acres will be flat pads for the development of 91 units, resulting in a project density of 14.3 dwelling units per acre. A for-sale multi-family three-story development of one- to three-bedroom condominium and townhome units ranging in size from 864 square feet to 1,956 square feet, with prices starting in the low \$500,000s, was approved in August 2020. This project is located in the north of the City, at El Toro Road and the Foothill Transportation Corridor. At market, these units are expected to be affordable to above moderate income households. The project is currently under construction (2023).
- **Morningstar Assisted Living.** The 2.92-acre site was recently constructed (completed as of April 2023) as a 132-unit (102 senior assisted living, 30 congregate care) development at 28570 Marguerite Parkway in the south of the City, resulting in a project density of 45.2 units per acre. One-bedroom/one-bathroom and two-bedroom/two-bathroom floorplans were constructed. The assisted living units qualify as housing units under the Building Code and are credited against the above moderate income RHNA.
- **Shea Homes (“Neo”):** A commercial site in the north of the City, at Los Alisos Boulevard and the Foothill Transportation Corridor, was rezoned to residential use in 2019. Shea Homes had already constructed homes in a neighboring parcel and is now developing an adjacent parcel with 42 two- to four-bedroom townhome units, with 10 affordable units (5 low, 5 very low income).

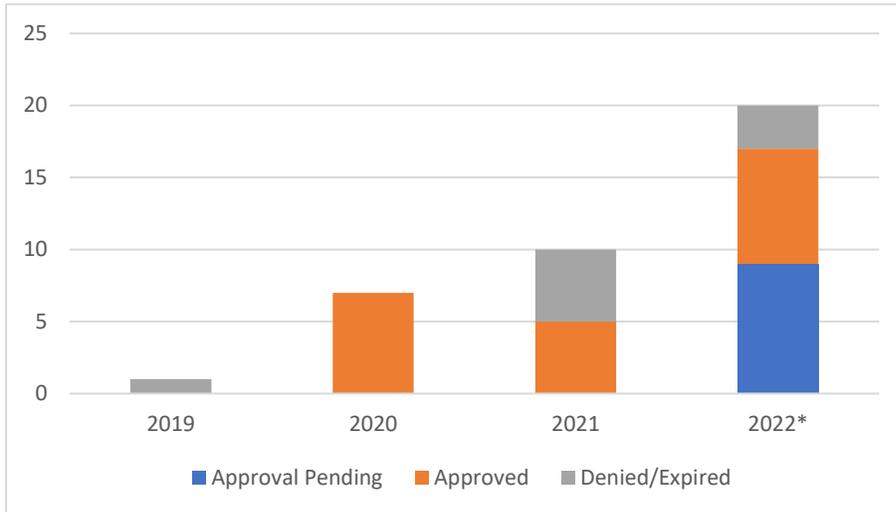
2. Accessory Dwelling Units

Accessory dwelling units (ADUs) are small, self-contained units with a kitchen, a bathroom, and a sleeping area, and can be attached to the main home, with a separate entrance, or located in the rear of the property or above a garage. Because ADUs are small, they usually have lower rents than standard apartments, making them suitable for small households. They can also provide rental income for homeowners, relieving some of their housing affordability pressures. Given the aging of Mission Viejo’s population described in Appendix D – Affirmatively Furthering Fair Housing (AFFH), additional income for traditionally fixed income senior households may help their housing issues.

Between 2019 and September 2022, the City received 38 applications to create ADUs (see Figure IV-1 below). The graph shows a significant increase in the number of ADU requests, increasing from 1 in 2019 to 20 in 2022 (up to September). Discussions with the Building Division reveal that it expects most if not all of the pending applications to be approved and permitted, as they are currently undergoing a final review that will likely require only minimal changes from the applicant. While there is not a great deal of data for ADUs to draw assumptions about, it is obvious that applications are on the rise. Given that there are currently 8 approved and permitted ADU applications through September 2022, 5 in 2021 and 7 in 2020, and there are another 9 applications in 2022 undergoing minor updates, it is reasonable to conservatively estimate an average of 8 ADUs per year for the life of the 2021-2029 RHNA. The projected affordability of these ADUs is based on SCAGs Regional Accessory Dwelling Unit Affordability Analysis (December 2020). (Note: “Approved” applications have also been permitted).



Figure IV-1 Accessory Dwelling Unit Applications, City of Mission Viejo



*2022 Data up to September

As shown in the graph above, the City began seeing an increase in the number of ADU applications upon adoption of the City’s ADU Ordinance in March 2020. As the City has become more efficient in processing ADU applications, including eliminating the requirement for Neighbor Awareness signatures and proof of Homeowner Association approval, the time between application submittal and permit issuance has narrowed. Per AB 671, the Housing Element includes a program to further incentivize the production of affordable ADUs, including pre-approved ADU plans to streamline the project application and review process and reduce upfront project costs, as well as promotion of ADUs through handouts, simplified application forms and an ADU website page. Applicants are asked to provide rent information as part of the plan check review, and staff are planning to create an ADU handout/checklist, including an affordability survey.

Mission Viejo has a number of characteristics that are conducive to promoting future ADU production. As shown in Figure 3 of Appendix D - AFFH, most of the land area of the city is occupied by single family housing, which comprises 72.5% of the housing stock (Table 12, Appendix D - AFFH), with many of the single-family lots of a large size suitable for the creation of ADUs.

1. Large lot sizes – Mission Viejo’s minimum lot size is 5,000 square feet, with many lots over 7,000 square feet. This is a larger lot size than many parts of suburban Orange County. Furthermore, residential lots in Mission Viejo have a minimum 50-foot lot width and 80-foot lot depth, a reasonable size for ADU or JADU (junior ADU) production;
2. Development Standards – Mission Viejo’s development standards for residential zones are set up to allow for ample setbacks and building separation between neighbors to encourage privacy and openness. With State law allowing secondary units, it has created significant opportunities for ADUs to be constructed in Mission Viejo, given that ADUs up to 1,200 square feet are exempt from most development standards.
3. Lot Coverage – Parcels in the City of Mission Viejo have a maximum lot coverage of 60% in residential zones, but many lots are well under the lot coverage maximum.



4. Setbacks – Many Mission Viejo parcels have between 30- and 40-foot-deep yards with side yards between 10 and 20 feet wide. With the State allowing for a 4-foot rear and side yard setback for an ADU, there is ample room on many medium to large Mission Viejo lots for ADUs of up to 1,200 square feet.
5. Many homes in Mission Viejo have at least 3-car garages. This additional space could be a catalyst for the third garage being converted into ADU or JADU space. Furthermore, many Mission Viejo homes have a driveway capable of accommodating at least three vehicles, whereas most other jurisdictions can only accommodate one or two vehicles in the driveway.
6. Many of Mission Viejo’s lots can accommodate an ADU (detached) plus one JADU (attached). The City currently has a number of residential projects going through the building permit process or recently approved, some with both planned on one lot. These and upcoming ADU projects will add more ADUs within the City of Mission Viejo.
7. At just over \$121,000, Mission Viejo has one of the highest median household incomes in the SCAG region. Studies have shown that a high level of disposable income can facilitate ADU construction based on the ability to self-finance development, which conversely shows that lower income households may not be able to secure financing to construct ADUs. Property owners with a new ADU on their property tend to be more affluent than the typical California homeowner, suggesting that there may not be adequate financing options for lower to moderate income households to construct ADUs.
8. As shown in Table D-16, Appendix D, AFFH, 19 out of the 26 Census tracts within the City of Mission Viejo are designated High or Highest Opportunity Areas, with the remaining 7 tracts in the Moderate category. ADU development across the City in High Opportunity Areas is a way for the City to support affirmatively furthering fair housing.
9. The City of Mission Viejo is a very business-friendly city for obtaining a streamlined process for quick building permits within the Building Division. For homeowners proposing residential additions and ADUs, the City has a quick review period (10-day review for first plan checks, 5 days for subsequent reviews). This fast plan check process is attractive for homeowners and contractors and is faster than other Southern California cities where building department review can take several months to over a year.
10. The City has experienced an uptick in ADU production in recent years (see Figure IV-1), with 20 applications as of September 2022, compared with 10 applications in all of 2021. This trend is likely to continue, given the factors listed above which will aid ADU production.
11. HCD has also approved an ADU affordability analysis prepared by SCAG (“SCAG Regional Accessory Dwelling Unit Affordability Analysis”, December 2020, p2). For Orange County, this allows jurisdictions to assume ADUs to be counted towards its lower income RHNA as follows: 15% as Extremely Low Income, 10% as Very Low Income, 43% as Low Income, 30% as Moderate Income and 2% as Above Moderate Income.

The projected affordability of these ADUs is based on the above-referenced SCAG Regional Accessory Dwelling Unit Affordability Analysis. The City will annually monitor ADU production and affordability as part of the Annual Performance Report (APR) on the Housing Element, and conduct reviews in 2024, 2026, and



2028 to evaluate if ADU production levels are being achieved. If ADU production is falling short, the City will ensure adequate sites are available to address the lower income RHNA, or will commit to rezoning additional sites within one year (as necessary) to offset any shortfall.

3. Available Sites

The City of Mission Viejo has conducted community outreach, reached out to property owners, and contracted with the Related Company to analyze sites for realistic housing capacities to meet the City's RHNA target. The City approved the rezoning of all 12 inventory sites that were included in the Second Revised Draft of the Housing Element that was delivered to HCD in October 2021 as part of its obligation to facilitate the development of housing to address the needs of lower income households, and also created two new higher density zoning categories (RPD 50 and RPD 80) discussed in Section III, Housing Constraints. The rezoning was completed on October 12, 2021, prior to the statutory deadline of the 6th cycle Housing Element on October 15, 2021. Therefore, the rezoning to accommodate the RHNA is not considered a rezoning for RHNA shortfall under State law.

Sites rezoned were selected based on several factors: existing land use and feasibility for redevelopment within the planning period; property owner interest; neighborhood compatibility and community context; and consideration of locating affordable housing opportunities in areas of the City where the demographic analysis in the Affirmatively Furthering Fair Housing section of this Housing Element indicated particular housing needs.

In terms of evaluating the adequacy of these sites to address the affordability targets established by the RHNA, Housing Element statutes provide for the use of "default densities" to assess affordability. Based on its population and location within Orange County, Mission Viejo falls within the default density of 30 units per acre for providing sites affordable to very low- and low-income households; sites suitable for moderate density households can be provided at 10 units per acre. The City has used these default density thresholds as a guide in allocating its sites inventory by income category, as shown in Table IV-2. A comparison of the sites inventory income distribution under the rezoning completed for the City's RHNA identifies sufficient sites at appropriate densities to accommodate Mission Viejos regional housing needs.

Table IV-2 shows the potential for Mission Viejo to exceed its RHNA by 539 units. This buffer above the RHNA target provides a degree of insurance from having to rezone additional sites during the 2021-2029 planning period of the Housing Element.

The following sections will examine in detail the various categories identified in Table IV-2 that will satisfy Mission Viejo's RHNA:

a. Rezoned Sites

To meet the remainder (1,888 units) of its RHNA, Mission Viejo rezoned sites on October 12, 2021 to permit housing development on suitable vacant and nonvacant sites in the city, and permit overlay zoning to allow the co-existence of commercial and residential land use on the same site. To fulfill its requirements, the City has already rezoned the sites identified in its October 12, 2021 Housing Element that was transmitted to HCD, which included creating two new zoning categories (RPD 50 and RPD 80) that will permit denser development than Mission Viejo has previously permitted. The rezoning of the sites identified in the Housing Element transmitted to HCD in October 2021 was approved by the Mission Viejo City Council at its October 12, 2021 meeting.



The rezoning of sites to accommodate Mission Viejo's RHNA, including its lower income RHNA requirement, is one of the programs (Program 3) itemized in the Housing Plan section of the City's Housing Element (Section V), pursuant to Government Code §65583.2, subdivisions (h) and (i).

The location of the sites within Mission Viejo is and details on the individual sites are included in Appendix C, Sites Inventory.

b. Sites Inventory Methodology and Assumptions

This section describes the methodology and assumptions used to develop the Housing Element Sites Inventory (Appendix C). It provides justification for development on non-vacant sites and review of the factors used in estimating the realistic housing potential during the 2021-2029 planning period.

California Government Code states that if a jurisdiction has implemented density standards consistent with criteria based on population set in state law (in the case of Mission Viejo, 30 units per acre), HCD must accept sites of that density or higher as appropriate for meeting a jurisdiction's RHNA and its low-income unit allocation. The zonings adopted by Mission Viejo to satisfy its 2021-2029 RHNA meet this default density standard. Additionally, while Mission Viejo is in receipt of detailed studies from the Related Company for its sites that show it is possible to develop plans to produce completely affordable housing developments (see Appendix C), in an abundance of caution, Mission Viejo will instead in this Housing Element apply the percentage of Extremely/Very Low, Low, Moderate and Above Moderate income units stated in the City's RHNA to the individual site inventory.

For sites in the inventory with overlay zoning, state law requires that if more than 50% of the lower income RHNA shortfall relies on rezoning land to mixed use, then the mixed use zoning must allow 100% standalone residential use, and for mixed use development, require no more than 50% of the building space as nonresidential. The City's overlay zone allows 100% residential development on the entire site, replacing existing uses, or infilling excess parking and under-performing uses. However, conservatively for the calculation of units on sites with overlay zoning, a midpoint between 50% and 100% residential was used.

Suitability of Non-Vacant Sites: Because non-vacant sites in Mission Viejo's Sites Inventory comprise more than half of the housing need for lower income households, Government Code §65583.2(g)(2) requires that the City analyze the extent to which existing uses may constitute an impediment to residential development during the planning cycle. As part of the resolution adopting the Housing Element, the City Council made findings based on substantial evidence that the existing use is not an impediment and that the existing use will likely discontinue during the planning period. These findings are based on a variety of factors, such as development trends, property owner interest, age of structure, and development capacity, used to select sites for RHNA.

Six of the 12 sites that are non-vacant in this Housing Element have been rezoned to have overlay zoning, where standalone residential and mixed-use commercial/residential development will be permitted. Two sites will permit increased density at existing residential developments. Three sites anticipate the complete replacement of existing usage with residential development. One site anticipates the replacement of an excess parking lot with residential development.

Non-vacant sites (often strip mall developments with a low degree of utilization where owners have expressed interest in redevelopment) were selected based on a combination of factors rendering it suitable and likely to redevelop during the planning period. These factors include physical underutilization of the



site; economic obsolescence of the existing use (as measured by an improvement-to-land value ratio of <1.0); condition of the existing use; developer and/or property owner interest in development. The sites inventory spreadsheet in Appendix C details these factors for each site, supplemented by a more detailed analysis sheet for each site, including an aerial photo exhibit of each site as well as a description of various factors that support development.

Similar Trend: Mission Viejo has successfully redesignated two sites and converted an existing non-vacant commercial use to residential use in the last decade: its Site A from Mission Viejo's 5th Cycle RHNA Housing Element, and the Morningstar Assisted Living Project, which were previously underutilized strip mall sites. One of the non-vacant sites in the Sites Inventory (Site 2) is immediately adjacent to the 5th Cycle Site A and will complete the redevelopment of this former commercial site to housing usage. This is an example where Mission Viejo has a proven track record of successfully converting former commercial sites to residential use.

Although Mission Viejo's RHNA target for the 5th Cycle was just 177 units, the target was not just met but exceeded, with 338 units developed on sites identified in the previous Housing Element. The market for residential development in Mission Viejo is robust, as evidenced by development on its prior Housing Element sites. The creation of various zoning overlays with regulatory incentives will render the 6th cycle Housing Element sites all the more attractive for development.

Realistic Development Capacity Analysis

As required by Housing Element statute, local governments must analyze available sites based on their realistic residential development capacity – i.e., the development density that can actually be achieved on a site will inevitably be less than the maximum residential densities permitted by the underlying General Plan land use and zoning. Therefore, to establish realistic capacity, jurisdictions must consider cumulative development standards such as maximum lot coverage, height, open space, parking, on-site improvements (sidewalks or easements), other factors.

As already mentioned above, because Mission Viejo's 5th Cycle RHNA was for just 177 units (compared with the 6th cycle target of 2,217 units), there is only limited data for analyzing how many units were actually built for the 5th Cycle compared to what was proposed. Three sites were identified in the 5th Cycle, with two sites reaching 100% of the expected capacity, and a phase of development still occurring on one site, which is currently at approximately 75% of its target.

The City of Mission Viejo has utilized the Related Company to devise realistic potential building plans for sites in the Housing Element that are included in Appendix C. In their site-specific analyses, the estimates of a realistic number of units on some of the sites corresponded to a calculation approximating 85% of the total possible capacity for a site based on its acreage and zoning. Additionally, a number of mixed-use developments in Southern Orange County (Westminster Mall, Gateway in Laguna Niguel, San Sebastian, Laguna Hills) also seem to be yielding realistic capacities of around 85%. For these reasons, Mission Viejo will also assume that all sites in this Housing Element will yield approximately 85% of maximum capacity.

Site Size

Per State law, sites smaller than one-half acre or larger than 10 acres are not considered adequate to accommodate lower income housing need unless it can be demonstrated that sites of equivalent size were



successfully developed during the prior planning period, or other evidence is provided that the site can be developed as lower income housing.

- Site 3: The site comprises four small parcels totaling approximately 2.1 acres, which gives access to a feeder street (Center Drive/Hillcrest) and a large parcel of 20.8 acres. The Related Company plan proposes a development solution including lower-income housing that would involve pads that would occupy about 6 acres of the large parcel. The large parcel could be subdivided to reflect this, or similar proposals. It is the expectation of the City that development of this site would occur on a section of the large parcel considerably less than 10 acres, due to slope and other environmental constraints. However, the entire acreage is included to allow for maximum flexibility for the developer.
- Idyllwillow Apartments: The site occupies a single parcel of 23.7 acres, and is currently occupied by 400 apartments, occupied by approximately 10% students attending Saddleback College, 80% families, including often lower-income military families who will receive a housing allowance, and 10% younger couples. Note that this is *not* a housing development for students, even though the land is owned by Saddleback College, which leases it to an apartment management company. College leadership has had preliminary conversations with the City regarding increasing density of the site. A site study devised by the Related Company (Appendix C) envisions a phasing of construction involving buildings on the western half of the parcel. In an abundance of caution, the RHNA total for this site equals 85% of the potential development in the Related Company's feasibility analysis.
- Macy's Site: As explained in the Sites Inventory section (Appendix C), the City has had encouraging discussions with the owners of the parcels comprising this 11.3-acre site, which comprises one parcel of 10.06 acres and a 1.27-acre piece of an adjacent parcel currently occupied by a parking lot. Conversion of similarly sized declining mall properties have occurred in nearby cities. Examples include:
 - Village at Laguna Hills Mall – A 68-acre site comprising retail, hotel, and office redevelopment, plus 1,500 units (residential/mixed-use zoning) occupying approximately 30 acres of the site.
 - South Bay Galleria, Redondo Beach – To be renamed South Bay Social District. A 30-acre site including 300 residential units (with a 20% set aside for low-income households) to be built as part of a complete remodel of the mall site.
- Vista del Lago Apartments: As with the Idyllwillow Apartments site, the single parcel 33-acre site already has 604 apartment units on the site and was developed far below its current zoning level. The owner has had positive discussions with the City regarding increasing the density on a 17-acre portion of the parcel as envisioned in the Housing Element and is extremely motivated to redevelop and increase density.

While the City's sites inventory does not include any sites that total less than one-half acre, individual parcels that comprise several sites are less than one-half acre. In most cases, the same owner owns all the parcels in the City's multi-parcel sites, making consolidation a simple process. To ensure housing units in these opportunity sites are credited as lower income units, a Lot Consolidation Program is included in the Housing Element. As part of the program, the City will first conduct outreach to property owners to identify meaningful incentives to facilitate lot consolidation and redevelopment. The City will then develop specific incentives such as flexible development standards and streamlined permit processing.



Sites Identified in Previous Housing Elements

Government Code §65583.2(c) specifies that a non-vacant site identified in the previous planning period or a vacant site that has been included in two or more previous consecutive planning periods cannot be used to accommodate the lower income RHNA unless the site is subject to a policy in State housing element law requiring rezoning within 3 years of the beginning of the planning period to allow residential use by right for housing developments in which at least 20% of the units are affordable to lower income households.

In this 6th cycle Housing Element Site Inventory, Site 3 includes the previous 5th cycle's 8.5-acre Site C, but the new site now comprises 22.8 acres in total. The housing massing study supplied to the City by the Related Company for Site 3 (Appendix C) envisions development on just 5.8 acres of Site 3. Only approximately 1.1 acres of the developable area is within the previous cycle's Site C. In other words, 4.7 acres or 81% of the developable area of Site 3 is different from the previous Site C. While Site C and Site 3 have a degree of overlap, they are different sites.

4. Availability of Infrastructure and Public Services

With the exception of the currently vacant Site 3, sites in this Housing Element are adjacent to existing public roadways and are serviceable by police and fire departments, as well as private companies that provide phone, cable, gas, and electric service. Existing water delivery and wastewater collection infrastructure are available to all properties located in the residential sites inventory, and the City has adequate water and wastewater capacity to accommodate the RHNA of 2,217 units. It is feasible to supply the same infrastructure for Site 3 as envisioned in the preliminary study performed for the City by the Related Company, but the infrastructure does not currently exist.

Both the Santa Margarita Water District (which includes Sites 2, 3 and 11) and the Moulton Niguel Water District (which includes the remaining sites) include sections in their current Urban Water Management Plans that factor in the likely impact of the State's 6th Cycle RHNAs for cities they serve as they project future water demand and their ability to serve it.

C. Financial Resources

1. Successor Agency/Housing Authority Resources

The primary local source of funds for affordable housing in Mission Viejo had traditionally been its Redevelopment Agency's Low- and Moderate-Income Housing Fund. However, due to passage of Assembly Bill (AB) 1X 26, redevelopment agencies across California were eliminated as of February 1, 2012, removing the primary local tool for creating affordable housing. However, with the passage of AB 1484 in June 2012, the Supplemental Educational Revenue Augmentation Funds (SERAF) borrowed by the State from Redevelopment Agencies Low- and Moderate-Income Housing Funds were required to be repaid and deposited into each Successor Agency's Housing Asset Fund. The successor agency is the Mission Viejo Housing Authority.

As of June 30, 2021, the Mission Viejo Housing Authority had approximately \$405,000 in its Low- and Moderate Income Housing Asset Fund. Over the 8--year planning period, the City estimates contributing approximately \$546,000 to the Housing Fund generated from loan repayments and interest. In addition, the Housing Fund will receive \$439,000 from Community Development Block Grant funds for the acquisition and rehabilitation of one low-income housing unit through an agreement with Families Forward.



2. Community Development Block Grant (CDBG)

Through the CDBG program, the federal Department of Housing and Urban Development (HUD) provides funds to local governments for funding a wide range of community development activities benefiting low-income persons. Financing is provided under an agreement with the County of Orange. For 2022--23, an allocation of approximately \$390,000 is expected, in line with the amounts of recent years, which is used to fund the Housing Rehabilitation Program, the Senior Nutrition (Hot Lunch) Program, and accessibility improvements in community facilities and public parks. The City has also used CDBG funds, combined with Housing Authority monies, to work with a local nonprofit, Families Forward, to purchase housing units (four purchased and a further two authorized) to house families experiencing homelessness, or at risk of homelessness, in Mission Viejo.

3. SB 2/LEAP Grants

In 2017, Governor Brown signed a \$15 billion housing package aimed at addressing the State's housing shortage and high housing costs. Specifically, it included the Building Homes and Jobs Act (SB 2, 2017), which establishes a \$75 recording fee on real estate documents to be used towards increasing the supply of affordable homes in California. Because the number of real estate transactions recorded in each county varies from year to year, the revenues collected fluctuate. The first year the State administered planning grants known as SB 2 Grants, and the following year a second planning grant program, Local Early Action Planning, or LEAP grants, was made available to cities. Gardena applied for and obtained funding for both of these grant opportunities.

a. SB 2 Grant

The City of Mission Viejo received \$310,000 in SB 2 grant funding for the following:

- Updating the Housing Element - \$135,000
- Rezoning with CEQA Clearance - \$50,000
- Permit Tracking Software - \$125,000

b. LEAP Grant

The City received for \$300,000 in LEAP grant funding for the following:

- Permit Tracking Software

c. Permanent Local Housing Allocation (PLHA)

SB 2 created a block grant for affordable housing programs and activities. The City of Mission Viejo is eligible to receive \$206,683 from the FY 2019 allocation and \$321,250 from the FY 2020 allocation. However, the City must achieve certification of the 6th cycle Housing Element to maintain its eligibility for PLHA funds.

D. Administrative Resources

Described below are several nonprofit agencies that can serve as resources in implementation of Mission Viejo's housing activities, including acquisition/rehabilitation, preservation of assisted housing, and development of affordable housing.



Eden Housing: Eden has worked in partnership with cities and local community partners to develop or acquire more than 10,600 homes in communities throughout California, currently serving a diverse population of 22,000 low-income residents from all cultures and backgrounds. Eden serves very low, low, and moderate-income families, seniors, veterans, people living with physical, mental, or developmental disabilities, and the formerly homeless. Eden's Arroyo Vista in Mission Viejo offers 156 affordable apartment units.

Families Assistance Ministries: Family Assistance Ministries (FAM) is a faith-based charitable nonprofit organization assisting those in need in Orange County with resources for food, shelter, and personalized supportive counsel and aid, helping clients bridge the gap from dependency to self-sufficiency. FAM has provided a growing continuum of services in response to the changing needs of those at-risk in Mission Viejo. The City currently contracts with FAM for case management and care coordination, providing direct client cash aid to help individuals avoid homelessness, and regain housing/avoid utility shut-off.

Families Forward: Families Forward is a nonprofit organization committed to helping local Orange County families who are homeless or at risk of homelessness. Their mission is to prevent and end family homelessness by providing access to housing and resources that create lasting stability. Over the last 6 years, Mission Viejo has granted \$2,344,690 to Families Forward to fund the purchase of six housing units in the City.

Habitat for Humanity: Habitat is a nonprofit, non-denominational Christian organization that builds and repairs homes for very low-income families with the help of volunteers and homeowner/partner families. Habitat homes are sold to partner families at no profit with affordable, no interest loans.

Jamboree Housing Corporation (JHC): JHC is a nonprofit that has developed numerous affordable housing projects throughout Orange County and the State. Jamboree has also established an in-house social services division, Housing with a HEART, that operates at most properties to assist residents in maintaining self-sufficiency. JHC is actively involved in many Orange County communities, including the 143 senior affordable Heritage Villas community in Mission Viejo (<https://www.jamboreehousing.com/blogs/affordable-housing-developer-partner/heritage-villas-mission-viejo-orange-county>). Jamboree worked closely with the City of Mission Viejo and other partners to develop this property, and recently contacted the City to review Housing Element sites with City staff. Jamboree Housing is particularly interested in Site 3.

Mercy House: Mercy House is a local nonprofit organization striving to be a leader in ending homelessness by providing a unique system of dignified housing opportunities, programs, and supportive services. They provide housing and comprehensive supportive services for a variety of homeless populations. The City of Mission Viejo currently contracts with Mercy House for homeless outreach and engagement services, in coordination with Orange County Health Department, and ongoing case management services to help homeless individuals develop a housing plan and coordinate with other agencies to provide assistance.

National Community Renaissance: National CORE is a nonprofit developer with in-house capacity to construct and renovate large-scale developments. The company owns and manages more than 4,500 multi-family units throughout Southern California, including sites in nearby cities such as San Clemente and Lake Forest. As part of its inclusive approach to improving quality of life, it staffs community resource centers at all its properties. These centers are supported and administered by the Hope Through Housing Foundation. National Core has been in communication with City of Mission Viejo staff regarding sites identified in this Housing Element.



NeighborWorks Orange County (NWOC): NWOC serves Orange County, implementing innovative solutions to break down barriers to homeownership and provide homeownership education to those looking to pursue homeownership. NWOC has become a HUD-certified counseling, lending, and realty service. The Agency provides a number of programs that benefit a variety of constituents, including financial literacy; first-time home-buyer education, counseling and lending services; foreclosure prevention services; and community building programs.

Orange County Community Housing Corporation (OCCHC): OCCHC’s mission is to transition extremely low-income families towards greater self-sufficiency by assisting them with housing and education. Since its founding in 1977, OCCHC has developed over 200 units of affordable housing throughout Orange County. Most of these apartments are owned and managed by OCCHC.

South County Outreach: South County Outreach is a local nonprofit that provides homelessness prevention and rapid re-housing services by offering rental and utility assistance as well as affordable housing to households who are homeless or at risk of becoming homeless. The City has helped the organization purchase five housing units in the city.

E. Opportunities for Energy Conservation

As part of the Housing Element, an analysis of opportunities for energy conservation with respect to residential development is required, including measures to encourage the incorporation of energy-saving features, energy-saving materials, and energy-efficient systems and design for residential development. Maximizing energy efficiency and incorporating energy conservation and green building features can contribute to reduced housing costs for homeowners and renters, in addition to promoting sustainable community design and reduced dependence on vehicles. Such planning and development standards can also significantly contribute to reducing greenhouse gases.

1. Green Building Practices

Conventional building operations, construction, demolition, and manufacturing building materials have multiple impacts on our environment, impacting electricity consumption, landfill waste, and water consumption. To facilitate a reduction of these impacts, it is important to integrate sustainable and energy efficient (green) building practices.

The 2019 California Building Standards Code establishes mandatory statewide green building standards. Mission Viejo has adopted the 2019 California Green Building Standards Code (CALGreen) Title 24, Part 11 and the 2019 California Energy Code/Title 25 (part 6). Reference to the City’s standards can be found in Chapter 8.02 – Building and Housing Codes, of the City of Mission Viejo Municipal Code. These green building codes reduce water consumption, improve energy efficiency, generate less waste, and lessen a building’s overall environmental impact.

The City provides two assistance programs, providing local residents the opportunity to reduce their building or residential energy consumption:

- The City’s Energy Efficiency Measures Fee Waiver Program (EEFW) is available to new homeowners aged 62 or older, who purchased their home within 1 year of building permit issuance. The program waives building permit fees for solar photovoltaic, solar thermal systems, tankless domestic water



heater, windows and/or doors containing glass, and high efficiency HVAC systems (Heating, Venting, and A/C).

- Mission Viejo offers a Housing Rehabilitation Program, allowing residents to replace items such as windows and doors with more energy-efficient products, and also to make energy conservation-related repairs. This program offers technical and financial assistance to qualifying low-to-moderate income residents who are owner-occupants of single-family homes in Mission Viejo. Incentives include zero percent financing for up to \$25,000 of home repairs. Participants do not have to make monthly payments, and loans can be paid back when the home is sold, title is transferred, refinanced, or if the homeowner otherwise no longer resides in the home.

2. Energy Conservation Programs Offered through Local Utilities

Southern California Edison and Southern California Gas

In addition to green building practices, Mission Viejo promotes energy conservation by advertising utility energy efficiency programs available through Edison and Southern California Gas, particularly connected to housing rehabilitation programs. Income-qualified Edison and Southern California Gas Company customers may be eligible for the State's Energy Savings Assistance program, and/or a 20% bill discount under the California Alternate Rates for Energy (CARE) program. Lower-income households are also eligible for State-sponsored energy and weatherization programs. Such as energy bill financial assistance, budget counseling, and weatherizing energy upgrades.

Southern California Edison (SCE) provides a series of energy conservation services. SCE offers families, with partner agencies, purchasing assistance for energy efficient appliances and solar installation. These services are designed to help eligible public assistance families, which include low-income households, help mitigate their energy use. Additionally, SCE aids local residents in determining qualifications for energy efficiency rebates or rates. Reduced rates and rebates are available for electric vehicle (EV) charging. The SCE programs and assistance can be found online at sce.com.

The Southern California Gas Company offers an Energy Savings Assistance Program to help individuals save money and energy. This program is designed to assist households that receive public assistance mitigate their energy use at no cost. This service provides energy efficient upgrades, including home improvements such as installation repairs and upgrades, replacements of weatherization for the homes or apartments of low-income families, provided they meet the federally established income guidelines. These services are provided to the low-income families free of charge while later being reimbursed by the company.

South Coast Air Quality Management District

Local residents in the South Coast Air Quality Management District can receive a rebate of up to \$250 with the purchase of a new cordless and electric battery lawn mower. The rebate is available on a first-come/first-serve basis, and the rebate amount received is calculated based on the purchase price of the new lawn mower. The lawnmower must be zero-emission and be a self-propelled or push lawnmower, with a least a 1-year warranty. An operable, gasoline powered lawn mower must be recycled at an approved dismantler to be eligible for the rebate.



HERO Financing Program

The City passed a resolution providing residents the option to participate in The California Home Energy Renovation Opportunity (HERO) Program. The program provides property owners with low interest financing for energy and water efficiency improvements and electric vehicle charging infrastructure on their property. Property owners who wish to participate agree to repay the amount borrowed through an assessment on their property taxes.

Energy Upgrade California

Energy Upgrade California (EUC) is a statewide program, part of the State’s initiative to assist California residents in meeting the State’s energy goals. The program provides homeowners incentives up to \$4,000 to implement certain energy-saving home improvements on a single-family residence and two- to four-unit buildings. The incentive packages encourage customers to take the “whole house” approach by combining several improvements at one time to achieve greater energy efficiencies and savings. An initial assessment is required, and homeowners will need to hire an EUC participation contractor. More information can be found online at energyupgradeca.org. Participants in the Southern California region include Southern California Edison and Southern California Gas.



V. Housing Plan

Sections II, III and IV of the Housing Element establish the housing needs, opportunities, and constraints in Mission Viejo. This final section, the Housing Plan, sets forth the City's goals, policies, and programs to address identified housing needs in the community for the 6th cycle, and presents the City's commitment to complying with both State and Federal housing mandates.

A. Goals and Policies

Goal HE 1: Housing choice for all Mission Viejo residents.

Objective HE 1.1:

Provide a range of housing prices, unit types, and sizes to accommodate the varied needs of all socioeconomic segments of Mission Viejo, fostering a diverse and balanced community.

Policies

- P.1 The City will maintain a Land Use Plan that continues to accommodate the City's Regional Housing Needs Allocation.
- P.2 The City will encourage the assembly of parcels to create larger and more easily developable lots.

Objective HE 1.2:

Remove or mitigate City policies, regulations, and procedures that serve to constrain the development of housing affordable to lower and moderate-income households, including extremely low income households.

Policies

- P.1 The City will prioritize review of affordable housing projects and expedite the permitting process.
- P.3 The City will establish development standards to facilitate a range of housing types, allowing development to achieve the intended density, scale, and character envisioned in the General Plan.
- P.4 The City will annually review the City's policies, regulations, and procedures to ensure their continued relevance and monitor their impact on affordable housing development.

Objective HE 1.3:

Provide incentives for the construction of housing affordable to the workforce.



Policies

- P.1: The City will facilitate the development of affordable housing through the use of federal, state, and local programs.
- P.2: The City will consider the use of density bonuses and provide other regulatory concessions to encourage housing development.
- P.3: The City will proactively seek out new models and approaches in the provision of affordable housing.

Objective HE 1.4:

Ensure equal housing opportunity for all, regardless of their special characteristics as protected by local, state, and federal fair housing laws.

Policies

- P.1. The City will comply with federal, state, and local Fair Housing and anti-discrimination laws, and affirmatively further fair housing for all, ensuring equal access to housing regardless of their special circumstances as protected by fair housing laws.
- P.2. The City will promote housing mobility by expanding housing choices and increasing housing opportunities in high resource areas.
- P.3. The City will educate the community regarding discriminatory housing practices and assist in mitigating the impacts of displacement.
- P.4. The City will promote the integration of affordable and special needs housing projects in existing neighborhoods.
- P.5. The City will collaborate with and support efforts of organizations dedicated to eliminating housing discrimination.
- P.6. The City will encourage City boards and commissions to include members who are representative of the targeted populations.

Goal HE 2: Preserved and enhanced residential neighborhoods.

Objective HE 2.1:

Preserve and improve the quality of existing housing stock.

Policies

- P.1: The City will work with property owners to require appropriate property maintenance to ensure the maximum useful life of the unit.
- P.2: The City will encourage and assist lower and moderate-income homeowners with residential maintenance and improvements through the Housing Rehabilitation program.



Goal HE 3: Improved housing for underserved populations.

Objective H 3.1:

Encourage the development of housing that caters to special needs groups including the elderly, persons with disabilities (including developmental disabilities), students, large families, and the homeless.

Policies

- P.1: The City will promote the use of universal design principles to provide housing that is adaptable to residents of varied abilities.
- P.2: The City will promote the development of a continuum of housing options for seniors, ranging from accessory dwelling units, small single-family homes, condominiums/town homes, apartments, assisted living, residential care facilities, to transitional and supportive housing.
- P.3: The City will work with the local Saddleback Community College district to address the housing needs of students.
- P.4: The City will encourage the development of rental units of adequate size and with amenities suitable for families, seniors, and other household types.
- P.5: The City will support the provision of housing to address the needs of persons with developmental disabilities, including licensed community care facilities, supportive housing and permanent affordable housing. The City will coordinate with the Regional Center of Orange County to promote affordable housing options for persons with developmental disabilities.
- P.6: The City will support development and maintenance of affordable senior rental and ownership housing and supportive services to facilitate maximum independence and the ability of seniors to remain in their homes and/or in the community.
- P.7: The City will support implementation of the Orange County Continuum of Care program for the homeless and persons and families at-risk of homelessness.
- P.8: The City will support local churches in providing emergency overnight shelter to homeless individuals and families.

Goal HE 4: Greater housing affordability for lower-and-moderate income households.

Objective HE 4.1: Offer assistance to lower and moderate-income households to attain affordable housing.

Policies

- P.1: The City will work to preserve existing affordable housing that may be at risk of converting from low-income to market-rate housing.



- P.2: The City will actively market its housing programs and available housing resources through the City website, brochures, public service announcements, and other means.
- P.3: The City will work with non-profit organizations such as Families Forward and South County Outreach to encourage and help fund acquisition, ownership, and management of subsidized developments.

B. Housing Programs / Implementing Actions

The goals and policies contained in the Housing Element address Mission Viejo’s identified housing needs, and are implemented through a series of housing programs and actions. Housing programs define the specific actions the City will undertake to achieve the stated goals and policies.

The City’s Housing Element programs encompass existing programs; programs revised in response to the review of program accomplishments (see Appendix B); and several new programs added to address unmet housing needs.

Program 1: Maintain a Residential Sites Inventory

Maintain a residential sites inventory that is adequate to accommodate the City’s share of regional housing needs. The City’s Regional Housing Needs Allocation (RHNA) for the 2021-2029 planning period is 2,217 units. Based on projected ADUs (64 units) and approved/entitled projects (265 units), the City has met 329 units of its RHNA obligations, with a remaining RHNA of 1,888 units (653 very low income; 368 low income; 378 moderate income; and 489 above moderate income units). The City is able to accommodate the remaining RHNA with existing sites and sites that were rezoned on October 12, 2021, (prior to the statutory deadline of the Housing Element).

AB 1397 requires the by-right approval of housing projects with 20% of the units set aside as affordable to lower income households if the project is located on a site that was also identified in the previous Housing Element (5th cycle) to accommodate the lower income RHNA.

<p>2021-2029 Actions and Objectives:</p> <ul style="list-style-type: none"> • Maintain an inventory of vacant and underutilized sites, post the inventory on City website, and provide information to interested developers. (Update annually). • Maintain an inventory of City-owned properties and other surplus sites owned by other public agencies, e.g., school district property, that may be appropriate for residential uses. (Update annually). Adhere to the Surplus Land Act requirements if city-owned properties are identified for disposition. • Play an active role in facilitating lot consolidation, particularly as it relates to parcels listed in the sites inventory. For example, the City will work with non-profit developers and owners of small sites to identify and consolidate parcels to facilitate the development of housing affordable to lower-income households. The lot consolidation procedure will be posted on the City website and discussed with developers during the preliminary review team process. (Ongoing). • By October 2023, in compliance with AB 1397, establish a formal procedure in the Municipal Code to provide for by-right approval 	<p>Funding: Departmental budget</p> <p>Responsible Agencies: Community Development – Planning Division</p>
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of projects with 20% lower income units on reuse sites from the previous cycle of Housing Element. (Ongoing).	
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Program 2: Surplus Land Act

The Mission Viejo Housing Authority owns Site 3 on the sites inventory, and together with the City, controls the sale and disposition of the property. The Housing Authority and City will consider all feasible arrangements to further housing development on this site, including sale, lease, public private partnership or other business structures. The City will comply with the requirements of Surplus Land Act with regard to the development of Site 3.

<p>2021-2029 Actions and Objectives: The Authority/ City will facilitate the development of a minimum of 215 units on Site 3 through implementation of a schedule of actions (see below) to ensure that suitable and feasible land is made available for development. The schedule for disposition of the site includes the following:</p> <ul style="list-style-type: none"> • Further refine assessment of the site (Underway, to be complete in 6 months from July 1, 2023) • Further develop conceptual grading plans (Underway, to be complete in 6 months from July 1, 2023) • <u>Environmental Clearance</u> - mitigation plan, CEQA and possibly other regulatory permits (Jan 2024 to Dec 2024) • <u>Selection of contractor</u> to manage soil import/placement (Sept 2024 to Dec 2024) • Assess need and applicability for <u>CDBG Funding</u> (in conjunction with City FY2023-24 and FY 2024-25 application cycles) • <u>Importation of Dirt & Pad-ready site available</u> (Jan 2025 to Dec 2026)- The City will commit to importing engineered-fill to create a pad-ready site, elevated well above the floodplain to avoid flood risk. The City will share its research, analysis and technical expertise regarding this site. • City to <u>consider subdividing</u> (this will be done during the soil import) • <u>Actively market</u> the site (this will be done during the soil import) • <u>City prepares RFP (or similar)</u> and selects developer (this will be done during the soil import) • <u>Transfer site to developer</u> (6 months and done during the soil import) • Preliminary development plans (6 months – prior to or concurrent with completion of sale) • <u>Priority processing</u>, fee waivers and shall grant other incentives and concessions (As necessary) • Preparation of final design plans and <u>City approval of Entitlement</u> (4 to 6 months, by December 2026) • <u>City Building Permits issued (by March 2027)</u> • If Building Permits not issued, develop <u>Alternative Plan of Action</u> by June 30, 2027 	<p>Funding: Departmental budget</p> <p>Responsible Agencies: Community Development – Planning Division; Mission Viejo Housing Authority, Public Works Department</p>
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Program 3: Monitoring of No Net Loss

To ensure that the City monitors its compliance with SB 166 (No Net Loss), the City will develop a procedure to track:

- Unit count and income/affordability assumed on parcels included in the sites inventory.
- Actual units constructed and income/affordability when parcels are developed.
- Net change in capacity and summary of remaining capacity in meeting remaining Regional Housing Needs Allocation (RHNA). Pursuant to SB 166, the No Net Loss requirements are:
 1. Make findings at the time of project approval regarding any site in the Housing Element sites inventory;
 2. Identify or rezone sufficient, adequate sites within 180 days of project approval to accommodate any shortfall; and
 3. Acknowledge projects may not be denied solely because No Net Loss would require zoning.

<p>2021-2029 Actions and objectives:</p> <ul style="list-style-type: none"> • Develop a formal procedure by the end of 2023 to monitor the development of vacant and nonvacant sites in the sites inventory and ensure adequate sites are available to meet the remaining RHNA by income category. 	<p>Funding: Departmental budget</p> <p>Responsible Agencies: Community Development – Planning Division</p>
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Program 4: Replacement Housing

Development on nonvacant sites with existing residential units that are either deed restricted as affordable housing for or occupied by lower income households is subject to replacement requirement, pursuant to AB 1397. The City will amend the Zoning Code to require the replacement of units affordable to the same or lower income level as a condition of any development on a nonvacant site consistent with those requirements set forth in State Density Bonus Law.

<p>2021-2029 Actions and Objectives:</p> <ul style="list-style-type: none"> • Amend the Zoning Code to address replacement requirement pursuant to AB 1397. (By the end of 2023) 	<p>Funding: Department budget</p> <p>Responsible Agencies: Community Development – Planning Division</p>
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Program 5: Expanding Housing Opportunities

The City is able to fully accommodate its RHNA with sites that are properly zoned and that are feasible for development during the planning period. Nevertheless, the City has identified additional properties for rezoning due to their potential for redevelopment within this planning period. These additional properties



are not subject to RHNA shortfall requirements as they are not needed to meet the City’s RHNA. The parcels are:

- Site 6: three additional parcels
 - 740-016-04, 0.890 acres, proposed zoning RPD 30, with an estimated capacity of 11 units
 - 740-016-01, 0.520 acres, proposed zoning RPD 30, with an estimated capacity of 7 units
 - 740-016-02, 1.050 acres, proposed zoning RPD 30, with an estimated capacity of 14 units
- Site 10: one additional parcel
 - 740-121-30, 0.210 acres, proposed zoning RPD50, with an estimated capacity of 4 units

<p>2021-2029 Actions and Objectives:</p> <ul style="list-style-type: none"> • Rezone four additional parcels to RPD 30 or RPD 50 (as outlined above) (By the end of 2024) 	<p>Funding: Department budget</p> <p>Responsible Agencies: Community Development – Planning Division</p>
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Program 6: Accessory Dwelling Units

Accessory Dwelling Units (ADUs) and Junior Accessory Dwelling Units (JADUs) represent an important affordable housing option to lower-and-moderate-income households. The City amended the Zoning Code in 2021 to comply with current State laws on ADU. Since 2018, the City experienced increased ADU/JADU activities.

<p>2021-2029 Actions and Objectives:</p> <ul style="list-style-type: none"> • Promote the development of ADUs/JADUs via city website (https://www.cityofmissionviejo.org), city social medias, and information at public counters with the goal of achieving 64 units over eight years. • Develop additional incentives and tools to facilitate ADU construction. Incentives may include, but are not limited to, expedited review, pre-approved plans, or reduced fees in exchange for affordability covenants. (By the end of 2023) • Evaluate the feasibility of applying for funding available at the State to assist lower and moderate-income homeowners to develop ADUs. (Annually) • Monitor the ADU development trend annually to ensure production is in line with the estimate presented in the Housing Element. If production falls short of estimate by the end of 2025, within 6 months reassess the City’s sites inventory for RHNA and ensure adequate capacity remains to accommodate the City’s RHNA for all income levels, and develop additional incentives for ADU construction. 	<p>Funding: Departmental Budget</p> <p>Responsible Agencies: Community Development – Planning Division</p>
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Program 7: Density Bonus Incentives

The City amended the Zoning Code in 2021 to comply with the latest density bonus provisions of State Density Bonus law. These include:

- AB 1763 (Density Bonus for 100 Percent Affordable Housing) – Density bonus and increased incentives for 100% affordable housing projects for lower income households.
- AB 1227 (Density Bonus for Student Housing) – Density bonus for student housing development for students enrolled at a full-time college, and to establish prioritization for students experiencing homelessness.
- AB 2345 (Increase Maximum Allowable Density) – Revised the requirements for receiving concessions and incentives, and the maximum density bonus provided.

<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> • Amend the Zoning Code to address recent changes to the State Density bonus law. (Completed) • Promote the density bonus program to developers during pre-application discussions. (Ongoing) 	<p>Funding: Departmental budget</p> <p>Responsible Agencies: Community Development – Planning Division</p>
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Program 8: Affordable Housing Development

The City will provide technical assistance, financial support if available, and expedited review for affordable housing development. While local City funding is somewhat limited since the dissolution of the City’s redevelopment agency, there are a number of housing assistance programs available that can serve to reduce the amount of City assistance needed and provide for deeper levels of affordability, including the new Orange County Housing Trust and significant new funding resources available through the State.

The City will support affordable housing development through the following:

- Technical Assistance: The City will proactively reach out to developers on an annual basis to discuss development opportunities and also provide technical assistance to developers in support of affordable housing development, including evaluation of projects for appropriate use of funding sources; assistance in completion of funding applications; and assistance in moving projects forward through the public review process.
- Land Assemblage and Write-Down: The City may utilize CDBG, and/or Housing Authority funds to write-down the cost of land for the development of lower-to-moderate income housing, and housing for special needs, including for persons with disabilities. As part of the land write-down, the City may also assist in acquiring and assembling property, subsidizing on-site and off-site improvements, and assisting in relocation activities as well as clearing and demolition.
- Direct Financial Assistance: The City may utilize Housing Authority funds to provide financial assistance in support of affordable housing development. In addition, the City may provide other forms of support for affordable housing.



- Application for State and Federal Housing Funds: The City will apply for funding directly or support the application for affordable housing funds by developers if the proposed projects are determined to be consistent with the goals of this Housing Element.
- Expedited Review and Priority Processing: The City will expedite and prioritize the review of housing or mixed-use developments that incorporate an affordable housing component to reduce the holding costs associated with delays (such as increased construction financing costs).
- Fee Deferrals: The City will consider fee deferrals for housing or mixed-use developments that incorporate an affordable housing component.

<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> • Continue to pursue affordable housing opportunities with interested developers and agencies with the goal of achieving 1,075 affordable lower income units. (2021-2029) • Continue to pursue affordable housing opportunities for households with special needs (such as large households and persons with disabilities, including developmental disabilities) and income at or below 30% of the County median income according to HUD income guidelines. Aim to achieve 25% of the affordable units to be targeted for special needs groups. (2021-2029) • Encourage developers to take advantage of density bonus incentives to provide residential units to individuals and families with incomes at or below 30% of the County median. Aim to achieve 10% of the affordable units to be targeted for extremely low income households. (2021-2029) • Encourage affordable housing developers to include large units (with three or more bedrooms) suitable for family living to help alleviate overcrowding issues. Aim to achieve 25% of the affordable units to be targeted for large households. (2021-2029) • Provide fee deferrals and/or expedited review and priority processing for projects providing affordable housing units for extremely low-income households, large households, or persons with disabilities, including developmental disabilities. (Ongoing) • Explore funding opportunities from State and Federal programs, including funding opportunities for housing affordable to households with incomes at or below 30% of the County median income according to HUD income guidelines. (Annually) • Solicit participation/partnership with nonprofit housing developers through a Request for Proposal process and/or direct contacts. (Annually) 	<p>Funding: DCBG; HOME; PLHA</p> <p>Responsible Agencies: Community Development – Planning Division; Housing Division</p>
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Program 9: Housing Choice Vouchers

Rent subsidies are available for very low-income renters through the County of Orange Housing Choice Voucher Program. The Housing Choice Voucher program provides rental subsidies to families with incomes that qualify as extremely low-income (up to 30% of Median Family Income or MFI) and very low-income (up to 50% of MFI). California legislature passed SB 329 in 2019, which defines source of income as “lawful, veritable income paid directly to the tenant or to a representative of a tenant, or paid to a housing owner or landlord on behalf of a tenant, including federal, state, or local public assistance, and federal, state, or



local housing subsidies, including, but not limited to, federal housing assistance vouchers issued under Section 8 of the United States Housing Act of 1937.” SB 22 passed in 2019 also extends the same protection to VASH (Veterans Affairs Supportive Housing) voucher recipients.

<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> • Assist approximately 600 very low-income households annually. (Annually) • Work with Fair Housing Foundation (FHF) to promote acceptance of Housing Choice Vouchers through outreach and education to renters and rental property managers. (Annually beginning in 2023) • Create a Fair Housing Fact Sheet with emphasis on the new source of income protection to be included in the City’s ADU and SB 9 application packets. (By the end of 2023) • Support Orange County Housing Authority (OCHA) efforts to pursue additional funding to expand the Voucher program and assist OCHA in promoting program with the goal of allocating 70% of new Section 8 assistance to extremely low-income households pursuant to HUD regulations. (Annually) 	<p>Funding: HUD Section 8 Rental Assistance Program; CDBG</p> <p>Responsible Agencies: Community Development – Planning Division; Housing Division; Orange County Housing Authority; FHF</p>
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Program 10: Preservation of Assisted Housing at Risk of Converting to Market Rate

Monitor the status of the City’s at-risk housing units and work with affordable housing providers to preserve the affordability of these units or provide replacement units. For the 2021-2029 Housing Element, no affordable housing units for lower income households are considered at risk of converting to market-rate housing. However, the 120-unit Alicia Viejo project provides affordable housing to 24 moderate income households. Affordability of these moderate income units is set to expire in 2028. While the City is not required by State law to address the at-risk status of moderate income units, the City will monitor the affordability of these units and pursue preservation options should project status be changed in the future.

<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> • Contact the property owner of Alicia Viejo regarding the potential conversion of moderate income units to market-rate housing. (2026) • Monitor the status of affordable housing developments by contacting the California Housing Preservation Commission for updates on project status. (Annually) • Establish contact with public and non-profit agencies interested in purchasing and/or managing units at risk. Where feasible, provide technical assistance to these organizations with respect to financing. (2026) • Work with tenants of at-risk units by providing information regarding tenant rights and conversion procedures. (2025) • Ensure property owners comply with California’s tenant notification requirements at three years, one year, and six months prior to conversion. (Beginning in 2025) • Explore potential funding sources for preservation/replacement. (Annually) • Assist income-eligible tenants in applying for priority status in the Section 8 program upon notification of owners’ decision to discontinue low-income use. (2028) 	<p>Funding: Section 8 Rental Assistance; other State and Federal loans and grants</p> <p>Responsible Agencies: Community Development</p>
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Program 11: Home Improvement Assistance

The City continues to provide a Housing Rehabilitation Program that offers a 0% interest deferred loan and grant to homeowners for necessary property repairs, upgrades, improvements and for all required city code upgrades. The program requires the homeowners to repair all health and hazardous violations identified as a result of the property inspection, along with their planned home improvements. Household earning lower incomes (up to 80% of Area Median Income or AMI) are eligible for the program.

<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> Assist 80 households during the planning period. (2021-2029) Target outreach to neighborhoods where there are concentrated issues of housing conditions. Pursue additional funding to expand program scope and eligibility. (2023) 	<p>Funding: CDBG</p> <p>Responsible Agencies: Community Development</p>
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Program 12: Objective Design and Development Standards

Pursuant to SB 330, the City will be developing objective design and development standards to facilitate multi-family housing development.

<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> Adopt objective design and development standards. (2023) 	<p>Funding: Departmental budget</p> <p>Responsible Agencies: Community Development – Planning Division</p>
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Program 13: Zoning Code Amendments

The City will amend the Zoning Code to address the provision of special needs housing pursuant to State laws. These include:

- Low Barrier Navigation Centers (AB 101): AB 101 requires cities to allow a Low Barrier Navigation Center development by right in areas zoned for mixed uses and nonresidential zones permitting multi-family uses if it meets specified requirements. A “Low Barrier Navigation Center” is defined as a “a Housing First, low-barrier, service-enriched shelter focused on moving people into permanent housing that provides temporary living facilities while case managers connect individuals experiencing homelessness to income, public benefits, health services, shelter, and housing.” Low Barrier shelters may include options such as allowing pets, permitting partners to share living space, and provide storage for residents’ possessions.
- Emergency Shelters: Establish an Emergency Overlay in the BP zone and identify emergency shelters and multi-family housing as permitted uses in the Overlay. Revise “Emergency Shelters” criteria to only require parking to accommodate staff working at the shelter and to remove the 10-bed limit for emergency shelters. Amend the separation requirement between two shelters to a maximum of 300 feet.
- Supportive Housing (AB 2162): AB 2162 requires supportive housing projects of 50 units or fewer to be permitted by right in zones where multi-family and mixed-use developments are permitted,



when the development meets certain conditions. The bill also prohibits minimum parking requirements for supportive housing within one-half mile of a public transit stop.

- **Employee Housing:** Pursuant to the Health and Safety Code (Section 17021.5) Employee Housing Act, employee housing for six or fewer persons should be treated as a single-family residential use to be similarly permitted as single-family homes in the same zone.
- **Residential Care Facilities (for Seven or More Persons):** Allow large (greater than 6 clients) residential care facilities in all residential zones, subject to a Conditional Use Permit and develop objective standards for review of residential care facilities with seven or more clients that facilitate certainty in outcomes.
- **Reasonable Accommodation:** Amend the City’s Reasonable Accommodation regulations (Chapter 9.60) of the Mission Viejo Development Code to remove items (c) and (d)
 - (c) Whether the accommodation will have only incidental economic or monetary benefits to the applicant, and whether the primary purpose of the accommodation is to assist with real estate speculation or excess profit taking;
 - (d) Whether the accommodation will create a substantial adverse impact on surrounding land uses, or a public nuisance, that cannot be reasonably mitigated;
- **Senior Housing Overlay:** The City’s Senior Housing Overlay zone is applied to areas where the only residential use allowed is senior housing. The City will amend the Zoning Code to incentivize senior housing through parking incentives but will remove this overlay from the Zoning Code.
- **SB 35 Processing:** Establish procedures to implement SB 35 eligible projects for streamlined processing.
- **SB 9:** Adopt a local ordinance to implement SB 9.
- **Height Limit:** Amend the Zoning Code to increase the maximum height in the RPD 50 zone from 50 feet to 55 feet.

<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> • Amend Zoning Code to address the various required revisions as outlined in program. (By the end of 2023) 	<p>Funding: Departmental Budget</p> <p>Responsible Agencies: Community Development –Planning Division</p>
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Program 14: Inclusionary Requirements

In 2023, the City will conduct a feasibility study to seriously explore an inclusionary housing program. Components of the program may include minimum affordability requirements; partnership with non-profit organizations such as Families Forward or South County Outreach to provide units and social services dedicated to persons at risk of homelessness; and/ or in-lieu housing options, such as payment of fees and off-site construction of community amenities. Within 6 months of completing the feasibility study, consider adoption of an inclusionary housing program.



<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> • Adopt the Inclusionary Housing Ordinance. (By the end of 2023) • By 2025, monitor the effectiveness of the Inclusionary Housing Ordinance to ensure it facilitates affordable housing and not constraining housing production overall. 	<p>Funding: Departmental Budget</p> <p>Responsible Agencies: Community Development – Planning Division</p>
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Program 15: Continuum of Care for the Homeless

The City will continue to participate in the Orange County continuum of care for addressing the housing and supportive service needs of the homeless. The continuum of care model includes five components: outreach and prevention; emergency shelter; transitional housing; supportive housing; and permanent housing. The City will also continue to allocate CDBG funds to supportive services for the homeless and those at-risk of becoming homeless.

<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> • Continue to support homeless outreach activities, such as those offered by Mercy House and Quality of Life Deputies, to connect persons with needs to available resources. Assist 50 persons. (Annually) • Allocate funding to address the emergency shelter and supportive service needs of the homeless with the goal of assisting 30 persons. (Annually) 	<p>Funding: CDBG</p>
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Program 16: Affirmatively Furthering Fair Housing

The City currently contracts with the Fair Housing Foundation of Long Beach to resolve tenant/landlord disputes. The City will continue to contract with a fair housing service provider to provide services to its residents.

<p>2021-2029 Actions:</p> <ul style="list-style-type: none"> • Provide fair housing and tenant/landlord dispute resolution services. (Ongoing) • Monitor developers’ compliance with all affirmative marketing requirements for housing developments that receive financial assistance from the City, incentives, or regulatory concessions in exchange for affordable housing. (Ongoing) 	<p>Funding: CDBG</p> <p>Responsible Agencies: Community Development</p>
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C. Quantified Objectives

For the 2021-2029 Housing Element, the City of Mission Viejo has established the following specific objectives:

Table V-1 Quantified Objectives (2021-2029), City of Mission Viejo

	Income Category					Totals
	Ex. Low	Very Low	Low	Moderate	Upper	
New construction*	337	337	401	397	745	2,217
Rehabilitation	20	25	45			90
Conservation**		149	149			298

*Quantified objective for new construction is for the RHNA projection period 6/30/2021 – 10/15/2029

**Deed-restricted affordable units

D. Summary of AFFH Actions

The following table summarizes the City’s meaningful actions in facilitating fair housing choices.



Table V-2 Summary of AFFH Actions

Program	Actions	Timeline	Target Area	Outcomes
New Opportunities in High Resource Areas				
Program 1: Maintain a Residential Sites Inventory	Proactively outreach to developers about opportunities.	Annually	High and Highest Resource	Facilitate development 2,217 units, including 1,075 affordable units; aim to achieve 50% of new units in Higher Resource Areas
Program 2: Surplus Land Act	Further develop conceptual plans and make determination regarding possible subdivision of Site 3. Actively market the site and reach conclusion regarding the importation of dirt to be able to deliver a Pad-ready site to potential developers. Establish a priority processing procedure, with fee waivers and grant other incentives and concessions as appropriate, including the need and applicability for CDBG Funding.	Within 1 year from July 2023, or HCD certification of Housing Element, whichever occurs first. As an exception, if the conclusion is to move forward with the import of dirt, this will occur 2 to 3 years from July 1, 2023 or from HCD certification of Housing Element, whichever occurs first.	Site 3	
Program 5: Expanding Housing Opportunities	Rezoning a total of four additional parcels to provide expanded opportunities for housing.	Complete the rezoning by the end of 2024.	High and Highest Resource	
Program 13: Inclusionary Requirements	Study the feasibility of adopting an Inclusionary Housing Ordinance. If inclusionary housing is determined not to be feasible, then within 6 months, develop alternative strategies to promote affordable housing.	Adopt ordinance by the end of 2023 or develop alternative strategies by 2025.	Citywide	
Housing Mobility				
Program 6: ADU	Develop additional incentives and tools to facilitate ADU construction.	By end of 2023	High and Highest Resource Areas	Facilitate 64 ADUs over 8 years, including eight as affordable ADUs
	Apply for funding available at the State to assist lower and moderate-income homeowners to develop ADUs.	Annually		
Program 7: Affordable Housing Development	Prioritize funding for projects that set aside units for special needs	2021-2029	Citywide	Aim to achieve 20% of the affordable units to be targeted



Program	Actions	Timeline	Target Area	Outcomes
	populations and those with extremely low incomes.			for special needs groups. Aim to achieve 10% of the affordable units to be targeted for extremely low income households. Aim to achieve 20% of the affordable units to be targeted for large households.
Program 8: Housing Choice Vouchers	Create a Fair Housing Fact Sheet with emphasis on the new source of income protection to be included in the City's ADU and SB 9 application packets.	By the end of 2023	High and Highest Resource Areas	Aim to increase the use of HCVs by 10% over 8 years.
	Assist OCHA, FHF, and United Way in promoting the HCV program	Hold promotional workshops annually		
Program 12: Zoning Code Amendments	Amend Zoning Code to address LBNC, emergency shelters, supportive housing, employee housing, residential care facilities, reasonable accommodations, senior housing	By the end of 2023	Citywide	Aim to achieve 25% of the affordable units to be targeted for special needs groups. Aim to achieve 10% of the affordable units to be targeted for extremely low income households. Aim to achieve 25% of the affordable units to be targeted for large households.
Place-Based Strategies for Neighborhood Improvements				
Program 10: Home Improvement Assistance	Target outreach to two neighborhoods where there are issues of housing conditions.	Annually	Coronado and Cordova communities	Assist 80 households over 8 years, with the goal of assisting 50% of assistance in targeted neighborhoods



Program	Actions	Timeline	Target Area	Outcomes
AFFH Action: Priority for Public Improvements	<p>Pursue a range of neighborhood improvements:</p> <p>Complete Coronado Park improvements</p> <p>Renovate Felipe Tennis Center, with added restrooms</p> <p>Refresh center median long Crown Valley Parkway</p> <p>Open Event Barn for public gatherings and events</p> <p>Install new play equipment in Granada Park</p>	2021-2029	Southside of city with concentration of lower and moderate income households	Capital improvement and public investment (approximately \$2.2 million)
Tenant Protection and Anti-Displacement				
Program 4: Replacement Housing	Amend the Zoning Code to address replacement requirement pursuant to AB 1397.	By end of 2023.	Citywide	100% demolished affordable units replaced
Program 9: Preservation of Assisted Housing	Monitor status of all affordable units	Annually	Citywide	Preserve all 298 affordable units
Fair Housing Outreach and Enforcement				
Program 15: AFFH	Provide fair housing and tenant/landlord dispute resolution services	Annually	Citywide, targeting southside of city with concentration of rental housing	Assist 400 persons over 8 years with fair housing services
	Expand promotion of housing resources, including fair housing services, via a multi-media approach, such as eNewsletter with circulation of 20,000, message boards, senior newsletter, and other social media outlets.	Annually		Outreach to at least 20,000 persons annually



Appendix A. Public Engagement

Mission Viejo Community Engagement Plan

- *Public Meetings* – Multiple public workshops and public hearings held providing opportunities for community and public participation and input, by residents, stakeholders, Planning and Transportation Commission, and City Council.
- *Online Community Survey* – Two online community surveys to gather feedback related to local housing needs.
- *Email Notices* – Direct email notifications delivered to Mission Viejo residents, businesses, apartment owners, service providers, and other agencies interested in the Housing Element Update.
- *Stakeholders* – Individual stakeholder meetings and consultations (i.e., property owners, service providers, community organizations) as part of the consultation process.
- *Website* – Creation of a focused webpage on the City’s website dedicated to the Housing Element Update which was routinely maintained and updated with pertinent information.
- *Social Media and Multi-Media News Releases* – Specific information, provisions and updates through the City’s website, social media posts, paid advertising via social media and in newspaper publications, press releases, and flyers.
- *On-going public input* – Continuous opportunities for review and comment of the Draft Housing Element update using all the community outreach methods and media listed above.

Dates of Public Meetings and Workshops

- March 31, 2021 – Housing Element Workshop
- May 24, 2021 – Public Meeting with Planning and Transportation Commission.
- June 8, 2021 – Public Meeting with City Council
- June 22, 2021 – Public Meeting with City Council
- September 27, 2021 – Public Meeting with Planning and Transportation Commission
- October 12, 2021 – Public Meeting with City Council
- June 9, 2022 – Housing Element Workshop
- June 10, 2022 – Housing Element Workshop
- June 30, 2022 – Senior Luncheon - Housing Q & A
- June 5, 2023 – Planning and Transportation Commission
- June 27, 2023 – Housing Element Workshop



Housing Element Workshops

To expand the conversation to all community members in the discussion, the City held two community workshops. To inform residents who did not have the opportunity to attend the sessions, the City uploaded copies of the presentation slides and meeting recordings onto the Housing Element update webpage. The workshops were advertised on the City website, City social media posts, and in the Murray Memo. The Murray Memo has a subscription of over 3,500 email addresses, and the e-newsletter has a distribution of over 21,000.

Each workshop included a presentation about what the Housing Element is, the process to update, and requirements for the update. Additionally, the site inventory was presented to the attendees. After the presentation, a question and answer session allowed for a facilitated discussion about the community's thoughts on the major housing issues and challenges, housing needs, and improving the housing stock in Mission Viejo.



**Housing Element Update
2021-2029
Community Workshops**

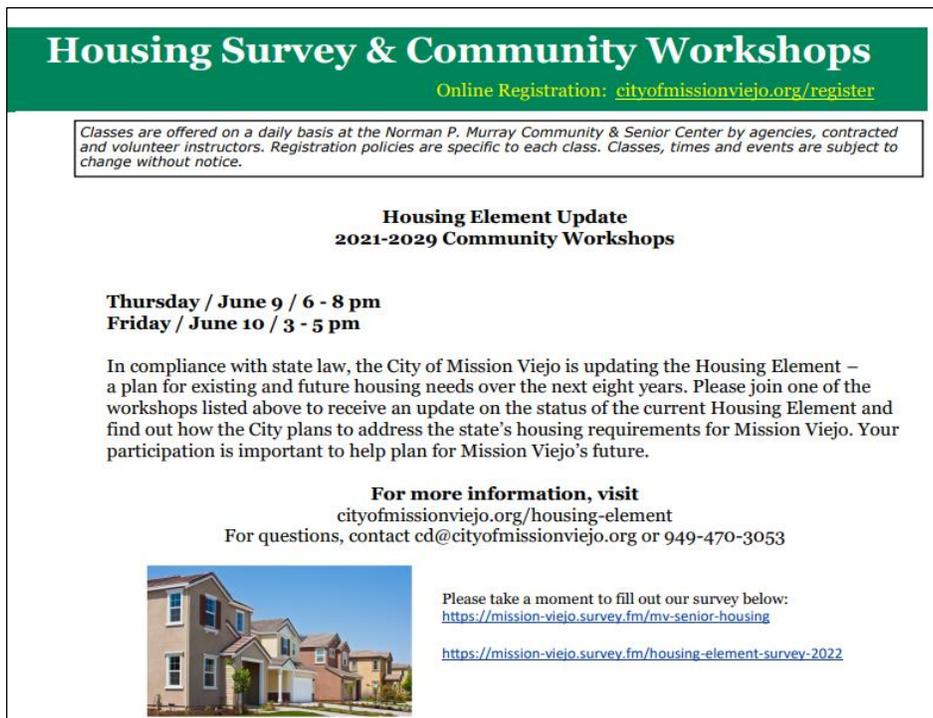
MISSION VIEJO
Make Living Your Mission

Norman P. Murray Center
24932 Veterans Way, Mission Viejo, CA 92692

June 9, 6 - 8 pm
or
June 10, 3 - 5 pm

In compliance with state law, the City of Mission Viejo is updating the Housing Element – a plan for existing and future housing needs over the next eight years. Please join one of the workshops listed above to receive an update on the status of the current Housing Element and find out how the City plans to address the state's housing requirements for Mission Viejo. Your participation is important to help plan for Mission Viejo's future.

For more information, visit
cityofmissionviejo.org/housing-element
For questions, contact cd@cityofmissionviejo.org or 949-470-3053



Housing Survey & Community Workshops

Online Registration: cityofmissionviejo.org/register

Classes are offered on a daily basis at the Norman P. Murray Community & Senior Center by agencies, contracted and volunteer instructors. Registration policies are specific to each class. Classes, times and events are subject to change without notice.

**Housing Element Update
2021-2029 Community Workshops**

Thursday / June 9 / 6 - 8 pm
Friday / June 10 / 3 - 5 pm

In compliance with state law, the City of Mission Viejo is updating the Housing Element – a plan for existing and future housing needs over the next eight years. Please join one of the workshops listed above to receive an update on the status of the current Housing Element and find out how the City plans to address the state's housing requirements for Mission Viejo. Your participation is important to help plan for Mission Viejo's future.

For more information, visit
cityofmissionviejo.org/housing-element
For questions, contact cd@cityofmissionviejo.org or 949-470-3053

Please take a moment to fill out our survey below:
<https://mission-viejo.surveymf.com/mission-viejo-survey-fm/mv-senior-housing>
<https://mission-viejo.surveymf.com/mission-viejo-survey-fm/housing-element-survey-2022>



Housing Needs Survey

As a part of the City's community outreach and engagement process, two housing surveys were circulated to Mission Viejo residents to determine what the community perceives as the City's most important housing needs and gather feedback on their preferences for policy options. One survey specifically focused on the overall greater community and a second survey specifically was directed to the senior resident. The surveys were posted on the City website for approximately four months, with a link advertised in the City's eNews, City newsletter, and various social media outlets (e.g., Facebook, Instagram, Twitter). The City received 54 responses to the survey, which closed on October 10, 2022.

The citywide survey consisted of 13 questions, with the City receiving a total of 14 responses. Of the respondents, 64% have lived in Mission Viejo for over 21 years. Additionally, 64% stated that their homes were in excellent condition. Those needing some minor maintenance or modest rehabilitation accounted for 14% of the responses. The following summarizes additional input received from the citywide housing needs survey.

- The survey identified 33% of the respondents as having experienced the following in the last two years:
 - An adult child living at home due to inability to afford housing
 - Lack of funding to make necessary home repairs
- The following were identified as the top three housing priorities (out of 6):
 - Encourage the maintenance and rehabilitation of housing in older neighborhoods.
 - Creating a blend of uses (commercial/office and residential projects) in the community that encourage walkable neighborhoods and reduce dependency on automobiles.
 - The following priorities received the same score, tying for the third most important priority:
 - Establish special needs housing for seniors, persons with disabilities, and/or veterans.
 - Focus new housing within existing developed areas and/or cluster/compact housing in order to preserve surrounding open space.
 - The following were identified as the top three housing development strategies (out of 4):
 - Increase allowable housing densities on a limited number of housing sites to reduce the number of multi-family sites required.
 - Encourage new multi-family housing on existing infill sites with access to existing infrastructure
 - Provide lower density zoning, requiring designation of a greater number of housing sites.
- The following were common write-in comments on strategies to create more housing opportunities:
 - The Shops at Mission Viejo (local mall)
 - Underused or distressed commercial properties
 - Open space should be preserved
 - Overall concerns about housing growth and future traffic congestion
 - Increase priority for mixed-use developments to mitigate traffic concerns

To ensure Mission Viejo's senior population were represented in the City's housing needs assessment, printed surveys targeting the senior population were promoted at the local senior center and distributed



and collected at a senior luncheon. Similar to the citywide survey, an online version was posted on the City website and Housing Element Update webpage; published in the City eNews; advertised on social media; and promoted in the “Murray Memo”, the senior center’s monthly newsletter.

The senior housing survey consisted of seven questions. A total of 35 seniors completed the Housing Needs Survey, with 7 responding electronically and 28 submitting written responses. Highlights of the survey responses include:

- 97% of respondents visit the Senior Center and/or receive the Senior Center newsletter
- 54% did not think adequate information was provided about housing programs for seniors such as senior housing, rental assistance, and help with housing maintenance
- 58% of respondents stated they would like to learn more about home and property maintenance
- Regarding housing issues in Mission Viejo, on scale of 1-5 (5 being highest)
 - 50% of respondents cited having senior housing near medical facilities and shopping centers was the most important issue.
 - Additionally, 48% of respondents stated having senior housing near transit was another priority.

Stakeholder Meetings and Consultations

The City has attempted to engage a broad cross-representation of the community. In addition to the public meetings and workshops, the City coordinated meetings with community stakeholders, including property owners, service providers, community partners, for-profit and non-profit developers, and housing advocacy groups. Meetings and consultations focused on the key issues related to the Housing Element Update, including the rezoning of properties, future residential development, and provision of services. Individuals and organizations were invited to participate and comment throughout the development of the draft Housing Element. Many of these organizations also outreached to their own constituents informing them of the opportunity.

In addition to residents, property owners, and developers, the City met and/or had discussions with the following community advocates:

- MV Partnership
- The Kennedy Commission
- Glenwood Foundation
- Families Forward
- Providence Mission Hospital
- Saddleback College
- Simon Malls
- Jamboree Housing

The City received letters in support of the Housing Element Update from the following Families Forward, Providence Mission Hospital, and Ken Kisling, a Mission Viejo resident.

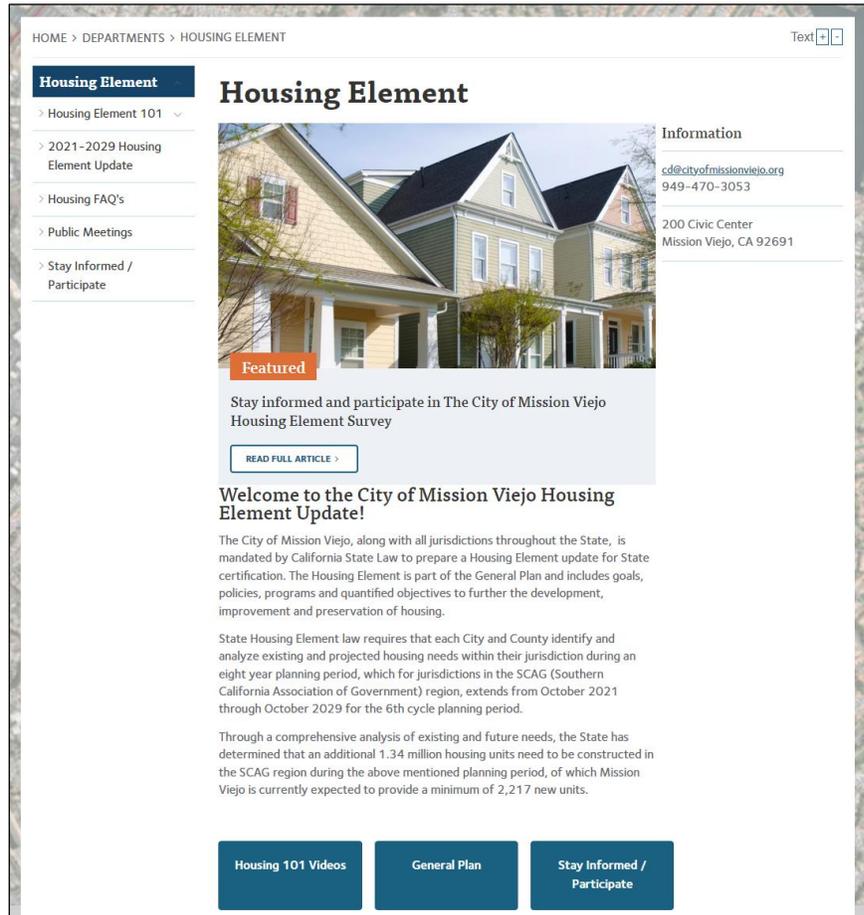


Housing Element Website

In March 2021, the City created a webpage on the City website (www.cityofmissionviejo.org) that could be accessed through a link on the Community Development Department webpage that served as an information and resource center to the public. In June 2022, the City established a new webpage for the Housing Element update that could be accessed from the home page of the City website and established a new section for the Housing Element. This new section created a standalone “department” for the Housing Element, making the webpage easier to locate on the website. This webpage serves as a 24/7 on-demand resource for the Housing Element Update. The landing page provides the history of the document as well as a banner that provides links pages that provide the following:

- Housing Element 101, to educate the public about the purpose and process
- 2021-2029 Housing Element Update, to provide an overview of what has happened to date
- Housing FAQ’s, a quick and easy resource to find information on the most common questions and pertinent information
- Public Meetings, provides a history of what meetings and workshop that have occurred and updates on future meetings
- Stay Informed/Participate, a page where the public can sign up for updates and Housing Needs Survey information

Additionally, the website feature links to workshop announcements, Zoom links, video recordings, presentations, and informational handouts. City staff regularly maintains and monitors the webpage to provide up-to-date information and reference materials.





Ongoing Engagement

Description	Frequency	Audience
Notifications of affordable housing-related news and updates	As applicable news and information is generated or received	General public via subscription to government updates
City of Mission Viejo Webpage dedicated to the Housing Element and its progress	On-going, available 24/	General public
Social Media	As applicable news and information is generated or received	General public
Annual Progress Report to track implementation of programs	Yearly	Decision-makers and general public
Participation in SCAG Regional Council Meeting	Monthly	City staff
Participation in OCCOG Technical Advisory Committee and Board of Director meetings	Monthly	OCCOG Members

Comments Received and Housing Element Responses

Public Review of Housing Element:

The City received several comment letters on the Draft Element, and has considered and as deemed appropriate, addressed these comments in the Element. The following summarizes some key comments and how they are addressed:

- The Element needs to provide additional evidence/analysis demonstrating the potential for development of non-vacant sites within the planning period. **(Response:** Additional supporting evidence has been added to the sites analysis to justify the conclusions, including trend data showing redevelopment of non-vacant land to residential; the strong market for residential as evidenced by recent development on prior Housing Element and other non-Housing Element sites throughout the City; age of the structures; and indications of property owner and developer interest. In addition, the City entered into a Consulting Services Agreement with the Related Companies of California to perform a housing feasibility analysis for the majority of housing sites in the City’s sites inventory .The up-zoning and housing overlay zones along with regulatory incentives are anticipated to render the 6th cycle Housing Element sites very attractive for development.)
- Several of the Housing Element sites do not appear realistic for development within the 8-year planning period/ Site Inventory is not adequate. Site 4, Idyllwillow Apartments: Main impediment to the site is the reluctance of the state to advance the improvement of the land. It does not seem as if the property owner (Saddleback College) has shown much interest. **(Response:** The Idyllwillow apartments site occupies a single parcel of 23.7 acres, and is currently occupied by 400 apartments, occupied by approximately 10% (lower income) students attending Saddleback College, 80% families, including often lower income military families who will receive a housing allowance, and 10% younger couples. The land is owned by Saddleback College, which leases it to an apartment management company. College leadership has had preliminary conversations with the City and is open to increasing density of the site. The increased density of the site is feasible, per the study developed for the City by the Related company.)



- Site 8, Macy's/ The Shops site: The draft Housing Element does not specifically indicate that both property owners are interested in redeveloping the mall. **(Response:** The City has had several conversations with representatives for Macys' (the law firm and developer representing them) and Simon (Simon upper management) they are extremely interested in being included in the zoning overlay effort as a viable option for their future plans with the property. Partial conversion of similarly sized declining mall properties have occurred in neighboring cities, such as the Laguna Hills Mall conversion, showing that it is possible in this region to develop housing and commercial development, including lower-income housing.
- Site 11, Vista Del Lago Apartments: Concern questioning the feasibility of this site. There is nothing to indicate the property owner is interested in including affordable housing. **(Response:** Initial contact regarding this site's inclusion in the Sites Inventory was from the property owner to the City, and City has since had very positive discussions with the property owner regarding increasing the density as envisioned in the Housing Element. Property owner is extremely motivated to redevelop and increase density on at least a portion of this site, as envisaged in this Housing Element.
- The Element needs to provide additional evidence as to the suitability of vacant sites. Evaluation of Site C has demonstrated significant pre-development grading and stabilization requirements before development can be contemplated. The site is also challenged by landslide and flood risk, as well environmental and wildlife conservation issues. The site will not be able to accommodate 447 Very low- and low-income units, and need to be reduced for low and very low income. There is too much over-reliance on this site. The City should provide an in-depth analysis of realistic feasibility and not rely and meeting nearly half its lower income RHNA on the site. **(Response:** The City has engaged consultants to perform preliminary geotechnical, environmental and grading analyses of Site 3. There are not expected to be any significant geotechnical concerns, including stability issues. Any proposed development would occur at a pad elevation well above the Trabuco Creek floodplain so there would be no flood risk. The limits of grading would be outside the sensitive riparian area; and, although some quality habitat would be disturbed, it could be readily mitigated through standard offsite habitat establishment and/or restoration. Soil generated from the nearby Interstate 5 Widening project as well as other regional projects can be used to create the elevated building pads. The City currently has an agreement in place (for a different site) through which revenue generated from the receipt of dirt exported from various construction projects is being used to offset the cost of managing and placing the dirt in pad form. A similar agreement could be employed for Site 3. A Preliminary Site and Feasibility Analysis was prepared for this site by the Related Companies. The analysis concludes that the site is ideally located from a TCAC site amenity score, eligible to receive 22 points as a Large Family development. Using a Mass Grading exhibit prepared by City consultant civTec, with a 5.8-acre buildable pad, a site plan was prepared yielding 215 affordable units. The City has modified its housing unit yield and affordability assumptions commensurate with the Related study.)
- Affordable housing sites should be evaluated for their viability to compete for traditional funding. These funding sources prioritize development sites that promote access to community resources, public transportation, medical services, access to parks etc. **(Response:** The City entered into a Consulting Services Agreement with the Related Companies of California to perform a housing feasibility analysis for the majority of housing sites in the City's sites inventory. As part of the



analysis, Related assesses the project site for a California Tax Credit Allocation Committee (TCAC) amenity score. This score is an important consideration in the confirmation of the site selection.)

- It is recommended that the former Stein Mart property be added to the City's Sites Inventory. **(Response:** This property is part of the Village Center shopping center and is not included in the sites inventory. The vast majority of this center is leased out, with properties seldom becoming available for sale. Furthermore, the Center is owned by multiple (13 plus) property owners and is governed by Covenants, Conditions, and Restrictions (CC&Rs) which, as confirmed by many of the property owners, would appear to prohibit housing. In December 2021, the City purchased the former Stein Mart property as part of a long-envisioned economic development effort. Money is budgeted to renovate/ rebuild the property, build out restaurants and retail, develop a paseo, and create a new pedestrian alley and pedestrian bridge at the rear of the shopping center.)
- The City should adopt a 15% Inclusionary Housing Ordinance, requiring that 15% of development of 6 more units be for very low income, or an in-lieu fee of \$10,000 to \$15,000 per unit. Concern that increasing density without inclusionary risks land being given density benefit without commensurate community benefit. The City needs to identify affordable housing policies and programs, including a recommendation for an inclusionary housing ordinance, and a 15% affordable housing overlay. **(Response:** The City is committed to exploring the feasibility of an inclusionary housing program. Housing Policies and Programs are identified in Section V of this Housing Element.)
- It is recommended the City allow By-Right development for 100% affordable developments. **(Response:** The City rezoned the majority of sites in the sites inventory prior to October 15, 2022, and will preserve the City's discretionary review process where possible. The City does not see this process in any way as being a constraint or impediment to the development of affordable housing.)
- Would like the City to create a plan to track ADU production and rent, and provide more incentives to encourage the development of ADU's, such as expedited review, pre-approved ADU design plans, and permit fee reduction, and also consider an ADU forgivable loan program. There is also comment that the City's estimate of 5 ADU's per year is drastically higher than the 6 total ADU's issued between 2014- 2020, and that the City should reduce the number of ADU's or include additional analysis to support the City's assumption. Additionally, the City needs to propose a better plan to ensure the affordability of ADU's. **(Response:** The City analyzed its ADU permit data and better developed its ADU tracking system. Review of the data shows that there has been a significant up-tick in the number of ADU applications submitted since the new ADU state law became effective January 1, 2020. City data confirms that between 2019 and July, 2022, the City has received 34 applications to create ADUs. In 2019, 3 applications were received, and 2 were approved; in 2021, 14 applications were received, 7 have been approved, and another 4 are being processed; up to July, 2022, 9 applications have been received, 1 has been approved, and 8 are being processed. While there is not a great deal of recent data for ADUs to draw assumptions about, it is apparent that applications are on the rise in the last two years, and a full year count for 2022 will likely be similar to that of 2021. Therefore, the assumption built into ADU production for the life of the 2021-2029 RHNA is for 8 ADUs per year, or 64 in total. The projected affordability of these ADUs is based on SCAGs Regional Accessory Dwelling Unit Affordability Analysis (December 2020). Program actions set forth in the Housing Element to provide pre-approved plans, ADU promotion and outreach, and a potential ADU development assistance program for rent-restricted



units will further bolster ADU production, making the City's projections for 64 ADUs/year realistic and achievable. Additionally, the Element includes a specific commitment to conduct a mid-cycle review of ADU production and affordability).

- The City had only held one Community workshop, and did not use other engagement tools such as a Community survey. (**Response:** As detailed in the Meetings, Public Workshops and Hearings section of the element, the City has held additional public workshops and hearings and also conducted a Community survey, including a survey geared specifically to seniors, as summarized in the Housing Element Survey section).
- The Housing Element was available for purchase and that this impacts cost and transportation issues, and that the City should have physical copies available for review as well as online availability. (**Response:** The Housing Element was available for public review on the City's website, with a hard copy available for review at the Mission Viejo Library and at City Hall. Additionally, computers with on-line access are available at the Library. The City endeavors to reduce the reproduction of paper copies under all circumstances, but will certainly consider and accommodate hardship cases, involving computer access or transportation issues. In the concern noted above, staff directly involved with the Housing Element were not aware of any request for a free hard copy of the Housing Element and suspects the requester talked to a staff member who quoted City standard costs for copying without properly understanding the situation or the nature of the request.)
- The Affirmatively Furthering Fair Housing Analysis (AFFH) doesn't provide adequate analysis or recommendations on how the City will address contributing factors to fair housing issues in the city. (**Response:** The Affirmatively Fair Housing Section has been rewritten and expanded to address in detail the elements required by HCD in this section, including identifying Racially or Ethnically Concentrated Areas of Affluence, Access to Opportunity, and Displacement Risk.)
- The City's shortfall in addressing its lower and moderate income RHNA during the 5th cycle Housing Element indicates that the City's affordable housing policies have not been effective in incentivizing and producing affordable housing for lower income households. (**Response:** As shown in Appendix B of the Housing Element, during the 5th cycle Housing Element the City met 43% of its RHNA for very low- income households, 117% of its RHNA for low income households, and 51% of its RHNA for moderate income households. While falling short of meeting all its affordable housing needs, the City's progress received a B+ grade in the Southern California News Groups' third annual permit report card published in November 2021, exceeding the County's overall grade of C. The 6th cycle Housing Element establishes meaningful incentives and opportunities to help the City meet its affordable housing goals).
- The City also received letters of support for the Housing Element. Support letters were received from:
 - Madelyn Hirneise, CEO, Families Forward
 - Seth Teigen, FACHE, Providence Mission Hospital
 - Ken Kisling, Mission Viejo Resident



Appendix B. Review of Past Accomplishments

The City of Mission Viejo 2013-2021 Housing Element established specific programs and objectives for expanding housing opportunities in the community. In updating this Element, the City reviewed these programs for successes or failures, and continued appropriateness. The Housing Plan in the updated 2021-2029 Housing Element reflects these lessons learned to improve the effectiveness of City actions.

Evaluation of Accomplishments under Adopted Housing Element

Section 65588(a) of the California Government Code requires that jurisdictions evaluate the effectiveness of the existing Housing Element, the appropriateness of goals, objectives, and policies, and the progress in implementing programs for the previous planning period. These results of the evaluation should be quantified where possible (e.g., the number of units rehabilitated), but may be qualitative where necessary. The results should then be compared with what was projected or planned in the earlier element. Where significant shortfalls exist between what was planned and what was achieved, the reasons for such differences must be discussed.

The City of Mission Viejo 2014-2021 Housing Element sets forth a series of housing programs with related objectives for the following areas:

- Conserving the existing supply of affordable housing;
- Providing adequate sites to achieve a variety and diversity of housing;
- Assisting in the provision of housing;
- Removing governmental constraints as necessary;
- Promoting equal housing opportunity; and
- Providing social services that support low- and moderate-income residents.

Below is a summary of the City's major accomplishments. Table A-1 then provides a comprehensive review and evaluation of the City's progress to date in implementing the housing programs and their continued appropriateness for the 2021-2029 Housing Element. Table A-1 following offers a review of the quantified objectives. The results of this analysis provide the basis for developing the comprehensive housing program strategy for the 2021-2029 Housing Element.

Summary of Housing Element Accomplishments

The City of Mission Viejo has made significant progress in implementing its 2014-2021 Housing Element.

Major accomplishments include the following:

- Provided housing rehabilitation assistance to 80 lower income homeowners, assisting lower income seniors, female-headed households and persons with disabilities to remain in their homes.
- Provided Section 8 rental assistance vouchers to 280 lower-income families and elderly, and encouraged listing of rental units with County Housing Authority.
- In partnership with Families Forward, purchased four market-rate condominiums, conducted rehabilitation improvements, and provided at affordable rents to lower income households
- Implemented its accessory dwelling unit (ADU) regulations consistent with changes in state law, and issued building permits for 32 ADUs between 2014-2020 and averaged one ADU application per week in 2021.



- Approved four affordable projects, addressing 94% of the City’s lower income RHNA needs: Lennar (11 very low, 1 low income); Los Alisos Apartments (3 very low, 5 low); Adiago-on-the-Green Apartments (22 lower income units); and Neo and Haven (13 very low, 12 low income units).
- Provided financial assistance to fund public service programs that support lower-income households and help them obtain adequate housing or assist them with special needs, including seniors, homeless and persons with Alzheimer’s, dementia and other developmental disabilities.
- During the 5th cycle planning period, the City updated its requirements for accessory dwelling unit (ADU) consistent with state law to facilitate the addition of ADUs which can benefit seniors, persons with disabilities and female-headed households.

Table A-1 below summarizes the quantified objectives contained in the City’s 2014-2021 Housing Element, and compares the City’s progress in fulfilling these objectives.

Table B-2: Summary of Quantified Objectives: 2014-2021 Housing Element (Progress through June 30, 2021)

Table B-2 – Progress in Achieving Quantified Objectives: City of Mission Viejo, 2013-2021

Program Category	Quantified Objectives	Progress
New Construction*		
Extremely-low	21	
Very-low	21	13
Low	29	31
Moderate	33	17
Above-moderate	73	848
Total	177	909
Rehabilitation		
Extremely-Low	45	
Very-Low	45	80
Low	38	
Moderate		
Above-Moderate		
Total	128	80
Preservation/Conservation		
Extremely-Low	140**	Approx. 280
Very-Low	140**	
Total	280**	Approx. 280

*The RHNA projection period for new construction was 2014 - 2021.

**Section 8 vouchers

Cumulative Impacts in Addressing Special Needs

The City addresses the housing needs of special populations primarily through its housing rehabilitation or improvement assistance, and rental housing assistance. These include:

- Rehabilitation assistance 80 lower income households, primarily benefitting the elderly, female-headed households, and persons with disabilities.
- Energy Efficiency and Water Conservation fee waivers that are available to seniors.
- Housing Choice Vouchers – benefitting 280 households, primarily senior households and those with special needs.



Table A-1 – Housing Element Program Evaluation: City of Mission Viejo, 2013-2021

Program	Responsible Agency	Funding Source	Program Objectives	Progress
1. Housing Rehabilitation Program	Community Development Department	CDBG	To maintain quality of housing in established neighborhoods, particularly for very-low- and low-income households by providing 128 deferred loans or grants for housing rehabilitation.	Approximately 80 rehab applications were approved during 2014-2020. Continued Appropriateness: This program continues to be appropriate for the 6 th cycle update.
2. Home Weatherization Improvements	Community Development Department	So. Cal Edison and So. Cal Gas	To provide information to residents regarding available weatherization improvements to reduce housing utility costs.	Home weatherization flyers have been made available at City Hall. Continued Appropriateness: This is not a city program and is not included in the 2021-2029 Housing Element.
3. Code Enforcement	Community Development Department	Department Budget	To enforce City codes pertaining to property maintenance, building and zoning.	The City's Code Enforcement staff has implemented this program continuously.
4. Section 8 Assistance Payment / Housing Vouchers	O.C. Housing Authority; City Community Development Department	HUD-Section 8 Certificate & Housing Vouchers	To provide at least 280 rental subsidies to lower-income families and elderly, and encourage listing of rental units with County Housing Authority.	Approximately 280 vouchers were provided. Continued Appropriateness: This program continues to be appropriate for the 6 th cycle update.
5. Land Use Element / Development Code	Community Development Department	Department Budget	To maintain a range of residential development opportunities through appropriate land use and zoning designations.	On 8/25/2020 GPA-2020-33 and Zone Change ZC2020-23 were approved by the City Council to rezone a 6.36-acre site from R (Recreation) to RPD30 (Residential Planned Development) to accommodate a 91 attached dwelling unit project. Continued Appropriateness: This program is updated to include a number of code amendments to address constraints to development and to comply with new State laws.
6. Inventory of Surplus Public Land	Community Development Department	Department Budget	To maintain an inventory of all land owned by public entities declared surplus.	Site 3 is owned by the City.



Program	Responsible Agency	Funding Source	Program Objectives	Progress
				Continued Appropriateness: A program to comply with the Surplus Land Act is included in the 6 th cycle Housing Element.
7. Density Bonus Units	Community Development Department	Department Budget	Continue to implement the Development Code density bonus provisions in compliance with state law, in order to maximize the capacity of housing sites and facilitate construction of affordable units.	On October 14, 2019, the Planning and Transportation Commission approved a 60-unit townhome project on Site A, with density bonus concession for building height, with the project providing 15% of the total units as affordable to low- and very-low-income households. Continued Appropriateness: A program to update the Density Bonus Ordinance is included in the 6 th cycle Housing Element.
8. Second Units	Community Development Department	Department budget	To expand the affordable housing stock by allowing a second unit on the same parcel as existing single or multifamily units.	Between 2018 and 2022, XX ADUs were permitted. Continued Appropriateness: A program to facilitate the development of ADUs is included in the 6 th cycle Housing Element.
9. Affordable Housing Outreach	Community Development Department	CDBG, Revenue Bonds	To meet the City's regional housing need allocation for all income groups through the pursuit of multiple tactics.	The City has continued to market its affordable housing sites, including the 8.5-acre City-owned Affordable Housing Site C, with an inclusionary housing requirement for a minimum 20% of the total units as affordable to lower-income households. Continued Appropriateness: The 6 th cycle Housing Element includes expanded outreach for implement the housing programs and to expand fair housing opportunities.



Program	Responsible Agency	Funding Source	Program Objectives	Progress
10. Emergency Shelters and Transitional Housing	Community Development Department	Department budget	Continue to implement City policies and regulations regarding emergency shelters and transitional/supportive housing in conformance with SB 2.	The City continued to implement regulations regarding emergency shelters and transitional/supportive housing in conformance with SB 2. Continued Appropriateness: A program to update the provisions for emergency shelters is included in the 6 th cycle Housing Element.
11. Mortgage Revenue Bond Financing	Orange County; Mission Viejo Community Development Department	Revenue Bonds	To increase supply of rental and ownership units affordable to low- and moderate-income households.	Revenue bonds have been used to finance three affordable housing projects in Mission Viejo. Continued Appropriateness: This is a potential financing mechanism. However, it is not included in the Housing Element as a separate housing program.
12. Non-Profit Housing Development	Community Development Department	Department budget	To provide support and assistance to non-profit housing organizations to facilitate affordable housing production commensurate with the City's quantified objectives.	The City continued to solicit development of the 8.5-acre City-owned Affordable Housing Site C, with an inclusionary housing requirement for a minimum 20% of the total units as affordable to lower-income households. Continued Appropriateness: The 6 th cycle Housing Element includes a program to facilitate the development of affordable housing, including partnering with nonprofit developers.
13. Reverse Mortgage Program	Community Development Department	Department budget	Coordinate with social service groups and lending institutions to provide information to seniors about reverse mortgage programs.	The City's Norman P. Murray Community and Senior Center continued to coordinate special workshops on reverse mortgages to inform and educate seniors, and offered a twice yearly financial series on various financial topics including reverse mortgages.



Program	Responsible Agency	Funding Source	Program Objectives	Progress
				Continued Appropriateness: This is not a city program and is removed from the 6 th cycle Housing Element.
14. Efficient Processing	Community Development Department	Department budget	To provide concurrent processing for residential projects to shorten review time and minimize related holding costs.	<p>The City continued to process projects concurrently and efficiently. It is the City's practice to process planning applications concurrently. Building plan check for new large-scale projects is 10 working days.</p> <p>Continued Appropriateness: The 6th cycle Housing Element includes the development of objective standards and SB 35/SB 9 processing. These actions will facilitate efficient processing.</p>
15. Development Fees	Community Development Department	General Fund	To provide reduced development fees for affordable and senior citizen housing.	<p>With the dissolution of the CDA, funding for fee subsidies has been very limited. The City Council approved the Water Conservation fee waiver program in 2014. The energy efficiency fee waiver program is also active, available to new homeowners and seniors.</p> <p>Continued Appropriateness: The City will consider fee deferrals for mixed-used developments that incorporate an affordable component. This program is continued in the 6th cycle Housing Element.</p>
16. Equal Housing Opportunity Services	Fair Housing Foundation	HUD-CDBG	To ensure equal housing opportunity by providing tenant/landlord counseling, housing discrimination response, and related housing services through the Fair Housing Foundation.	In FY 2014-2015, 85 households from Mission Viejo were assisted with fair housing issues and concerns. In FY 2015-2016, 102 households were assisted. In FY 2016-2017, 71 households were assisted. In FY 2017-18, 57 households were assisted. In FY 2018-19, 63 households were assisted.



Program	Responsible Agency	Funding Source	Program Objectives	Progress
				<p>In FY 2019-20, 48 households were assisted.</p> <p>Continued Appropriateness: This program is expanded to formulate the City's meaningful actions to affirmatively further fair housing.</p>
17. Community Development Block Grant Public Service Programs	Community Development Department	HUD-CDBG	To fund public service programs that support lower-income households to obtain adequate housing or assist them with special needs.	<p>The CDBG public service program funded organizations providing services for low income families, seniors, homeless and homelessness prevention, and persons with Alzheimer's, dementia and other developmental disabilities.</p> <p>Continued Appropriateness: This is a funding source and is not included in the 6th cycle Housing Element as a separate housing program.</p>
18. Pre-application Review Program	Community Development Department	Department budget	Encourage developers to include amenities such as childcare, computer workstations in affordable developments.	<p>The Adiago-on-the-Green apartments, completed in 2015, includes two pools, gym, creek-adjacent greenbelt and pathway, meeting rooms, and entertainment rooms. The Shea Homes Haven and Neo projects currently under construction share a pool, tot-lot, and multiple shaded bbq and seating areas. The 91-unit Trumark Homes project approved in 2020 includes a pool, tot-lot, and multiple shaded bbq and seating areas.</p> <p>Continued Appropriateness: This is a routine process the City offers to facilitate residential and mixed-used development, especially affordable housing. This is included in the Affordable Housing Development program.</p>

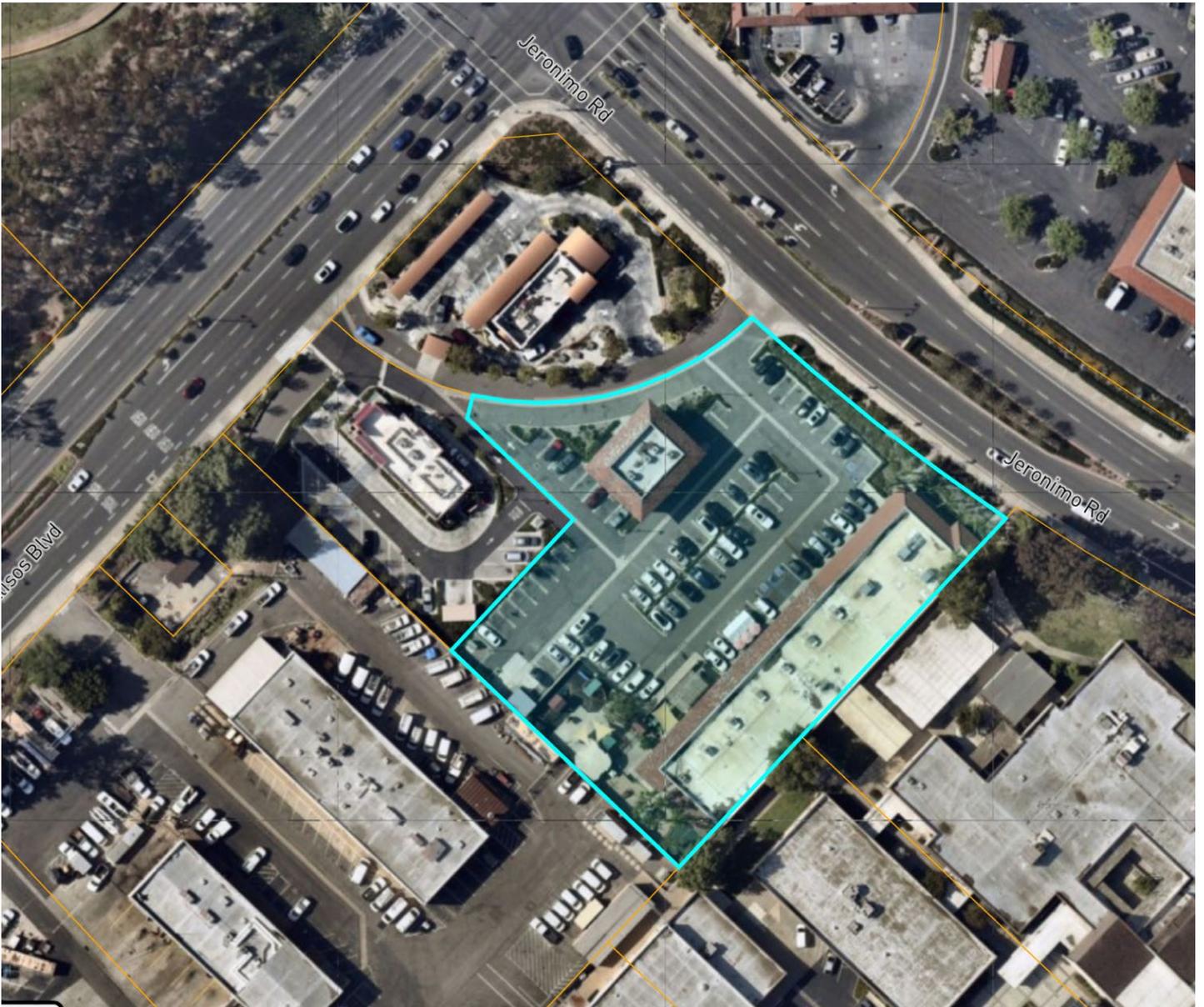


Program	Responsible Agency	Funding Source	Program Objectives	Progress
19. Energy Conservation Program	Community Development Department	Department budget	<p>Continue the Green Building Program, which encourages energy conservation through incentives such as expedited processing and fee waivers for qualifying projects.</p> <p>Continue the Solar Energy Education Program, which promotes energy conservation throughout the community.</p>	<p>The City offers expedited processing and, since 2006, has offered "Energy Efficiency" fee waivers for qualifying green building projects and solar installations, currently available to seniors and new homeowners. In 2014, the Council approved a "Water Conservation" fee waiver program to encourage the installation of water conservation improvements. In 2020 the City purchased an electric vehicle and installed two vehicle charging stations at City Hall.</p> <p>Continued Appropriateness: These programs continue to be available to residents and they are incorporated into the Housing Improvement Assistance program in the 6th cycle Housing Element.</p>



Appendix C. Sites Inventory

Site 1: Silverado Plaza. Aerial Parcel View



Site 1: Silverado Plaza. Data Summary

Site ID	1: Silverado Plaza, 25542 Jeronimo Road			
Assessor's Parcel Number(s)	809-311-16			
Lot Consolidation	N.A. Single Parcel			
Original Zoning/Zoning Approved for RHNA	Commercial Highway (CH) / RPD 50			
Size	1.5 Acres (entire site is developable, per Related Company feasibility study)			
Maximum Density/ Realistic Density	50 du/acre / 42 du/acre (assumes 85% of RPD 50)			
Maximum Potential Unit Capacity/Realistic Capacity	75 / 63 (assumes 85% of RPD 50)			
Property Owner/Developer Interest	The City has received developer redevelopment interest re this site.			
TCAC Site Amenity Score	18 (High score – good proximity to transit, public parks, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 15, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	Built 1977, with little to no site improvement since then; Improvement: Land AV Ratio of 0.66 (Under 1.0 indicates underutilization); Approximately 2000 sf vacant (about 12.5% of total built square footage). Close to major employers, including Amazon, Target, Saddleback Community College. Infrastructure in place.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	20	11	11	21

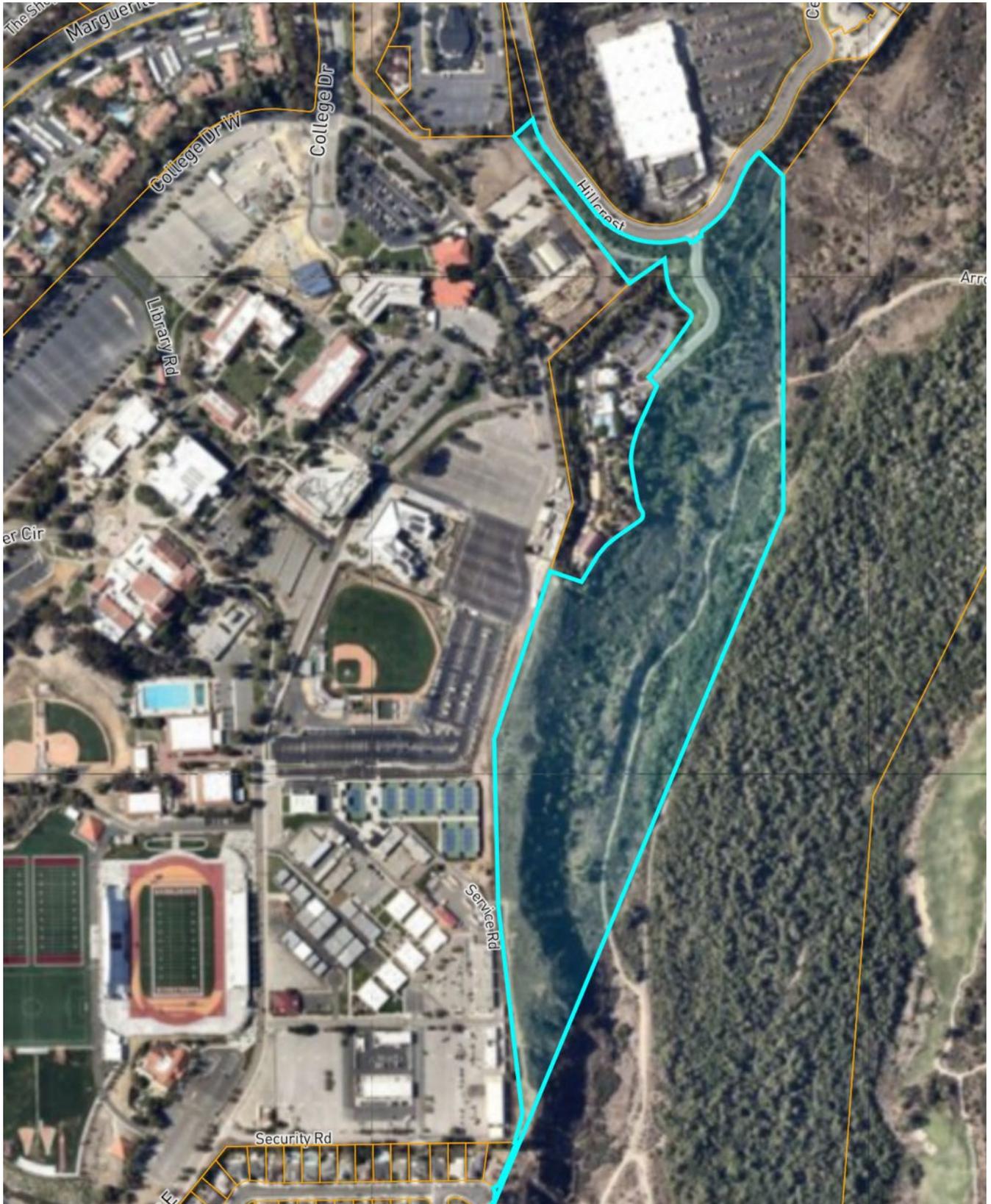
Site 2: Mission Foothill Marketplace. Aerial Parcel View



Site 2: Mission Foothill Marketplace. Data Summary

Site ID	2: Mission Foothill Marketplace, 28719 - 28815 Los Alisos Rd			
Assessor's Parcel Number(s)	839-161-13, 839-161-14, 839-161-17, 839-161-28			
Lot Consolidation	Property owners supported the October, 2021 rezoning of their parcels for residential use, which may potentially involve lot consolidation.			
Original Zoning/Zoning Approved for RHNA	Commercial & Services (CH) / RPD 30 (Three parcels with Overlay, except vacant parcel 839-161-17)			
Size	4.4 Acres. Flat site, all available for development.			
Maximum Density/ Realistic Density	30 du/acre / 20.2 du/acre			
Maximum Potential Unit Capacity/Realistic Capacity	132 / 89			
Property Owner/Developer Interest	Yes. Property owners have contacted City and are interested in residential redevelopment.			
TCAC Site Amenity Score	Related Company did not calculate a TCAC Amenity Score.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 15, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	Site is adjacent to a previous Housing Element site, a former shopping center, now developed and including affordable housing, proving that conversion of shopping mall sites to housing is achievable in Mission Viejo. Site is underutilized (Improvement:Land Ratio of under 1.0); Close to amenities - within 2 miles of shopping center with grocery store and pharmacy, and neighborhood elementary and high school; adjacent to Pinecrest Park for recreation; Kaiser Permanente facility 3 miles away. Infrastructure in place.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	28	16	15	30

Site 3: Undeveloped Land. Aerial Parcel View



Site 3: Undeveloped Land. Data Summary

Site ID	3: Undeveloped land, Hillcrest Drive/Center Drive			
Assessor's Parcel Number(s)	740-012-40, 740-012-36, 740-113-01, 740-112-02, 740-112-03			
Lot Consolidation	Land is owned by Mission Viejo Housing Authority			
Original Zoning/Zoning Approved for RHNA	Open Space/Recreation (R/OS) / RPD 30			
Size	22.821 Acres; Related Company feasibility study assumes only 5.8 acres used for development			
Maximum Density/ Realistic Density	30 du/acre (gross acreage) / 37 units/developable acre (5.8 acres)			
Maximum Potential Unit Capacity/Realistic Capacity	215 (Related Company feasibility calculation)			
Property Owner/Developer Interest	Yes. Several developers, including nonprofit companies, have expressed interest in this site.			
TCAC Site Amenity Score	22 (High score – good proximity to transit, public parks, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15. In High Resource opportunity area.			
Site Identified in Previous Housing Element	No. Site C in the 5 th Cycle was 8.5 acres, and overlaps with this Site 3, comprising 22.8 acres. The Related Company identifies 5.8 acre buildable acres in Site 3, and only 1.1 acres of that area is in common with Site C.			
Site Description and Factors Supporting Development	City has received residential development proposals for the site, including one involving hotel and residential units. The site has been promoted via developer outreach and Requests For Proposals. The City has recently worked with market-rate and non-profit housing developers, and have engaged a consulting geotechnical engineer to determine site feasibility.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	65	39	39	72

Site 4: Idyllwillow Apartments. Aerial Parcel View



Site 4: Idyllwillow Apartments. Data Summary

Site ID	4: Idyllwillow Apartments, 28008 Marguerite Parkway			
Assessor's Parcel Number(s)	740-012-29			
Lot Consolidation	N.A. Single Parcel			
Original Zoning/Zoning Approved for RHNA	RPD 30 / RPD 30 (partial redevelopment of site to increase current development density)			
Size	23.7 acres (entire site is developable, per Related Company feasibility study)			
Maximum Density/ Realistic Density	Current site is zoned RPD 30, but was developed at 17 units/acre. Related Company feasibility study developed a plan that would increase residential development on the western portion of the site to its zoned density of 30 units/acre.			
NET Maximum Potential Unit Capacity/NET Realistic Capacity	311 / 204			
Property Owner/Developer Interest	Property owner has had communications with City re reopening the lease at this site which could allow redevelopment to help the housing needs of both students and housing for residents at large, helping Mission Viejo meet RHNA goals.			
TCAC Site Amenity Score	21 (High score – good proximity to transit, public parks, grocery stores, public schools, library, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	Land is owned by Saddleback College. As mentioned above, preliminary communications have been held with City staff re reopening the current lease. The current development is <u>not</u> student housing, but some units are occupied by students. Increasing density would indirectly help the College provide more housing for its student body.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	62	37	37	68

Site 5: Commerce Center. Aerial Parcel View



Site 5: Commerce Center. Data Summary

Site ID	5: Commerce Center, 27200-27240 La Paz Road			
Assessor's Parcel Number(s)	782-471-01; 782-471-02; 782-471-03; 782-471-04; 782-471-05; 782-471-06			
Lot Consolidation	N.A. Parcels owned by single owner.			
Original Zoning/Zoning Approved for RHNA	Commercial Highway (CH) / RPD 30			
Size	4.55 Acres (entire site is developable, per Related Company feasibility study).			
Maximum Density/ Realistic Density	30 du/acre / 25.4 du/acre (assumes 85% of RPD 30)			
Maximum Potential Unit Capacity/Realistic Capacity	138 / 117 (assumes 85% of RPD 30)			
Property Owner/Developer Interest	Conversations with owner agent revealed that this property was potentially available for sale in the short-term.			
TCAC Site Amenity Score	22 (High score – good proximity to transit, public parks, library, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 15, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	Retail center with automotive, restaurant and personal care businesses, built in 1989 and essentially unimproved since then. Some vacant units. Two out of 5 built parcels on site under-utilized (Improvement:Land AV Ratio of under 1.0 for some of the parcels). Site is located in City's Core Area Vision Plan Area, which will include access to retail, entertainment and recreational opportunities for residents if site is residentially redeveloped. Infrastructure in place.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	36	22	22	37

Site 6: Town Center. Aerial Parcel View



Site 6: Town Center. Aerial Parcel View

Site ID	6: Town Center, 28331 Marguerite Parkway			
Assessor's Parcel Number(s)	740-016-03			
Lot Consolidation	N.A. Single Parcel			
Original Zoning/Zoning Approved for RHNA	Commercial Highway (CH) / RPD 30 (OVERLAY)			
Size	3.29 Acres (entire site is developable, per Related Company feasibility study)			
Maximum Density/ Realistic Density	30 du/acre / 19 du/acre			
Maximum Potential Unit Capacity/Realistic Capacity	99 / 62			
Property Owner/Developer Interest	Yes. Owners have indicated to City that they are interested in residential redevelopment possibilities as part of the Housing Element.			
TCAC Site Amenity Score	18 (High score – good proximity to transit, public parks, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 2015, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	The largest parcel out of the four comprising Town Center is proposed for residential redevelopment. Strip mall built in 1980, that has recently had a number of tenants vacating (Pier 1 Imports, Jos. A. Bank, DSW Shoes). Façade renovation has recently occurred, but owners have indicated to City that they are interested in residential redevelopment possibilities as part of the Housing Element. There is a high likelihood of conversion to residential use, given the history of the site as a retail center.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	19	11	11	21

Site 7: College Center. Aerial Parcel View



Site 7: College Center. Data Summary

Site ID	7: College Center, 28171 Marguerite Parkway			
Assessor's Parcel Number(s)	740-011-15			
Lot Consolidation	N.A. Single Parcel			
Original Zoning/Zoning Approved for RHNA	Commercial Highway (CH) / RPD 30 (OVERLAY)			
Size	7.75 Acres (gross); approximately 5.89 developable, per Related Company feasibility study			
Maximum Density/ Realistic Density	30 du/acre / 19.4 du/acre			
Maximum Potential Unit Capacity/Realistic Capacity	177 / 114			
Property Owner/Developer Interest	Yes. Property owner has had communications with City re potential for mixed use residential redevelopment as part of the Housing Element.			
TCAC Site Amenity Score	17 (High score – good proximity to transit, public parks, library, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 2015, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	Close to Site 6 in Housing Element. Strip mall, built 1981, with few improvements since then. Site has struggled as a commercial center, having lost major tenants (e.g. Jared Galleria Jewelry, Kwik Kopy Printing, Papa John's Pizza). A bank, food outlets and a US Armed Forces Career Center remain. Infrastructure in place.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	34	21	21	38

Site 8: Macy's. Aerial Parcel View



Site 8: Macy's. Data Summary

Site ID	8: Macy's and part of parking lot, 27000 Crown Parkway			
Assessor's Parcel Number(s)	740-121-26, 740-121-30 (part)			
Lot Consolidation	The two parcel owners (Macy's, Simons) are amenable to the project.			
Original Zoning/Zoning Approved for RHNA	Commercial Highway (CH) / RPD 80 (OVERLAY)			
Size	11.327 Acres.			
Maximum Density/ Realistic Density	80 du/acre / 54 du/acre			
Maximum Potential Unit Capacity/Realistic Capacity	906 / 612			
Property Owner/Developer Interest	Yes. The owners (Simon Inc and Macy's) have requested the option of mixed- use development in discussions with the City concerning the Housing Element. Macy's has a second store at this mall site. Both owners have a successful track record of redeveloping mall sites in this fashion, at this zoning density.			
TCAC Site Amenity Score	21 (High score – good proximity to transit, public parks, library, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 2015, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	Proposed site is a mixed use overlay of commercial and residential uses for approximately one quarter of the current mall site. Originally built in 1979, remodeled 1997. Declining foot traffic, affecting malls across the country, as e-commerce rises; site is under-utilized. Infrastructure is in place. Development will most likely occur by demolishing one of the two Macy's stor in the complex, and use of the parking lot, using less than 10 acres of the site.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	188	110	109	205

Site 9: Grace Church Parking Lot. Aerial Parcel View



Site 9: Grace Church Parking Lot. Data Summary

Site ID	9: Grace Church Parking Lot, next to 26052 Trabuco Rd			
Assessor's Parcel Number(s)	809-521-11			
Lot Consolidation	N.A. Single Parcel			
Original Zoning/Zoning Approved for RHNA	Commercial Neighborhood (CN) / RPD 50			
Size	2.38 Acres (2.0 acres is developable, per Related Company feasibility study, due to slope issues)			
Maximum Density/ Realistic Density	50 du/acre / 21.8 du/acre (per Related Company feasibility study.)			
Maximum Potential Unit Capacity/Realistic Capacity	100 / 52 (per Related Company feasibility study.)			
Property Owner/Developer Interest	Yes. Developer with substantial experience working with religious institutions re developing affordable housing solutions has been in contact regarding residential development potential.			
TCAC Site Amenity Score	16 (Moderate/High score – proximity to transit, public parks, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 15, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	Seldom used overflow parking lot for the adjacent church. Almost entirely flat and undeveloped site, but a moderate slope at one end which was discounted from the Related Company feasibility study. Close to employment centers in both Lake Forest and Mission Viejo. Infrastructure is in place.			
Potential Income Distribution of Units	Extremely/ Very Low	Low	Moderate	Above Moderate
	17	9	9	17

Site 10: Burlington Site. Aerial Parcel View



Site 10: Burlington Coat Factory. Data Summary

Site ID	10: Burlington Coat Factory, 28452 Marguerite Parkway			
Assessor's Parcel Number(s)	740-012-28			
Lot Consolidation	N.A. Single Parcel			
Original Zoning/Zoning Approved for RHNA	Commercial Highway (CH) / RPD 50 (OVERLAY)			
Size	6.9 Acres (entire site is developable, per Related Company feasibility study)			
Maximum Density/ Realistic Density	50 du/acre / 32 du/acre			
Maximum Potential Unit Capacity/Realistic Capacity	345 / 220			
Property Owner/Developer Interest	Yes. Property owner's representative has approached the City regarding rezoning to residential usage, and is motivated.			
TCAC Site Amenity Score	21 (High score – good proximity to transit, public parks, library, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 15, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	Building on site built 1979, and little facilities improvement since then. Has operated as Burlington's since 1998. Site is assessed as underdeveloped and underperforming. Lease with Burlington will expire in 2024.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	67	40	39	74

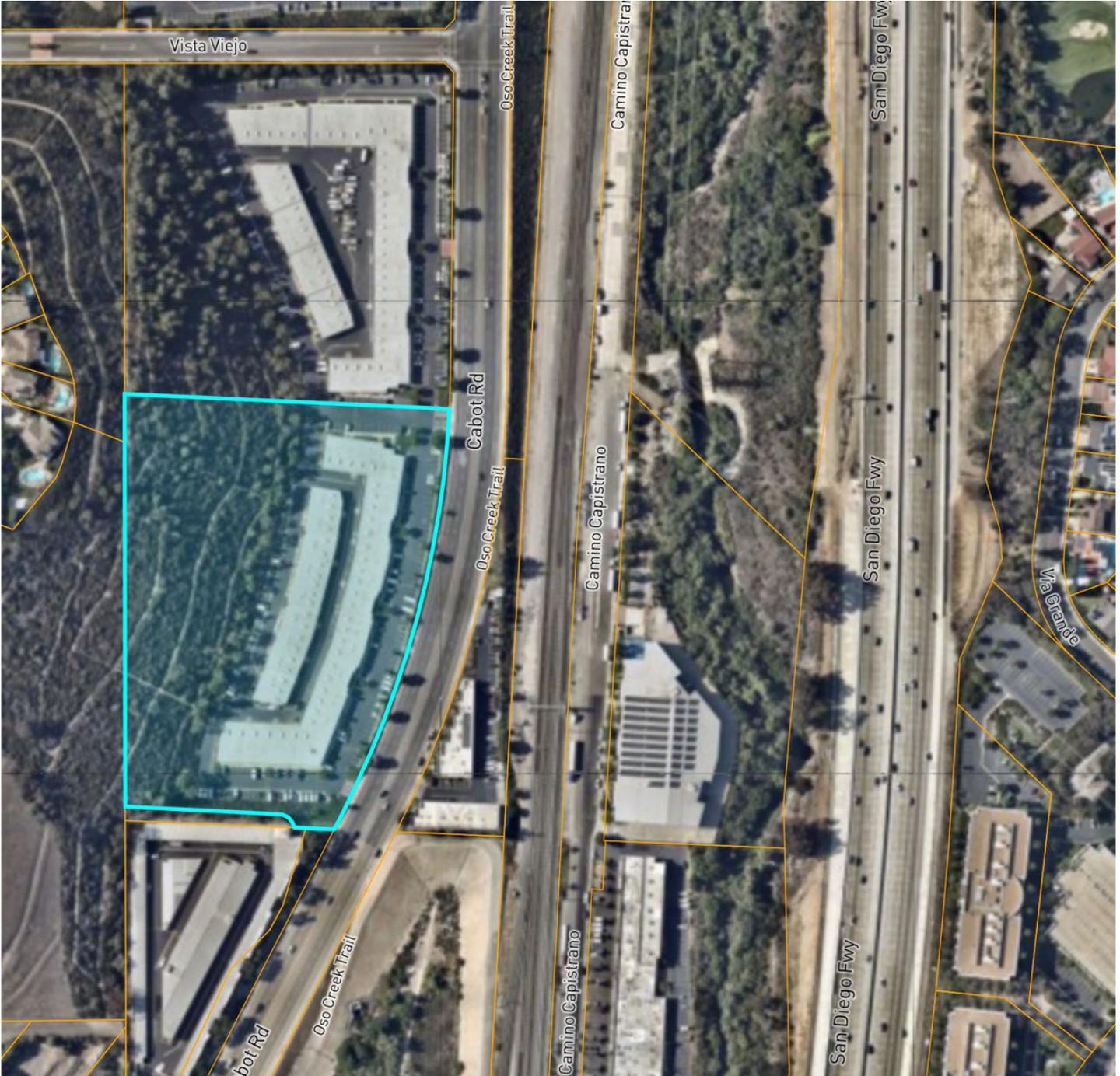
Site 11: Vista del Lago Apartments. Aerial Parcel View



Site 11: Vista del Lago Apartments. Data Summary

Site ID	11: Vista del Lago Apartments, 21622 Marguerite Parkway			
Assessor's Parcel Number(s)	836-211-45			
Lot Consolidation	N.A. Single Parcel			
Original Zoning/Zoning Approved for RHNA	RPD 30 / RPD 50			
Size	33.73 Acres, 29.41 Acres buildable per Related Company feasibility study. (NOTE: only a portion of the site to be redeveloped to full RPD 50. Site currently developed at 21 du/acre.)			
Maximum Density/ Realistic Density (of redeveloped portion)	50 du/acre / 32.5 du/acre			
NET Maximum Potential Unit Capacity/NET Realistic Capacity	650 / 553			
Property Owner/Developer Interest	Yes. Property owner has contacted the City to request higher zoning density, and discussions have occurred regarding redeveloping a portion of the property to the RPD 50 zoning. Owner is extremely motivated and is in the process of planning redevelopment of portion of site. Construction would be phased within the Housing Element planning period to accomplish the increase in density.			
TCAC Site Amenity Score	20 (High score – good proximity to transit, public parks, library, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 15, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	608 unit apartment complex, built 1987. Whole site developed at approximately 21 units/acre, far below zoning potential. Infrastructure in place.			
Potential Income Distribution of <u>Net</u> Units	Extremely/Very Low	Low	Moderate	Above Moderate
	168	100	99	186

Site 12: Saddleback Business Center. Aerial Parcel View



Site 12: Saddleback Business Center. Data Summary

Site ID	12: Saddleback Business Center, 27071 Cabot Road			
Assessor's Parcel Number(s)	636-022-14			
Lot Consolidation	N.A. Single Parcel			
Original Zoning/Zoning Approved for RHNA	Business Park (BP) / RPD 30 (Overlay)			
Size	9.38 Acres. Approximately 70% of site developable due to slope at rear of property.			
Maximum Density/ Realistic Density	30 du/acre / 19.2 du/acre			
Maximum Potential Unit Capacity/Realistic Capacity	197 / 126			
Property Owner/Developer Interest	Staff has received inquiries from interested parties about increasing the density of the site, and staff thinks the site is underdeveloped and underutilized.			
TCAC Site Amenity Score	16 (Moderate/High score – good proximity to transit, public parks, grocery stores, public schools, medical facilities, pharmacies). TCAC limits Site Amenity points to 15.			
Site Identified in Previous Housing Element	No. Rezoned prior to statutory deadline of October 15, 2021. Considered new site not subject to by-right development.			
Site Description and Factors Supporting Development	Part of business park, built in 1980. Some vacant units noted at last visit. Underutilized site (Improvement:Land AV Ratio of 0.56), indicating redevelopment potential. Close to I-5 and near transit hub. Developed portion of parcel is level site, and utilities are in place. The adjacent community of Laguna Niguel has experienced the conversion of business parks to housing, a trend which has increased as COVID increased work-from-home options. Site is closer to the Mission Viejo/Laguna Niguel Metrolink Station, connecting site to employment centers.			
Potential Income Distribution of Units	Extremely/Very Low	Low	Moderate	Above Moderate
	39	23	23	41



March 22, 2022

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: Silverado Plaza – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of Silverado Plaza located at 25542 Jeronimo Road (the “Project Site”). This initial assessment of the Project Site is composed of a California Tax Credit Allocation Committee (TCAC) site amenity score and a density study to determine the number of units that can be accommodated on the site.

1. TCAC Site Amenity Score

- Amenity Score - The Project Site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 18 points as a Large Family development, satisfying the 15-point TCAC maximum Site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study

- Developable Space - The Project Site is roughly 1.5 acres and is flat allowing the entire site to be developed.
- Unit Yield - A massing study site plan was prepared yielding 63 affordable family units at a density of 42 units per acre. (See Attachment #2 - Massing Study Site Plan.) Buildings are assumed to be 3 and 4-story, stacked flat structures, served by an elevator, reaching a maximum building height of roughly 45 feet. The site would need to be re-zoned through an entitlement process to permit the proposed residential development.
- Parking – All parking shown is surface parking with tuck-under, tandem and open-air space parking proposed. 1 parking space is provided for each one 1-bedroom unit, 1.5 spaces for each 2-bedroom unit, and 2 spaces for each 3-bedroom unit.

In conclusion, it is Related's opinion that Site C could yield up to 63 affordable housing units. Should you have any questions about this initial study, please let us know.

Sincerely,

Joseph Baclit
Project Manager

Attachments

1. TCAC Site Amenity Score
2. Massing Study Site Plan

TCAC Site Amenity Score

Mission Viejo - Silverado Plaza

25542 Jeronimo Rd., Mission Viejo, CA 92691

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 86	Intersection of Los Alisos Blvd. & Jeronimo Rd., Mission Viejo, CA 92692	0.07	4	7
Public Park	Heroes Park	25420 Jeronimo Road Lake Forest, CA 92630	0.08	3	3
Grocery Store	Mission Ranch Market	23166 Los Alisos Blvd Mission Viejo, CA 92691	0.47	3	5
Public School	Los Alisos Intermediate School	25171 Moor Ave. Mission Viejo, CA 92691	0.43	3	3
Medical Clinic	Memorial Care Medial Group	23512 Madero Mission Viejo, CA 92691	0.45	3	3
Pharmacy	CVS Pharmacy	25601 Jeronimo Rd. Mission Viejo	0.24	2	2
Total Score:				18	15 ⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.

LOS ALISOS BLVD.

JERONIMO ROAD



SITE AREA: 1.497 ACRES
 NUMBER OF UNITS: 63 FAMILY APARTMENTS
 DENSITY: 42 UNITS/ ACRE
 BUILDING HEIGHT: +/- 45 FEET

UNIT TYPE	SF.	NO.	MIX%
1 BR/1 BA	600 SF	30	47.6%
2 BR/1 BA	875 SF	17	27.0%
3 BR/2 BA	1125 SF	16	25.4%

PARKING PROVIDED:

1 BR	30 SPACES	(1:1)
2 BR	26 SPACES	(1.5:1)
3 BR	32 SPACES	(2:1) (note: 8 spaces are tandem)

TOTAL: 88 SPACES 1.39 SPACES/UNIT

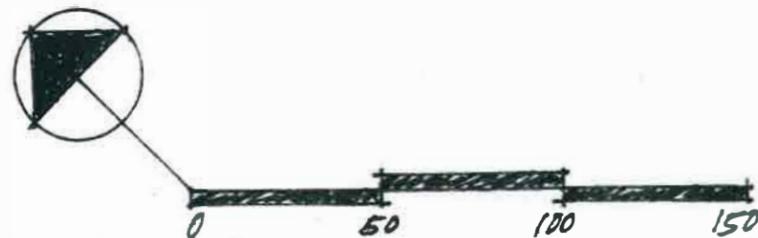
COMMON AREAS: +/- 3300 SF

MISSION VIEJO HOUSING SITES SILVERADO PLAZA

FAMILY APARTMENTS

RELATED CALIFORNIA

3-22-2022





November 16, 2021

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: SITE C – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of Site C located on Center Drive ("Site C").

This initial assessment of Site C is composed of 1) a California Tax Credit Allocation Committee (TCAC) site amenity score; 2) a density study to determine the number of units that can be accommodated on the site; and 3) a preliminary proforma financial analysis. It is important to note that due to the large size of Site C we are recommending splitting its development into four phases to maximize the amount of 9% tax credits the project is eligible to receive. Since this is the first feasibility package that we have provided, our financial analysis has been limited to Phase 1. After the City's review, and our refinement of the package, assessment of the addition three phases can be performed.

1. TCAC Site Amenity Score

- Amenity Score - The site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 22 points as a Large Family development, easily satisfying the 15-point TCAC maximum Site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study

- Developable Space - Although the site is 32.8 acres, much of it is composed of steep-sloped canyon terrain. To prepare the site for construction, extensive grading and retaining walls will be required which will significantly reduce the amount of usable space. This is illustrated by the Mass Grading Exhibit prepared by civTEC, in which, of the 32.8 acres, only 5.8 acres are shown as a buildable pad. Our Civil Engineer has reviewed the proposed pad layout and design. However, to confirm the proposed usable pad allotment, an aerial survey and a geotechnical study would be needed. (See Attachment #2 – Civil Opinion Letter.)
- Unit Yield - Using civTEC's proposed pad size of 5.8 acres, a massing study site plan was prepared yielding 215 affordable units at a density of 37.1 units per developable acre. (See Attachment #3 - Massing Study Site Plan.) Buildings are assumed to be 3-story, 34'-40' tall, walk-up, stacked flat structures. The site plan was prepared to be consistent with the current zoning of the majority of the site, Residential Planned Development (RPD) Zone 30.

- Parking – All parking shown is surface parking with one parking space provided for each Studio and 1-bedroom unit and two spaces provided for each 2-bedroom and 3-bedroom unit.

Project Phasing Matrix

	Phase 1	Phase 2	Phase 3	Phase 4	Total
Units	52	60	60	43	215
Parking Spaces	80	90	90	65	325

3. Financial Feasibility / Pro Forma Analysis

- Funding Sources - In addition to conventional construction and permanent loan financing, the following funding sources have been assumed:
 - 9% Tax Credits – California Tax Credit Allocation Committee
 - Eight (8) Permanent Supportive Housing (PSH) project-based vouchers - Orange County Housing Authority
 - Residual Receipts PSH Loan - Orange County Housing Authority
 - Residual Receipts PSH Loan - Orange County Housing Finance Trust (OCHFT)
 - Residual Receipts Acquisition Loan - City of Mission Viejo
 - Residual Receipts Development Loan - City of Mission Viejo (matches OCHFT loan).
- Phasing – TCAC limits the amount of 9% tax credits allocated to the Orange County Geographic Region on an annual basis. This annual allocation is further divided into two funding rounds each year. If the entire development of Site C were to be constructed in one phase, its tax credit request would far exceed the amount of available tax credits in the geographic pool in a typical funding round. Therefore, to maximize the amount of credits Site C is eligible to receive, a four-phase development is proposed, making the project theoretically eligible for tax credits available over the course of four funding rounds (as opposed to one).
- High Construction Costs – Due to Site C’s steep canyon terrain, significant grading and retain wall costs are assumed. To further refine the estimated grading and retaining wall construction costs, we recommend that a preliminary geotechnical investigation and aerial survey be prepared.

In conclusion, it is Related’s opinion that Site C could yield up to 215 affordable housing units. We look forward to having a more detailed discussion with you about these initial findings and any comments you may have.

Sincerely,

Joseph Baclit
Project Manager

Attachments

1. TCAC Site Amenity Score
2. Civil Opinion Letter
3. Massing Study Site Plan
4. Proforma Financial Analysis

TCAC Site Amenity Score

Mission Viejo - Site C / Center Drive

Hillcrest St. & Marguerite Pkwy, Mission Viejo, CA 92692

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 85/91	Intersection of Medical Center & Marguerite, Mission Viejo, CA 92692	0.38	3	7
Public Park	Coronado Park	26652 Las Ondas Dr. Mission Viejo, CA 92692	0.63	2	3
Grocery Store	Crown Valley Market	27771 Center Dr. Mission Viejo, CA 92692	0.35	3	5
Public School	Capistrano Valley High School	26301 Via Escolar Mission Viejo, CA 92692	0.97	3	3
Medical Clinic	Providence Mission Hospital Mission Viejo	27700 Medical Center Rd. Mission Viejo, CA 92691	0.53	2	3
Pharmacy	Mission Medical Pharmacy	27800 Medical Center Rd., Suite 99 Mission Viejo, CA 92691	0.52	1	2
Opportunity Map - Highest / High Resource	High Resource		n/a	8	8
Total Score:				22	15 ⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.



CIVIL ENGINEERING | PLANNING | SURVEYING

October 27, 2021

Joseph Baclit | Project Manager
Related Companies of California
18201 Von Karman Avenue, Suite 900
Irvine, California 92612

RE: Mission Viejo Site C

Dear Joseph

In response to your inquiry, KES has reviewed the conceptual mass grading exhibit authored by CIVTECH for the subject site. At this time further investigation will need to be conducted to determine adequacy of provided sections as they relate to the existing topography. It is uncertain if the image/edge of the proposed pad is a usable pad limit or projected day light line. KES would recommend a detailed aerial survey to confirm project contours and detailed modeling. The proposed modeling would include grid ticks to ascertain projected retaining elements and day light join connections. This could be a dynamic exhibit/model to further understand earthwork, necessary shoring, or retaining walls.

In addition, KES would recommend contracting with a geotechnical engineer to determine the susceptibility to landslide or required set back to the existing sloped edge. KES would encourage additional studies regarding retaining elements, slot cutting, and means/methods of construction. KES would further encourage a structural engineer be consulted regarding footing structural requirements based on pad findings. A detailed cost analysis of required earthwork, retaining walls, shoring, and means/methods of construction should be performed in order to deem this site feasible for development.

If you have any questions, please call.

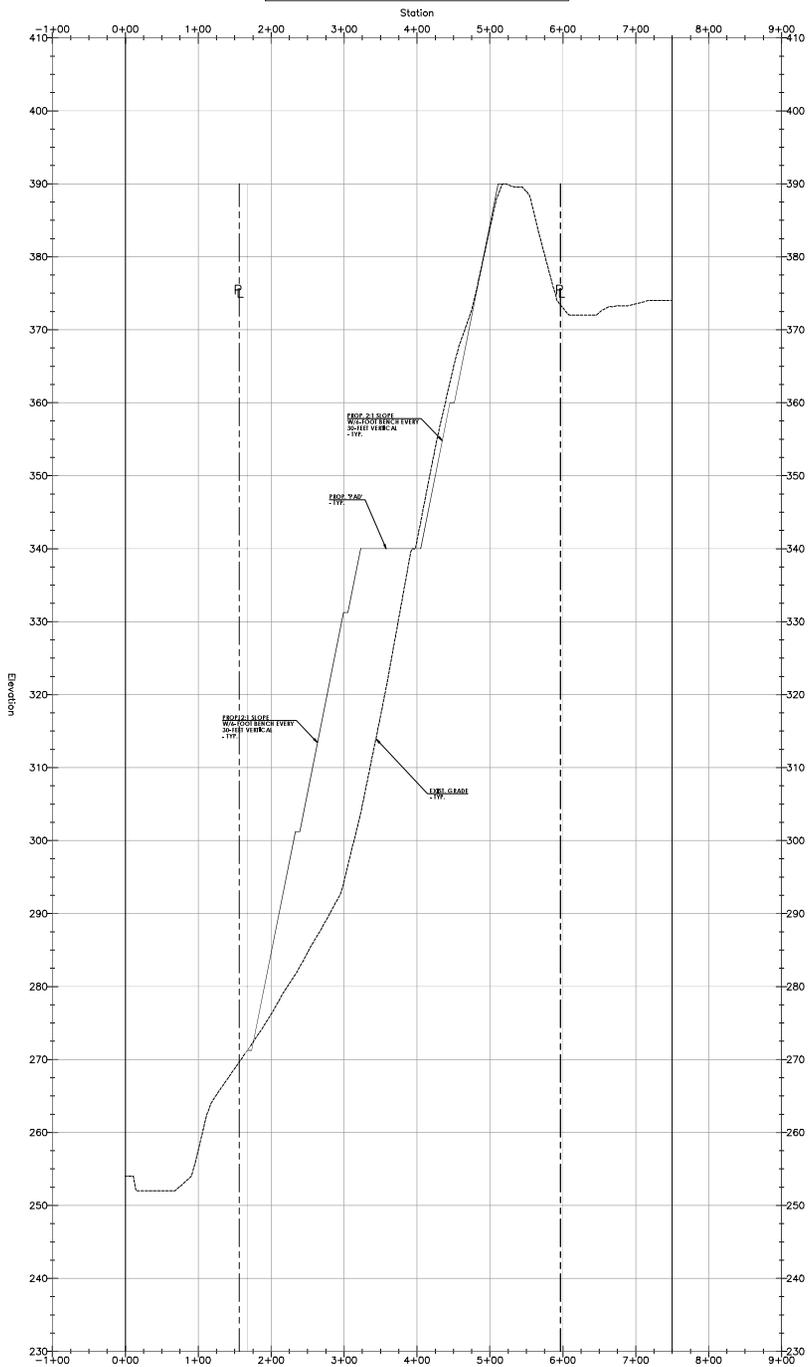
A handwritten signature in black ink, appearing to read 'Daryl Kessler'.

Daryl Kessler – CEO/President
dkessler@kestechologies.com
949.339.5331

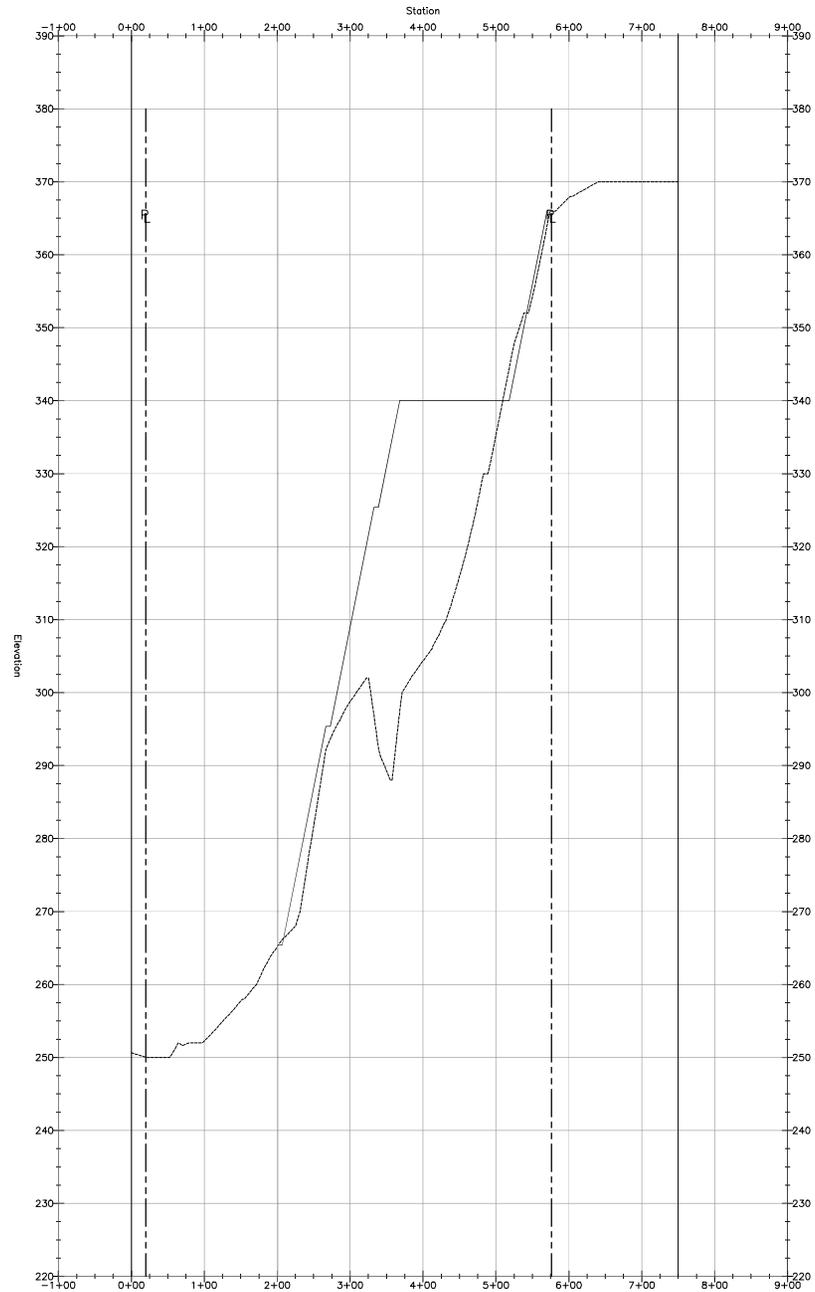
Encl: Mass Grading Exhibit – Site “C” civTEC 9.15.2020

One Venture, Suite No. 130 Irvine, California 92618
949.339.5330 (Main) 877.635.3775 (Toll Free)
www.kestechologies.com

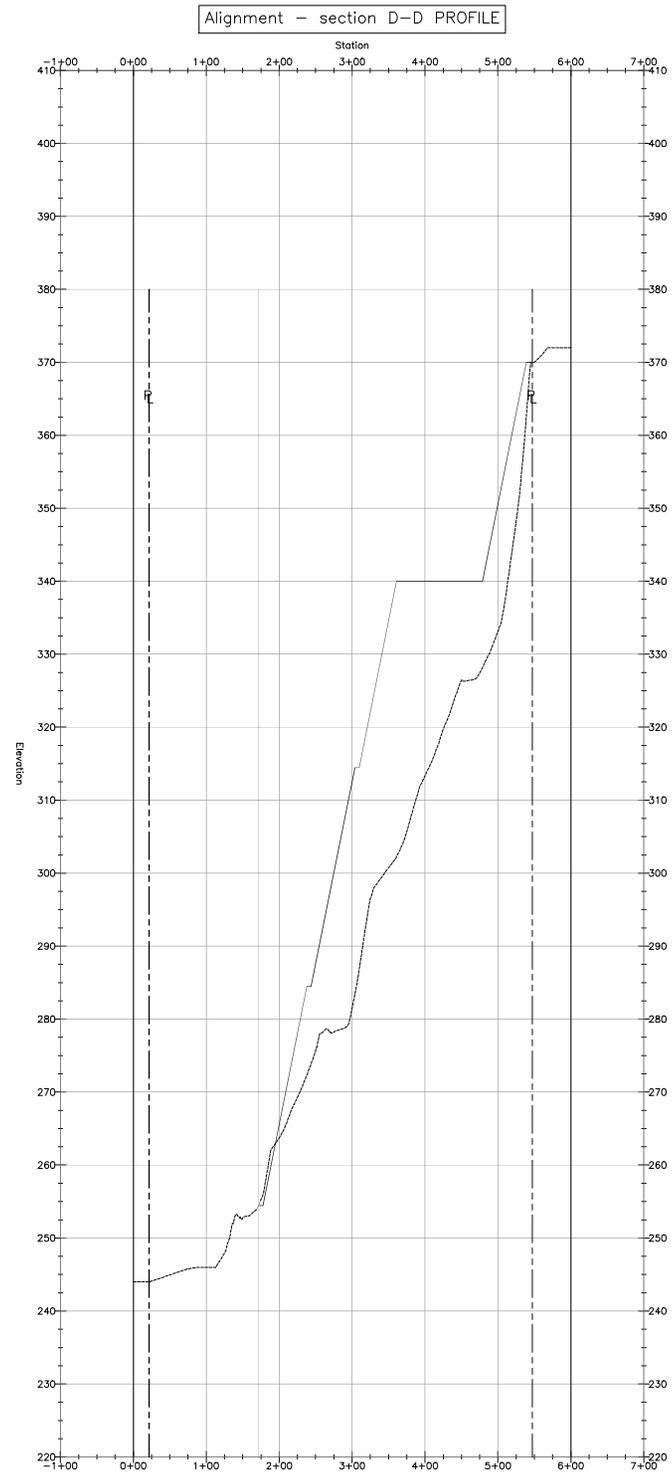
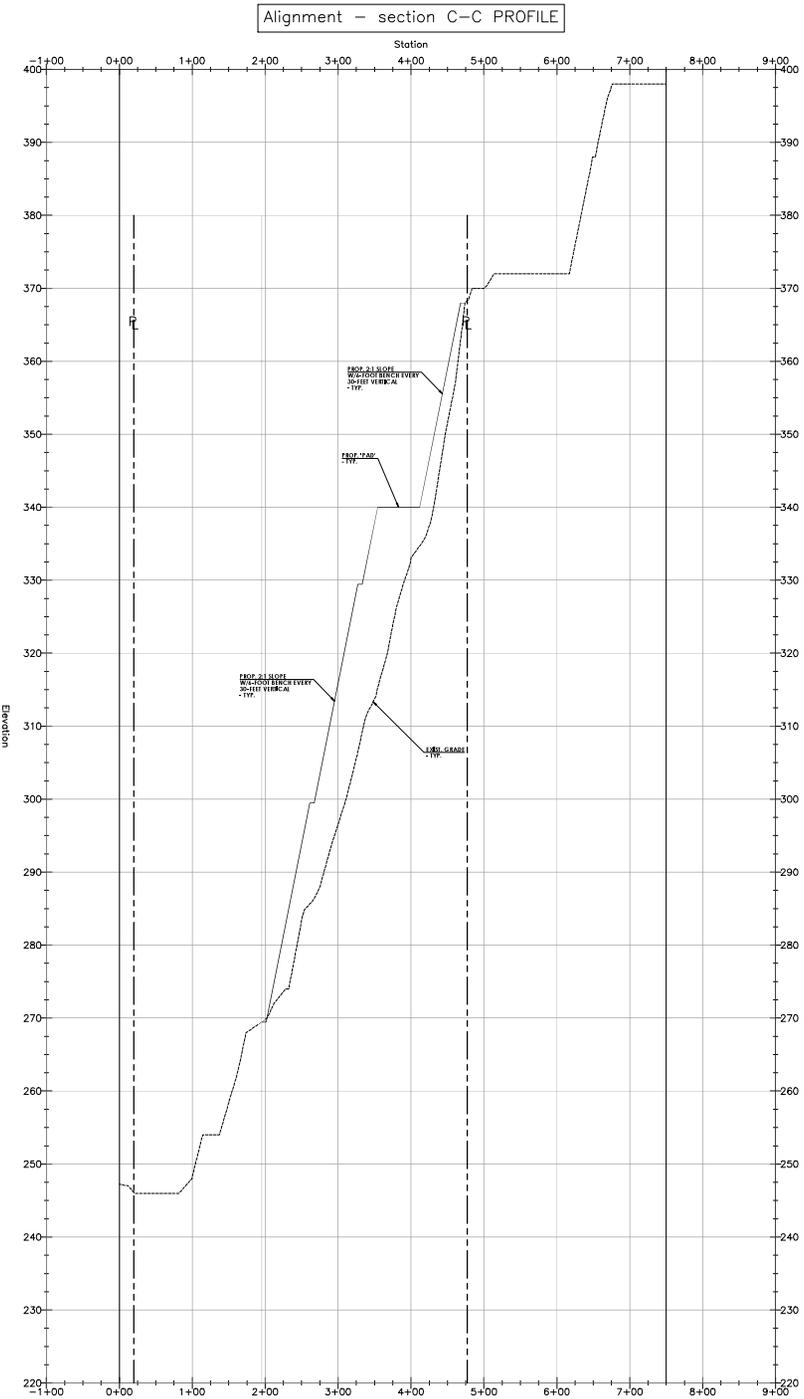
Alignment - section A-A PROFILE



Alignment - section B-B PROFILE

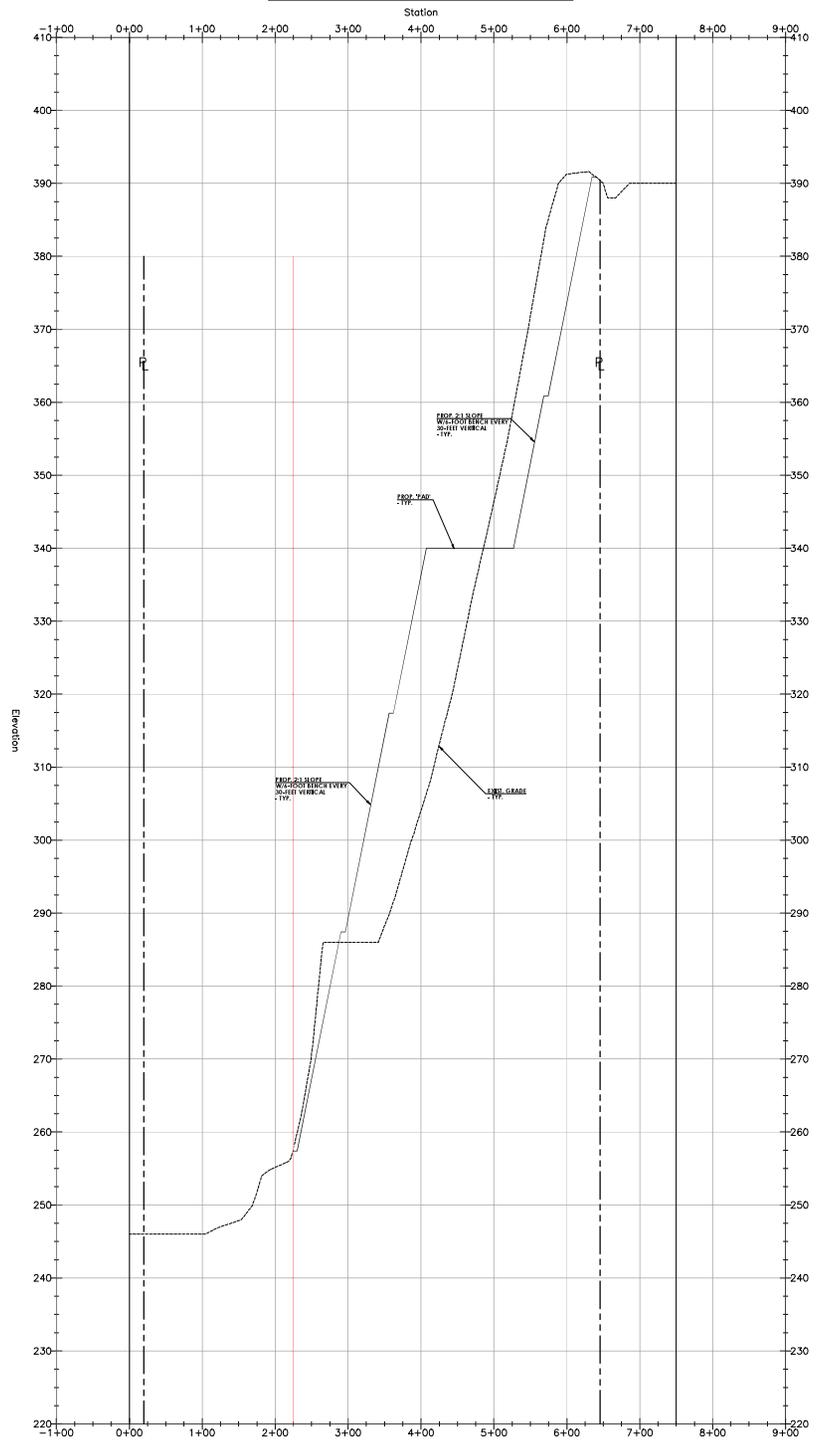


PROFILE SCALE:
 HORIZ.: 1" = 60'
 VERT.: 1" = 6'

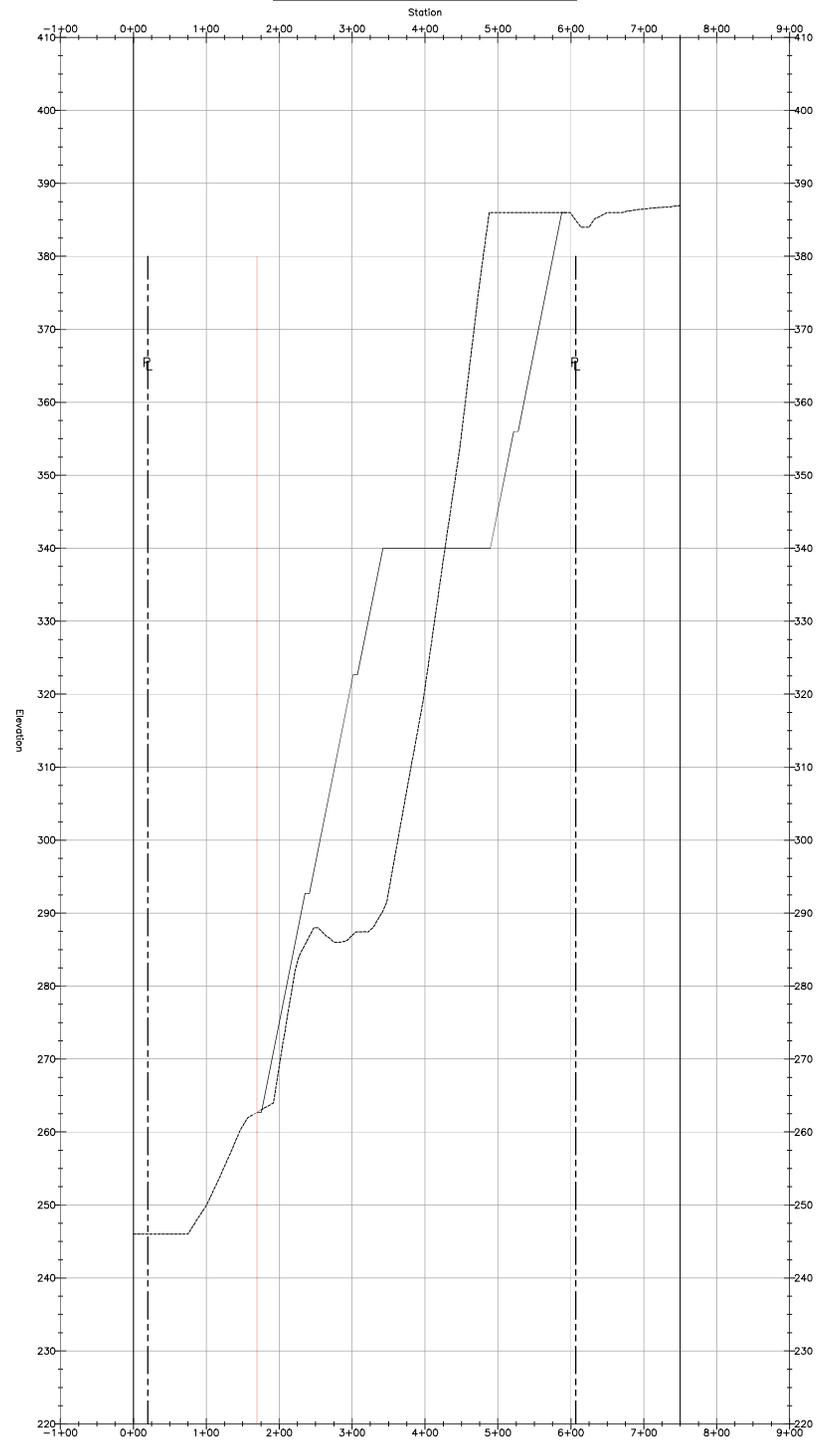


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 VERT.: 1" = 6'

Alignment - section E-E PROFILE

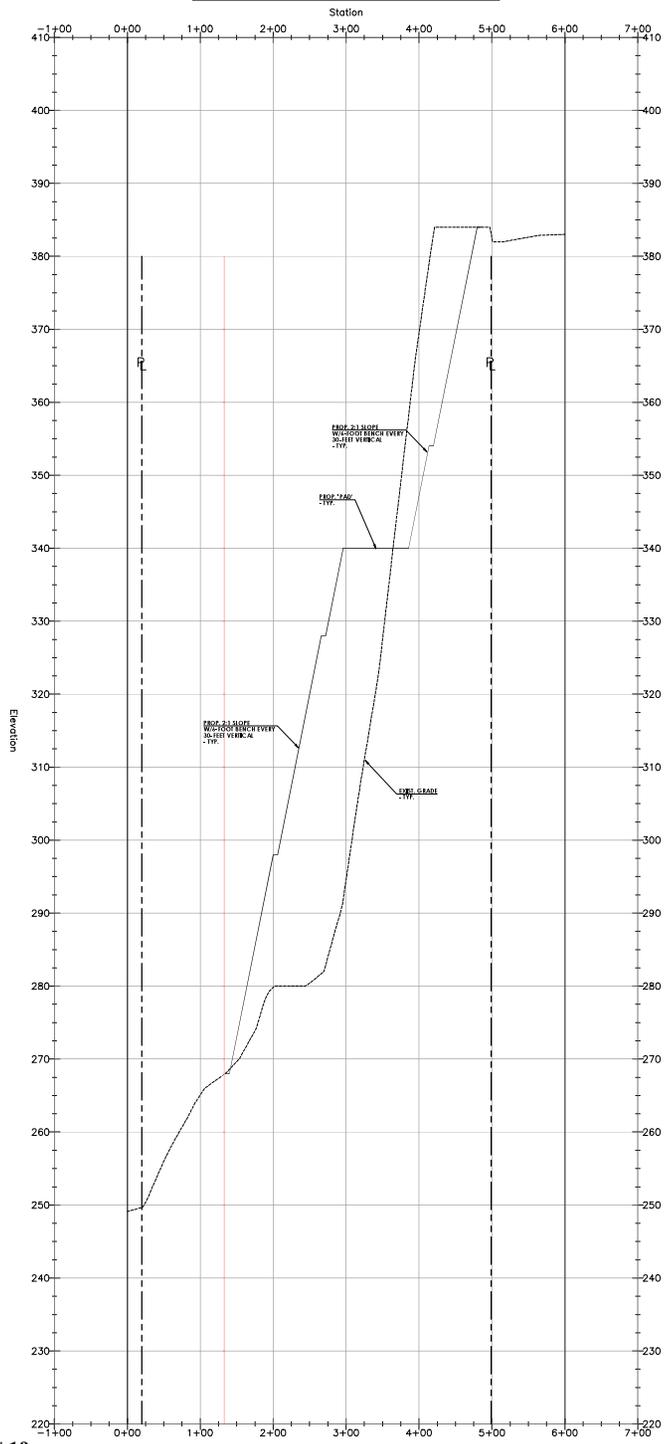


Alignment - section F-F PROFILE

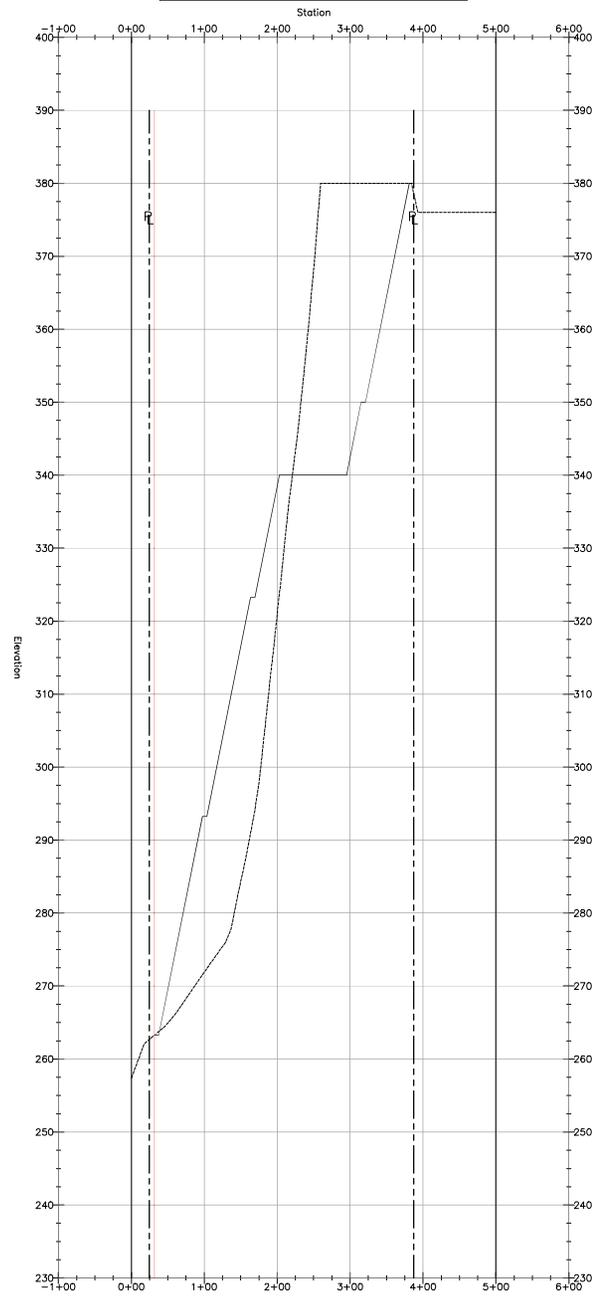


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 VERT.: 1" = 6'

Alignment - section G-G PROFILE

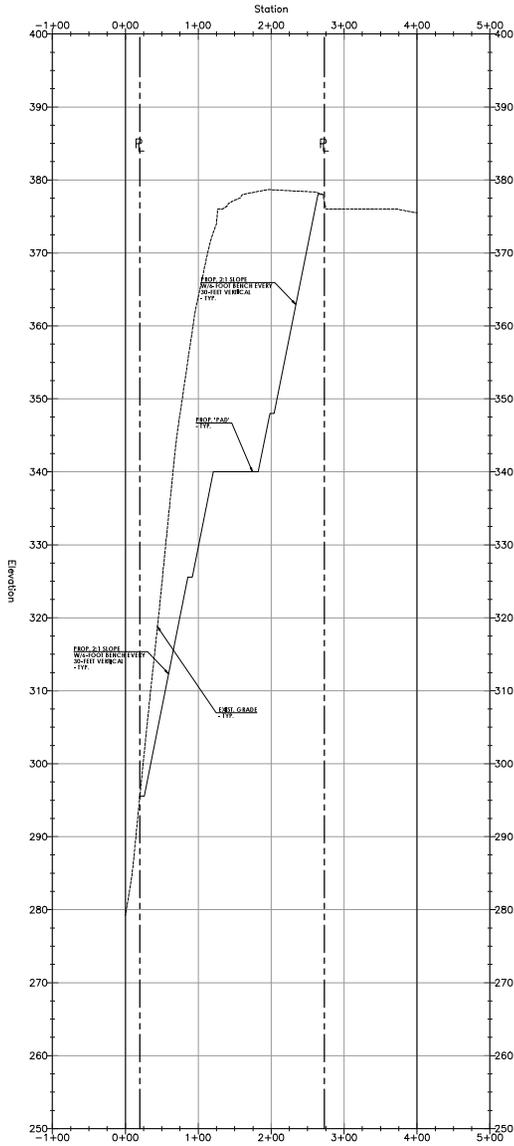


Alignment - section H-H PROFILE

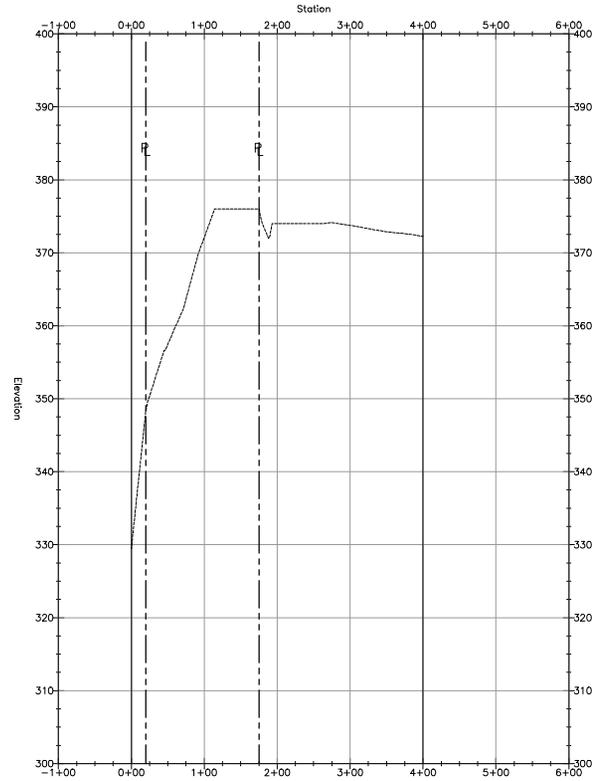


PROFILE SCALE:
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 VERT.: 1" = 6'

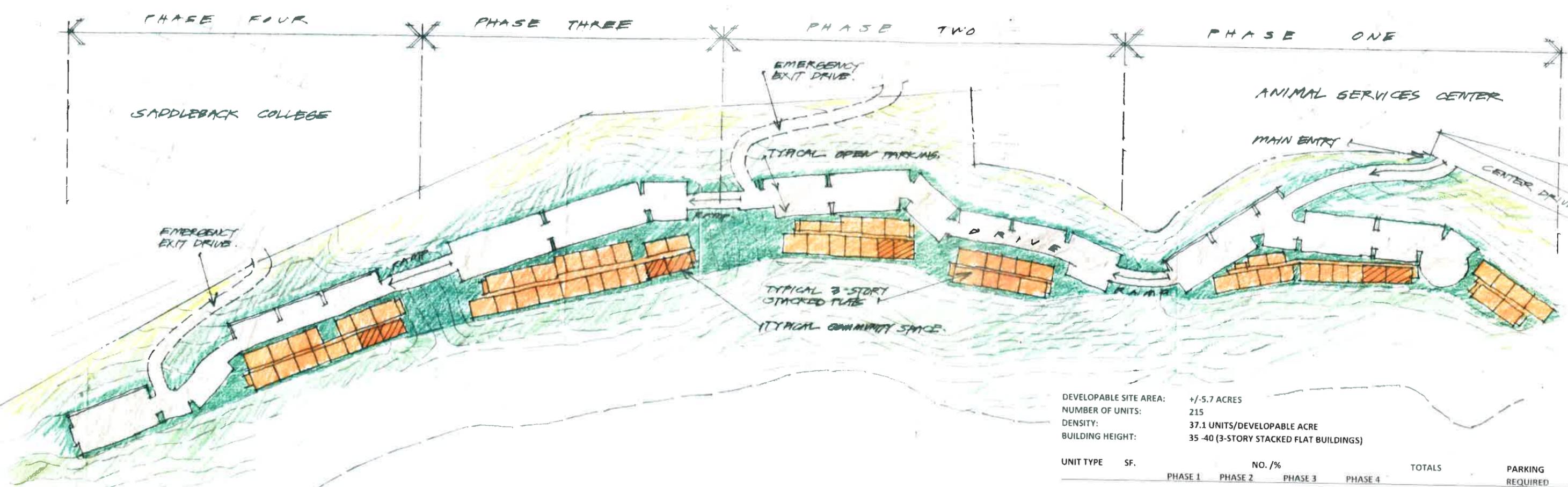
Alignment - section I-I PROFILE



Alignment - section J-J PROFILE



PROFILE SCALE:
 HORIZ.: 1" = 60'
 VERT.: 1" = 6'



DEVELOPABLE SITE AREA: +/- 5.7 ACRES
 NUMBER OF UNITS: 215
 DENSITY: 37.1 UNITS/DEVELOPABLE ACRE
 BUILDING HEIGHT: 35 -40 (3-STORY STACKED FLAT BUILDINGS)

MASSING STUDY SITE PLAN
MISSION VIEJO HOUSING SITES SITE C
 RELATED CALIFORNIA
 10-11-2021

UNIT TYPE	SF.	NO. /%				TOTALS	PARKING REQUIRED	PARKING PROVIDED
		PHASE 1	PHASE 2	PHASE 3	PHASE 4			
STUDIO	410	6 /11.5%	6 /10.0%	6 /10.0%	6 /14.0%	24 UNITS (11.2%)	24	24
1 BR/1 BA	600	18 /34.5%	24 /40.0%	24 /40.0%	15 /34.8%	81 UNITS (37.7%)	81	81
2 BR/1 BA	875	14 /27.0%	15 /25.0%	16 /26.6%	11 /25.6%	56 UNITS (26.0%)	112	112
3 BR/2 BA	1125	14 /27.0%	15 /25.0%	14 /23.4%	11 /25.6%	54 UNITS (25.1%)	108	108
TOTALS		52 UNITS	60 UNITS	60 UNITS	43 UNITS	215 UNITS SPACES	325 SPACES	325 SPACES
COMMUNITY BUILDING:		+/- 2000 SF	+/- 2000 SF	+/- 2000 SF	+/- 1750 SF			



PROJECT SUMMARY

**Mission Viejo Site C - Phase I (3 story buildings)
Related California**

Project Data		Basis Calculations	
Project Type	Large Family	Total Eligible Basis	\$27,256,803
County	Orange	Adjusted Threshold Basis Limit	\$21,029,977
Total Units	52		
Parking Spaces	80		
Land Area	8.20 Acres		
Net Residential Area	41,260 SF		
Construction Months	15 Months		
Operating Economic Assumptions		Permanent Sources	
Residential Vacancy Rate	5.0%	Tax Credit Equity	20,773,734
Retail Vacancy Rate	0.0%	Permanent Financing	4,142,000
Income Inflator	3.0%	OCHA - PBS8 Tranche B Loan	826,000
Expense Inflator	3.0%	OCHA - PSH Loan	405,000
Property Tax Inflator	2.0%	OCHFT - RR Loan	1,362,652
Replacement Reserve Inflator	3.0%	City of MV - RR Acquisition Loan	4,420,000
CPI	3.0%	City of MV - RR Development Loan	1,362,652
		Total	\$33,292,037
			\$320,080
Stabilized Cash Flow		Sources and Uses	
	Year 1	Total Permanent Sources	\$33,292,037
Gross Scheduled Rent	\$803,628	Total Development Cost	33,292,037
PBV Overhang	\$99,336	Over/(Under)	\$0
Laundry Income	3,744		
Other Income	0		
Vacancy & Collection	@ 5.00% (45,335)		
Effective Gross Income	861,373		
Operating Expenses	(493,207)		
Net Operating Income	368,165		

UNIT DISTRIBUTION

**Mission Viejo Site C - Phase I (3 story buildings)
Related California**

Number Of Units	Income Category	Source	SF	Gross Rent	Utility Allowance	Net Rent	Net Rent Per SqFt	Monthly Rent	Annual Rent	Unit %	Total Square Footage
Studio											
6	30% HCD (H&SC)		410	\$560	\$64	\$496	\$1.21	\$2,976	\$35,712	12%	2,460
<u>6</u>											
1 Bedroom											
2	30% HCD (H&SC)		600	\$640	\$74	\$566	\$0.94	\$1,132	\$13,584	4%	1,200
1	40% TCAC		600	\$1,009	\$74	\$935	\$1.56	\$935	\$11,220	2%	600
5	50% TCAC		600	\$1,261	\$74	\$1,187	\$1.98	\$5,935	\$71,220	10%	3,000
10	60% TCAC		600	\$1,513	\$74	\$1,439	\$2.40	\$14,390	\$172,680	19%	6,000
<u>18</u>											
2 Bedrooms											
1	30% TCAC		875	\$908	\$103	\$805	\$0.92	\$805	\$9,660	2%	875
3	40% TCAC		875	\$1,211	\$103	\$1,108	\$1.27	\$3,324	\$39,888	6%	2,625
3	50% TCAC		875	\$1,513	\$103	\$1,410	\$1.61	\$4,230	\$50,760	6%	2,625
6	60% TCAC		875	\$1,816	\$103	\$1,713	\$1.96	\$10,278	\$123,336	12%	5,250
1	Manager		875	\$0	\$0	0	n/a	\$0	\$0	2%	875
<u>14</u>											
3 Bedrooms											
2	30% TCAC		1,125	\$1,049	\$133	\$916	\$0.81	\$1,832	\$21,984	4%	2,250
2	40% TCAC		1,125	\$1,399	\$133	\$1,266	\$1.13	\$2,532	\$30,384	4%	2,250
3	50% TCAC		1,125	\$1,748	\$133	\$1,615	\$1.44	\$4,845	\$58,140	6%	3,375
7	60% TCAC		1,125	\$2,098	\$133	\$1,965	\$1.75	\$13,755	\$165,060	13%	7,875
<u>14</u>											
Unit Distribution Summary											
Summary			Income	Units	Total %	Unit Size		Units	Total %		
Total SF		41,260	30% TC	11	22%	Studio		6	12%		
Avg. Unit SF		793	35% TC	0	0%	1 Bedroom		18	35%		
Monthly Rent		\$66,969	40% TC	6	12%	2 Bedrooms		14	27%		
Annual Rent		\$803,628	45% TC	0	0%	3 Bedrooms		14	27%		
Avg. Rent (excl. manager's)		\$1,313	50% TC	11	22%	4 Bedrooms		0	0%		
Avg. Rent PSF (excl. manager's)		\$1.66	60% TC	23	45%	Total		52	100%		
Bedrooms (counts studio's as having 1 bdrm)		94	Market	0	0%						
			Subtotal	51	100%						
			Manager	1							
			Total	52							

PROJECT BASED VOUCHER SECTION 8 OVERHANG CALCULATION
Mission Viejo Site C - Phase I (3 story buildings)
Related California

	PBS8 Units	Monthly				Annual
		Per Unit Gross OC Payment Standard (a)	Per Unit Gross TCAC Rents (b)	Per Unit Net Overhang (c) c = a - b	Total Overhang	Total Overhang
Studio	30% TC 6	1,511	560	951	5,706	68,472
1 Bedroom	30% TC 2	1,926	640	-	2,572	-
Total	8			PBV Overhang	8,278	99,336

Less Vacancy	5.00%	(414)	(4,967)
Less Management Fee	6.00%	(472)	(5,662)

Net Overhang	7,392	88,707
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DCR	1.15
Interest Rate	4.75%
Term (months)	180
Loan Amount	826,406
Actual Loan Amount (Rounded Down)	826,000

Annual Payment	77,099
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ANNUAL OPERATING EXPENSE BUDGET

**Mission Viejo Site C - Phase I (3 story buildings)
Related California**

	Project Budget (52 units)
RENTING	
Misc. Renting	\$ 6,210
TOTAL RENTING	\$ 6,210
ADMINISTRATION	
Office	\$ 3,654
Legal	\$ 713
Audit	\$ 16,300
Telephone/Computer	\$ 20,800
Misc. Administrative	\$ 2,450
TOTAL ADMINISTRATION	\$ 43,918
MANAGEMENT FEE	
Contract Management	\$ 51,682
TOTAL MANAGEMENT	\$ 51,682
OPERATING	
Electricity	\$ 21,173
Water	\$ 13,717
Sewer	\$ 17,779
Exterminating	\$ 1,440
Rubbish Removal	\$ 25,231
Misc. Operating	\$ 8,855
TOTAL OPERATING	\$ 88,195
MAINTENANCE	
Security	\$ 12,000
Grounds	\$ 5,652
Repairs	\$ 10,825
Misc. Maintenance	\$ 14,709
TOTAL MAINTENANCE	\$ 43,185
SALARIES AND BENEFITS	
Office Salaries	\$ 50,419
Maintenance Salaries	\$ 42,316
Payroll Taxes and Benefits	\$ 47,559
TOTAL SALARIES AND BENEFITS	\$ 140,294
TAXES AND INSURANCE	
Insurance	\$ 31,155
TOTAL TAXES AND INSURANCE	\$ 31,155
RESERVES AND OTHER EXPENSES	
Replacement Reserves	\$ 15,600
City Monitoring Fee	\$ 2,600
County OCHFT Monitoring Fee	\$ 768
Social Programs	\$ 69,600
TOTAL RESERVES AND OTHER COSTS	\$ 88,568
TOTAL OPERATING EXPENSES	\$ 493,207

DEVELOPMENT COSTS & ELIGIBLE BASIS DETERMINATION

Mission Viejo Site C - Phase I (3 story buildings)
 Related California

#NAME?

	52 units Budget	TCAC % Eligible	TCAC Eligible Basis
ACQUISITION COSTS			
Land Acquisition Cost	\$4,420,000	0%	0
Acquisition Closing Costs	\$0	0%	0
TOTAL ACQUISITION COSTS	4,420,000		0
PROFESSIONAL FEES			
Architecture & Engineering	1,495,000	100%	1,495,000
Other Professional / Consulting	155,500	100%	155,500
TOTAL PROFESSIONAL FEES	1,650,500		1,650,500
FEES AND PERMITS			
City/County Fees and Permits	1,350,000	100%	1,350,000
Utility Fees/Costs	185,000	100%	185,000
TOTAL FEES AND PERMITS	1,535,000		1,535,000
CONSTRUCTION COSTS			
Offsite Improvements	260,000	100%	260,000
Site Improvements	3,178,395	100%	3,178,395
Landscaping / Common Areas	1,856,546	100%	1,856,546
Residential Structures	9,892,302	100%	9,892,302
Community Building	1,150,000	100%	1,150,000
Contractor Contingency	490,117	100%	490,117
General Conditions	1,177,915	100%	1,177,915
Contractor Overhead	720,211	100%	720,211
Contractor Profit	540,158	100%	540,158
Contractor Insurance	192,656	100%	192,656
Construction Contingency	972,915	100%	972,915
Construction Management Fee	195,500	100%	195,500
TOTAL CONSTRUCTION COSTS	20,626,715		20,626,715
FINANCING COSTS			
Gap Loan Costs	55,000	0%	0
Construction Loan Costs	165,500	7%	12,229
Construction Loan Fees	218,000	7%	16,108
Construction Period Interest	423,000	100%	423,000
Post-Construction Interest	243,000	0%	0
Permanent Loan Costs	60,000	0%	0
Permanent Loan Fees	8,000	0%	0
TCAC Fees	114,000	0%	0
Misc. Finance Costs	25,000	0%	0
TOTAL FINANCING COSTS	1,311,500		451,337
OTHER COSTS			
Furnishings, Fixtures & Equipment	185,000	100%	185,000
Marketing Costs	315,000	0%	0
Legal Fees	225,000	30%	67,500
Property Taxes	25,000	75%	18,750
Soft Cost Contingency	413,000	100%	413,000
Accounting / Audit / Insurance	181,500	60%	109,000
Development Fees	2,200,000	100%	2,200,000
Other Costs / Reserves	203,822	0%	0
TOTAL OTHER COSTS	3,748,322		2,993,250
TOTAL DEV COSTS/ TOTAL ELIGIBLE BASIS	\$33,292,037		\$27,256,803
TOTAL BASIS REDUCTION (Amount over Adjusted Threshold Basis Limit or Voluntary Exclusion)			<u>(7,955,603)</u>
TOTAL REQUESTED UNADJUSTED ELIGIBLE BASIS			19,301,200
High Cost Area Adjustment			130%
TOTAL ADJUSTED ELIGIBLE BASIS			25,091,559
Applicable Fraction			100%
TOTAL QUALIFIED BASIS			25,091,559
Total Credit Reduction	0%		0
TOTAL ADJUSTED QUALIFIED BASIS			25,091,559

TAX CREDIT CALCULATION

**Mission Viejo Site C - Phase I (3 story buildings)
Related California**

Total Project Cost	\$33,292,037
Total Permanent Sources	<u>(12,518,304)</u>
Funding Shortfall	\$20,773,734
Total Qualified Basis	\$25,091,559
Annual Federal Credits - Calculated	\$2,258,240
Annual Federal Credits - Awarded	\$0
Total Federal Credits (10 Years)	\$22,582,404
Federal Tax Credit Investor Equity	\$20,773,734
Total Requested Unadjusted Basis	\$19,301,200
Total 4 -Year State Credits - Calculated	\$0
Total 4 -Year State Credits - Awarded	\$0
State Tax Credit Investor Equity	\$0
Calculated Acquisition Basis	\$0
Available Acquisition Basis	\$0
Annual Acquisition Credits - Calculated	\$0
Annual Acquisition Credits - Awarded	\$0
Total Acquisition Credits (10 Years)	\$0
Acquisition Tax Credit Investor Equity	\$0
Total Tax Credit Investor Equity (Federal + State+ Acquisition)	\$20,773,734

Threshold Basis Limits	Percentage Boc 4 & 9% Limits	Units	Limit	Total
1 Bedroom		24	322,315	7,735,560
2 Bedrooms		14	388,800	5,443,200
3 Bedrooms		14	497,664	6,967,296
		<u>52</u>		<u>20,146,056</u>
Special Features Threshold Basis Limit Increases				
10% Increase: 95% of the project's upper floor units are serviced by an elevator				0
20% Increase: State or Federal Prevailing Wage Requirement				0
7% Increase: New Construction with Parking beneath Residential Units				0
2% Increase: Day Care Center				0
2% Increase: Special Needs Populations				0
Total Percentage Increase to Unadjusted Eligible Basis (Combined not to exceed 39%)				0
10% Increase: Energy Efficiency/Resource Conservation/Indoor Air Quality				402,921
Seismic Upgrading or Environmental Mitigation (15% unadj. eligible basis max.)				0
Development Impact Fees				481,000
Bond Deals				
1% Increase: Every 1% of the project's units between 35% and 50% AMI				0
2% Increase: Every 1% of the project's units at or below 35% AMI				0
Adjusted Threshold Basis Limit			<u>\$21,029,977</u>	
Total Eligible Basis			\$27,256,803	
Over /(Under) Basis Limit			\$6,226,826	

SOURCES AND USES OF FUNDS

**Mission Viejo Site C - Phase I (3 story buildings)
Related California**

Construction Sources and Uses

Construction Sources		
Tax Credit Equity	3,116,060	15% of tax credit equity
Construction Loan	21,706,352	
OCHFT - RR Loan	1,362,652	
City of MV - RR Acquisition Loan	4,420,000	
City of MV - RR Development Loan	1,362,652	
Deferred Developer Fee	1,100,000	
Operating Deficit Reserve	203,322	
TCAC Monitoring Fee	21,000	
	Total Construction Sources	33,292,037
Construction Uses		
	Total Development Cost	33,292,037
Amount Over/(Under)		0

Permanent Sources and Uses

Sources		
Tax Credit Equity	20,773,734	
Permanent Financing	4,142,000	
OCHA - PBS8 Tranche B Loan	826,000	
OCHA - PSH Loan	405,000	
OCHFT - RR Loan	1,362,652	
City of MV - RR Acquisition Loan	4,420,000	
City of MV - RR Development Loan	1,362,652	
	Total Permanent Sources	33,292,037
Uses		
	Total Development Cost	33,292,037
Amount Over/(Under)		0

STABILIZED CASH FLOW ANALYSIS
Mission Viejo Site C - Phase I (3 story buildings)
Related California

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
INCOME																
Gross Rental Income	803,628	827,737	852,569	878,146	904,490	931,625	959,574	988,361	1,018,012	1,048,552	1,080,009	1,112,409	1,145,781	1,180,155	1,215,559	
PBV Overhang	99,336	102,316	105,386	108,547	111,804	115,158	118,612	122,171	125,836	129,611	133,499	137,504	141,629	145,878	150,255	
Laundry Income	3,744	3,856	3,972	4,091	4,214	4,340	4,471	4,605	4,743	4,885	5,032	5,183	5,338	5,498	5,663	
Vacancy @ 5.0%	(45,335)	(46,695)	(48,096)	(49,539)	(51,025)	(52,556)	(54,133)	(55,757)	(57,430)	(59,152)	(60,927)	(62,755)	(64,637)	(66,577)	(68,574)	
EFFECTIVE GROSS INCOME	861,373	887,214	913,830	941,245	969,482	998,567	1,028,524	1,059,380	1,091,161	1,123,896	1,157,613	1,192,341	1,228,111	1,264,955	1,302,903	
EXPENSES																
Administrative	(43,918)	(45,236)	(46,593)	(47,990)	(49,430)	(50,913)	(52,440)	(54,014)	(55,634)	(57,303)	(59,022)	(60,793)	(62,617)	(64,495)	(66,430)	
Management Fee @ 6.0%	(51,682)	(53,233)	(54,830)	(56,475)	(58,169)	(59,914)	(61,711)	(63,563)	(65,470)	(67,434)	(69,457)	(71,540)	(73,687)	(75,897)	(78,174)	
Operating	(88,195)	(90,841)	(93,566)	(96,373)	(99,264)	(102,242)	(105,309)	(108,468)	(111,722)	(115,074)	(118,526)	(122,082)	(125,745)	(129,517)	(133,402)	
Maintenance	(43,185)	(44,481)	(45,815)	(47,190)	(48,605)	(50,063)	(51,565)	(53,112)	(54,706)	(56,347)	(58,037)	(59,778)	(61,572)	(63,419)	(65,321)	
Salaries	(140,294)	(144,503)	(148,838)	(153,303)	(157,902)	(162,639)	(167,519)	(172,544)	(177,720)	(183,052)	(188,544)	(194,200)	(200,026)	(206,027)	(212,208)	
Insurance	(31,155)	(32,089)	(33,052)	(34,043)	(35,065)	(36,117)	(37,200)	(38,316)	(39,466)	(40,650)	(41,869)	(43,125)	(44,419)	(45,752)	(47,124)	
Renting	(6,210)	(6,397)	(6,588)	(6,786)	(6,990)	(7,199)	(7,415)	(7,638)	(7,867)	(8,103)	(8,346)	(8,596)	(8,854)	(9,120)	(9,393)	
Social Programs	(69,600)	(71,688)	(73,839)	(76,054)	(78,335)	(80,685)	(83,106)	(85,599)	(88,167)	(90,812)	(93,537)	(96,343)	(99,233)	(102,210)	(105,276)	
City Monitoring Fees	(2,600)	(2,600)	(2,678)	(2,678)	(2,678)	(2,758)	(2,758)	(2,758)	(2,841)	(2,841)	(2,841)	(2,926)	(2,926)	(2,926)	(3,014)	
OCHA & OCHFT Monitoring Fees	(768)	(791)	(815)	(839)	(864)	(890)	(917)	(945)	(973)	(1,002)	(1,032)	(1,063)	(1,095)	(1,128)	(1,162)	
Replacement Reserves	(15,600)	(16,068)	(16,550)	(17,047)	(17,558)	(18,085)	(18,627)	(19,186)	(19,762)	(20,354)	(20,965)	(21,594)	(22,242)	(22,909)	(23,596)	
TOTAL OPERATING EXPENSES	(493,207)	(507,925)	(523,163)	(538,778)	(554,861)	(571,507)	(588,569)	(606,143)	(624,328)	(642,972)	(662,176)	(682,041)	(702,415)	(723,400)	(745,102)	
NET OPERATING INCOME	368,165	379,288	390,667	402,467	414,622	427,060	439,955	453,236	466,833	480,924	495,437	510,300	525,696	541,555	557,802	
DEBT SERVICE																
Permanent Financing	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	(242,981)	
OCHA - PBSS Tranche B Loan	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	(77,099)	
Cash Flow After Debt Service, before AMF	48,085	59,208	70,587	82,387	94,542	106,980	119,875	133,156	146,753	160,844	175,357	190,220	205,616	221,475	237,722	
ASSET MANAGEMENT FEES																
SLP Fee	(5,000)	(5,150)	(5,305)	(5,464)	(5,628)	(5,796)	(5,970)	(6,149)	(6,334)	(6,524)	(6,720)	(6,921)	(7,129)	(7,343)	(7,563)	
Partnership Administration Fee	(20,000)	(20,600)	(21,218)	(21,855)	(22,510)	(23,185)	(23,881)	(24,597)	(25,335)	(26,095)	(26,878)	(27,685)	(28,515)	(29,371)	(30,252)	
Cash Flow After Fees	23,085	33,458	44,064	55,069	66,404	77,998	90,024	102,409	115,084	128,224	141,759	155,614	169,972	184,762	199,907	
CASH FLOW SPLIT																
Orange County Housing Authority (OCHA)	3.50%	808	1,171	1,542	1,927	2,324	2,730	3,151	3,584	4,028	4,488	4,962	5,446	5,949	6,467	6,997
Orange County Housing Finance Trust (OCHFT)	12.00%	2,770	4,015	5,288	6,608	7,968	9,360	10,803	12,289	13,810	15,387	17,011	18,674	20,397	22,171	23,989
City of Mission Viejo	34.50%	7,964	11,543	15,202	18,999	22,909	26,909	31,058	35,331	39,704	44,237	48,907	53,687	58,640	63,743	68,968
Limited Partnership	50.00%	11,543	16,729	22,032	27,535	33,202	38,999	45,012	51,205	57,542	64,112	70,879	77,807	84,986	92,381	99,953
RESIDUAL RECEIPT LOANS																
OCHA - PSH Loan																
Beginning Loan Balance	405,000	416,342	427,321	437,929	448,151	457,977	467,397	476,396	484,962	493,084	500,746	507,935	514,638	520,839	526,523	
Cash Flow to Subsidy Provider (3.00%)	12,150	12,150	12,150	12,150	12,150	12,150	12,150	12,150	12,150	12,150	12,150	12,150	12,150	12,150	12,150	
Cash Flow Payment	(808)	(1,171)	(1,542)	(1,927)	(2,324)	(2,730)	(3,151)	(3,584)	(4,028)	(4,488)	(4,962)	(5,446)	(5,949)	(6,467)	(6,997)	
Ending Loan Balance	416,342	427,321	437,929	448,151	457,977	467,397	476,396	484,962	493,084	500,746	507,935	514,638	520,839	526,523	531,676	
OCHFT - RR Loan																
Beginning Loan Balance	1,362,652	1,400,761	1,437,625	1,473,217	1,507,489	1,540,400	1,571,919	1,601,996	1,630,586	1,657,656	1,683,149	1,707,017	1,729,223	1,749,706	1,768,414	
Cash Flow to Subsidy Provider (3.00%)	40,880	40,880	40,880	40,880	40,880	40,880	40,880	40,880	40,880	40,880	40,880	40,880	40,880	40,880	40,880	
Cash Flow Payment	(2,770)	(4,015)	(5,288)	(6,608)	(7,968)	(9,360)	(10,803)	(12,289)	(13,810)	(15,387)	(17,011)	(18,674)	(20,397)	(22,171)	(23,989)	
Ending Loan Balance	1,400,761	1,437,625	1,473,217	1,507,489	1,540,400	1,571,919	1,601,996	1,630,586	1,657,656	1,683,149	1,707,017	1,729,223	1,749,706	1,768,414	1,785,305	
City of MV - RR Development Loan																
Beginning Loan Balance	1,362,652	1,378,261	1,390,292	1,398,664	1,403,239	1,403,903	1,400,568	1,393,084	1,381,326	1,365,196	1,344,533	1,318,886	1,288,016	1,251,658	1,209,569	
Cash Flow to Subsidy Provider (1.73%)	23,574	23,574	23,574	23,574	23,574	23,574	23,574	23,574	23,574	23,574	23,574	23,260	22,817	22,283	21,654	
Cash Flow Payment	(7,964)	(11,543)	(15,202)	(18,999)	(22,909)	(26,909)	(31,058)	(35,331)	(39,704)	(44,237)	(48,907)	(53,687)	(58,640)	(63,743)	(68,968)	
Ending Loan Balance	1,378,261	1,390,292	1,398,664	1,403,239	1,403,903	1,400,568	1,393,084	1,381,326	1,365,196	1,344,533	1,318,886	1,288,016	1,251,658	1,209,569	1,161,527	
City of MV - RR Acquisition Loan																
Beginning Loan Balance	4,420,000	4,496,466	4,572,932	4,649,398	4,725,864	4,802,330	4,878,796	4,955,262	5,031,728	5,108,194	5,184,660	5,261,126	5,337,592	5,414,058	5,490,524	
Cash Flow to Subsidy Provider (1.73%)	76,466	76,466	76,466	76,466	76,466	76,466	76,466	76,466	76,466	76,466	76,466	76,466	76,466	76,466	76,466	
Cash Flow Payment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ending Loan Balance	4,496,466	4,572,932	4,649,398	4,725,864	4,802,330	4,878,796	4,955,262	5,031,728	5,108,194	5,184,660	5,261,126	5,337,592	5,414,058	5,490,524	5,566,990	
DCR	1.15	1.18	1.22	1.26	1.30	1.33	1.37	1.42	1.46	1.50	1.55	1.59	1.64	1.69	1.74	



January 9, 2023

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: IDYLLWILLOW APARTMENTS – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of Idyllwillow Apartments, located at 28032 Marguerite Parkway (the “Project Site”). This initial assessment of the Project Site C is composed of a California Tax Credit Allocation Committee (TCAC) site amenity score and a yield study to determine the number of units that can be accommodated on the site.

1. TCAC Site Amenity Score

- **Amenity Score** - The Project Site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 21 points as a Large Family development, satisfying the 15-point TCAC maximum site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study (See Attachment #2 – Massing Study Site Plan)

- **Developable Space** – The Project Site is roughly +/-23.30 acres.
- **Unit Yield** – The site is improved with a multifamily asset built in 1987. At a density of 17 units per acre, Idyllwillow currently has 400 units across 25 two-story structures. Since the site was upzoned to Residential Planned Development (RPD) Zone 30, our proposed site plan reflects a partial vs. full-scale redevelopment of the property in order to maximize the allowable density of 30 units per acre.

Of the 400 existing residential units, 240 units that are located in 15 buildings on the western half of the property, would not be demolished. However, the remaining 160 units, situated across ten (10) buildings on the eastern half of the property, would be redeveloped into 456 new units in three- and four-story buildings over an on-grade parking podium.

As a result, Idyllwillow’s total unit count, ranging from studios to three-bedrooms, would equal 696 units (240 existing plus 456 new units), which would yield a net proposed density of 29.96 units per acre.

- **Parking** – 623 spaces, at a ratio of 1.36 spaces/unit, will be provided for the 456 new apartment units. Parking shown will be provided in podium parking structures. One parking space is provided

for each studio and 1-bedroom unit; 1.5 spaces for each 2-bedroom unit; and two spaces for each 3-bedroom unit.

Should you have any questions about this initial study, please let us know.

Sincerely,

Andrew Yick
Sr. Development Associate

Attachments: (1) TCAC Site Amenity Score and (2) Massing Study Site Plan

TCAC Site Amenity Score

Idyllwillow Apartments
 28032 Marguerite Parkway, Mission Viejo, CA 92692

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 91 (Marguerite - South Deck)	Marguerite Parkway and The Shops Blvd. Mission Viejo, CA 92692	0.03	4	7
Public Park	Coronado Park	26652 Las Ondas Dr. Mission Viejo, CA 92691	0.67	2	3
Public Library	IMC Library	28000 Marguerite Parkway Mission Viejo, CA 92692	0.37	3	3
Grocery Store	Crown Valley Market	27771 Center Dr. Mission Viejo, CA 92692	0.39	4	5
Public School	Capistrano Valley HS	26301 Via Escolar Mission Viejo, CA 92692	0.60	3	3
Medical Clinic	Providence Mission Hospital Mission Viejo	27700 Medical Center Rd. Mission Viejo, CA 92691	0.24	3	3
Pharmacy	Mission Medical Pharmacy	27800 Medical Center Rd., Ste. 99 Mission Viejo, CA 92691	0.17	2	2
Total Score:				21	15⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.

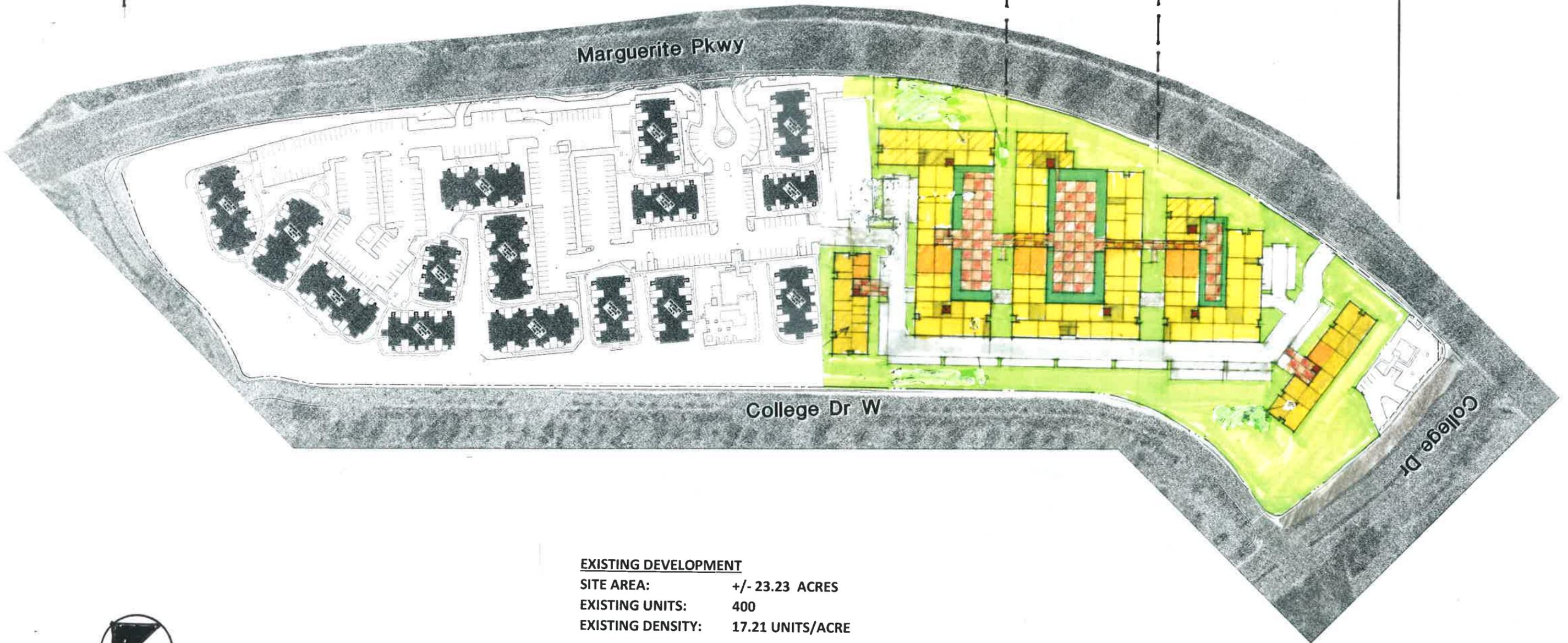
EXISTING DEVELOPMENT
TO REMAIN: 240 UNITS.

NEW CONSTRUCTION
DEVELOPMENT: 456 UNITS

PHASE 1
152 UNITS

PHASE 2
152 UNITS

PHASE 3
152 UNITS.



EXISTING DEVELOPMENT

SITE AREA: +/- 23.23 ACRES
EXISTING UNITS: 400
EXISTING DENSITY: 17.21 UNITS/ACRE

PROPOSED DEVELOPMENT

SITE AREA: +/- 23.23 ACRES
NO. OF UNITS: 240 EXISTING/REMAINING UNITS
456 NEW UNITS
696 TOTAL UNITS
PROPOSED DENSITY: 29.96 (30) UNITS/ACRE

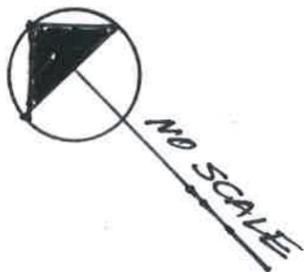
IDYLLWILLOW FAMILY APARTMENTS

PARTIAL EXISTING - PARTIAL NEW CONSTRUCTION

MISSION VIEJO

RELATED CALIFORNIA

12-15-2022



EXISTING DEVELOPMENT
 SITE AREA: +/- 23.23 ACRES
 EXISTING UNITS: 400
 EXISTING DENSITY: 17.21 UNITS/ACRE

PROPOSED DEVELOPMENT
 SITE AREA: +/- 23.23 ACRES
 NO. OF UNITS: 240 EXISTING/REMAINING UNITS
 456 NEW UNITS
 696 TOTAL UNITS
 PROPOSED DENSITY: 29.96 (30) UNITS/ACRE

	PHASE 1	PHASE 2	PHASE 3
NUMBER OF UNITS:	152	152	152
BUILDING TYPES:	3 & 4 STORIES OVER ON-GRADE PARKING PODIUM & 4-STORY ON- GRADE	3 & 4 STORIES OVER ON-GRADE PARKING PODIUM	3 & 4 STORIES OVER ON-GRADE PARKING PODIUM & 4-STORY ON- GRADE

UNIT TYPES:	PHASE 1	PHASE 2	PHASE 3
STUDIO: +/-390 SF	27 17.8%	12 7.9%	26 17.1%
1 BEDROOM: +/-600 SF	48 31.6%	62 40.9%	50 32.9%
2 BEDROOM: +/- 900 SF	39 25.6%	39 25.6%	38 25.0%
3 BEDROOM: +/-1150 SF	38 25.0%	39 25.6%	38 25.0%

COMMON SPACE: +/-3,500 SF +/-2,300 SF +/- 3,200 SF

RESIDENT PARKING SPACES:

STUDIO: (0-1.0/UNIT)	20	12	26
1 BR: (1.0/UNIT)	48	62	50
2 BR: (1.5/UNIT)	59	59	57
3 BR: (2.0/UNIT)	76	78	76
	203	211	209
	(1.33/UNIT)	(1.38/UNIT)	(1.37/UNIT)

TOTAL PARKING: 623 SPACES (1.36 SPACES /UNIT)



IDYLLWILLOW FAMILY APARTMENTS

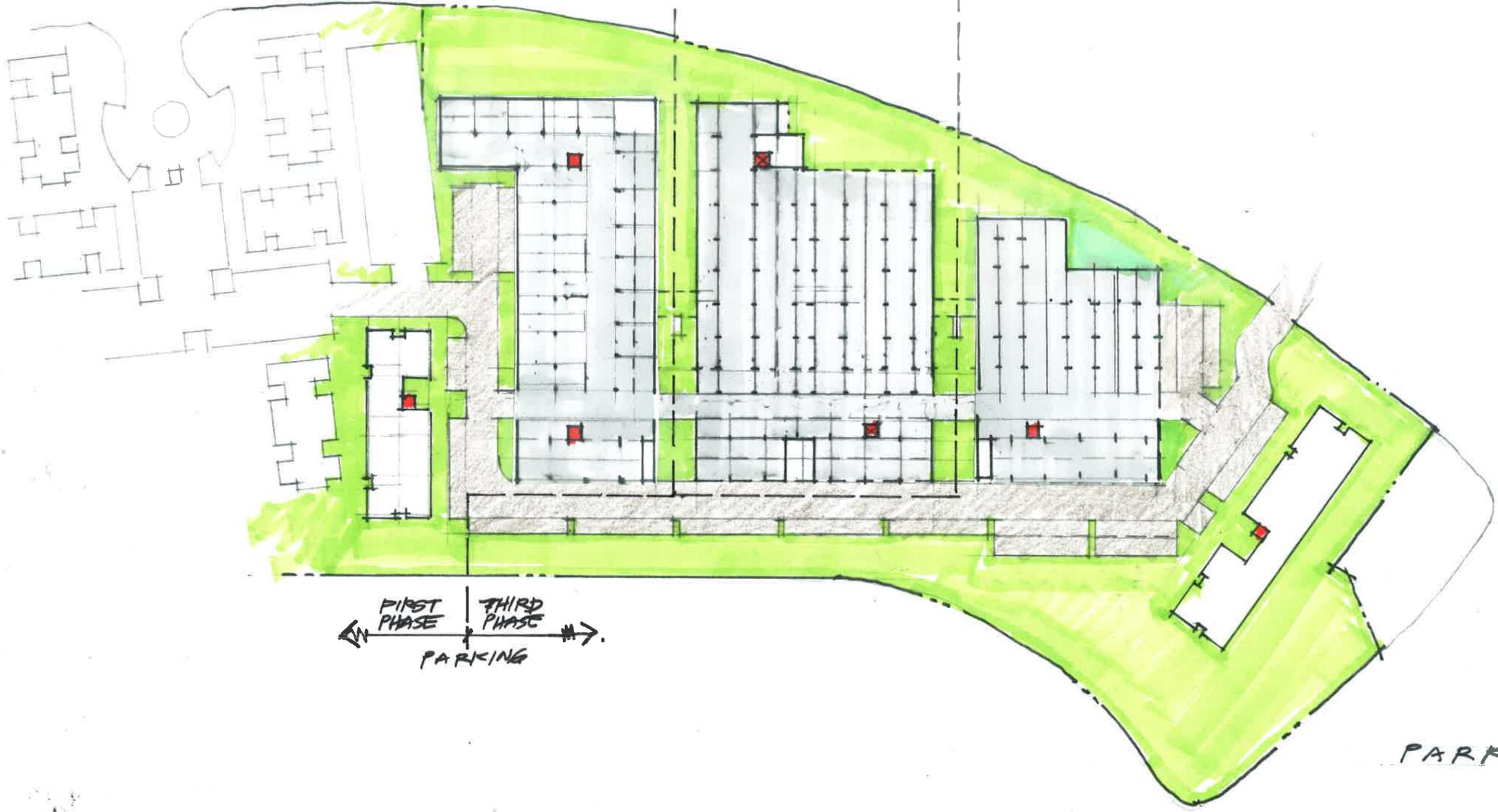
PARTIAL EXISTING - PARTIAL NEW CONSTRUCTION

MISSION VIEJO

RELATED CALIFORNIA

12-22-2022

EXISTING DEVELOPMENT. FIRST PHASE SECOND PHASE THIRD PHASE



PARKING PLAN.



June 2, 2022

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: Commerce Center – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of Commerce Center, located at 27200-27240 La Paz Road (the “Project Site”). This initial assessment of the Project Site is composed of a California Tax Credit Allocation Committee (TCAC) site amenity score and a density study to determine the number of units that can be accommodated on the site.

1. TCAC Site Amenity Score

- **Amenity Score** - The Project Site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 22 points as a Large Family development, satisfying the 15-point TCAC maximum Site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study

- **Developable Space** - The Project Site is roughly +/-4.5 acres and is flat allowing the entire site to be developed.
- **Unit Yield** - A massing study site plan was prepared, yielding 136 affordable family units at a density of approximately 30.2 units per acre. (See Attachment #2 - Massing Study Site Plan.) Buildings are assumed to be 3-story, stacked flat structures, served by an elevator, reaching a maximum building height of roughly 40 feet. Currently zoned CC (Commercial Community), the site would need to be re-zoned through an entitlement process in order to permit the proposed residential development.
- **Parking** – All parking shown is surface parking with tuck-under, tandem and open-air space parking proposed. One parking space is provided for each studio and 1-bedroom unit; 1.5 spaces for each 2-bedroom unit; and 2 spaces for each 3-bedroom unit.

In conclusion, it is Related's opinion that Commerce Center could yield up to 136 affordable housing units. Should you have any questions about this initial study, please let us know.

Sincerely,

Andrew Yick
Development Associate

Attachments

1. TCAC Site Amenity Score
2. Massing Study Site Plan

TCAC Site Amenity Score

Commerce Center
27200-27240 La Paz Road, Mission Viejo, CA 92692

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 86	Intersection of La Paz Road and Marguerite Pkwy, Mission Viejo, CA 92692	0.14	4	7
Public Park	Oso Viejo Community Park	24932 Veterans Way, Mission Viejo, CA 92692	0.27	3	3
Public Library	Mission Viejo Library	100 Civic Center, Mission Viejo, CA 92691	0.19	3	3
Grocery Store	Ralphs	25104 Marguerite Pkwy, Mission Viejo, CA 92692	0.09	5	5
Public School	Fred Newhart Middle School	25001 Veterans Way, Mission Viejo, CA 92692	0.23	3	3
Medical Clinic	Marque Urgent Care	25482 Marguerite Pkwy, Mission, Viejo, CA 92692	0.52	2	3
Pharmacy	CVS Pharmacy	25272 Marguerite Pkwy, Mission Viejo, CA 92692	0.06	2	2
Total Score:				22	15⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.

SITE AREA: +/-4.5 ACRES
 NUMBER OF UNITS: 136 FAMILY APARTMENTS
 DENSITY: 30 UNITS/ ACRE
 BUILDING HEIGHT: 3-STORIES 32- 40 FEET

UNIT TYPE	NO.	SF.	MIX%	PARKING PROVIDED
STUDIO	13	410 SF	9.5%	13 SPACES
1 BR/1 BA	55	600	40.5%	55 SPACES
2 BR/1 BA	34	875	25%	51 SPACES
3 BR/2 BA	34	1125	25%	68 SPACES (12 TANDEM)
VISITOR/STAFF PARKING				12 SPACES
TOTALS				179 SPACES (1.31 SPACES/UNIT)

COMMON AREAS: +/- 5200 SF



MISSION VIEJO HOUSING SITES COMMERCE CENTER

RELATED CALIFORNIA

5-12-2022



September 19, 2022

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: MISSION VIEJO TOWN CENTER – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of Mission Viejo Town Center (the “Project Site”), located at 28331 Marguerite Parkway, in Mission Viejo. This initial assessment of the Project Site is composed of a California Tax Credit Allocation Committee (TCAC) site amenity score and a density study to determine the number of units that can be accommodated on the site.

1. TCAC Site Amenity Score

- **Amenity Score** - The Project Site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 18 points as a Large Family development, satisfying the 15-point TCAC maximum site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study (See Attachment #2 – Massing Study Site Plan)

- **Developable Space** – Per the assessor’s parcel map, the site is +/- 3.277 acres. Site conditions are favorable for redevelopment into multifamily use.
- **Unit Yield** – The site is zoned RPD30, which allows a density of up to 30 dwelling units per acre. The site plan, prepared to be consistent with the current zoning, yields 99 large family units, or 30.2 du/acres, within four 3-story, +/- 35’ tall, walk-up, stacked flat structures. Programming of the site also includes +/-2,675 sf of common area.
- **Parking** – 152 open parking spaces, at a ratio of 1.53 spaces/unit. One parking space is provided for each 1-bedroom unit; 1.5 spaces for each 2-bedroom unit; and 2.0 spaces for each 3-bedroom unit.

Should you have any questions about this initial study, please let us know.

Sincerely,

Andrew Yick
Development Associate

Attachments: (1) TCAC Site Amenity Score and (2) Massing Study Site Plan

TCAC Site Amenity Score

Mission Viejo Town Center
 28331 Marguerite Pkwy, Mission Viejo, CA 92692

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 91	Marguerite - Ent 28451 Audi Mission Viejo	0.08	4	7
Public Park	Coronado Park	26652 Las Ondas Drive Mission Viejo, CA 92691	0.53	3	3
Public Library	IMC Library	28000 Marguerite Parkway Mission Viejo, CA 92692	0.33	3	3
Grocery Store	Crown Valley Marketplace	27771 Center Dr. Mission Viejo, CA 92692	0.94	1	5
Public School	Capistrano Valley HS	26301 Via Escolar Mission Viejo, CA 92692	0.58	3	3
Medical Clinic	Providence Mission Hospital Mission Viejo	27700 Medical Center Rd. Mission Viejo, CA 92691	0.69	2	3
Pharmacy	Walgreens Pharmacy	28311 Marguerite Pkwy Mission Viejo, CA 92692	0.02	2	2
Total Score:				18	15⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.



SITE AREA: +/- 3.277 ACRES
 NUMBER OF UNITS: 99 FAMILY APARTMENTS
 DENSITY: 30.2 UNITS/ACRE
 BUILDING HEIGHT: 3-STORIES ON-GRADE +/-35 FEET

UNIT TYPE	NO.	SF.	MIX%
1 BEDROOM	23	600 SF	23.3%
2 BEDROOM	50	900 SF	50.5%
3 BEDROOM	26	1175 SF	26.2%

TOTALS: 99

RESIDENT PARKING:

1 BR:	25 SPACES	(1:1)
2 BR:	75 SPACES	(1.5:1)
3 BR:	52 SPACES	(2:1 - +/-50% TANDEM)

TOTAL PARKING: 152 SPACES (1.53 SPACES /UNIT)

COMMUNITY BUILDING: +/-2,675 SF

MISSION VIEJO TOWN CENTER

FAMILY APARTMENTS

MISSION VIEJO
 RELATED CALIFORNIA

9-15-2022



July 18, 2022

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: College Center – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of College Center, located at 28171 Marguerite Parkway (the “Project Site”). This initial assessment of the Project Site is composed of a California Tax Credit Allocation Committee (TCAC) site amenity score and a density study to determine the number of units that can be accommodated on the site.

1. TCAC Site Amenity Score

- **Amenity Score** - The Project Site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 17 points as a Large Family development, satisfying the 15-point TCAC maximum Site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study (See Attachment #2 – Massing Study Site Plans)

- **Developable Space** - The Project Site is roughly +/-7.75 gross acres. However, after excluding the slope down to the 405 Freeway, only +/-5.89 acres is developable area.
- **Unit Yield** – We prepared two separate massing study site plans:
 - One is senior housing, which represents less entitlement risk. Since the site is currently zoned CH (Commercial Highway), senior housing is permitted through its senior housing overlay zoning. Our massing study yielded 315 senior units, at a density of 53.48 units per buildable acre, within a 4-story structure. (Although a 5+ story building would accommodate a higher unit count, this building typology will necessitate a concrete structure that will be too costly and, therefore, relatively more difficult to finance.)
 - Another concept for consideration is intergenerational housing, which represents a mix of large family and senior apartments. Our massing study yielded a lower density of 33.9 units per buildable acre, or 200 units (50% seniors / 50% large families), within a 4-story structure. Since TCAC scores Intergenerational projects as Large Family projects, this housing type is more competitive than a senior one because TCAC allocates a greater percentage of its tax credits to Large Family projects. However, the entitlement risk is greater, since a zone change would be required.

▪ **Parking**

- Senior Housing – 333 parking spaces, at a ratio of 1.05/unit. Parking includes a 2-story parking garage in addition to on-grade guest parking.
- Intergenerational Housing – 269 spaces, at a ratio of 1.35/unit. Parking shown is surface parking with tuck-under, tandem and open-air space parking proposed. No parking is provided for studios; one parking space is provided for each 1-bedroom unit; 1.5 spaces for each 2-bedroom unit; and 2 spaces for each 3-bedroom unit.

Should you have any questions about this initial study, please let us know.

Sincerely,

Andrew Yick
Development Associate

Attachments

1. TCAC Site Amenity Score
2. Massing Study Site Plans (Senior and Intergenerational)

TCAC Site Amenity Score

College Center
28171 Marguerite Parkway, Mission Viejo, CA 92692

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 91	Intersection of Marguerite Pkwy and College Dr. Mission Viejo, CA 92692	0.04	4	7
Public Park	Coronado Park	26652 Las Ondas Dr. Mission Viejo, CA 92691	0.62	2	3
Public Library	Mission Viejo Library	100 Civic Center Mission Viejo, CA 92691	3.11	0	3
Grocery Store	Amazon Fresh	26940 Crown Valley Pkwy Mission Viejo, CA 92691	0.60	4	5
Public School	Capistrano Valley HS	26301 Via Escolar Mission Viejo, CA 92692	0.71	3	3
Medical Clinic	Providence Mission Hospital	27700 Medical Center Rd. Mission Viejo, CA 92691	0.57	2	3
Pharmacy	Walgreens	28311 Marguerite Pkwy Mission Viejo, CA 92692	0.07	2	2
Total Score:				17	15⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.



SITE AREA: +/- 7.75 GROSS ACRES
 +/- 5.89 BUILDABLE ACRES
 NUMBER OF UNITS: 315 SENIOR APARTMENTS
 DENSITY: 40.6 UNITS/ GROSS ACRES
 53.48 UNITS/ BUILDABLE ACRES
 BUILDING HEIGHT: 4-STORIES (2-stories) +/-45 FEET

UNIT TYPE	NO.	SF.	MIX%	PARKING PROV.
STUDIO	28	410 SF	8.9%	28 SPACES
1 BR/1 BA	287	600	91.1%	287 SPACES

RESIDENT/STAFF PARKING: 315 SPACES
 VISITOR PARKING: 18 SPACES
 TOTAL PARKING: 333 SPACES
 (1.05 /UNIT)

COMMUNITY BUILDING: +/- 2,700 SF
 PRPOERTY MANAGEMENT/LEASING: +/- 1,200 SF

MISSION VIEJO - COLLEGE CENTER
SENIOR APARTMENTS
RELATED CALIFORNIA

7-05-2022



CONCEPTUAL SECTION

SENIOR APARTMENTS.



SITE AREA: +/- 7.75 GROSS ACRES
 +/- 5.89 BUILDABLE ACRES
 NUMBER OF UNITS: 200 INTERGENERATIONAL APARTMENTS
 100 SENIOR APARTMENTS
 100 FAMILY APARTMENTS
 DENSITY: 25.8 UNITS/ GROSS ACRES
 33.9 UNITS/ BUILDABLE ACRES
 BUILDING HEIGHT: 4-STORIES +/-45 FEET

UNIT TYPE	NO.	SF.	MIX%	SENIOR	FAMILY
STUDIO	6	410 SF	.03%	0	6
1 BEDROOM	94	600 SF	.47%	88	6
2 BEDROOM	50	900 SF	.25%	12	38
3 BEDROOM	50	1175 SF	.25%	0	50
TOTALS:	200			100	100

RESIDENT PARKING:

STUDIO:	0 SPACES	(0:1)
1 BR:	94 SPACES	(1:1)
2 BR:	75 SPACES	(1.5:1)
3 BR:	100 SPACES	(2:1 - SOME TANDEM)
TOTAL PARKING:	269 SPACES	(134 /UNIT)

COMMON SPACE IN "SENIOR BUILDING":
 PROPERTY MANAGEMENT OFFICES: +/-3,000 SF
 COMMON SPACE IN "FAMILY BUILDING": +/-4,500 SF

MISSION VIEJO - COLLEGE CENTER
INTERGENERATION APARTMENTS
 RELATED CALIFORNIA

7-05-2022



September 19, 2022

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: THE SHOPS – MACY’S – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of The Shops – Macy’s site (the “Project Site”), located at 300 The Shops Blvd., in Mission Viejo. This initial assessment of the Project Site is composed of a California Tax Credit Allocation Committee (TCAC) site amenity score and a density study to determine the number of units that can be accommodated on the site.

1. TCAC Site Amenity Score

- **Amenity Score** - The Project Site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 21 points as a Large Family development, satisfying the 15-point TCAC maximum site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study (See Attachment #2 – Massing Study Site Plan)

- **Developable Space** – The City identified the parcels for analysis. They include: (1) parcel #26 (APN 740-121-26) and (2) three delineated portions within parcel #30 (APN 740-121-30). See attached aerial map. In combination, the site totals approximately 15.187 acres.

However, only 11.327 acres are developable due to favorable site conditions:

- Parcel #26 = 10.057 acres
- Parcel #30 = the sub-parcel that totals 1.27 acres

According to our in-house architect, the remaining two sub-parcels within parcel #30 are too steep to develop with affordable housing:

- The sub-parcel that totals 1.02 acres, and
 - The sub-parcel that totals 2.84 acres.
- **Unit Yield** – The site was upzoned to RPD80, which increased the allowable density to 80 dwelling units per acre. Our massing study maximized the allowable density to yield 906 large family units across five structures with five-stories of apartments over subterranean parking or five-stories over an on-grade podium garage over subterranean parking. Programming of the site also includes +/-8,700 sf of common areas.

- **Parking** – 1,360 spaces, at a ratio of 1.50 spaces/unit. One parking space is provided for each studio and 1-bedroom unit; 1.5 spaces for each 2-bedroom unit; and 2.0 spaces for each 3-bedroom unit.

Should you have any questions about this initial study, please let us know.

Sincerely,

Andrew Yick
Development Associate

Attachments: (1) TCAC Site Amenity Score; (2) Massing Study Site Plan; (3) Aerial Map Identifying Parcel #26 and Three Portions of Parcel #30

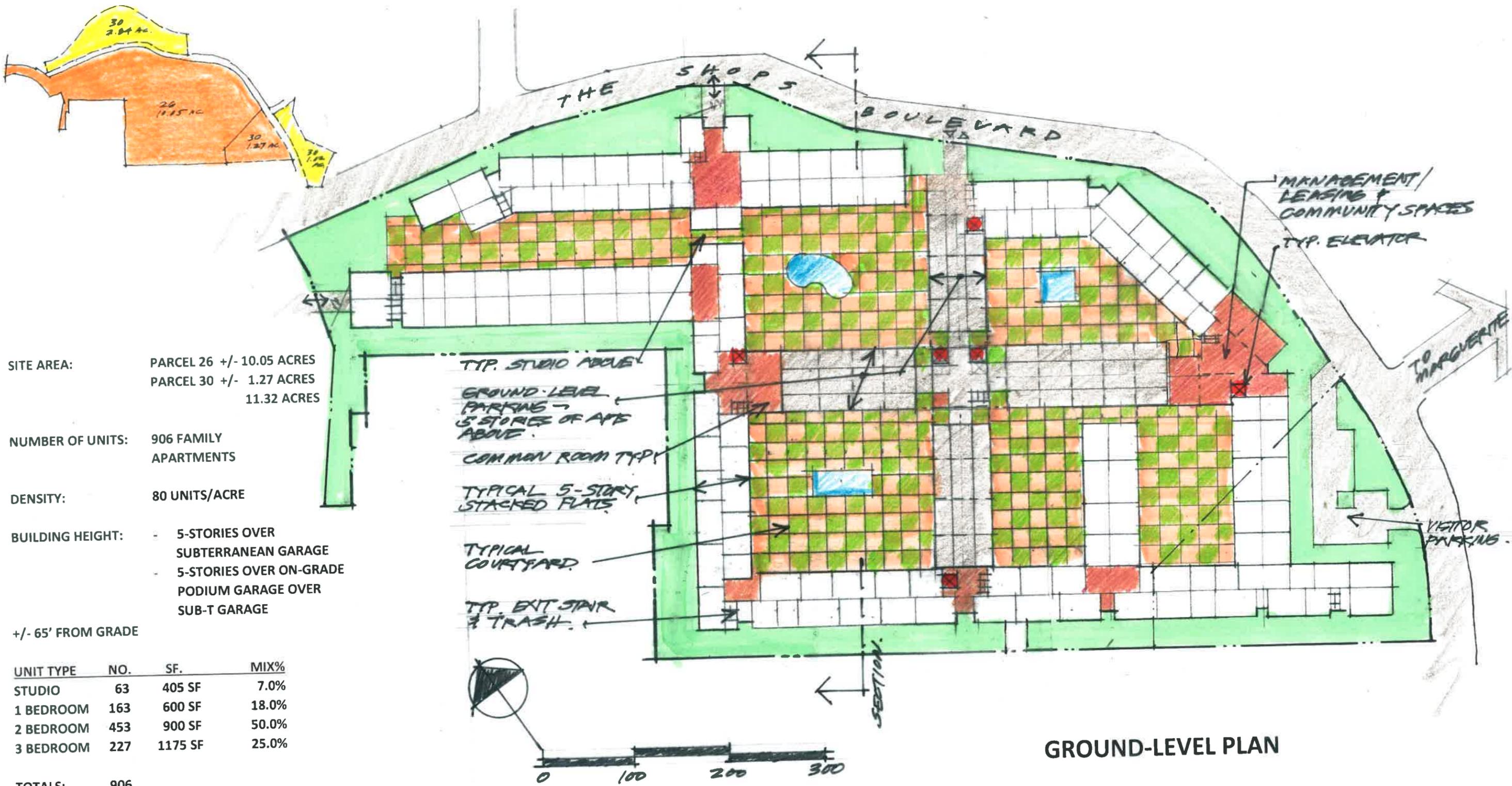
TCAC Site Amenity Score

The Shops - Macy's
300 The Shops Blvd., Mission Viejo, CA 92691

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 85/91	Crown Valley - Shops at Mission Viejo	0.04	4	7
Public Park	Granada Park	27122 Via Grande Mission Viejo, CA 92691	0.47	3	3
Public Library	IMC Library	28000 Marguerite Parkway Mission Viejo, CA 92692	0.57	2	3
Grocery Store	Crown Valley Marketplace	27771 Center Dr. Mission Viejo, CA 92692	0.51	4	5
Public School	Capistrano Valley HS	26301 Via Escolar Mission Viejo, CA 92692	0.95	3	3
Medical Clinic	Providence Mission Hospital Mission Viejo	27700 Medical Center Rd. Mission Viejo, CA 92691	0.13	3	3
Pharmacy	Mission Medical Pharmacy	27800 Medical Center Rd., Ste. 99 Mission Viejo, CA 92691	0.15	2	2
Total Score:				21	15⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.



SITE AREA: PARCEL 26 +/- 10.05 ACRES
 PARCEL 30 +/- 1.27 ACRES
 11.32 ACRES

NUMBER OF UNITS: 906 FAMILY APARTMENTS

DENSITY: 80 UNITS/ACRE

BUILDING HEIGHT: - 5-STORIES OVER SUBTERRANEAN GARAGE
 - 5-STORIES OVER ON-GRADE PODIUM GARAGE OVER SUB-T GARAGE

+/- 65' FROM GRADE

UNIT TYPE	NO.	SF.	MIX%
STUDIO	63	405 SF	7.0%
1 BEDROOM	163	600 SF	18.0%
2 BEDROOM	453	900 SF	50.0%
3 BEDROOM	227	1175 SF	25.0%

TOTALS: 906

RESIDENT PARKING:

STUDIO:	63 SPACES	(1:1)
1 BR:	163 SPACES	(1:1)
2 BR:	680 SPACES	(1.5:1)
3 BR:	454 SPACES	(2:1 +/-40% TANDEM)
TOTAL:	1,360 SPACES	(1.5 SPACES /UNIT)

COMMON AREAS: +/-8,700 SF

GROUND-LEVEL PLAN

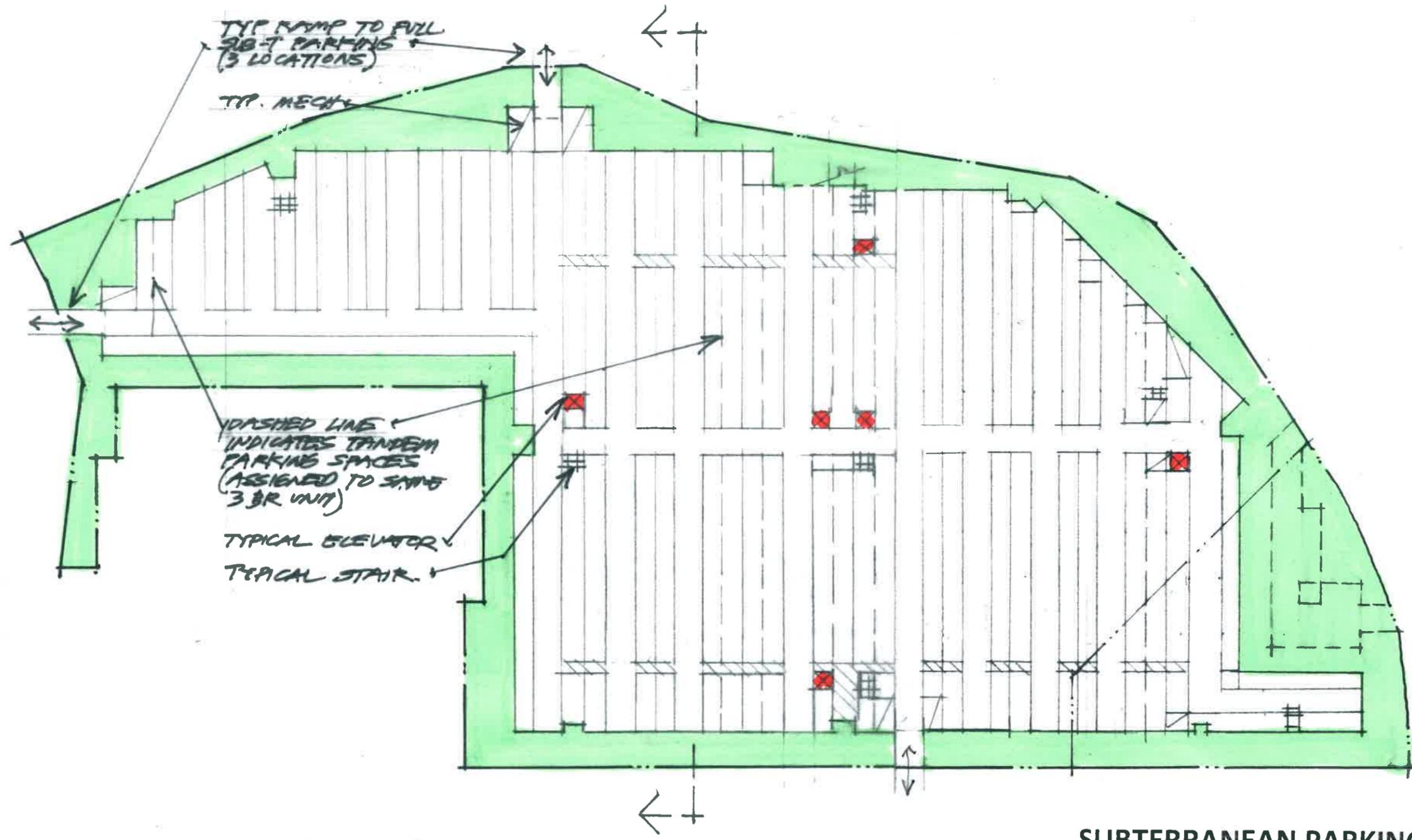
MACY PARCEL 26 & PARTIAL PARCEL 30

FAMILY APARTMENTS

MISSION VIEJO

RELATED CALIFORNIA

9-08-2022



SUBTERRANEAN PARKING PLAN

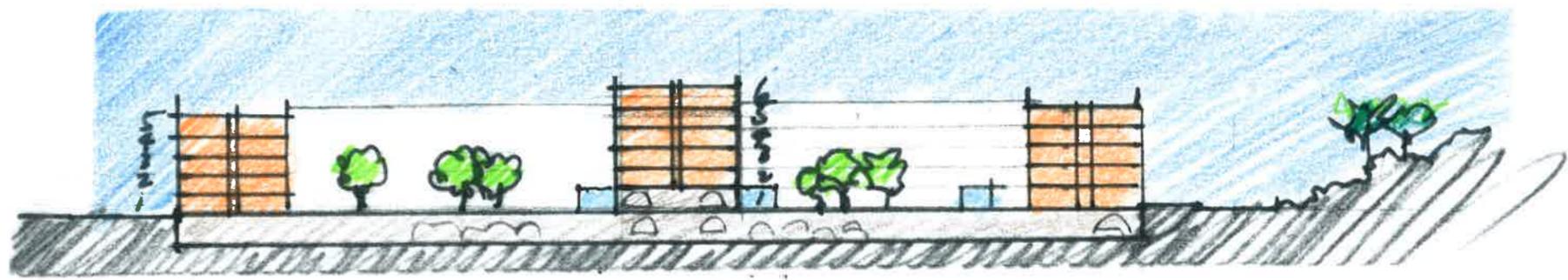
MACY PARCEL 26 & PARTIAL PARCEL 30

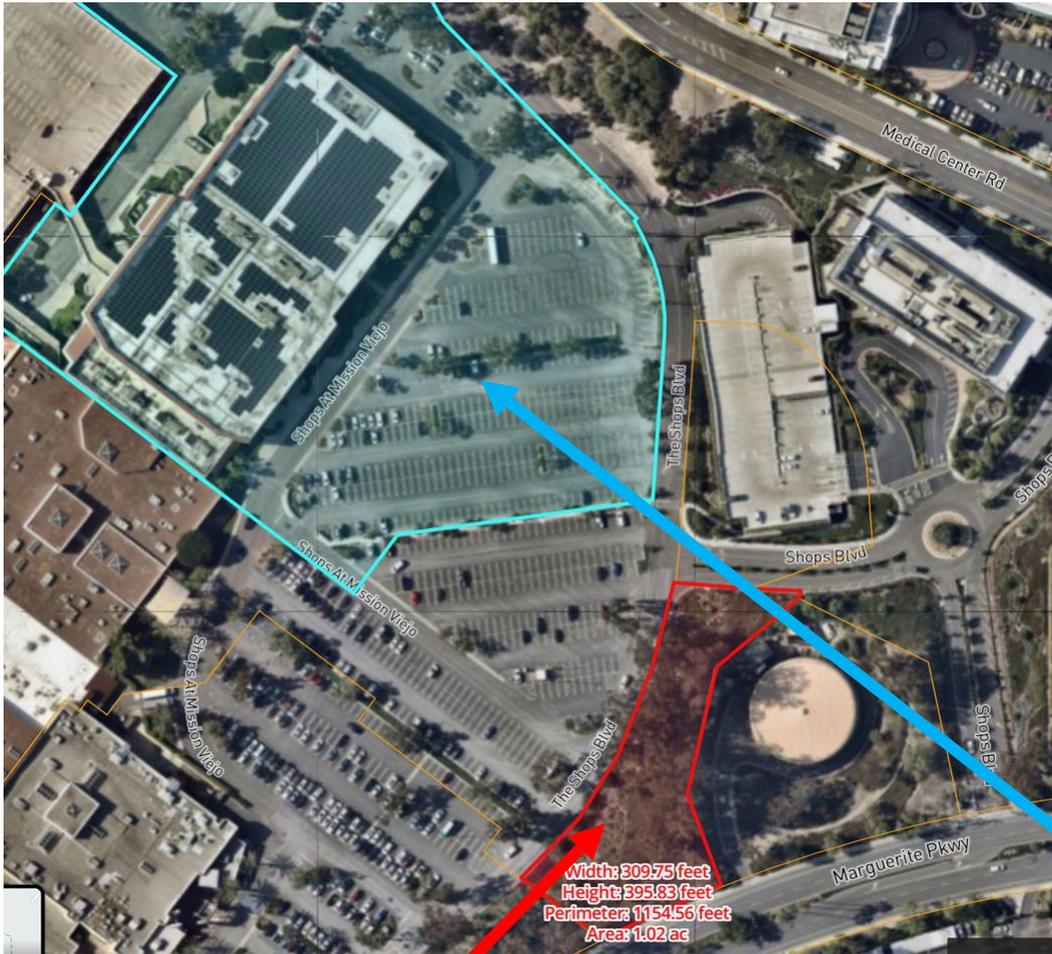
FAMILY APARTMENTS

MISSION VIEJO

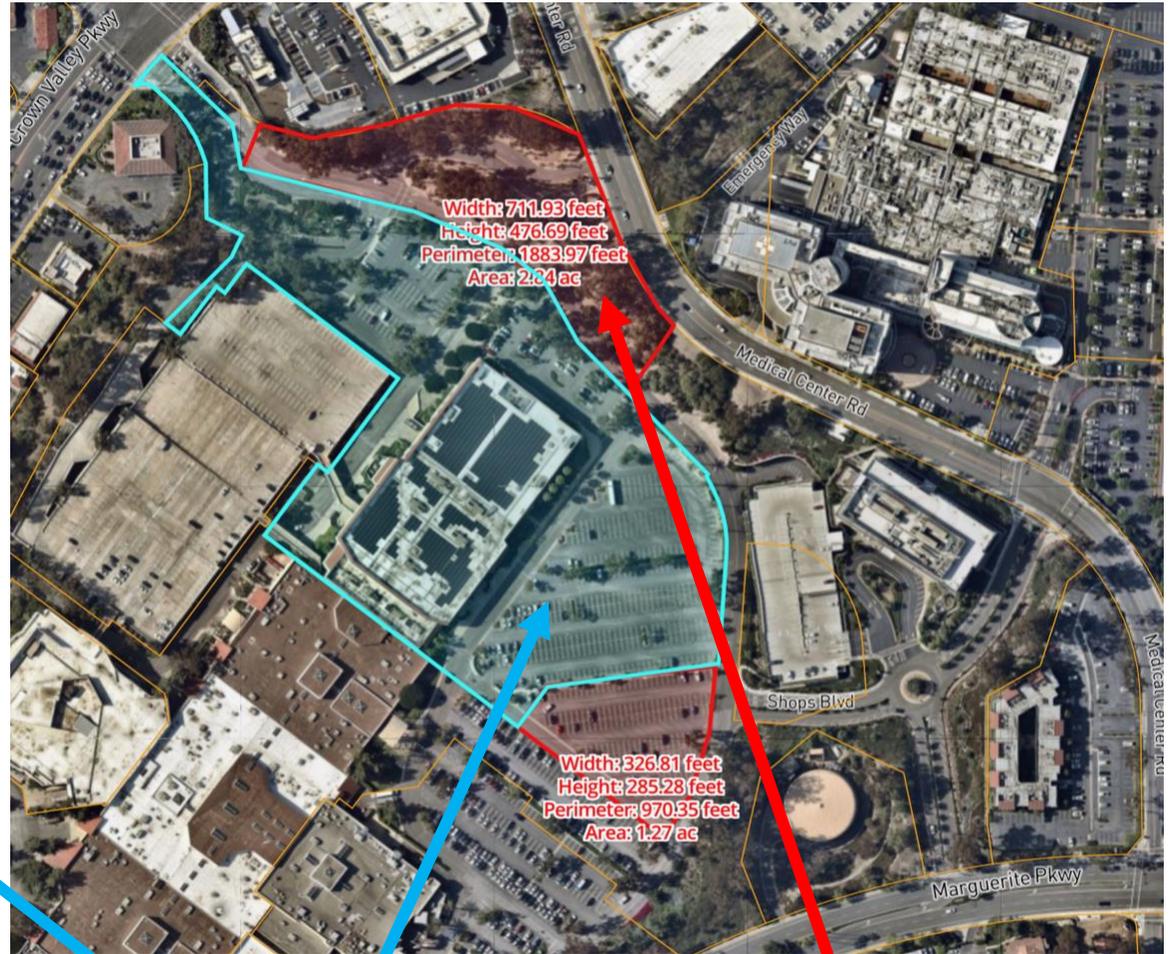
RELATED CALIFORNIA

9-08-2022





Portion of Parcel #30



Parcel #26

Portion of Parcel #30



May 4, 2022

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: Grace Church Parking Lot – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of Grace Church Parking Lot located at 26052 Trabuco Road (the “Project Site”). This initial assessment of the Project Site is composed of a California Tax Credit Allocation Committee (TCAC) site amenity score and a density study to determine the number of units that can be accommodated on the site.

1. TCAC Site Amenity Score

- Amenity Score - The Project Site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 16 points as a Large Family development, satisfying the 15-point TCAC maximum Site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study

- Developable Space - The Project Site is roughly +/-2.4 gross acres. The eastern 0.4 acres is covered by a hillside, with the remaining 2 acres being flat and easily developable.
- Unit Yield - A massing study site plan was prepared yielding 52 affordable family units at a density of 21.6 units per acre. (See Attachment #2 - Massing Study Site Plan.) Buildings are assumed to be 3-story, stacked flat structures, served by an elevator, reaching a maximum building height of roughly 45 feet. The site would need to be re-zoned through an entitlement process to permit the proposed residential development.
- Parking – All parking shown is surface parking with tuck-under, tandem and open-air space parking proposed. One parking space is provided for each studio and 1-bedroom unit; two spaces for each 2-bedroom unit; and 2 spaces for each 3-bedroom unit.

In conclusion, it is Related's opinion that the Grace Church Parking Lot could yield up to 52 affordable housing units. Should you have any questions about this initial study, please let us know.

Sincerely,

Joseph Baclit
Project Manager

Attachments

1. TCAC Site Amenity Score
2. Massing Study Site Plan

TCAC Site Amenity Score

Grace Church Parking Lot
26052 Trabuco Rd, Mission Viejo, CA 92691

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 89	Intersection of El Toro Blvd. & Jeronimo Rd., Mission Viejo, CA 92692	0.43	3	7
Public Park	Cherry Park	25801 Princeton Way Lake Forest, CA 92630	0.26	3	3
Grocery Store	Stater Bros.	22351 El Toro Rd. Lake Forest, CA 92630	0.47	5	5
Public School	Glen Yermo Elementary School	26400 Trabuco Rd. Mission Viejo, CA 92691	0.41	2	3
Medical Clinic	Memorial Care Medial Group	23512 Madero Mission Viejo, CA 92691	0.60	2	3
Pharmacy	CVS Pharmacy	25601 Jeronimo Rd. Mission Viejo	0.55	1	2
		Total Score:		16	15 ⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.



SITE AREA: +/-2.4 GROSS ACRES
 NUMBER OF UNITS: 52
 DENSITY: 21.6 UNITS/GROSS ACRE
 BUILDING HEIGHT: 32- 45 FEET

UNIT TYPE	SF.	NO.		MIX%	TOTALS	PARKING	
		FAMILY	PSH			REQ'D	PROV.
STUDIO	410	0	6	11.5%	6	6	6
1 BR/1 BA	600	14	6	38.5%	20	20	20
2 BR/1 BA	875	10	2	23.0%	12	24	24
3 BR/2 BA	1125	14	0	27.0%	14	28	28
TOTALS		38 UNITS	14 UNITS		52 UNITS	78	78 SPACES

COMMON AREAS: +/- 2700 SF 600 SF

MISSION VIEJO HOUSING SITES GRACE CHURCH SITE
RELATED CALIFORNIA

8-19-2021



August 30, 2022

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: BURLINGTON – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of the Burlington site (the “Project Site”), located at 28452 Marguerite Parkway, in Mission Viejo. This initial assessment of the Project Site is composed of a California Tax Credit Allocation Committee (TCAC) site amenity score and a density study to determine the number of units that can be accommodated on the site.

1. TCAC Site Amenity Score

- **Amenity Score** - The Project Site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 21 points as a Large Family development, satisfying the 15-point TCAC maximum site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study (See Attachment #2 – Massing Study Site Plan)

- **Developable Space** – The Project Site is roughly +/-6.90 acres.
- **Unit Yield** – The site was rezoned to RPD50, which increased the allowable density to 50 from 30 dwelling units per acre. Based on our analysis of current site conditions, we are able to maximize the fully allowable density of the site. Our massing study yielded 345 large family units, or 50 du/acres, within three structures that reflect four stories of apartments over on-grade podium (total of 5 stories). Programming of the site also includes +/-6,300 sf of common areas.
- **Parking** – 530 spaces, at a ratio of 1.53 spaces/unit. Parking shown is both surface and podium parking. One parking space is provided for each 1-bedroom unit; 1.5 spaces for each 2-bedroom unit; and two spaces for each 3-bedroom unit.

Should you have any questions about this initial study, please let us know.

Sincerely,

Andrew Yick
Development Associate

Attachments: (1) TCAC Site Amenity Score and (2) Massing Study Site Plan

TCAC Site Amenity Score

Burlington
 28452 Marguerite Pkwy, Mission Viejo, CA 92692

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 91 (Marguerite-Ent 28452 Burlington Coat Factory)	(in front of Burlington) Mission Viejo, CA 92692	0.03	4	7
Public Park	Coronado Park	26652 Las Ondas Dr. Mission Viejo, CA 92691	0.28	3	3
Public Library	IMC Library	28000 Marguerite Parkway Mission Viejo, CA 92692	0.17	3	3
Grocery Store	Amazon Fresh	26940 Crown Valley Pkwy Mission Viejo, CA 92691	0.83	4	5
Public School	Capistrano Valley HS	26301 Via Escolar Mission Viejo, CA 92692	0.22	3	3
Medical Clinic	Mission Heritage Medical Group (Providence affiliate)	26800 Medical Center Rd. Mission Viejo, CA 92691	0.71	2	3
Pharmacy	Walgreens Pharmacy	28311 Marguerite Pkwy B-1 Mission Viejo, CA 92692	0.14	2	2
		Total Score:		21	15 ⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.



SITE AREA: +/- 6.90 ACRES
 NUMBER OF UNITS: 345 FAMILY APARTMENTS
 DENSITY: 50 UNITS/ACRE
 BUILDING HEIGHT: 4-STORIES OVER ON-GRADE
 PODIUM PARKING +/-55 FEET

UNIT TYPE	NO.	SF.	MIX%
1 BEDROOM	68	600 SF	19.7%
2 BEDROOM	184	900 SF	53.3%
3 BEDROOM	93	1175 SF	25.0%

TOTALS: 345

RESIDENT PARKING:
 1 BR: 68 SPACES (1:1)
 2 BR: 276 SPACES (1.5:1)
 3 BR: 186 SPACES (2:1 +/-20% TANDEM)

TOTAL PARKING: 530 SPACES (1.53 SPACES /UNIT)

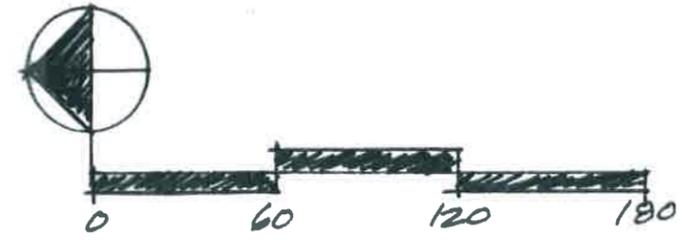
COMMON AREAS: +/-6,300 SF

MARGUERITE PARKWAY

SITE PLAN
BURLINGTON FAMILY APARTMENTS

MISSION VIEJO
 RELATED CALIFORNIA

8-17-2022



PARKING PLAN



November 1, 2022

Ms. Elaine Lister
Director of Community Development
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

RE: VISTA DEL LAGO APARTMENTS – Preliminary Site and Feasibility Analysis

Dear Elaine:

Per our Consulting Services Agreement dated August 1, 2021, The Related Companies of California is pleased to present the City of Mission Viejo with an affordable housing feasibility analysis of Vista del Lago Apartments (the “Project Site”), located at 21622 Marguerite Parkway, in Mission Viejo. This initial assessment of the Project Site is composed of a California Tax Credit Allocation Committee (TCAC) site amenity score and a density study to determine the number of units that can be accommodated on the site.

1. TCAC Site Amenity Score

- **Amenity Score** - The Project Site is ideally located from a TCAC site amenity standpoint, making it eligible to receive 20 points as a Large Family development, satisfying the 15-point TCAC maximum site Amenity Score. (See Attachment #1 - TCAC Site Amenity Score.)

2. Density Study (See Attachment #2 – Massing Study Site Plan)

- **Developable Space** – Overall, site conditions are favorable. Per the assessor’s parcel map, the site is +/- 33.813 acres. However, according to Tract Map 11277, the site encompasses +/- 29.410 acres. Since the assessor’s map most likely reflects gross acreage, which includes non-buildable acreage, we decided to base our yield study on the (net) acreage indicated in the tract map.
- **Unit Yield** – In 1987, the site was improved with a multifamily asset (Vista del Lago Apartments) consisting of 608 units, which represents a density of approximately 21 units per acre. However, in 2021, the City upzoned the site to Residential Planned Development (RPD) Zone 50 from RPD 30, which increased the allowable density to 50 units per acre.

Based on our analysis of current site conditions and the zoning of RPD 50, our massing study yields a total of 1,405 units, or 47.8 units per acre, of which 1,155 are family units and 250 units are designated for seniors. The building typologies span from 2-story townhouses to 5-stories on-grade. Our site planning includes +/-29,550 sf of common area and +/-11,000 sf of multi-use space. The entire site would be developed over multiple phases.

- **Parking** – 1,875 open parking spaces, at a ratio of 1.33 spaces/unit. One-half parking space is provided for each studio unit; one parking space for each 1-bedroom unit; 1.5 spaces for each 2-bedroom unit; and 2.0 spaces for each 3-bedroom unit.

Should you have any questions about this initial study, please let us know.

Sincerely,

Andrew Yick
Development Associate

Attachments: (1) TCAC Site Amenity Score and (2) Massing Study Site Plan

TCAC Site Amenity Score

Vista del Lago Apartments
21622 Marguerite Parkway, Mission Viejo, CA 92692

Site Amenity Type	Amenity Name	Address	Distance (miles)	Points Earned	Max Points Possible
Transit	Bus Route 85 (Los Alisos - Mustang Run)	Marguerite Parkway and Santa Marguerite Mission Viejo, CA 92692	0.03	4	7
Public Park	Eastbrook Park	21530 Eastbrook Way Mission Viejo, CA 92692	0.37	3	3
Public Library	IMC Library	28000 Marguerite Parkway Mission Viejo, CA 92692	7.00	0	3
Grocery Store	Ralphs	27730 Santa Margarita Parkway Mission Viejo, CA 92691	0.22	5	5
Public School	Trabuco Hills HS	27501 Mustang Run Mission Viejo, CA 92691	0.60	3	3
Medical Clinic	Share Our Selves Medical Health Center	27725 Marguerite Pkwy Mission Viejo, CA 92691	0.24	3	3
Pharmacy	CVS	27750 Santa Margarita Pkwy Mission Viejo, CA 92691	0.15	2	2
Total Score:				20	15⁽¹⁾

Footnotes:

(1) TCAC limits Site Amenity points to 15.

SITE AREA: 29.4 ACRES (INCLUDES INTERIOR STREET)
NUMBER OF UNITS: 1405 APARTMENTS
DENSITY: 47.8 UNITS/ACRE
BUILDING HEIGHTS: 2-STORY TOWNHOUSES
 3-STORY STACKED FLATS ON GRADE
 4-STORY STACKED FLATS OVER PODIUM
 5-STORIES ON-GRADE (SENIOR APARTMENTS)
PARKING: 1,875 SPACES (SOME TANDEM FOR 3 BR UNITS)
 1.33 SPACES/UNIT

PARCEL	UNITS	TYPES	MIX%	PARKING
1	220	STUDIO 20	9%	.5/UNIT = 10 SPACES
	FAMILY	1 BR 35	16.0%	1.0/UNIT = 35 SPACES
		2 BR 110	50.0%	1.5/UNIT = 165 SPACES
		3 BR 55	25.0%	2.0/UNIT = 110 SPACES
	TOTAL:	220 UNITS		(W/ TANDEM) 320 SPACES REQ'D 320 SPACES PROVIDED
				COMMON SPACE: +/-4,800 SF
2	250	STUDIO 16	6.4%	.5/UNIT = 8 SPACES
	SENIOR	1 BR 234	93.6%	1.0/UNIT = 234 SPACES
	TOTAL:	250 UNITS		242 SPACES REQ'D 242 SPACES PROVIDED
				COMMON SPACE: +/-5,000 SF
3	128	STUDIO 8	6.3%	.5/UNIT = 4 SPACES
	FAMILY	1 BR 24	18.8%	1.0/UNIT = 24 SPACES
		2 BR 64	50.0%	1.5/UNIT = 96 SPACES
		3 BR 32	25.0%	2.0/UNIT = 64 SPACES
	TOTAL:	128 UNITS		(W/ TANDEM) 188 SPACES REQ'D 188 SPACES PROVIDED
			COMMON SPACE: 5,400 SF	
4	144	STUDIO 8	5.5%	.5/UNIT = 4 SPACES
	FAMILY	1 BR 34	23.6%	1.0/UNIT = 34 SPACES
		2 BR 66	45.9%	1.5/UNIT = 99 SPACES
		3 BR 36	25.0%	2.0/UNIT = 72 SPACES
	TOTAL:	144 UNITS		(W/ TANDEM) 209 SPACES REQ'D 209 SPACES PROVIDED
			COMMON SPACE: +/-2,100 SF	

5	130	STUDIO 5	3.8%	.5/UNIT = 3 SPACES
	FAMILY	1 BR 26	20.0%	1.0/UNIT = 26 SPACES
		2 BR 65	50.0%	1.5/UNIT = 98 SPACES
	MIXED-USE	3 BR 34	26.2%	2.0/UNIT = 68 SPACES
TOTAL:	130 UNITS		(W/ TANDEM) 195 SPACES REQ'D 195 SPACES PROVIDED *	
			MULTI--USE SPACE: +/- 11,000 SF	

6	134	STUDIO 8	6.0%	.5/UNIT = 4 SPACES
	FAMILY	1 BR 36	26.8%	1.0/UNIT = 36 SPACES
		2 BR 56	41.8%	1.5/UNIT = 84 SPACES
		3 BR 34	25.4%	2.0/UNIT = 68 SPACES
TOTAL:	134 UNITS		(W/ TANDEM) 192 SPACES REQ'D 192 SPACES PROVIDED *	
			COMMON SPACE: +/-2,350 SF	

7	125	STUDIO 10	8.0%	.5/UNIT = 5 SPACES
	FAMILY	1 BR 28	22.4%	1.0/UNIT = 28 SPACES
		2 BR 55	44.0%	1.5/UNIT = 83 SPACES
		3 BR 32	25.6%	2.0/UNIT = 64 SPACES
TOTAL:	125 UNITS		(W/ TANDEM) 180 SPACES REQ'D 166 SPACES PROVIDED *	
			COMMON SPACE: 3,300 SF	

8	116	STUDIO 12	10.3%	.5/UNIT = 6 SPACES
	FAMILY	1 BR 18	15.5%	1.0/UNIT = 18 SPACES
		2 BR 57	49.2%	1.5/UNIT = 86 SPACES
		3 BR 29	25.0%	2.0/UNIT = 58 SPACES
TOTAL:	116 UNITS		(W/ TANDEM) 168 SPACES REQ'D 168 SPACES PROVIDED *	
			COMMON SPACE: +/-3,300 SF	

9	158	STUDIO 22	14.0%	.5/UNIT = 11 SPACES
	FAMILY	1 BR 36	22.8%	1.0/UNIT = 36 SPACES
		2 BR 60	38.0%	1.5/UNIT = 90 SPACES
		3 BR 40	25.2%	2.0/UNIT = 80 SPACES
TOTAL:	158 UNITS		(W/ TANDEM) 217 SPACES REQ'D 195 SPACES PROVIDED *	
			COMMON SPACE: +/- 3,300 SF	

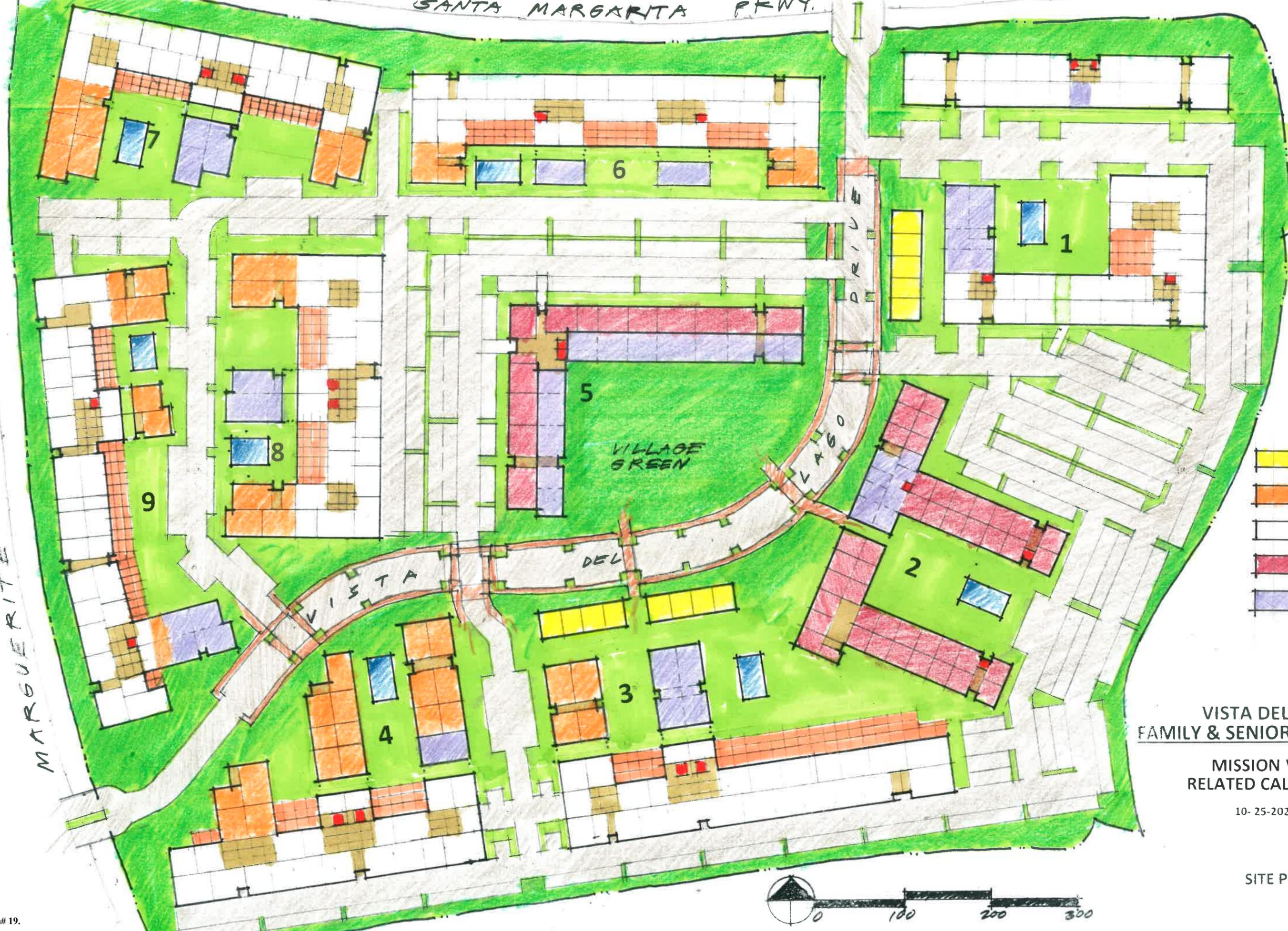
* = NOT ALL SPACES ARE LOCATED ON THIS SITE

VISTA DEL LAGO FAMILY & SENIOR APARTMENTS

MISSION VIEJO
RELATED CALIFORNIA

SANTA MARGARITA PKWY.

MARGUERITE PARKWAY



-  2-STORY TH. ON-GRADE
-  3-STORY ON-GRADE
-  4-STORY ABOVE PODIUM
-  5-STORY ON-GRADE
-  COMMON/MULTI-USE.

VISTA DEL LAGO
FAMILY & SENIOR APARTMENTS

MISSION VIEJO
RELATED CALIFORNIA

10-25-2022

SITE PLAN

SANTA MARGARITA PKWY.

PARKWAY

MARGUERITE

DRIVE

DEL

VISTA

PARALLEL PARKING

TUCK-UNDER PARKING

GAUGE PARKING

TANDEM PARKING

OPEN PARKING

7

6

1

5

8

9

2

3

4

VISTA DEL LAGO FAMILY & SENIOR APARTMENTS

MISSION VIEJO RELATED CALIFORNIA

10-25-2022

GROUND / PARKING LEVEL





Appendix D. Affirmatively Furthering Fair Housing

All Housing Elements due on or after January 1, 2021 must contain an Assessment of Fair Housing consistent with the core elements of the analysis required by the federal Affirmatively Furthering Fair Housing (AFFH) Final Rule of July 16, 2015. Under state law, affirmatively furthering fair housing means “taking meaningful actions, in addition to combatting discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics” (CDH AFFH Guidance document, April 2021 Update).

This appendix provides a detailed analysis of fair housing issues in Mission Viejo, and each section will discuss the site inventory as it relates to the geographic distribution of these issues. Other sections of the housing element also address these issues and are included in this appendix by reference.

A. Key Data and Background Information

(Note that data from the Orange County Analysis of Impediments to Fair Housing Choice, May 27, 2020, (County AI), American Community Survey (ACS), 2014-18, 2015-2019 and 2016-2020 series, US Census 2010 and 2020 data, the Southern California Association of Governments (SCAG) Pre-Certified Housing Data report and other data sources are used in the analysis below, depending on the topic being discussed. Using different data sources, covering different time periods, to address AFFH issues means that there may be small differences in totals or percentages discussed for the same variable, depending on which dataset is being used)

Orange County was established when it seceded from Los Angeles in 1889, with the county seat established in Santa Ana. Transportation innovation was important in the county’s development, including trolley connections from Santa Ana and Newport Beach to Los Angeles, as well as major roads such as State Route/US Route 101 in the 1920s, much of which is now Interstate 5.

Agriculture and oil extraction were early drivers of the county’s economy, but after World War II, the growth of the aerospace and manufacturing industry and improved communications connections such as I-5 caused the population to grow significantly as suburbanization accelerated. The opening of Disneyland in the mid-1950s established the county as a major tourist destination. The southern part of the county began to grow in the 1960s with a series of master planned communities developed, including the City of Mission Viejo. As of the 2020 Census, Orange County has 3.19 million inhabitants, growing by 176,757 since the 2010 Census (5.9%). Statewide growth was 6.1%.

In 1965, after 2 years of master planning, the first homes were constructed on what was then unincorporated county land but would ultimately become Mission Viejo. In 1988, the planned community of Mission Viejo was incorporated, and today, the city is essentially fully built out.

Both the County AI and the Housing Needs Assessment in Section II of this Housing Element examine key demographic factors for Mission Viejo, neighboring cities, and the County as a whole. Additional regional and local analysis is provided in this Appendix. Key data points include:

- Between 2010 and 2020, Mission Viejo’s total population grew from 93,305 to 93,653 (+348, +0.4%). Table D-1 shows the city’s population growth relative to neighboring cities, and the county. Mission Viejo had the second lowest growth rate of these cities, which with the exception of Lake



Forest, ranged from 0.4% to 3.4%, lower than the county’s overall growth rate of 5.9%. Lake Forest’s growth was substantially higher, at 11%, due to a burst of new residential development in the mid/late 2010s, following annexation of new territory in the 2000s, where new residential neighborhoods were approved for the Baker Ranch, Portola Center, Serrano Summit and Teresina neighborhoods.

Table D-1 - Total Population Growth, 2010-2020, Mission Viejo and Neighboring Cities

	2010 Census	2020 Census	Change	% Change
Laguna Hills	30,344	31,374	1,030	3.4%
Laguna Niguel	62,979	64,355	1,376	2.2%
Lake Forest	77,264	85,858	8,594	11.1%
Rancho Santa Margarita	47,853	47,949	96	0.2%
San Juan Capistrano	34,593	35,196	603	1.7%
Mission Viejo	93,305	93,653	348	0.4%
Orange County	3,010,232	3,186,989	176,757	5.9%

- The proportion of Mission Viejo’s population over 65 was 21.3%, based on ACS 2020 series estimates – the highest proportion among its neighboring cities (see Table D-2). Lake Forest and Rancho Santa Margarita in particular have smaller older populations while Mission Viejo’s other neighboring cities (San Juan Capistrano, Laguna Hills and Laguna Niguel) are similar to Mission Viejo. Orange County’s proportion was 15.3%.

Table D-2 - % Persons 65+, 2010-2020, Mission Viejo and Neighboring Cities

	2010 ACS	2020 ACS
Laguna Hills	11.9%	17.9%
Laguna Niguel	12.3%	18.4%
Lake Forest	9.1%	13.5%
Rancho Santa Margarita	5.2%	9.5%
San Juan Capistrano	14.6%	18.0%
Mission Viejo	13.2%	21.3%
Orange County	11.2%	15.3%

- Mission Viejo had a population classified as 66.87% White, 16.94% Hispanic, and 10.62% Asian/Pacific Islander (per the County AI – summarized below in Table D-3 for largest racial/ethnic groups only). Trend analysis in the County AI shows that Mission Viejo’s White population has been falling since 1990, when it was 83.86%, its Hispanic proportion has doubled from 8.18%, and the Asian/Pacific Islander population has also grown substantially, from a proportion of 6.62%. Mission Viejo’s surrounding cities have White proportions ranging from 54% (Lake Forest) to 66.5% (Laguna Niguel), and Hispanic proportions ranging from 16.84% (Laguna Niguel) to 36.37% (San Juan Capistrano). The County as a whole is significantly less white than these Southern Orange County cities (41.4%), and, apart from San Juan Capistrano, significantly more Hispanic (34.2%).



Table D-3 - Population by Race, County AI, 2020

	White	Black	Hispanic	Asian/PI
Laguna Hills	58.58%	2.39%	20.87%	14.59%
Laguna Niguel	66.48%	1.89%	16.84%	10.11%
Lake Forest	53.98%	1.80%	24.52%	15.57%
Rancho Santa Margarita	63.36%	2.47%	19.57%	10.47%
San Juan Capistrano	57.30%	0.09%	36.37%	3.30%
Mission Viejo	66.87%	1.36%	16.94%	10.62%
Orange County	41.40%	1.57%	34.20%	19.78%

- Per the 2019 series ACS, 29.7% of Mission Viejo’s households had children, compared to 31.5% for the County. Neighboring cities were in the range of 28.3% (Laguna Niguel) to 34.3% (Rancho Santa Margarita). This reflects in part the age structure of the cities; as has already been noted, Rancho Santa Margarita had by far the smallest proportion of its population over 65.
- Between 2010 and 2020 (U.S. Census), Mission Viejo’s housing stock grew by 2.2%, a lower rate than all but one of the surrounding cities, compared to 5% countywide (Table D-4).

Table D-4 - Total Housing Units by City, 2010 and 2020

Total Units	2010 Census	2020 Census	Change	% Change
Laguna Hills	11,046	11,426	380	3.4%
Laguna Niguel	25,312	27,281	1,969	7.8%
Lake Forest	27,088	30,570	3,482	12.9%
Rancho Santa Margarita	17,260	17,606	346	2.0%
San Juan Capistrano	11,940	12,319	379	3.2%
Mission Viejo	34,228	34,982	754	2.2%
Orange County*	1,048,907	1,101,244	52,337	5.0%

* Orange County’s 2020 data is an estimate from ACS.

- The proportion of owned housing units in Mission Viejo versus rented is generally in line with neighboring cities, at 77%-23% (see Table D-5). Countywide, the breakdown is 57%-43%. (source: www.censusreporter.org)

Table D-5 - Total Owner-Occupied and Renter Occupied Units

Owner-Renter	% Owner	% Renter	% Occ.	% Vacant
Laguna Hills	70%	30%	96%	4%
Laguna Niguel	69%	31%	93%	7%
Lake Forest	70%	30%	95%	5%
Rancho Santa Margarita	73%	27%	98%	2%
San Juan Capistrano	75%	25%	93%	7%
Mission Viejo	77%	23%	96%	4%
Orange County	57%	43%	94%	6%

There are a total of 26 census tracts within the City of Mission Viejo. Some tracts are shared with neighboring cities and are marked with an asterisk in tables. Figure D-1 shows the tract boundaries.

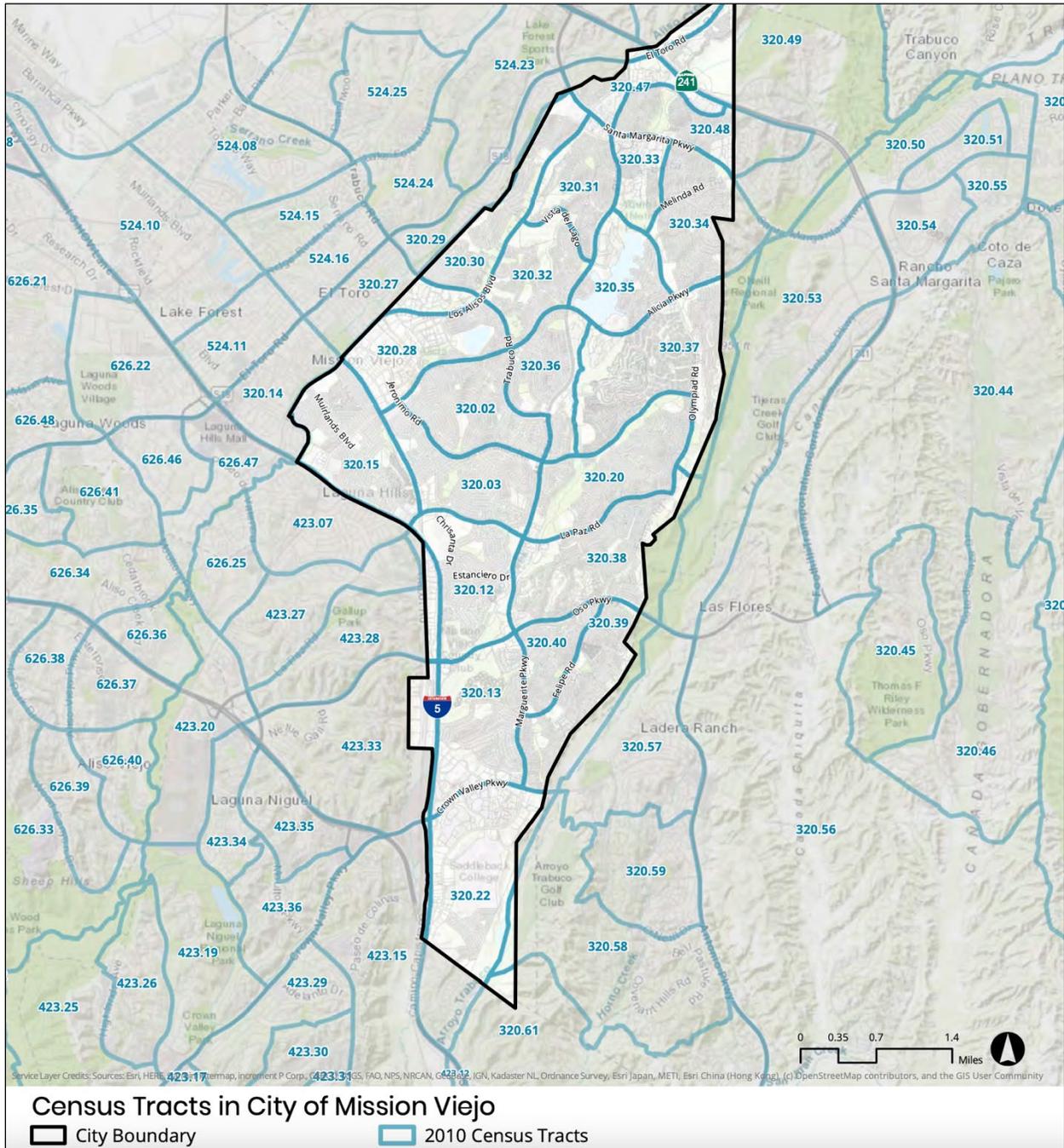


Appendix D. Assessment of Fair Housing





Figure D-1 - Census Tracts in Mission Viejo





B. Fair Housing Enforcement and Outreach Capacity

Federal fair housing laws prohibit discrimination based on: race, color, religion, national origin, sex/gender, handicap/disability, and familial status. Specific federal legislation and court rulings include:

- The Civil Rights Act of 1866 – covers only race and was the first legislation of its kind
- The Federal Fair Housing Act 1968 – covers refusal to rent, sell, or finance
- The Fair Housing Amendment Act of 1988 – added the protected classes of handicap and familial status
- The Americans with Disabilities Act (ADA) – covers public accommodations in both businesses and in multi-family housing developments
- Shelly v. Kramer 1948 – made it unconstitutional to use deed restrictions to exclude individuals from housing
- Jones v. Mayer 1968 – made restrictive covenants illegal and unenforceable

California state fair housing laws protect the same classes as the federal laws with the addition of marital status, ancestry, source of income, sexual orientation, and arbitrary discrimination. Specific State legislation and regulations include:

- Unruh Civil Rights Act – extends to businesses and covers age and arbitrary discrimination
- California Fair Employment and Housing Act (Rumford Act) – covers the area of employment and housing, with the exception of single-family houses with no more than one roomer/boarder
- California Civil Code Section 53 – takes measures against restrictive covenants
- Department of Real Estate Commissioner’s Regulations 2780-2782 – defines disciplinary actions for discrimination, prohibits panic selling and affirms the broker’s duty to supervise
- Business and Professions Code – covers people who hold licenses, including real estate agents, brokers, and loan officers.

The County, including the City of Mission Viejo, has committed to complying with applicable federal and State fair housing laws to ensure that housing is available to all persons without regard to race, color, religion, national origin, disability, familial status, or sex as outlined in the County’s 2020 Analysis of Impediments to Fair Housing Choice (2020 AI).

1. Orange County

To set Mission Viejo’s Fair Housing Enforcement and Outreach Capacity in context, the 2020 Orange County AI reports that the Fair Housing Council of Orange County (FHCO) received 363 allegations of housing discrimination between 2015 and 2019 within the County of Orange Urban County Jurisdiction (which includes 16 of the County’s 34 incorporated cities, and 16 unincorporated areas, with a population of around 545,000 and 193,000 households). Of those allegations, 179 cases were opened for further investigation and/or action.



According to the 2020 AI, there are two pending administrative complaints or lawsuits against the locality alleging fair housing violations or discrimination, neither of which were filed against Mission Viejo:

- *Watts v. City of Newport Beach*, 790 Fed.Appx. 853 (9th Cir. 2019): The City of Newport Beach was recently sued by a young woman who alleged excessive force, unlawful entry, and unlawful arrest. Upon the decline of her card for a taxi fare, the driver called the police, who threatened to take Watts to jail if she could not produce additional funds to pay. She asked to go to her apartment to get another form of payment, and officers escorted her. When she objected to their entry into her apartment to retrieve the funds, they handcuffed her to the point of injury to her wrists, kicked her legs out from under her, pushed her head into a wall, and took her to jail overnight. The 9th Circuit ruled affirmed that officers were not covered by qualified immunity for unlawful arrest and unlawful entry, but that they were covered for the excessive force claim.
- *A. K. H by and through Landeros v. City of Tustin*, 837 F.3d 1005 (9th Cir. 2016): In 2014, the city of Tustin was sued by the family of a minor who was shot and killed by a Tustin police officer. The city moved for summary judgement based on qualified immunity. The district court denied that motion. On appeal, the 9th Circuit affirmed the lower court decision, holding that the shooting violated the 4th Amendment, and that the officer was not covered by qualified immunity.

2. Mission Viejo

As outlined in the Constraints section of the Housing Element, Mission Viejo has numerous procedures in place to address potential impediments to fair housing choice to persons with disabilities and other special needs populations. The City contracts with the Fair Housing Foundation (FHF), which currently serves 24 cities in Los Angeles and Orange counties, to implement the regional Fair Housing Plan and to offer outreach, fair housing services and tenant/landlord counseling to residents. The City’s website provides links to the fair housing provider and applicable services. According to the 2020 County AI, the FHF provided fair housing services to 292 Mission Viejo households under the previous County AI, dealing with general housing issues and allegations of discrimination.

Table D-6 below summarizes annual reports from FHF, showing demographics for clients served, the number of Fair Housing Cases opened, and their status.

Table D-6 - Fair Housing Data for Mission Viejo (Fair Housing Foundation Annual Reports, 2014-15 through 2020-21)

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-2020	2020-2021
Total Cases Opened	1	1	1	0	2	0	3
Age Related							1
Disability Related		1	1				
Race Related					1		1
National Origin Related					1		
Income Related							1
Findings							
Inconclusive	1						
No Evidence		1	1		1		2
Pending					1		1



	2014-15	2015-16	2016-17	2017-18	2018-19	2019-2020	2020-2021
Clients Served: Race/Ethnicity	86	103	71	57	63	48	56
Asian	3	11	3	3		5	5
Black		8	3	3	1	2	1
Hispanic	16	22	22	11	11	6	11
White	67	62	43	40	51	35	39
Clients Served: Income*	86	103	71	57	63	48	56
High / Above Moderate	14	18	9	8	13	4	4
Medium	9	23					15
Low	32	27	18	16	10	17	12
Very Low	31	35	19	22	12	9	
Extremely Low			25	11	28	18	25
Clients Served: Special Groups	19	32	24	24	17	24	24
Female Head of Household	7	15	7	9	7	10	7
Disabled	9	8	9	6	6	8	6
Senior	3	9	8	9	4	6	11
Type of Caller	83	93	65	50	62	46	50
City Staff							1
Community Organization				3		4	
Homebuyer							
In-Place Tenant	64	72	50	37	51	33	39
Landlord/Manager/Mgmt Company	3	10	6	7	1	2	6
Other	10	9	3	2	6	3	4
Property owner	6	12	11	4	4	5	4
Realtor	1			1		1	1
Rental Home Seeker	2		1	3	1		1

*2014-15, 2015-16 and 2020-21: Income categories were Very Low, Low, Medium, High
2016-17 through 2019-2020: Income categories were Extremely Low, Very Low, Low, Above Moderate
The income categories may not be directly comparable over all seven years.

Around 1-3 cases related to Mission Viejo are opened each year by FHF, and in general the cases are closed with a status of No Evidence to sustain the case. There are approximately 33,000 households in Mission Viejo, so the case number is very small. In recent years, FHF has served around 50 to 60 clients in Mission Viejo each year, with approximately 65% to 70% of the clients being White (citywide demographics are 67% White), and the clientele is concentrated in lower income categories, as would be expected. Tenants are the most common type of client served by FHF, and roughly half of the clients tend to be in categories of special need, such as female-headed households, disabled, or senior households.

HUD data for Fair Housing Enforcement and Outreach Case data between 2013 and 2021 from the AFFH Data Viewer shows that Mission Viejo had 0.13 inquiries per 1,000 residents, a very low rate. Most southern Orange County cities had a similar rate of inquiries, although the following nearby cities exhibited higher rates: Aliso Viejo (0.37), Laguna Niguel (0.31), San Clemente (0.29) and Dana Point (0.35).

As of April, 2022, Mission Viejo had 236 Section 8 Housing Choice Vouchers (HCVs). Table D-7 below shows how this compares to neighboring cities, and as a percentage of total housing units.



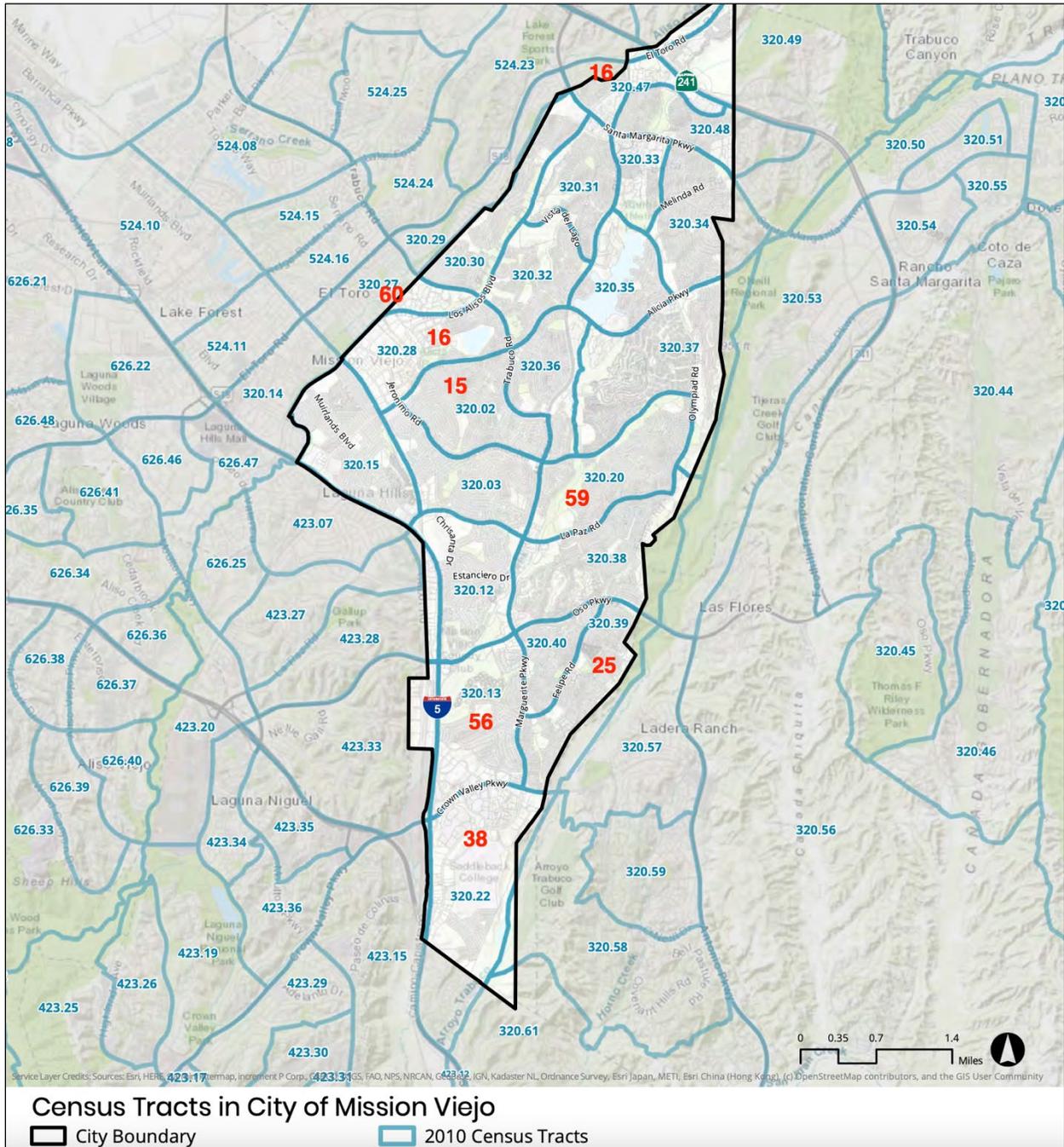
Table D-7 - 2020 SCAG Housing Unit Totals and Housing Choice Vouchers

	Units	HCV	HCV as % of Total Units
Laguna Hills	11,426	19	0.2%
Laguna Niguel	27,281	78	0.3%
Lake Forest	30,570	164	0.5%
Rancho Santa Margarita	17,606	109	0.6%
San Juan Capistrano	12,319	52	0.4%
Mission Viejo	34,982	236	0.7%

The 236 Housing Choice Vouchers (HCVs) in Mission Viejo represent 0.7% of the total housing units. This is a higher rate than any neighboring city. The AFFH Data and Mapping Resources website using data that was updated in 2022 at the Census Tract level reveals that the Housing Choice Vouchers are located in 8 of Mission Viejo's 26 Census Tracts as shown in Figure D-2 below. Many of the Mission Viejo's HCVs are in the southern section of the city, in tracts 320.13, 320.22 and 320.39, and the largest single concentration is 59 HCVs in Tract 320.20 in the central-eastern part of the city. Tracts 320.27 and 320.47 are shared with Lake Forest, so it is impossible to know how many of the HCVs recorded for those tracts (60 and 16, respectively) are located within Mission Viejo.



Figure D-2 - Housing Choice Voucher Count by Census Tract



The Orange County 2020 AI reports that there are very few Project-Based Section 8 units or other subsidized multifamily units with more than one bedroom to meet the large number of households in the county experiencing overpayment burden. A total of 2,286 Housing Choice Vouchers were utilized in the County, equating to just over 1% of the total units in Orange County; with 236 Housing Choice Vouchers, Mission Viejo has around 10% of the County total, while accounting for just 3% of the total County population. As has been seen with various demographic indicators in this section, there is a north-south



difference in utilization of Housing Choice Vouchers in the county, which the report notes are concentrated in the Garden Grove-Westminster area and along the I-5 corridor in the northern section of Orange County.

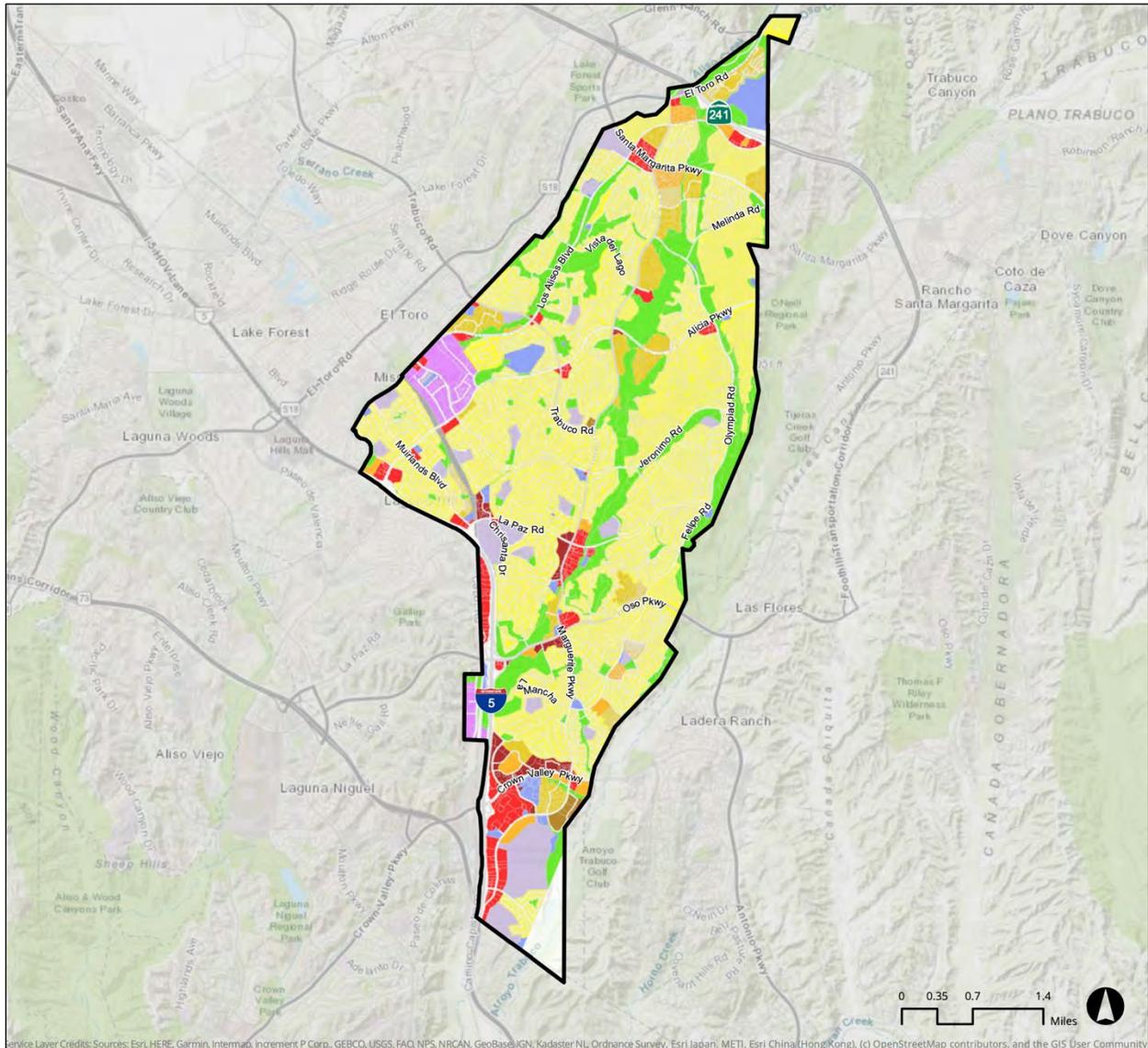
A. Integration and Segregation

As a master-planned community initially developed in the 1960s, Mission Viejo's land is overwhelmingly occupied by single-family housing development – see Figure D-3 below (source: SCAG Data/Map Book, Draft, November 2019). The majority of the land area within the City was developed with single-family homes built between the 1960s and 1990s. Apartments, townhomes and condominiums tend to be located along Marguerite Parkway, the City's major north-south thoroughfare, especially in the northern half of the City, and along Crown Valley Parkway in the south.

Commercial development has concentrations in the southern part of the City, along Interstate 5, and another focus on the border in the west with the City of Lake Forest at Los Alisos Boulevard and Jeronimo Road, and close to the rail line, with and Amazon Distribution Center, Target, and automotive services dominating. There are also smaller commercial centers at major intersections serving the residential communities. The City is essentially built out and has very little vacant land suitable for housing development. Opportunities for new housing development to meet the City's RHNA therefore have a focus on redevelopment of existing commercial areas, as well as two existing apartment communities, and the one extensive area of undeveloped land left in the city.



Figure D-3 - Land Use, City of Mission Viejo



General Plan Land Use in City of Mission Viejo (2016 SCAG Land Use Codes)

- | | | |
|---|---|--|
| ■ Single Family Residential | ■ Facilities | ■ Open Space and Recreation |
| ■ Multi-Family Residential | ■ Education | ■ Agriculture |
| ■ Mobile Homes and Trailer Parks | ■ Military Installations | ■ Vacant |
| ■ Mixed Residential | ■ Industrial | ■ Water |
| ■ Rural Residential | ■ Transportation, Communications, and Utilities | ■ Specific Plan |
| ■ General Office | ■ Mixed Commercial and Industrial | ■ Undevelopable |
| ■ Commercial and Services | ■ Mixed Residential and Commercial | ■ Unknown |

Data Source: City of Mission Viejo, SCAG, 2018 | Map Created: 6/5/2019

Disclaimer: The information shown on this map reflect jurisdiction's input submitted during the Local Input and Envisioning Process for the Connect SoCal. SCAG shall not be responsible for user's misuse or misrepresentation of this map. For the details regarding the sources, methodologies and contents of this map, please refer to the SCAG Data/Map Book or contact RTPLocalInput@scag.ca.gov.



3. Race and Ethnicity

Table D-8 shows the racial/ethnic makeup of Mission Viejo by Census Tract in 2010, with the highest proportions of each group highlighted in yellow, and the lowest proportions in green. Figure D-4 shows the racial demographics (percent Non-White) by block group in Mission Viejo (ACS 2018 series), plus the location of the Sites Inventory, and Figure D-5 shows the same information for the county as a whole, to show how Mission Viejo’s racial demographics fit in its regional context. Figure D-6 shows the county’s demographics in 2010 (source: U.S. Census) as means of highlighting change over time. Figure D-7 and Figure D-8 show the Mission Viejo’s diversity index, and the pattern for the County. Maps in this section of the Housing Element have been created using the AFFH Data Viewer tool, unless indicated otherwise.

As shown in these tables and figures, the most diverse portions of the city are in the south (represented by tracts 320.22 and 320.13, and along the southern part of Mission Viejo’s border with Lake Forest (tracts 320.15 and 320.28, plus tract 320.27, which is shared with Lake Forest).

The Diversity Index (Figures 7 and 8) is another method of quantifying segregation, measured on a scale of 0 to 100, where 0 represents a totally segregated geography, and 100 a totally integrated geography. Figure D-7 shows that in Mission Viejo, most of the city is in the mid to upper ranges of the index, representing more integrated neighborhoods. On this measure, the most diverse parts of the city are in the south (which may in part be influenced by the location of Saddleback College), and in the northwest, along the city line with Lake Forest. In contrast, at the county level (Figure D-8), the northern part of the county has many sections that are highly diverse on this measure, in part due to much higher proportions of the Hispanic population in the north.

Also at the county level, it can be readily seen in Figure D-5 that the southern part of Orange County has higher proportions of White residents than the northern part of the county, but Figure D-6, showing the racial demographics in 2010, also reveals that the southern portion of the county is changing, with many sections of Mission Viejo moving from the under 20% nonwhite category in the 2010 map to the 21% to 40% category in just 8 years.

As shown in Table D-8, the percentage of Black residents by Census Tract is fairly uniform, and small, across the city, with the highest proportion (3.7%) in tract 320.47 at the northern edge of the city. The Tracts with the largest Asian/Pacific Islander populations (320.28 with 15.3% and 320.37 with 20.2%) are on the west and east sides of the city, respectively, and are not contiguous. The Tracts with the largest Hispanic population are 320.22 (50%) in the southernmost tip of the city, and 320.27 (42%), a tract which is largely located in Lake Forest. According to the US Census, Mission Viejo’s Non-White population has doubled since 1990, increasing from 16.14% to 33.13% in the 2020 Census. As a comparison, the county’s Non-White population has slightly more than doubled, from 23.85% to 58.6%.

Table D-8 - Race/Ethnicity by Census Tract (2010)

Census Tract	% Hispanic	% White	% Black	% Asian/ Pacific Islander	% Multi Racial
320.02	18.3%	68.7%	1.5%	8.3%	3.0%
320.03	16.6%	71.2%	0.5%	8.2%	3.2%
320.12	15.3%	73.1%	1.7%	5.9%	3.6%
320.13	17.9%	66.9%	2.3%	7.3%	5.3%
320.15	22.8%	57.5%	1.7%	13.8%	3.8%
320.20	19.1%	66.1%	1.2%	8.8%	4.6%



Census Tract	% Hispanic	% White	% Black	% Asian/ Pacific Islander	% Multi Racial
320.22*	50.0%	37.8%	1.6%	7.2%	3.0%
320.27*	42.0%	37.8%	1.1%	15.3%	3.2%
320.28	31.8%	49.2%	1.9%	12.8%	3.9%
320.30	24.1%	59.7%	1.3%	10.8%	3.7%
320.31	18.9%	64.6%	1.1%	10.1%	4.6%
320.32	18.6%	65.8%	0.7%	9.5%	5.1%
320.33	24.7%	53.8%	2.1%	14.4%	4.6%
320.34	10.5%	70.4%	1.5%	12.6%	4.4%
320.35	10.4%	76.3%	1.3%	7.6%	4.2%
320.36	18.3%	66.6%	0.7%	9.8%	4.2%
320.37*	7.4%	79.3%	1.2%	9.0%	2.9%
320.38*	11.7%	61.6%	0.8%	20.2%	5.2%
320.39*	22.3%	58.9%	0.9%	12.7%	5.0%
320.40	11.1%	71.8%	1.0%	12.1%	3.8%
320.47*	22.7%	58.0%	3.7%	10.0%	4.4%
320.48*	14.9%	66.8%	1.6%	12.7%	3.8%
320.49*	14.7%	62.8%	1.9%	15.6%	4.6%
423.28*	6.9%	74.2%	0.8%	12.2%	5.2%
423.33*	7.4%	72.7%	0.9%	14.7%	4.1%
524.28*	15.3%	66.0%	1.3%	11.8%	5.3%



Figure D-4 - Racial Demographics by Block Group, & Site Inventory Location, Mission Viejo, 2018

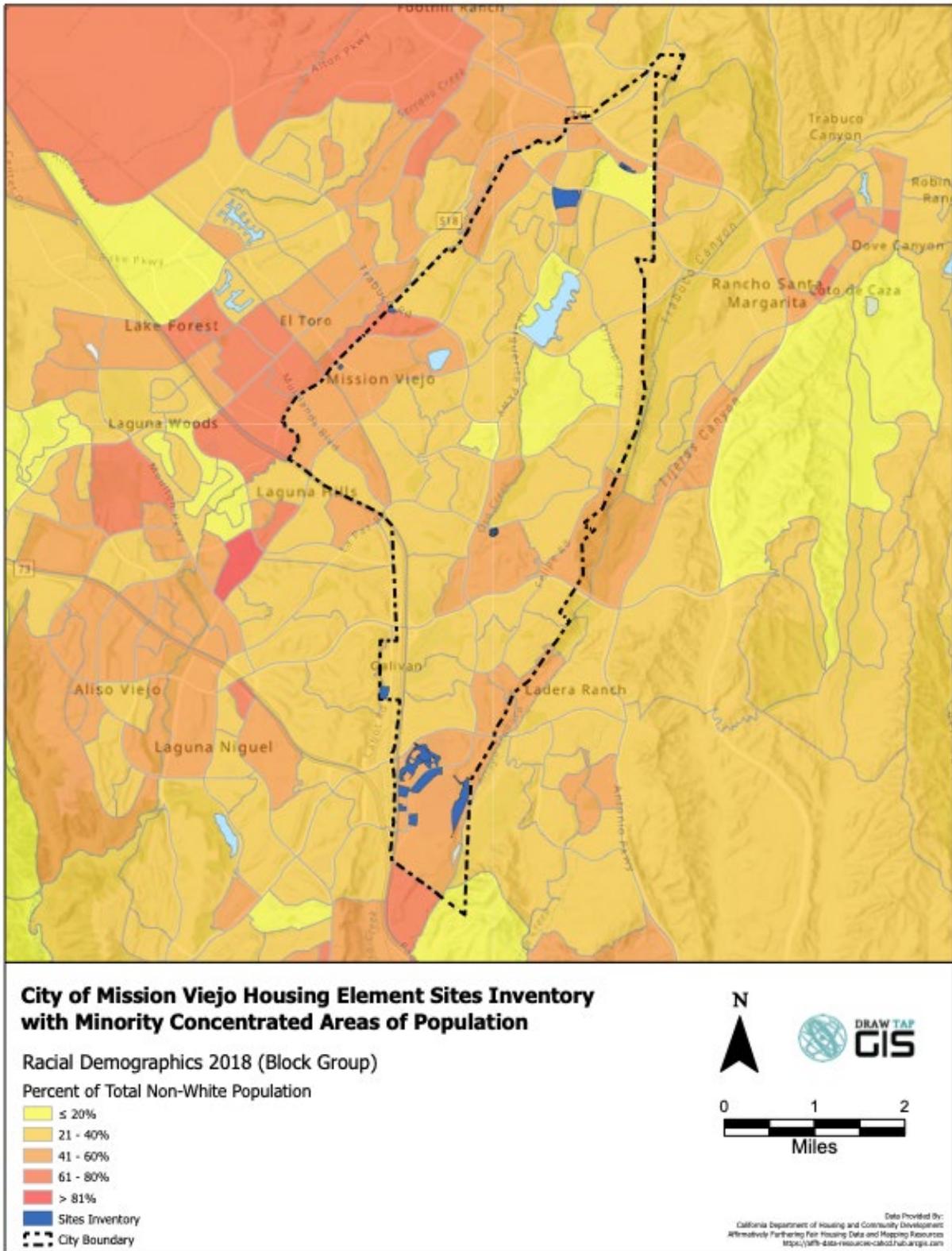




Figure D-5 - Racial Demographics by Block Group, Orange County, 2018

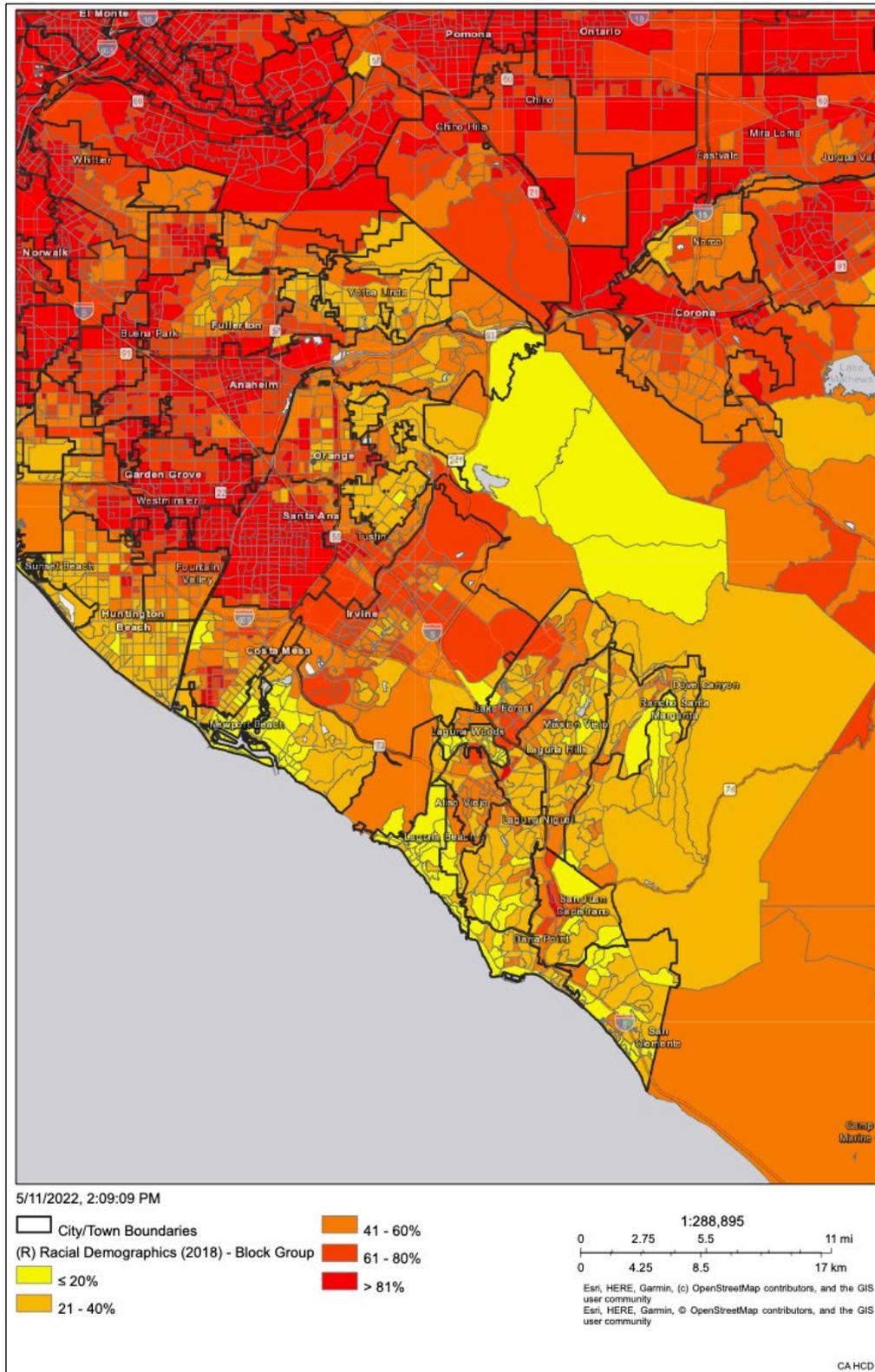




Figure D-6 - Racial Demographics by Block Group, Orange County, 2010

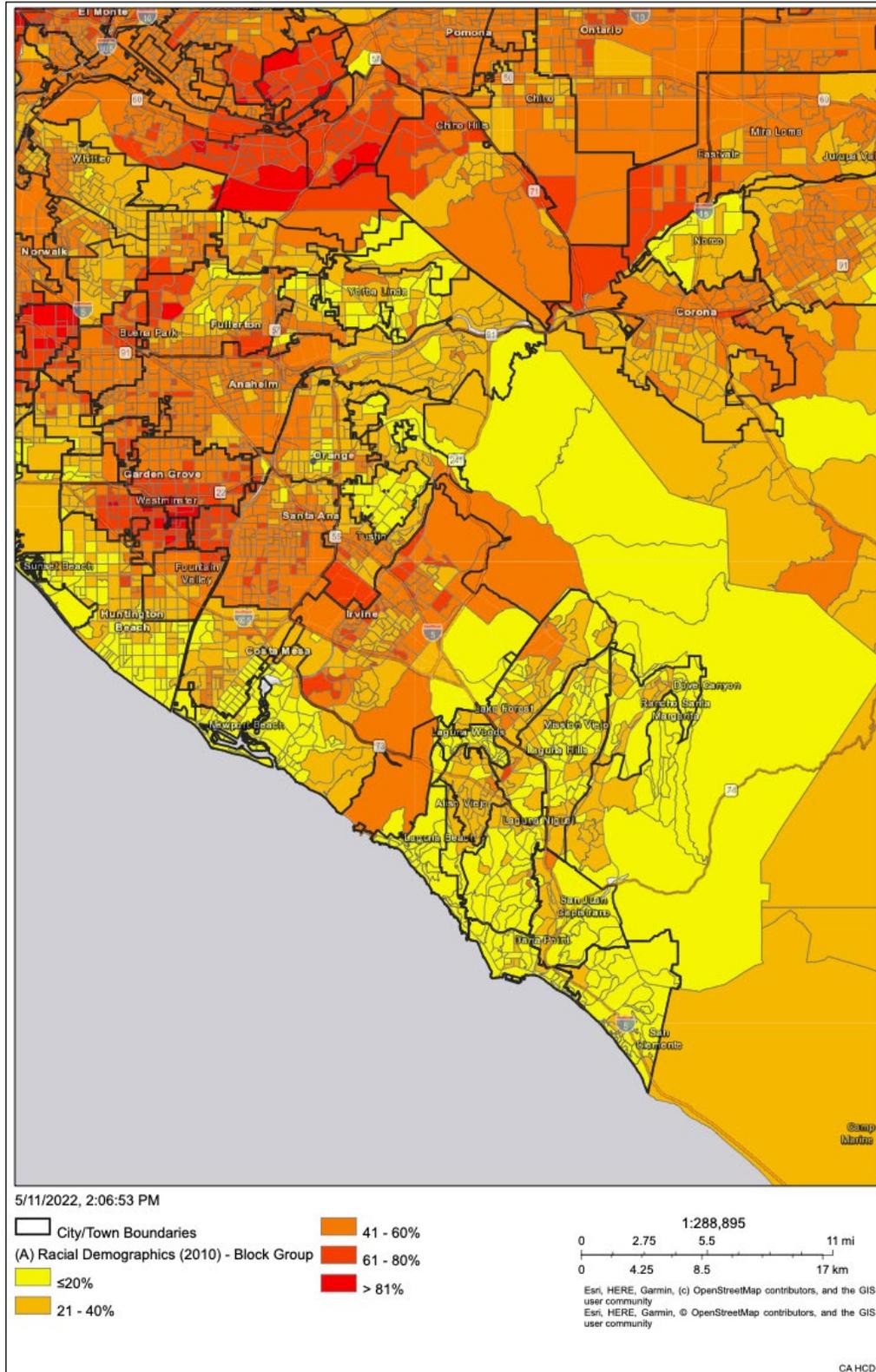




Figure D-7 - Diversity Index, Mission Viejo (2018)

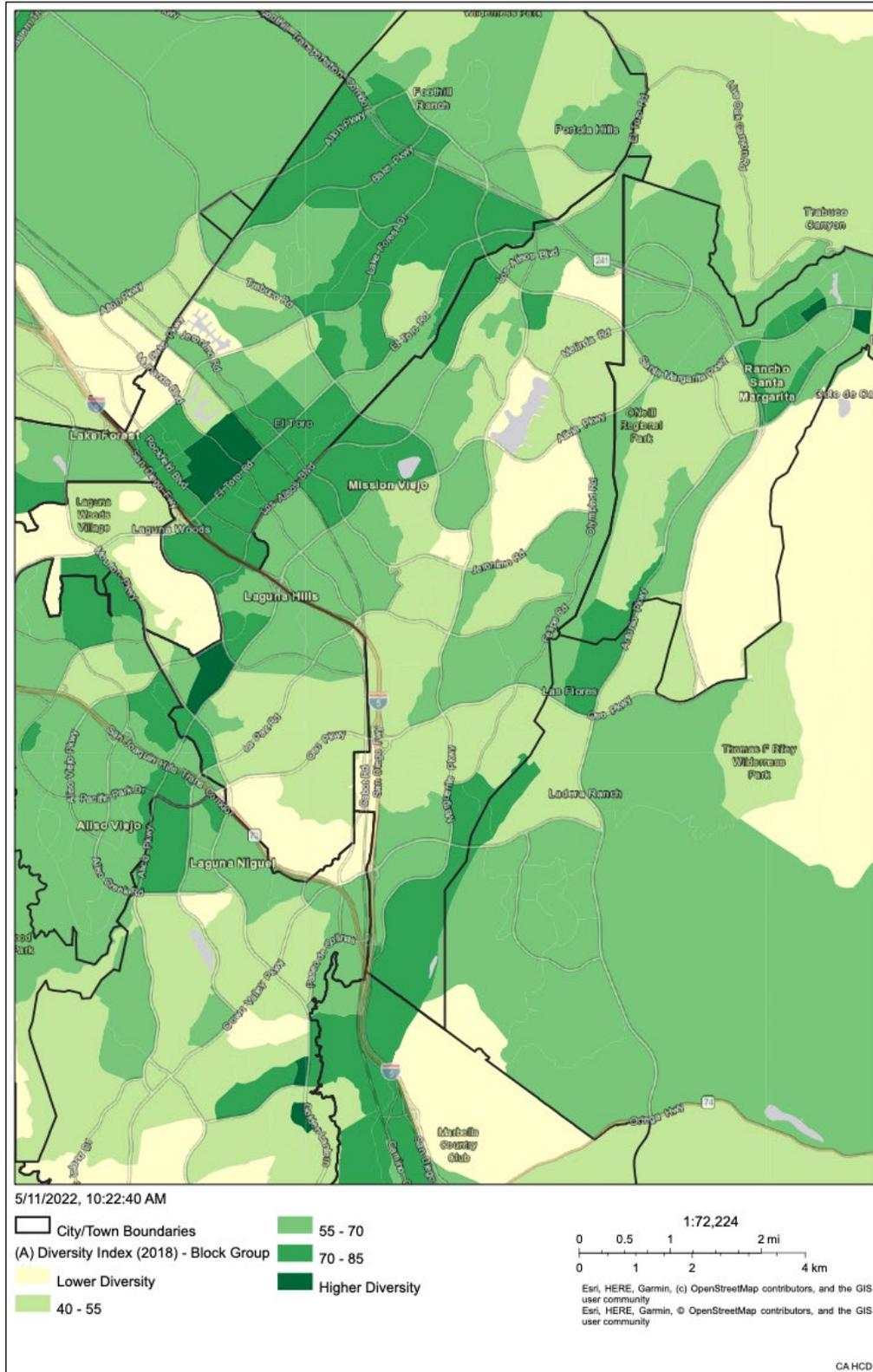
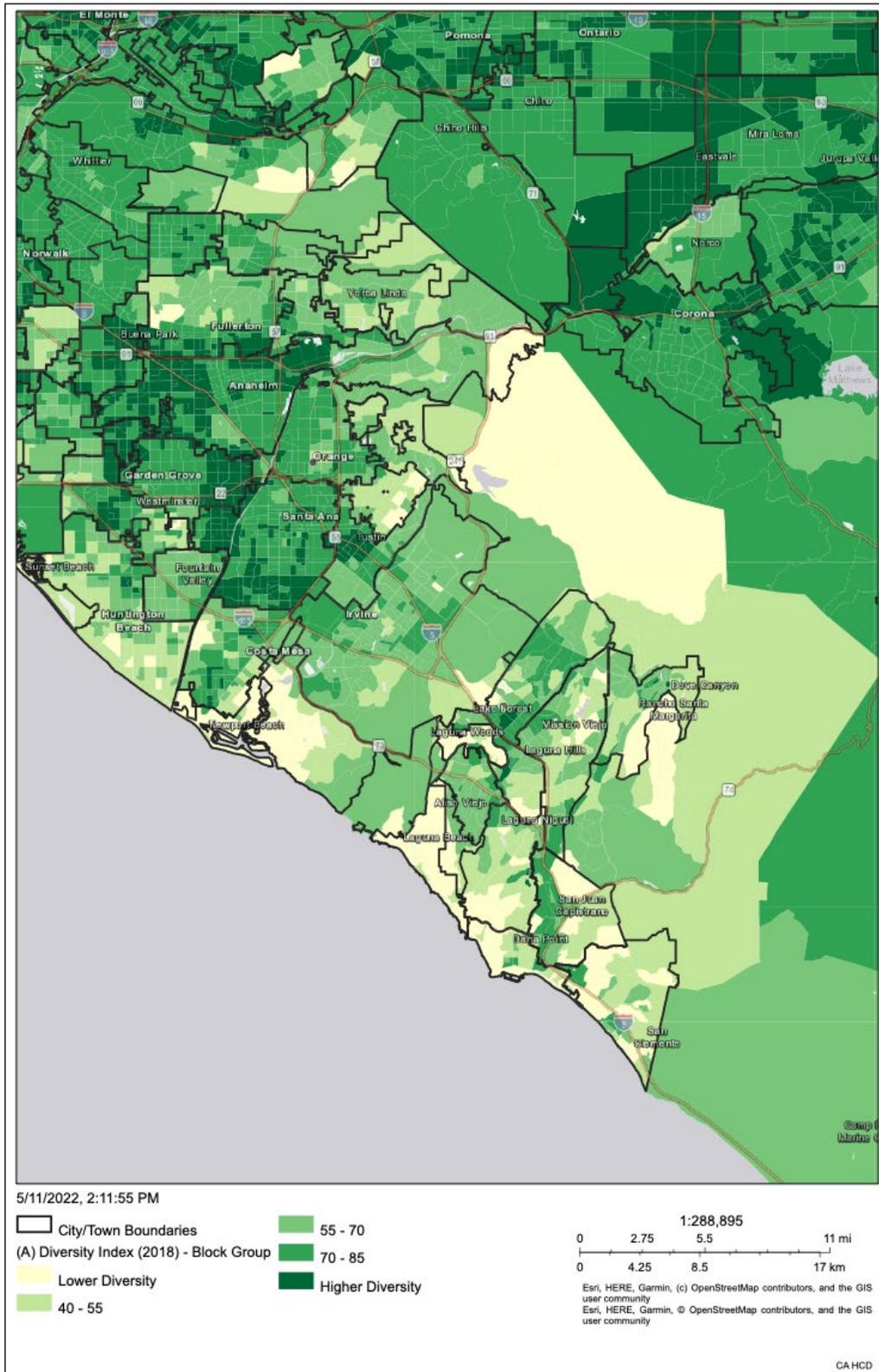




Figure D-8 - Diversity Index, Orange County (2018)





Another way to consider patterns of segregation is by the calculation of the Dissimilarity Index (data from Brown University, <https://s4.ad.brown.edu/projects/diversity/segregation2020/Default.aspx?msa=11244>). The Index “measures whether one particular group is distributed across census tracts [in an area] in the same way as another group. A high value indicates that the two groups tend to live in different tracts. [The index value] ranges from 0 to 100. For instance, a value of 60 (or above) is considered very high. It means that 60% (or more) of the members of one group would need to move to a different tract for the groups to be equally distributed. Values of 40 or 50 are usually considered a moderate level of segregation and values of 30 or below are considered low levels of segregation.”

Table D-9 below shows how Mission Viejo’s Dissimilarity Index (highlighted in yellow) for various ethnic group combinations changed between 2010 and 2020 and how that compares with trends at the county level, and with neighboring cities in southern Orange County.

Table D-9 - Dissimilarity Index

	Orange County*		Mission Viejo			
	2010	2020	2010	2020		
White-Black/Black-White	34.9	33.5	17.3	19.1		
White-Hispanic/Hispanic-White	54.1	51.4	20.6	19.4		
White-Asian/Asian-White	41.6	41.6	14.8	14.7		
Black-Hispanic/Hispanic-Black	36.3	35.3	16.1	14.8		
Black-Asian/Asian-Black	32.8	31.2	18.1	15.6		
Hispanic/Asian/Asian-Hispanic	47.6	44.9	17.9	17.7		
	Laguna Hills		Laguna Niguel			
	2010	2020	2010	2020		
White-Black/Black-White	14.9	13.9	16.7	18.3		
White-Hispanic/Hispanic-White	29.7	27.9	22.9	23.6		
White-Asian/Asian-White	10.6	9.8	13.8	13.8		
Black-Hispanic/Hispanic-Black	25.3	20.5	14.1	15.4		
Black-Asian/Asian-Black	14.1	12	15	18.5		
Hispanic/Asian/Asian-Hispanic	21.4	23.7	19.5	20		
	Lake Forest		Rancho Santa Margarita		San Juan Capistrano	
	2010	2020	2010	2020	2010	2020
White-Black/Black-White	11.2	14.8	11.7	12.6	15.8	13.2
White-Hispanic/Hispanic-White	27.3	23.9	22.6	17.8	48.8	52
White-Asian/Asian-White	11.4	14.1	11.2	8.8	7.4	10.5
Black-Hispanic/Hispanic-Black	29	25.6	14.9	10.4	38.9	43.3
Black-Asian/Asian-Black	12.6	13	9.8	10.6	12.9	20
Hispanic/Asian/Asian-Hispanic	23.8	29	21.2	17.3	45.6	52.1

*Brown University used the “Anaheim-Santa Ana-Irvine Metropolitan Division” in its Dissimilarity Index calculations. This area corresponds to Orange County

The table shows that Mission Viejo and neighboring southern Orange County cities have low Dissimilarity Indices in all the racial/ethnic combinations, and are significantly lower than the county as a whole. There has been little change in the index calculations for Mission Viejo over the last decade.



The above discussion of race and ethnicity in Mission Viejo shows that the city does not exhibit strong patterns of ethnic segregation, with most census tracts scoring in the middle range of the Diversity Index. Overlaying the Sites Inventory on to the Mission Viejo Racial Demographics Block Group map in Figure D-4 above reveals that all sites are located in block groups with 21%-40% or 41%-60% non-White population, and are therefore not located in highly segregated areas.

Table D-10 below also shows that the expected distribution of lower income units is not highly concentrated in parts of the city with a high non-White population percentage. The vast majority of units across all income levels (approximately 88%) would be located in 41%-60% Non-White areas.

Table D-10 - Distribution of Site Inventory Units by Percent Non-White and Unit Income Level

% Non-White Population	Lower Income Units	Moderate Income Units	Above Moderate Income Units	Total Units
<20%	0.0%	0.0%	0.0%	0.0%
21-40%	9.7%	9.6%	9.5%	9.6%
41-60%	87.8%	87.8%	88.1%	87.9%
61-80%	2.5%	2.7%	2.4%	2.5%
>81%	0.0%	0.0%	0.0%	0.0%
Total Units	1,182	435	810	2,427

4. Persons with Disabilities

Figure D-9 shows the percentage of the total population with a disability, plus the location of the Site Inventory, by census tract in Mission Viejo, and Figure 10 shows Mission Viejo relative to the rest of Orange County.

Most of the tracts in Mission Viejo have less than 10% of the population with a disability, but four fall into the 10%-20% range. They correspond in part to tracts noted above with relative concentrations of racial ethnic minorities: Tracts 320.13 in the south of the city (13.1%), 320.15 on the Lake Forest border (19%), and 320.36 (10.1%) and 320.37 (15.1%) in the center/east of the city. Tract 320.15, with the highest proportion of disabled in the city, also has a very high proportion of males between 35 and 64 with a disability (15%), compared with females in the same tract (7%) or males in the adjacent tract 320.28 (5%).

Some of these patterns can be explained by the presence of senior residential communities in these tracts, which impact the disabled proportion. For example, Tract 320.37 contains Casta del Sol, a large, gated senior community; Tract 320.15 contains the Aegean Hills neighborhood, which was annexed into Mission Viejo in 1992, and a number of its large single level homes have since been converted into residential care facilities for the elderly.

Figure D-10 shows that the pattern of disabled persons across the county is not significantly concentrated, or different from the pattern observed in Mission Viejo in Figure D-9, with one exception. Both Figures show that there is a concentrated incidence of people with disabilities in the City of Laguna Woods. Other maps in this section of the Housing Element will also show anomalous patterns for that nearby city. This can be explained by the fact that, according to Wikipedia, “about 90% of the city consists of Laguna Woods Village, a private gated retirement community.” A city with such unique demographics will clearly display different characteristics to the more heterogeneous cities around it.



Overlaying the Site Inventory on to the Mission Viejo census tract level disability map in Figure D-9 and Table D-11 below reveals that all sites are located in tracts with under 10% of the population with a disability, therefore not concentrated in the few areas of the city with higher proportions of the population with a disability.

Table D-11 - Distribution of Site Inventory Units by Percent Population with a Disability and Unit Income Level

% Population with Disability	Lower Income Units	Moderate Income Units	Above Moderate Income Units	Total Units
<10%	100.0%	100.0%	100.0%	100.0%
10-20%	0.0%	0.0%	0.0%	0.0%
20-30%	0.0%	0.0%	0.0%	0.0%
30-40%	0.0%	0.0%	0.0%	0.0%
>40%	0.0%	0.0%	0.0%	0.0%
Total Units	1,182	435	810	2,427



Figure D-9 - Proportion of Population with a Disability and Site Inventory Location, Mission Viejo (ACS 201014)

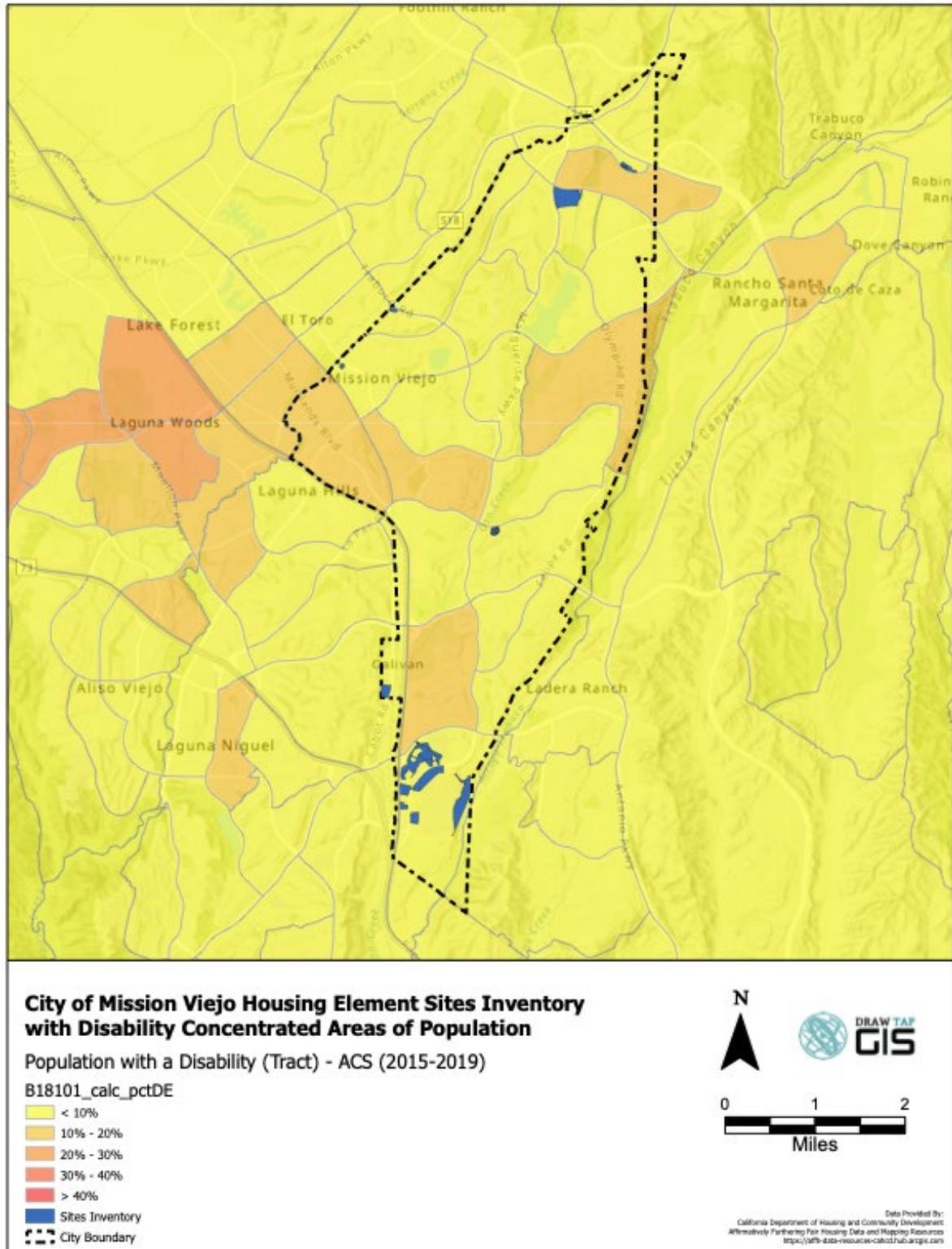
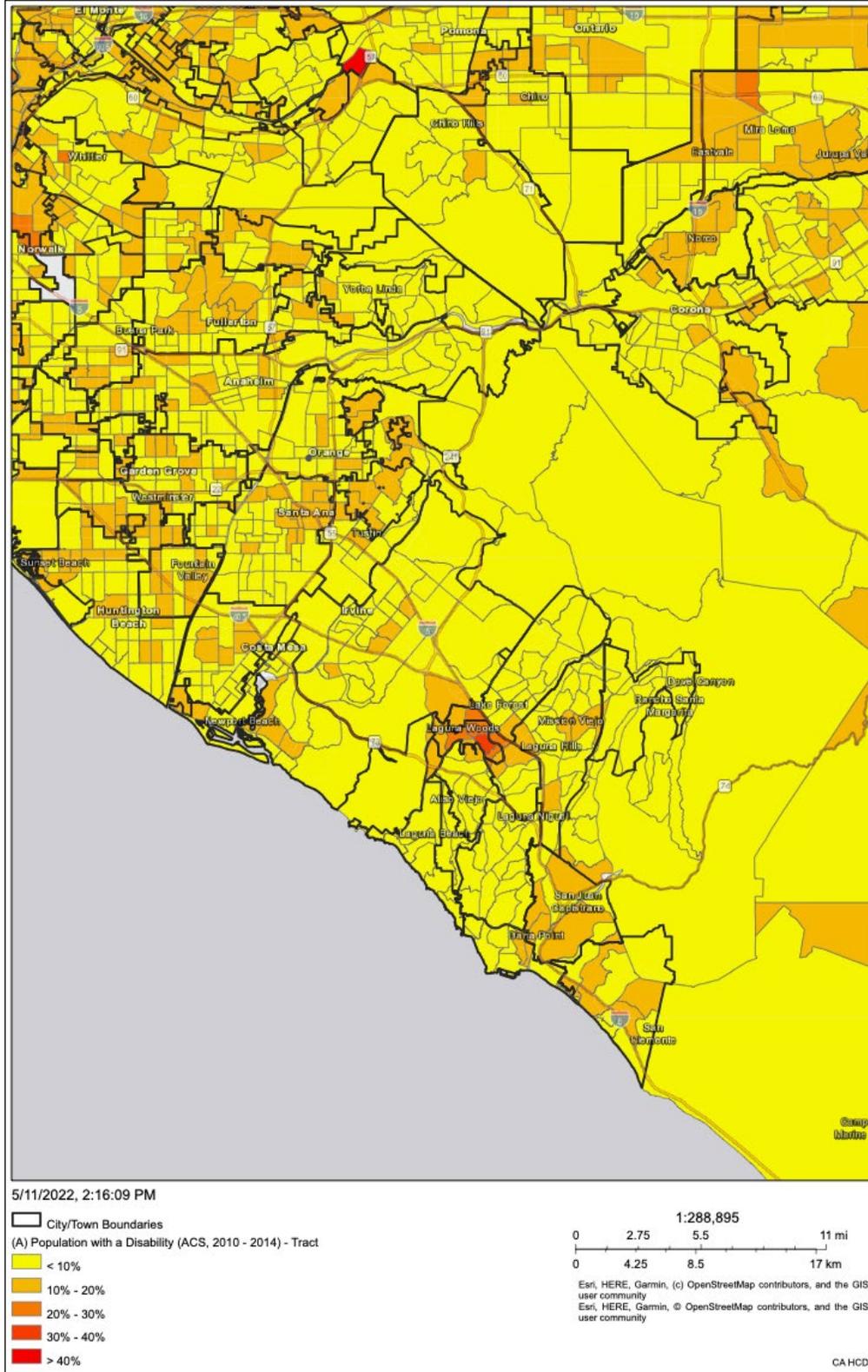




Figure D-10 - Proportion of Population with a Disability, Orange County (ACS 2010-14)





5. Familial Status

Family/Household composition can have a significant impact on housing issues, so it is instructive to examine the geographic distribution of different household structures, such as married couple households, female-headed households, and people living alone, and to compare Mission Viejo's household profile with neighboring cities and the rest of the county. Figure D-11 through Figure D-18 show, by Census tract, the percentage of total population over 18 in households with a spouse; the percentage of children in married couple households; the percentage of children in female-headed households; and the percentage of the population over 18 living alone. To summarize the patterns in these figures:

- Figure D-11: Most Mission Viejo tracts have 40% to 60% of their households with a spouse, and 8 out of 26 are in the 60%-80% range, located in the center and north of the city. This sort of breakdown is similar to other southern Orange County cities, contrasting with the northern part of the county in Figure D-12 (Santa Ana, Anaheim, Garden Grove), where there are a significant proportion of tracts in the 20% to 40% range. This could be a function of differing age profiles, with Southern Orange County cities skewing a little older.
- Figure D-13 (includes location of Site Inventory): There are eight tracts in Mission Viejo where the percentage of children in married couple households is between 60% and 80%, with the other 18 tracts over 80%. Again, the southernmost tract 320.22 (probably a function of the presence of Saddleback Community College in this tract) and 320.28, bordering Lake Forest, fall into the lower category. As noted in the bullet above, this sort of split is also seen in other southern Orange County cities, and is different from northern parts of the county (Figure D-14), where there are noticeably many tracts in the 20% to 40% range.
- An important measure of potential housing issues can be found in analyzing the distribution of the percentage of children in female-headed households, which can be more financially stressed than households with both spouses. In Figure D-15, which also includes the location of the Site Inventory, only one tract in the southeast of the city (320.39) has more than 20% of children in female-headed households. Neighboring Laguna Woods, the retirement community, stands out with a very high proportion of children in female-headed households; since females tend to live longer than males, it is not surprising that a retirement community would show a significant number of female-headed households. There is another cluster near Newport Beach. There is not a significant variation in the pattern of the percentage of children in female-headed households across the county (Figure D-16), with only a slightly higher proportion of tracts in the 20% to 40% range in the northern section.
- All but two of Mission Viejo's 26 tracts (Figure D-17) are in the lowest category of the 18+ population in households living alone. Again, neighboring Laguna Woods, with its retiree population is an outlier, with very high proportions of households living alone. There is not a great variation across the county (Figure D-18), with a noticeable cluster near Newport Beach and an anomalous low population tract in eastern Anaheim that only has four residents over the age of 18.

In general, Mission Viejo tracts do not have significant concentrations of families in households that do not contain both spouses, where children are not living in married couple households, or people live alone. Relative to other parts of the county, this suggests proportionally fewer families in households that may face challenges and stresses due to their family structure than in other parts of the county.



Examining the location of the Site Inventory relative to the proportion of children in married couple households (Figure D-13 and Table D-12 below) shows that the sites are uniformly located in areas with a high proportion of married couple households. The majority of the sites in the Sites Inventory are in the southernmost tract (Tract 320.22, partly shared with the City of San Juan Capistrano), where 72.5% of children are in married couple households; there is relatively little variation across the location of the Site Inventory in terms of this variable, with the lowest value being 71.5%, and the highest at 90.5%

Table D-12 - Distribution of Site Inventory Units by Percent of Children in Married Couple Households and Unit Income Level

% Children in Married Couple Households	Lower Income Units	Moderate Income Units	Above Moderate Income Units	Total Units
<20%	0.0%	0.0%	0.0%	0.0%
21-40%	0.0%	0.0%	0.0%	0.0%
41-60%	0.0%	0.0%	0.0%	0.0%
61-80%	64.0%	64.1%	63.9%	64.0%
>81%	36.0%	35.9%	36.1%	36.0%
Total Units	1,182	435	810	2,427

In terms of the location of the Sites Inventory relative to the proportion of children in female-headed single-family households (Figure D-15), all sites are located in tracts with the lowest category range of under 20%. Because the distribution of these two family status variables across the city is relatively uniform, with no severe concentrations of children in female-headed single family households, or low proportions of children in married couple households, the Site Inventory location does not have the potential to adversely impact patterns of family status in the city.

Table D-13 - Distribution of Site Inventory Units by Percent of Children in Female-Headed Households and Unit Income Level

% Children in Female-Headed Households	Lower Income Units	Moderate Income Units	Above Moderate Income Units	Total Units
<20%	100.0%	100.0%	100.0%	100.0%
21-40%				
41-60%				
61-80%				
>81%				
Total Units	1,182	435	810	2,427



Figure D-11 - Mission Viejo - Percentage of Population over 18 in Household with Spouse (ACS 2015-19)

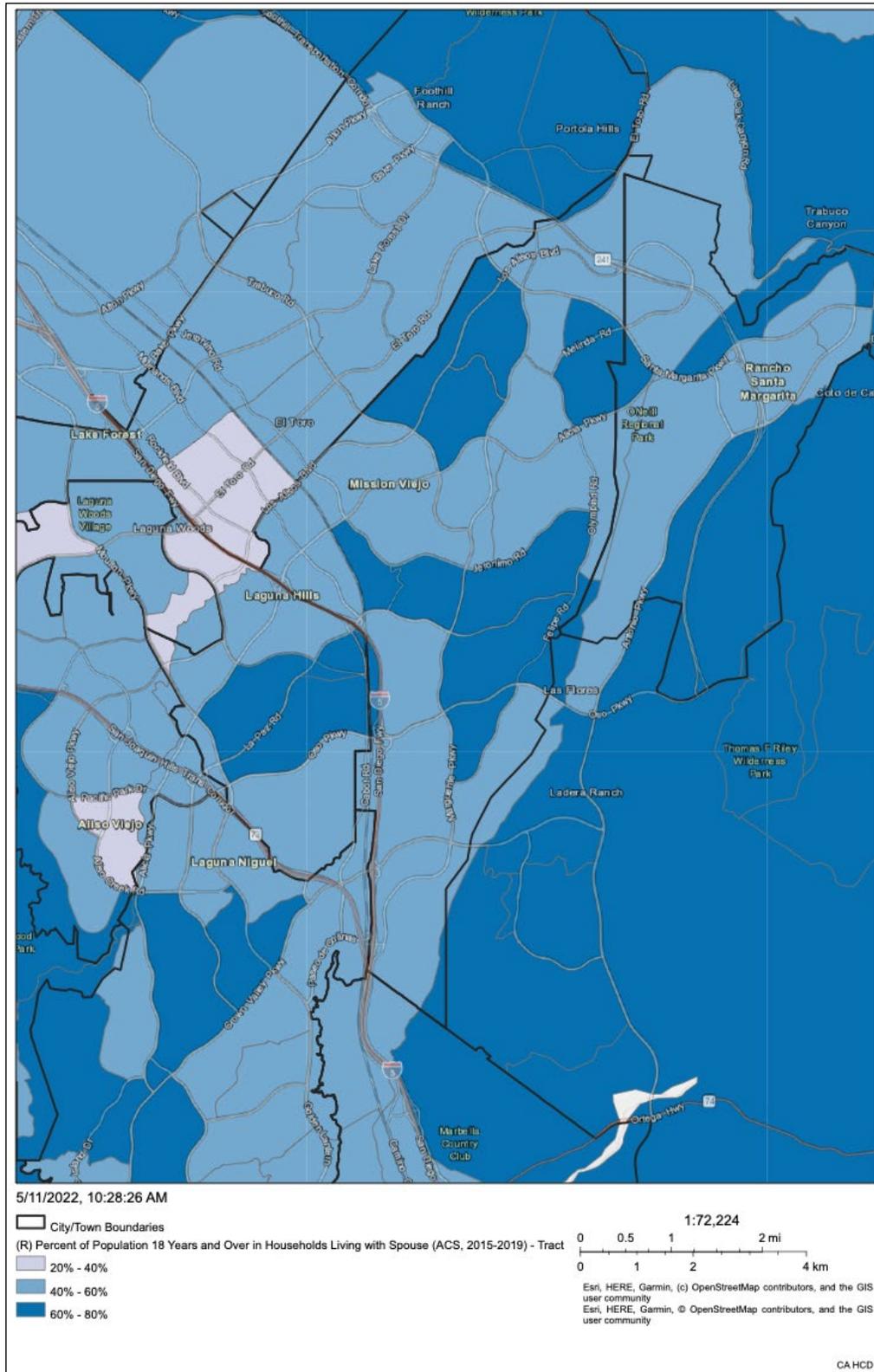




Figure D-12 - Orange County - Percentage of Population over 18 in Household with Spouse (ACS 2015-19)

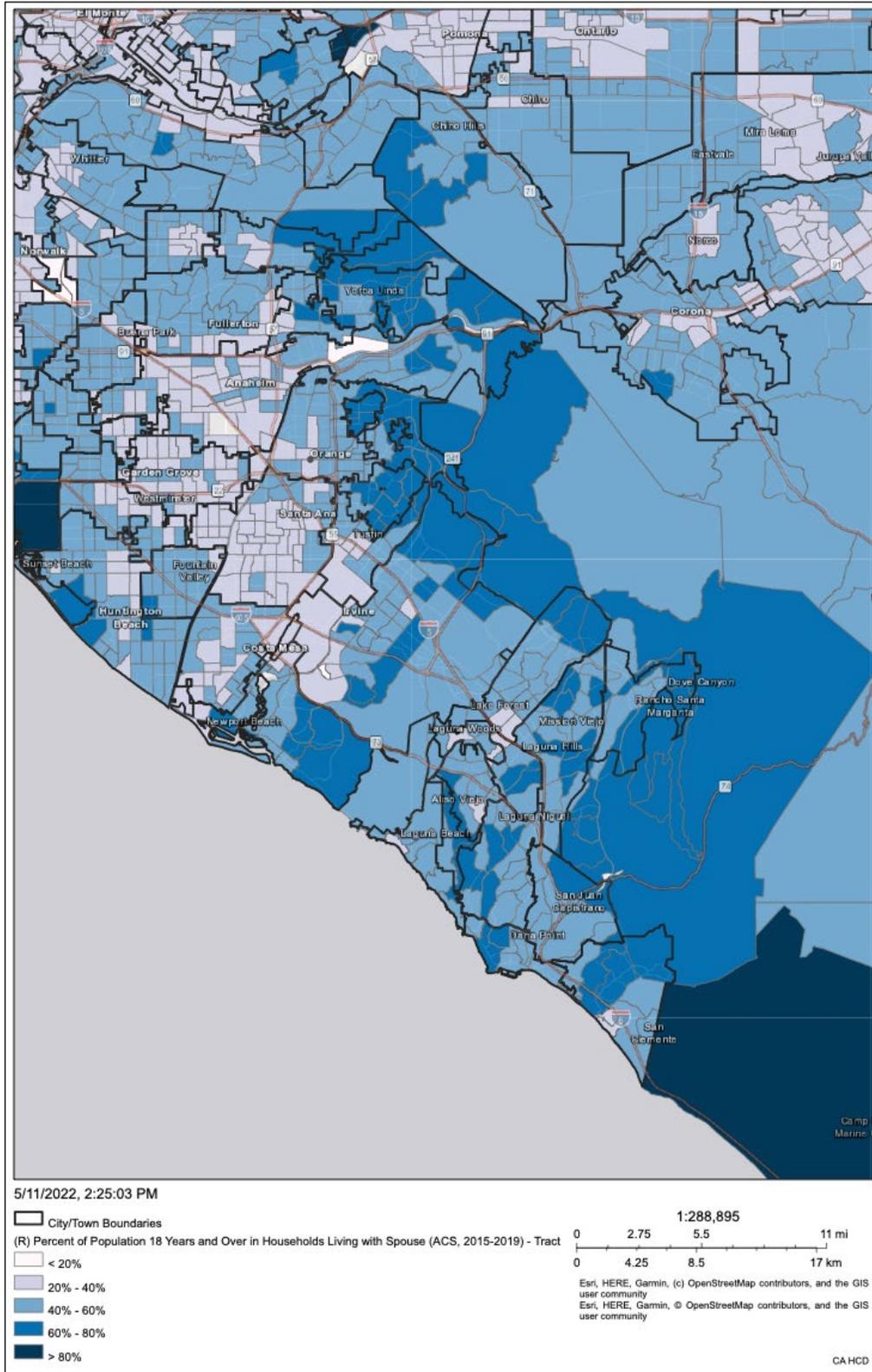




Figure D-13 - Mission Viejo - Percentage of Children in Married Couple Households and Sites Inventory (ACS 2015-19)

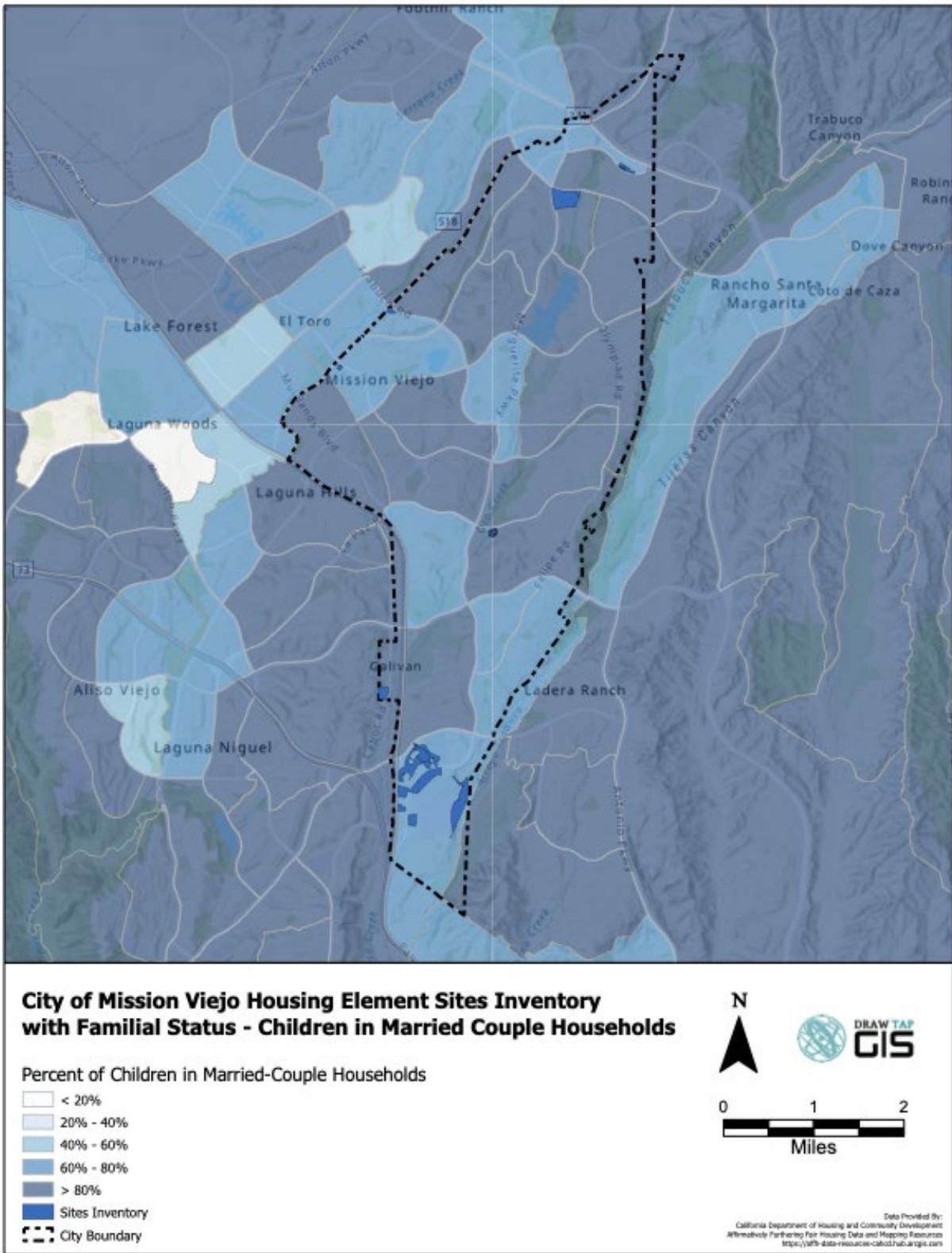




Figure D-14 - Orange County - Percentage of Children in Married Couple Households (ACS 2015-19)

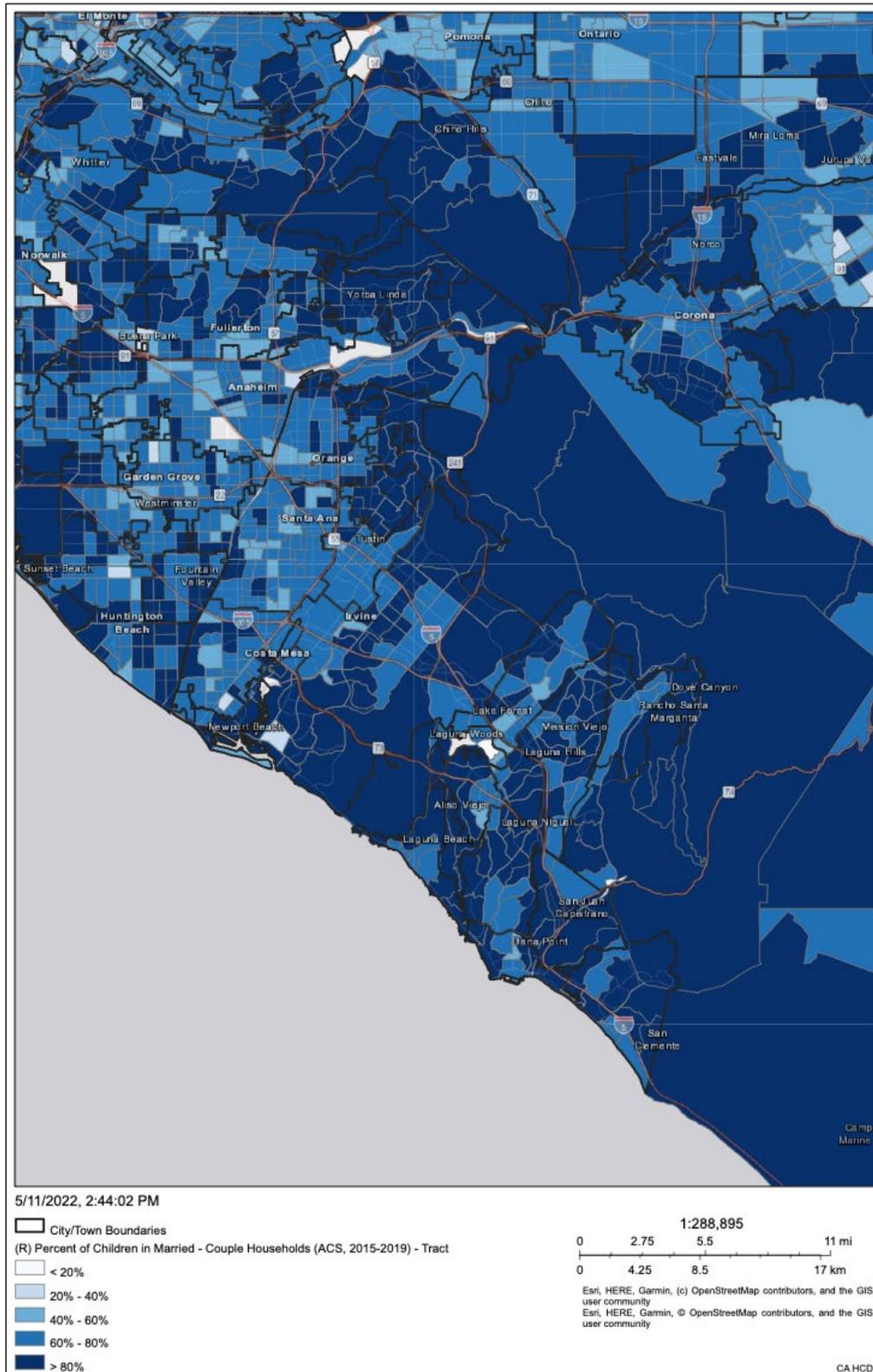




Figure D-15 - Mission Viejo - Percentage of Children in Female-Headed Households & Site Inventory (ACS 2015-19)

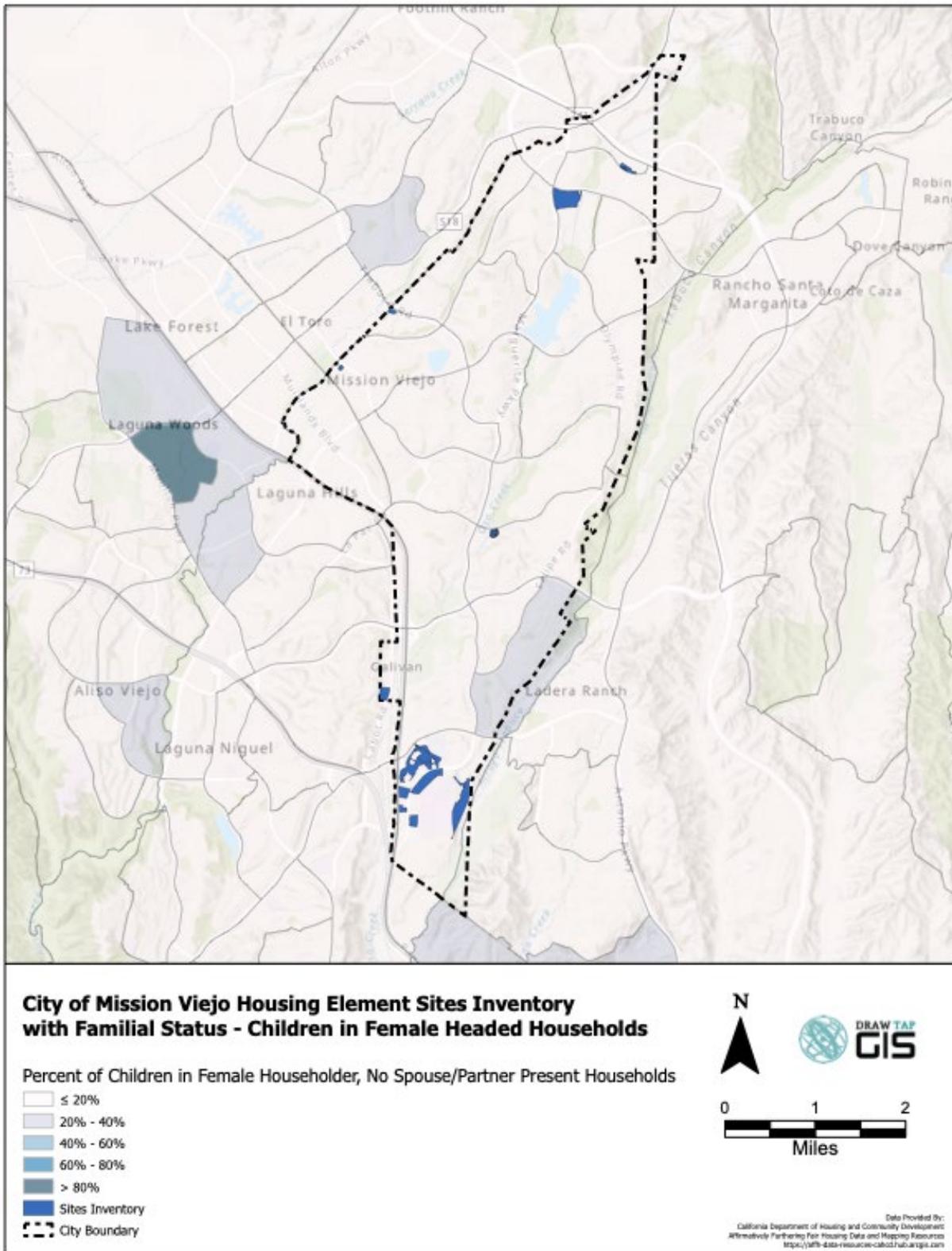




Figure D-16 - Orange County - Percentage of Children in Female-Headed Households (ACS 2015-19)

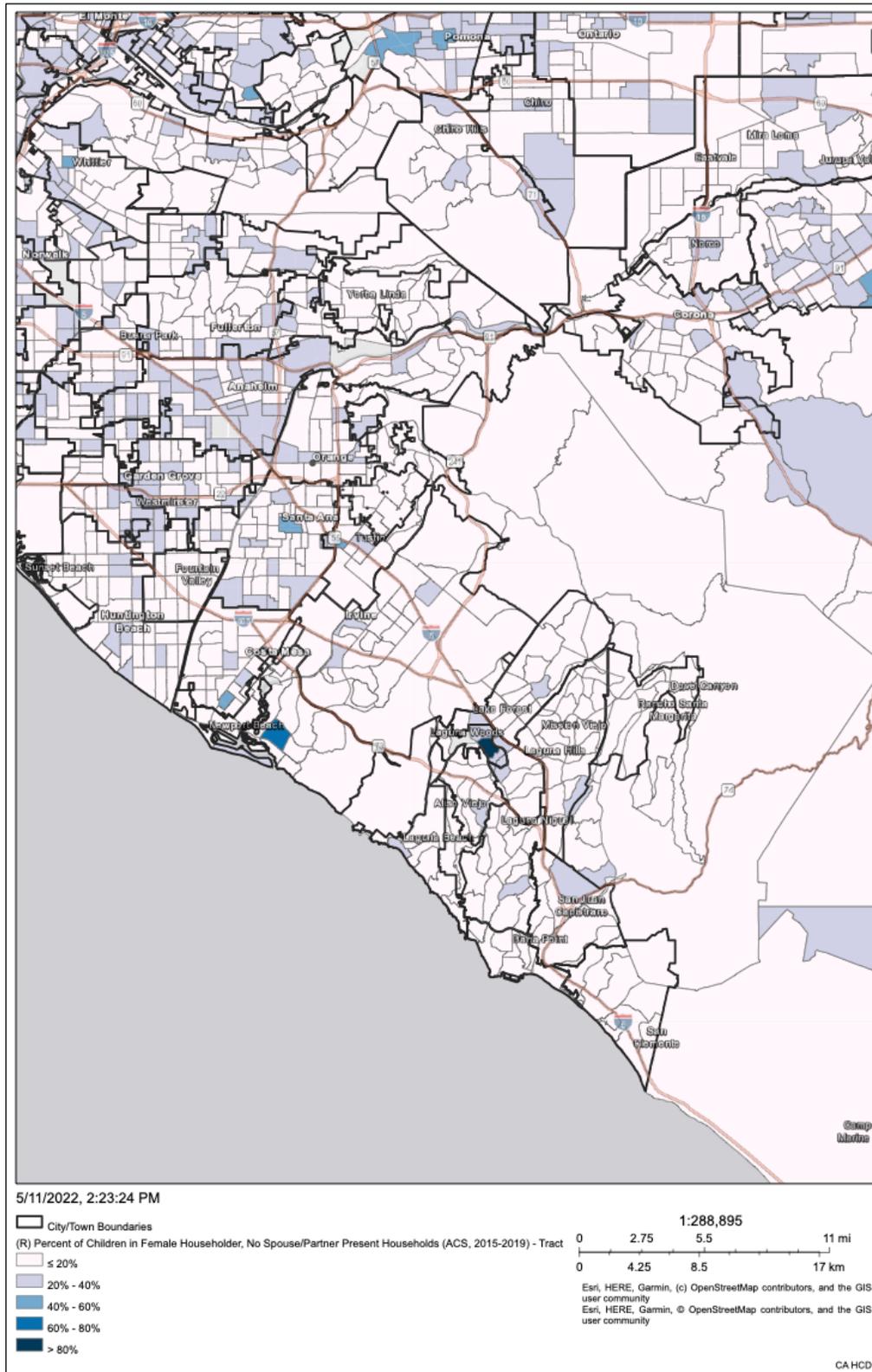




Figure D-17 - Mission Viejo - Percentage Population over 18 Living Alone (ACS 2015-19)

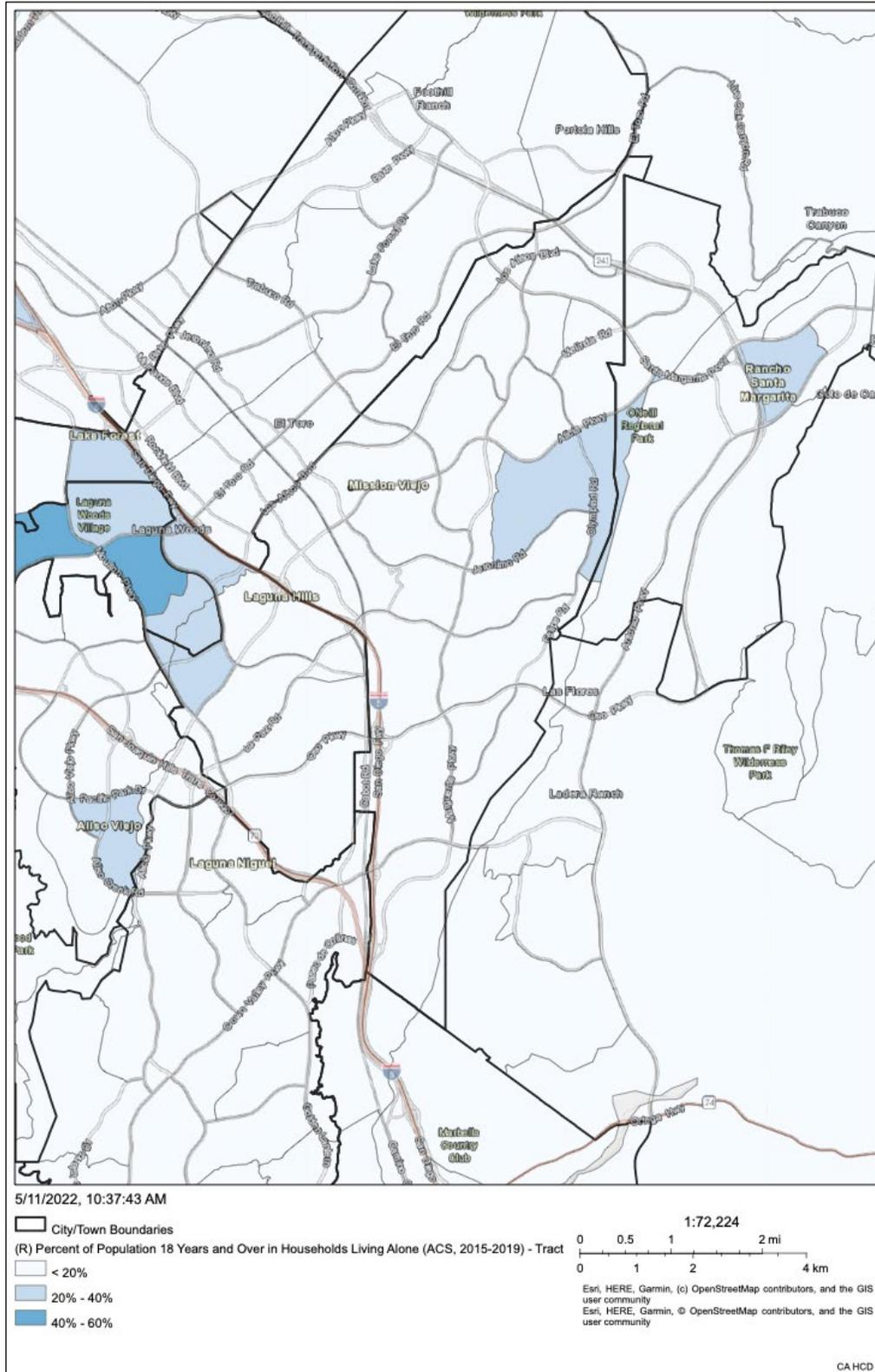
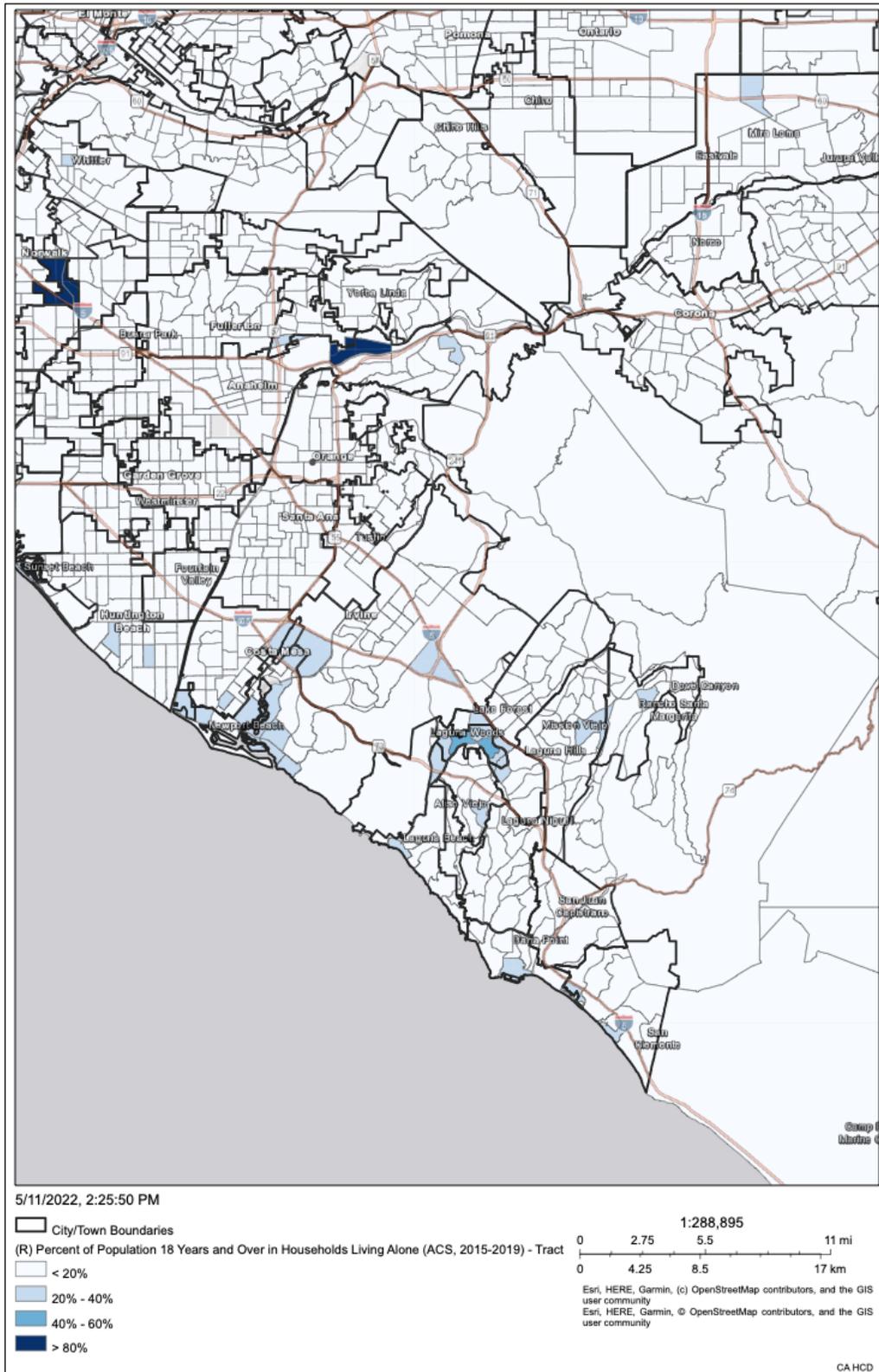




Figure D-18 - Orange County - Percentage Population over 18 Living Alone (ACS 2015-19)



Income Level



Income level clearly has a very strong impact on housing issues, which can contribute to patterns of segregation or integration. Figure D-19 and Figure D-20 display information on the poverty status of households in the Mission Viejo area and the county at large, and Figure D-21 and Figure D-22 show the distribution of low-to-medium income households at the two different geographic levels. Poverty status is defined as the percentage of the population whose income falls below the Federal poverty line. Figure D-19 shows that all 26 tracts in the City of Mission Viejo have a poverty status of less than 10%. Just beyond Mission Viejo’s boundaries, in the retirement community of Laguna Woods and southern Lake Forest, there are a few tracts with a poverty status of 10% to 20%. At the county level (Figure D-20), the most noticeable poverty status concentration between the 405 Freeway and Highway 73 corresponds to the University of California, Irvine campus. As with other maps discussed, there is a divide between northern and southern Orange County, with concentrations of tracts with a poverty status in the 20%-30% and 30%-40% range in the Santa Ana-Anaheim-Garden Grove area.

The distribution of block groups with higher proportions of low- and moderate-income population in Mission Viejo (Figure D-21, including Sites Inventory) echoes some patterns in other indicators already discussed; block groups in the 50%-75% range are noticeable in the southernmost tip of the city, and also in some central/eastern block groups. As has been stated above, the presence of a number of senior communities, and possibly student population in the vicinity of Saddleback College in the southernmost part of city may be impacting the overall distribution of people on low and moderate incomes. Again, the neighboring retirement community city of Laguna Woods stands out as an area with very high proportions of low- and moderate-income individuals. At the county level (Figure D-22), there are again noticeable concentrations in the Santa Ana-Anaheim-Garden Grove area, where some block groups exceed 75% low to moderate income.

Examining the location of the Sites Inventory relative to the distribution of the low- to moderate-income population in Mission Viejo (Figure D-21) shows the majority of the sites, which are located in the southernmost Tract 320.22 are in areas with 50%-75% of the population in low- to moderate-income categories, largely due to the somewhat unique demographic characteristics of Tract 320.22. As Table D-14 below also shows, about 42% of the units in the inventory are in areas where under 50% of the population is in low- to moderate-income categories. There is therefore a slight, but not overwhelming concentration in low- to moderate-income areas, which is largely a function of the characteristics of a single Census Tract.

Table D-14 - Distribution of Site Inventory Units by Percent Low- to Moderate-Income by Census Block Group and Unit Income Level (Mission Viejo, ACS 2011-15)

% Low-Moderate Income	Lower Income Units	Moderate Income Units	Above Moderate Income Units	Total Units
< 25%	9.7%	9.6%	9.5%	9.6%
25-50%	32.6%	32.4%	32.5%	32.5%
50-75%	57.7%	58.0%	58.0%	57.9%
Total Units	1,182	435	810	2,427



Figure D-19 - Mission Viejo - Percentage of Households with Income Under the Poverty Line (ACS 2015-19)

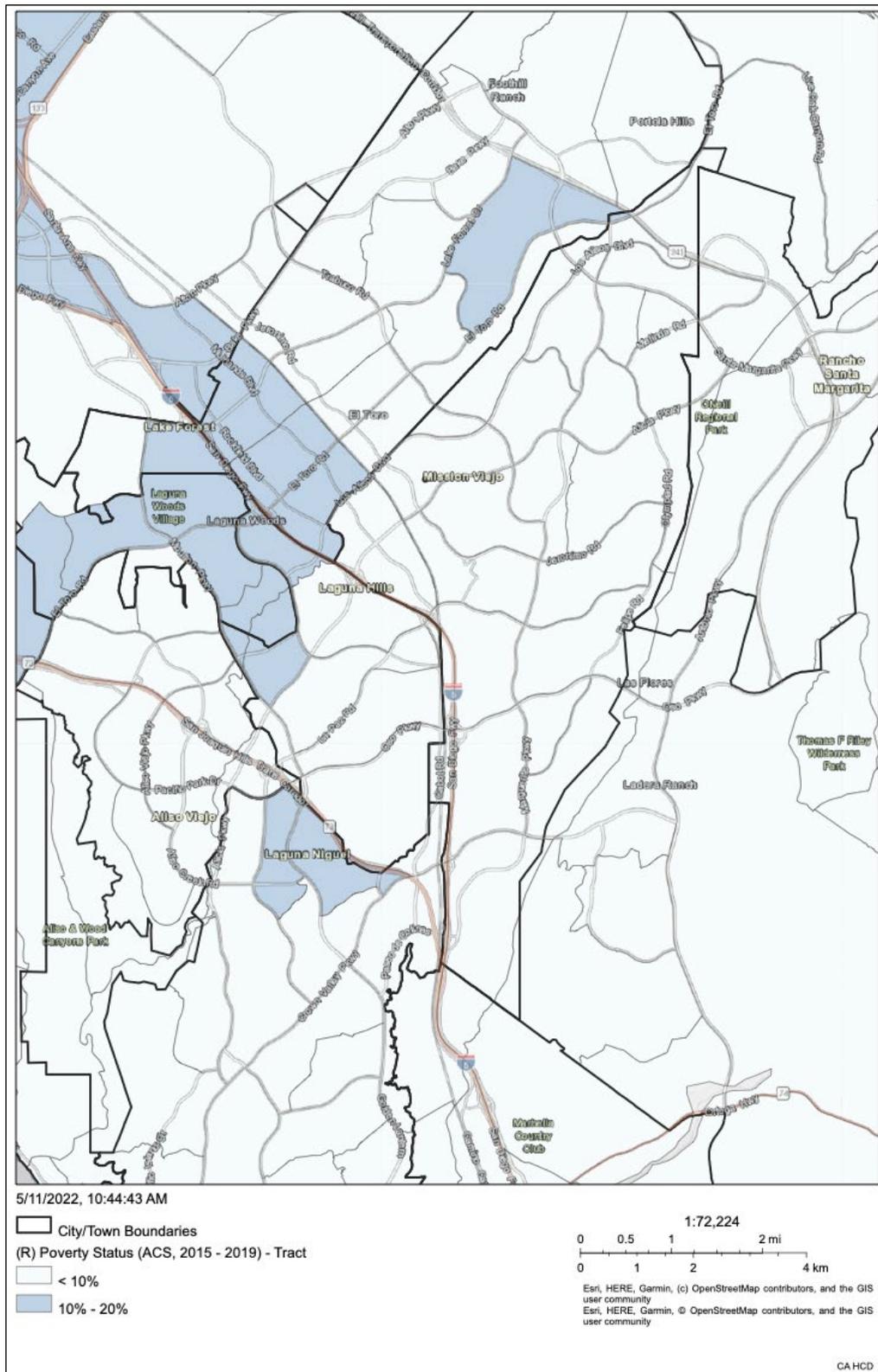




Figure D-20 - Orange County - Percentage of Households with Income Under the Poverty Line (ACS 2015-19)

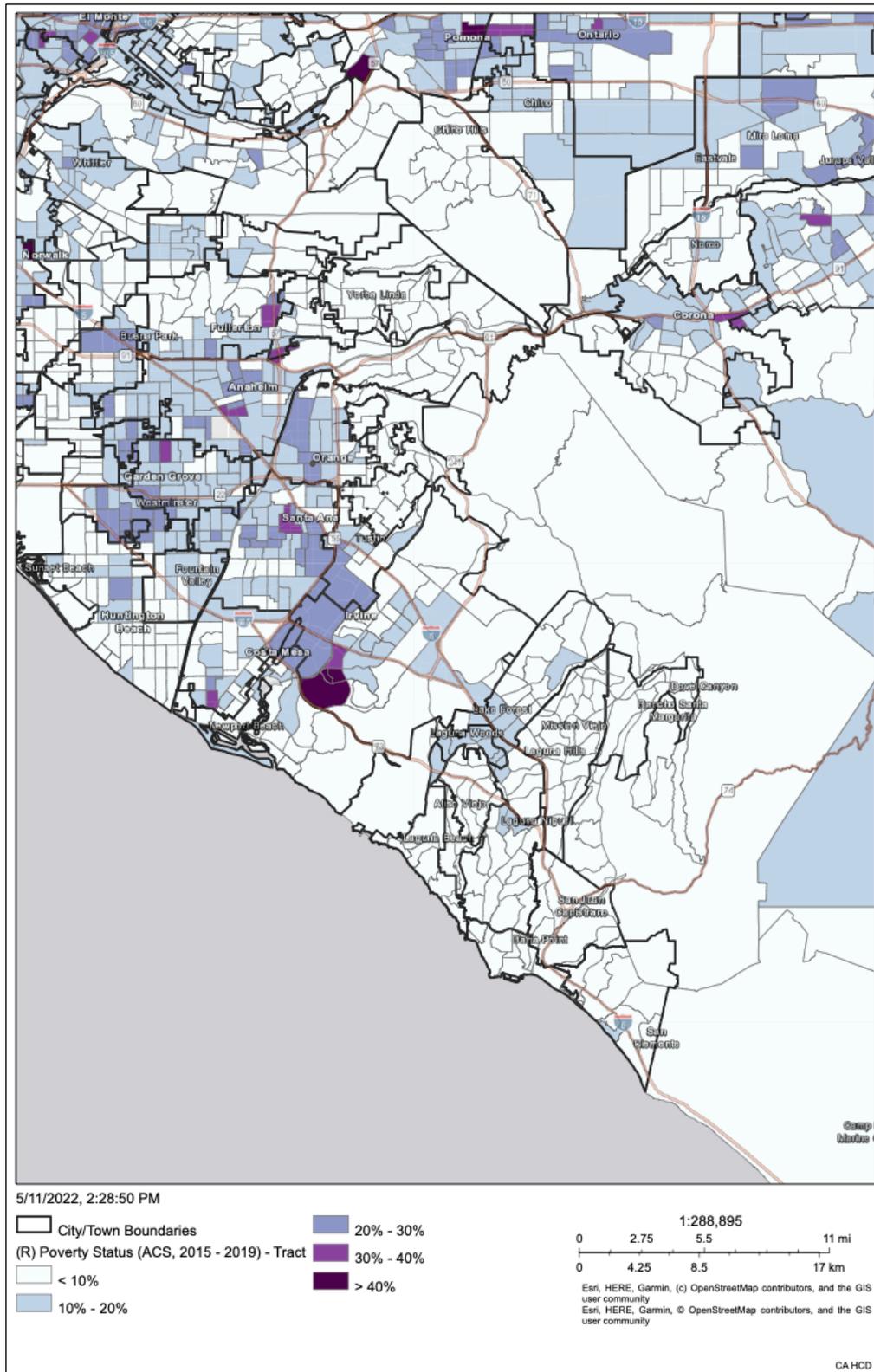
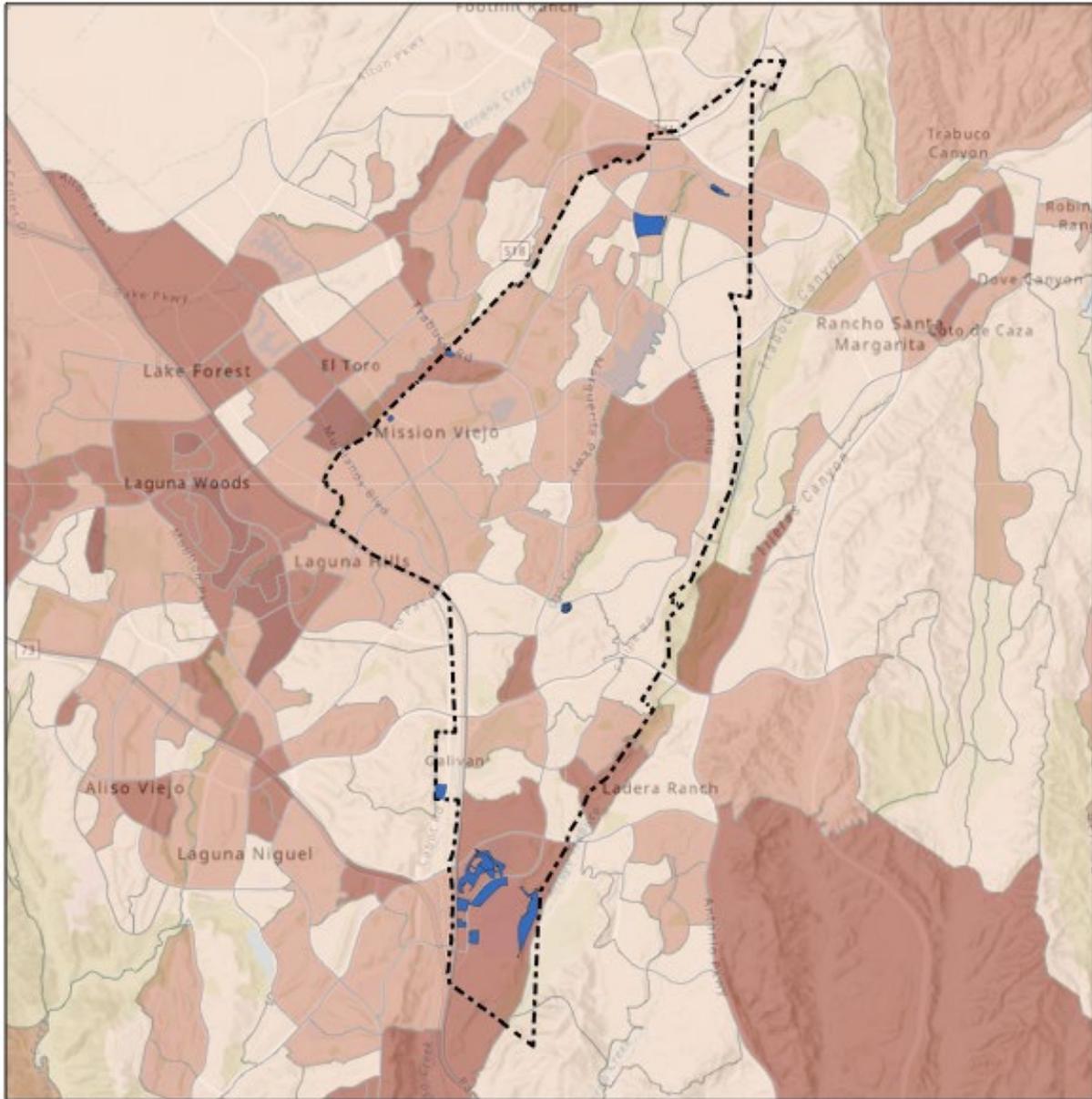




Figure D-21 - Mission Viejo - Percentage of Population in Low-to-Moderate Income Category & Site Inventory (ACS 2011-15)



City of Mission Viejo Housing Element Sites Inventory with Low to Moderate Income Population

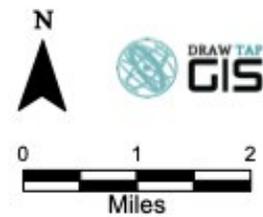
Low to Moderate Income Population (Block Group) - (HUD)

LOWMOD_PCT

- < 25%
- 25% - 50%
- 50% - 75%
- 75% - 100%

Sites Inventory

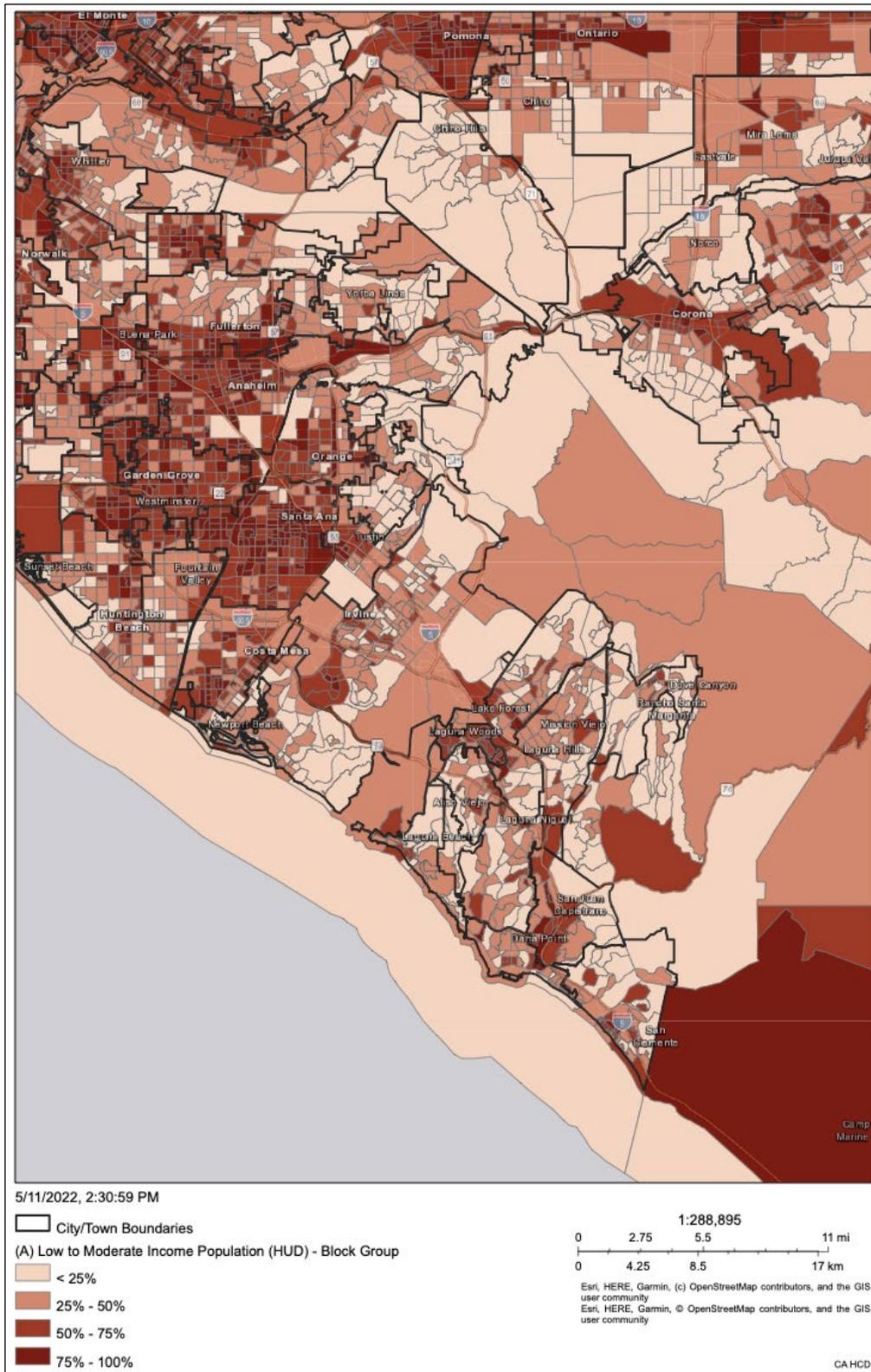
City Boundary



Data Provided By:
California Department of Housing and Community Development
Affirmatively Furthering Fair Housing Data and Mapping Resources
<https://affirm-data-resources-calhcd.hud-arizona.com>



Figure D-22 - Orange County - Percentage of Population in Low-to-Moderate Income Category (ACS 2011-15)





C. Racially or Ethnically Concentrated Areas

6. Racially/Ethnically Concentrated Areas of Poverty

HCD guidance re the analysis of geographic patterns of poverty and segregation includes consideration of Racially/Ethnically Concentrated Areas of Poverty (R/ECAPs), defined as an area that has a non-white population of 50% or more (<https://data.world/hud/recap>), and which also has “census tracts with 40% or more of individuals living at or below the poverty line” (HUD R/ECAP dataset website).

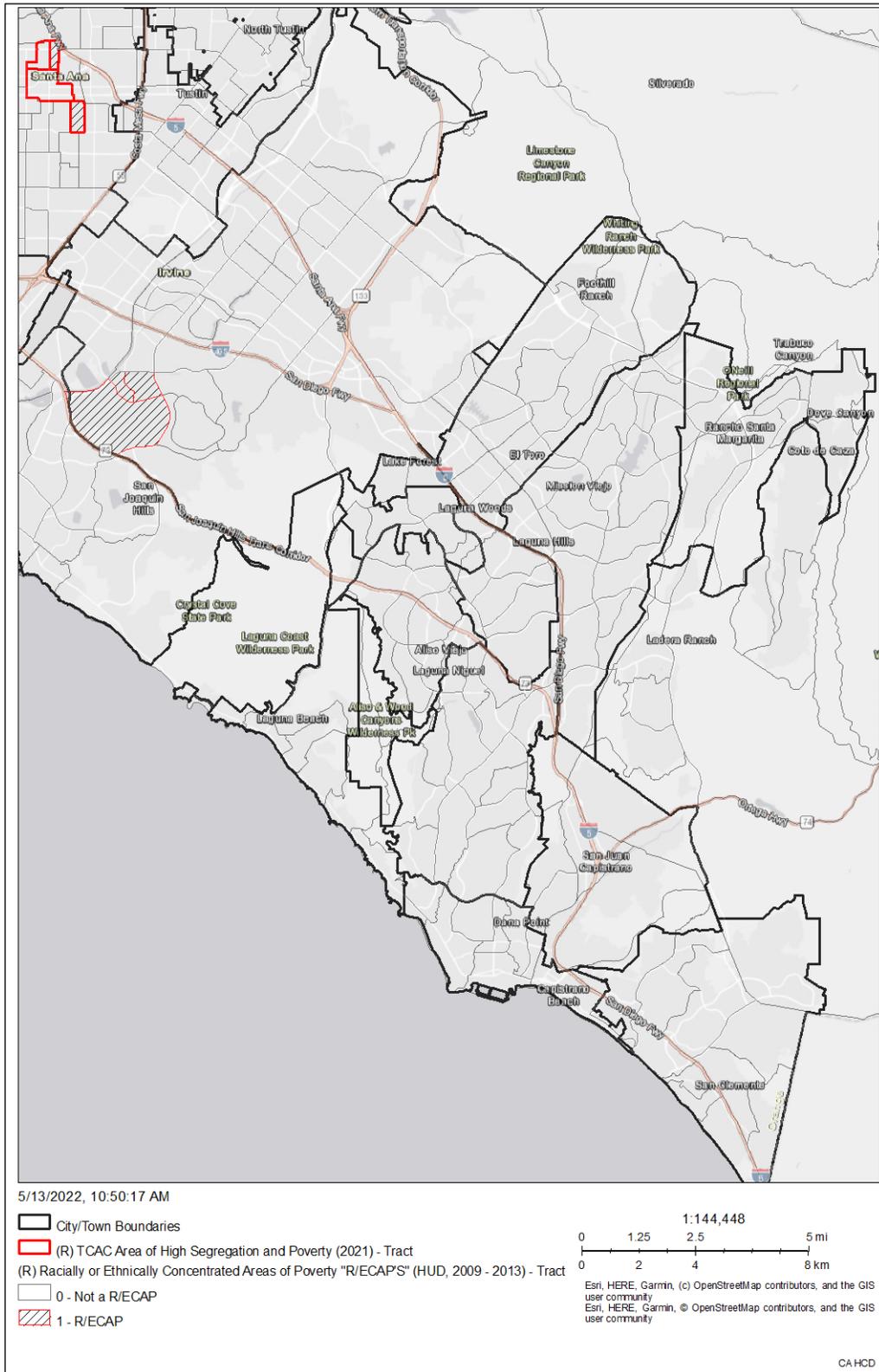
Figure D-23 shows that Mission Viejo and environs have no R/ECAPs, nor are there any TCAC (Tax Credit Allocation Committee) defined areas of High Segregation and Poverty nearby. The closest R/ECAP is located at the University of California, Irvine property, which had a high Poverty Status score, as mentioned earlier in this analysis, and the nearest areas of high segregation and poverty are tracts in Santa Ana.

Earlier analysis of the Diversity Index and Poverty Status measures for Mission Viejo show that the city has no major concentrations on either measure, although it is noticeable that tracts in the south of the city, and on its western border with Lake Forest exhibit slightly higher concentrations than other parts of Mission Viejo.

Since there are no R/ECAPs in Mission Viejo, no analysis of the Site Inventory location relative to R/ECAPs is required.



Figure D-23 - Mission Viejo – RE/CAPs and Areas of High Segregation and Poverty





7. Racially/Concentrated Areas of Affluence

In addition to examining patterns of poverty and segregation, HCD also recommends examining “concentrated areas of affluence.” Possible measures of this factor include identifying the percentage of the White population and median household income for White households versus the population at large, and an examination of median income patterns across the city.

Table D-15 below shows ACS’s 2020 estimates of the median household incomes of households, and the variation from the median income by race/ethnicity in Mission Viejo and surrounding cities, and for Orange County as a whole. It should be noted that the percentage of White residents of Mission Viejo and its surrounding cities are significantly higher than the proportion for the county overall.

Mission Viejo’s median income is 28% higher than the County’s, but the city’s White median income is slightly lower than that for all households in Mission Viejo, with Asian households significantly above the median. It is also noteworthy that Black household median income in Mission Viejo is slightly higher than that for White households, although ACS sampling of a population that makes up 1.9% of the city’s population may have a wide margin of error; three other cities (Laguna Hills, Rancho Santa Margarita and San Juan Capistrano) have no entry in the Black median income column because the sample sizes were too small.

Hispanic median income for Mission Viejo and its neighboring cities falls below the various citywide medians, but Mission Viejo reports the second smallest deviation from the citywide median, at 10.3; Laguna Niguel’s Hispanic median income is over 38% below the citywide median. With the exception of Laguna Hills, Asian median income is significantly higher than the city medians. In general, Mission Viejo’s median incomes for racial/ethnic groups have some of the smallest variations from the citywide median, compared to neighboring cities, and the county.

Table D-15 - Median Income by Racial/Ethnic Groups (ACS 2016-2020)

	All HH	White Alone	Hispanic	Black	Asian	% Non Hisp. White
Laguna Hills	\$102,358.00	\$109,304.00	\$93,537.00	–	\$82,679.00	53.7%
Laguna Niguel	\$119,608.00	\$122,040.00	\$74,003.00	\$120,333.00	\$130,313.00	66.5%
Lake Forest	\$112,988.00	\$119,081.00	\$90,843.00	\$75,754.00	\$128,162.00	47.2%
Rancho Santa Margarita	\$125,329.00	\$127,200.00	\$110,772.00	–	\$152,578.00	58.2%
San Juan Capistrano	\$103,922.00	\$108,294.00	\$79,559.00	–	\$138,052.00	52.8%
Mission Viejo	\$121,299.00	\$121,228.00	\$108,832.00	\$121,304.00	\$136,708.00	61.7%
Orange County	\$94,441.00	\$105,133.00	\$74,319.00	\$81,754.00	\$96,959.00	37.6%
Median Income by Racial/Ethnic Groups : Variation from Citywide Median						
	All HH	White Alone	Hispanic	Black	Asian	
Laguna Hills	\$102,358.00	6.8%	-8.6%	na	-19.2%	
Laguna Niguel	\$119,608.00	2.0%	-38.1%	0.6%	9.0%	
Lake Forest	\$112,988.00	5.4%	-19.6%	-33.0%	13.4%	
Rancho Santa Margarita	\$125,329.00	1.5%	-11.6%	na	21.7%	
San Juan Capistrano	\$103,922.00	4.2%	-23.4%	na	32.8%	
Mission Viejo	\$121,299.00	-0.1%	-10.3%	0.0%	12.7%	
Orange County	\$94,441.00	11.3%	-21.3%	-13.4%	2.7%	

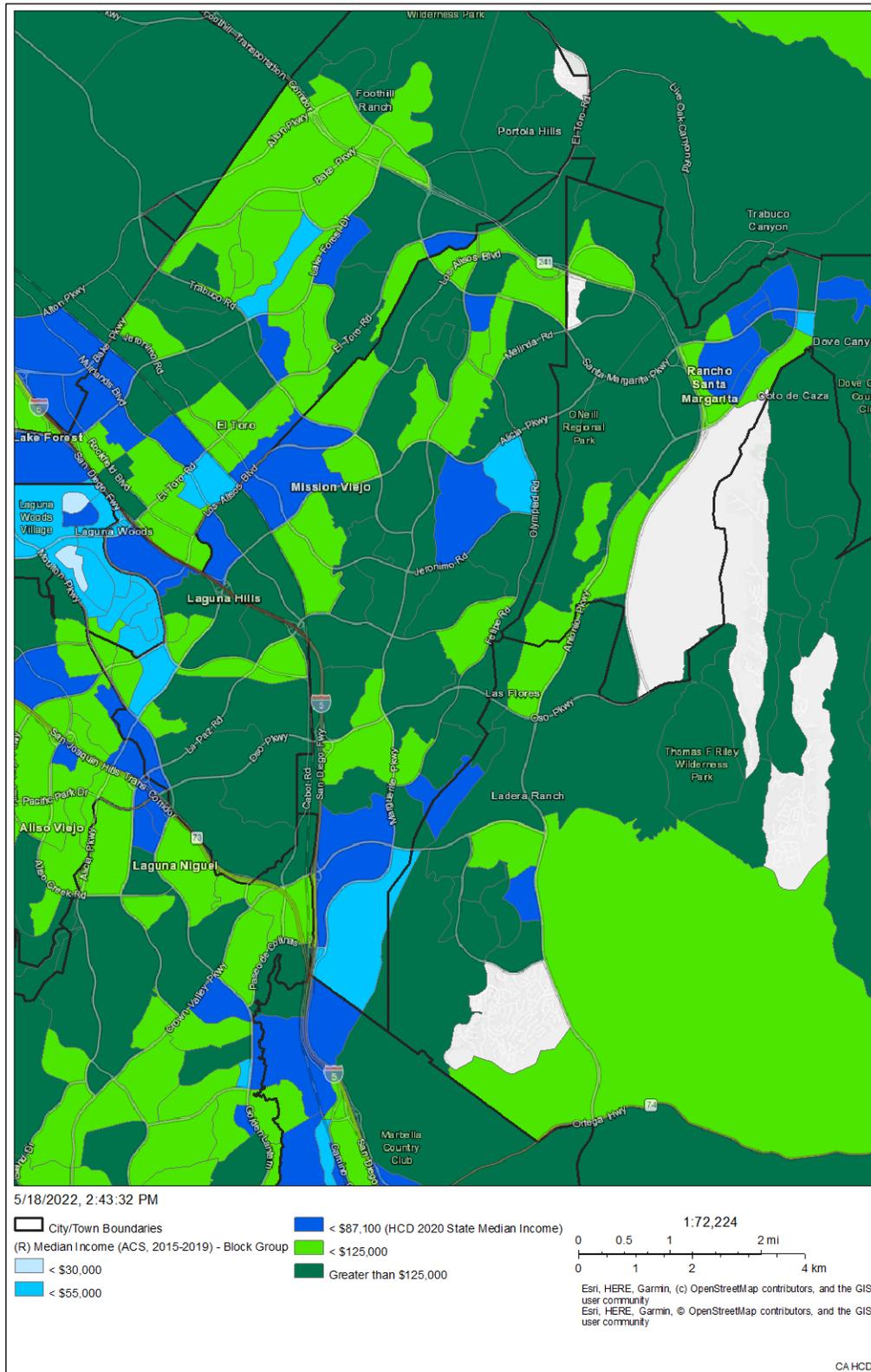
Sources: ACS Table S1903 (Median Income); Brown University tabulation of 2020 Census (Racial Data)



Geographically, Figure D-24 below shows median household income by block group for Mission Viejo and surrounding areas (ACS 2019 data series). As has already been noted in the above table, Mission Viejo is an affluent city, but lower median income areas are apparent in block groups corresponding to census tracts that have been discussed in the other sections of this analysis, in relation to having some concentrations of senior housing communities, and also housing complexes with Section 8 vouchers, in the south of the city, along the Lake Forest city boundary, and an area that contains the large Casta del Sol in the center-east of the city.



Figure D-24 - Mission Viejo – Median Income by Block Group (ACS 2015-19)





D. Disparities in Access to Opportunity

Consideration of patterns of socio-economic and racial/ethnic variation in the context of AFFH analysis should also examine what is termed “access to opportunity”. HCD and TCAC have provided “Opportunity Maps” for 2020, displaying indices of Economic, Educational and Environmental Opportunity, as well as a composite index of all three.

The different indices used to create the TCAC/HCD Opportunity Maps are comprised of the following measures, on a 0-100 scale:

- **Economic**
 - *Poverty* – percentage of population with income above 200% of federal poverty line
 - *Adult Education* – percentage of adults with a bachelor’s degree or above
 - *Employment* – percentage of adults ages 20-64 who are employed in the civilian labor force or in the armed forces
 - *Job Proximity* – number of jobs filled by workers with less than a BA that fall within a given radius of each census tract population
 - *Median Home Value* – value of owner-occupied units
- **Education**
 - *Math and Reading Proficiency* – percentage of 4th graders who meet or exceed math and literacy proficiency standards
 - *High School Graduation Rates* – percentage of high school cohort that graduated on time
 - *Student Poverty Rate* – percentage of students not receiving free or reduced-price lunch
- **Environmental**
 - *Cal Enviro Screen 3.0 indicators* - such as Ozone, PM_{2.5}, drinking water – the higher the index score, the greater the exposure.

Table D-16 identifies the scores in Mission Viejo by census tract, with some low scores highlighted, and Figure D-25 maps the TCAC/HCD Composite Score by census tract, plus the location of the Site Inventory. Figure D-26 maps the composite score across Orange County, and as in other maps in this report, a clear north-south divide can be seen, with Low Resource and High Segregation and Poverty areas apparent in the Anaheim/Orange/Santa Ana area.



Table D-16 - TCAC Opportunity Indices by Census Tract

Census Tract	Resource Level	Economic Index	Educational Index	Environmental Index
320.02	High	61	58	86
320.03	High	57	52	89
320.12	Moderate	45	58	69
320.13	Moderate	41	57	57
320.15	Moderate	37	41	50
320.20	Highest	50	84	96
320.22*	High	24	98	67
320.27*	Moderate	36	42	65
320.28	Moderate	36	60	79
320.30	Moderate	48	44	84
320.31	High	62	56	91
320.32	Moderate	40	55	88
320.33	High	42	68	97
320.34	High	69	64	88
320.35	High	42	69	94
320.36	High	28	79	94
320.37*	High	30	89	93
320.38*	Highest	72	80	92
320.39*	High	47	57	94
320.40	High	47	57	89
320.47*	High	49	68	80
320.48*	High	58	68	91
320.49*	High	63	76	57
423.28*	High	85	56	68
423.33*	Highest	81	74	73
524.28*	Highest	82	74	64



Figure D-25 - Mission Viejo – Composite TCAC Opportunity Index & Site Inventory (2021)

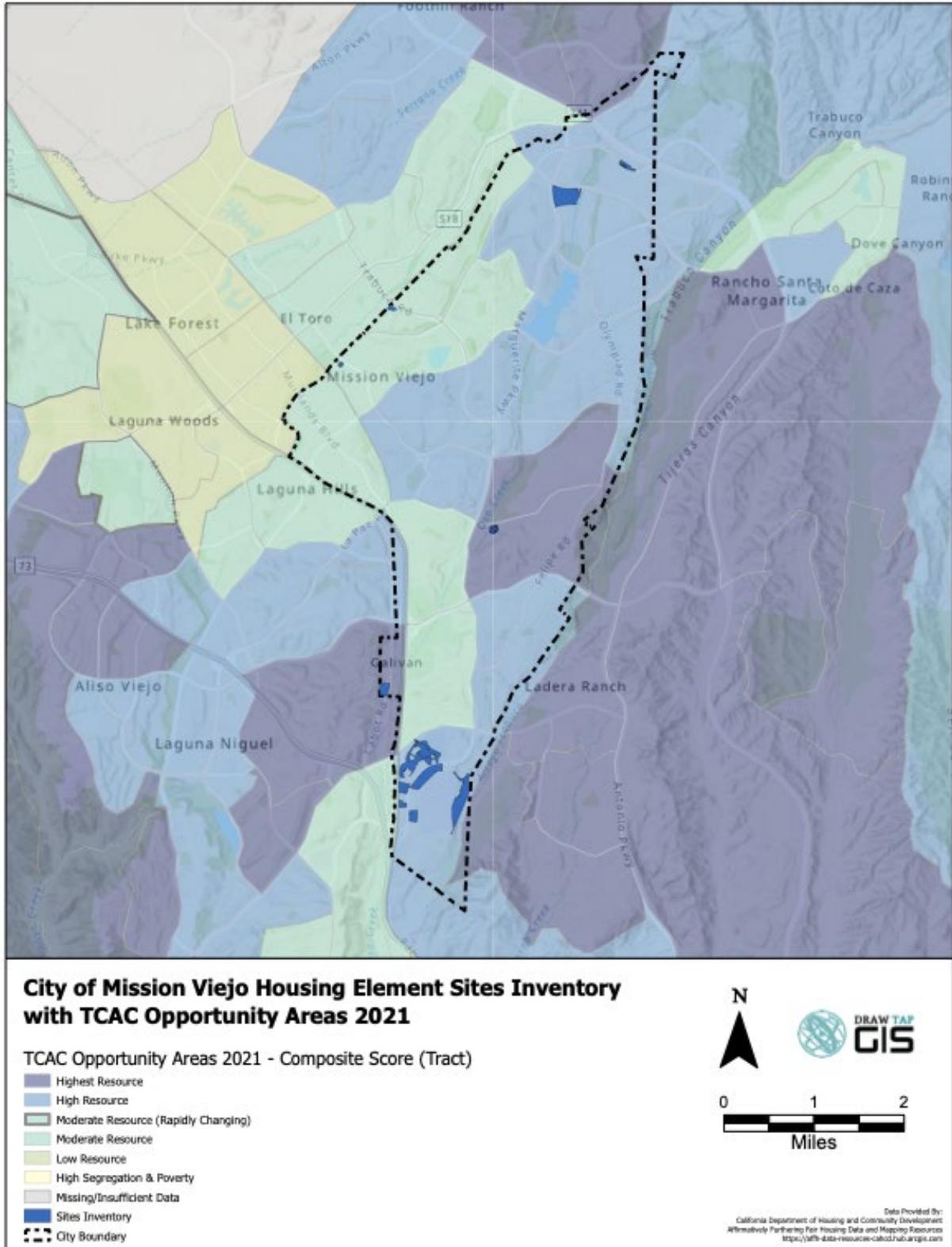
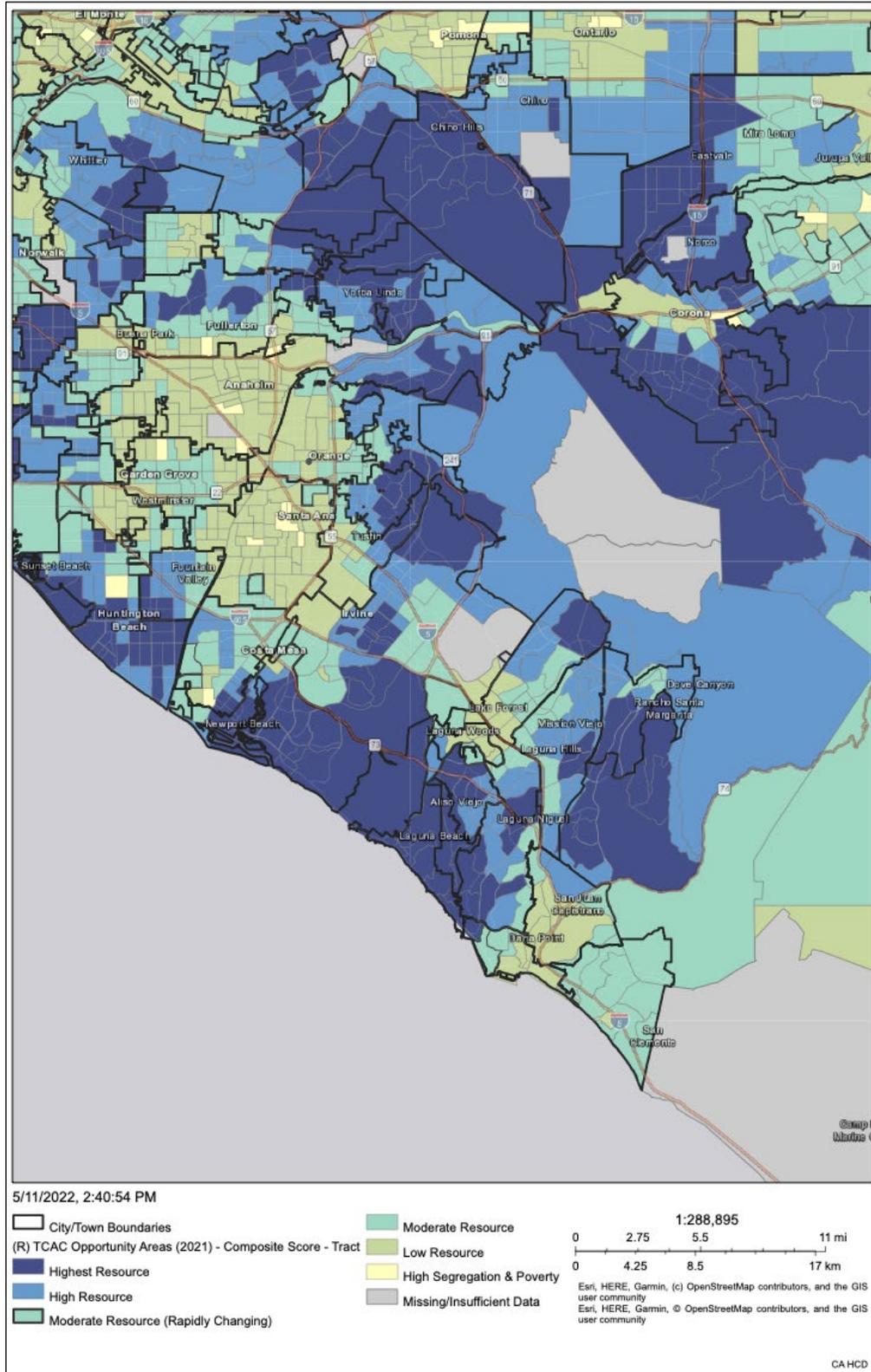




Figure D-26 - Orange County – Composite TCAC Opportunity Index (2021)





Examining the location of the Sites Inventory relative to the distribution of the Composite TCAC Opportunity Index in Mission Viejo (Figure D-25) shows that all the sites are located in High or Highest Resource Composite Score areas; none are in Moderate or Low Resource Composite Score areas. Therefore, the location of the Sites Inventory is not concentrated in poor resource areas. Table D-17 below shows that 94.5% of the Sites Inventory is in High or Highest Resource areas, across unit income levels.

Table D-17 - Distribution of Site Inventory Units by TCAC Opportunity Area Composite Score and Unit Income Level

TCAC Opportunity Area (Composite Score)	Lower Income Units	Moderate Income Units	Above Moderate Income Units	Total Units
Low Resource				
Moderate Resource	5.5%	5.6%	5.4%	5.5%
High Resource	84.8%	84.8%	85.1%	84.9%
Highest Resource	9.7%	9.6%	9.5%	9.6%
Total Units	1,182	435	810	2,427

Seven of Mission Viejo’s 26 census tracts are assigned a “Moderate” score on the composite index in Table D-18, mostly located along the city’s border with Lake Forest, with the other tracts in the “High” or “Highest” range. Three tracts have relatively low scores on two out of the three indicators, with two of those tracts – 320.13 and 320.15 – being wholly located within the city of Mission Viejo.

Tract 320.15 has occasionally been identified in the various sections of this analysis as having slightly lower socio-economic and demographic rankings than other tracts, so it is worthwhile looking at that tract, and 320.13, in more detail – see Table D-18 below, with data for the city as a whole for comparison. Tract 320.13, in the south of the city, scores relatively low on the Economic and Environmental indices. Tract 320.15, located on the western border with Lake Forest, scores low on the Educational and Environmental indices.

Table D-18 - Analysis of Census Tracts 320.13 and 320.15

	Tract 320.13	Tract 320.15	Mission Viejo
TCAC Resource Level	Moderate	Moderate	
TCAC Economic Index	41	37	
TCAC Education Index	57	41	
TCAC Environmental Index	57	50	
Total Population	5,065	6,730	
Race/Ethnicity (%)			
White	65.8%	53.7%	61.7%
Black	1.5%	1.8%	1.9%
Asian	7.6%	16.0%	14.8%
Hispanic	18.2%	21.7%	19.2%
Poverty Score	10.9%	9.0%	
% Population Disabled	15.4%	17.9%	10.0%
Total Housing Units (Occupied)	2,326	1,877	33,000
% Single Family	36.0%	82.7%	72.5%
% Owner-Occupied	42.8%	85.4%	77.2%
Unit Age: % Built			
Before 1980	59.2%	94.0%	54.1%
1980-99	21.4%	5.7%	40.8%
2000-09	13.8%	0.3%	3.3%



	Tract 320.13	Tract 320.15	Mission Viejo
2010+	5.6%	0.0%	1.8%
Median Household Income	\$78,843.00	\$145,110.00	\$121,299.00
% Population Disabled	15%	18%	10%
Public Housing Choice Vouchers as % of Renter-Occupied Units	5.3%	0.0%	3.8%
"Sensitive Community"	Yes	No	

Tract 320.15, on the border with Lake Forest, differs most from the city as a whole in having a higher proportion of the population with a disability, a higher proportion of single family and owner-occupied housing, and a significantly older housing stock. This area includes the Aegean Hills community, which as has been noted earlier was annexed into the city in 1992, and which has undergone demographic change as some of its larger single-story homes have been converted to senior residential care facilities. It is noteworthy that this tract has a significantly higher median income than the city as a whole (ACS, Table S1903, “Median Income in the past 12 months”, 2016-2020 5 Year estimates).

Tract 320.13, in the southern part of the city, exhibits more divergence from the city’s overall scores on a number of factors. As with tract 320.13, it also has a relatively high proportion of disabled residents, but 320.13 has a significantly lower median income, and a higher White percentage of its population. Only 43% of its units are owner-occupied, compared with the citywide figure of 77%, and the tract has 5.3% of its renter-occupied units with Housing Choice Vouchers. Its housing stock is newer than the city as a whole, with almost 20% of it built in the last 20 years. It is also identified in the AFFH data viewer application as a “Sensitive Community”, defined as one that “... may be vulnerable to displacement.” because it has low income indicators and a high proportion of the population are renters.

Tract 320.13 also includes a number of apartment complexes with deeded affordable units: Heritage Villas (which appears in the AFFH data viewer as having 141 out of its 143 units subsidized), Adagio on the Green, and Heritage Pointe are all senior housing developments. In addition, there are two apartment complexes (Camden Crown Valley and Vista Real) in this tract which accept Section 8 vouchers.

Examining aspects of the three indices further:

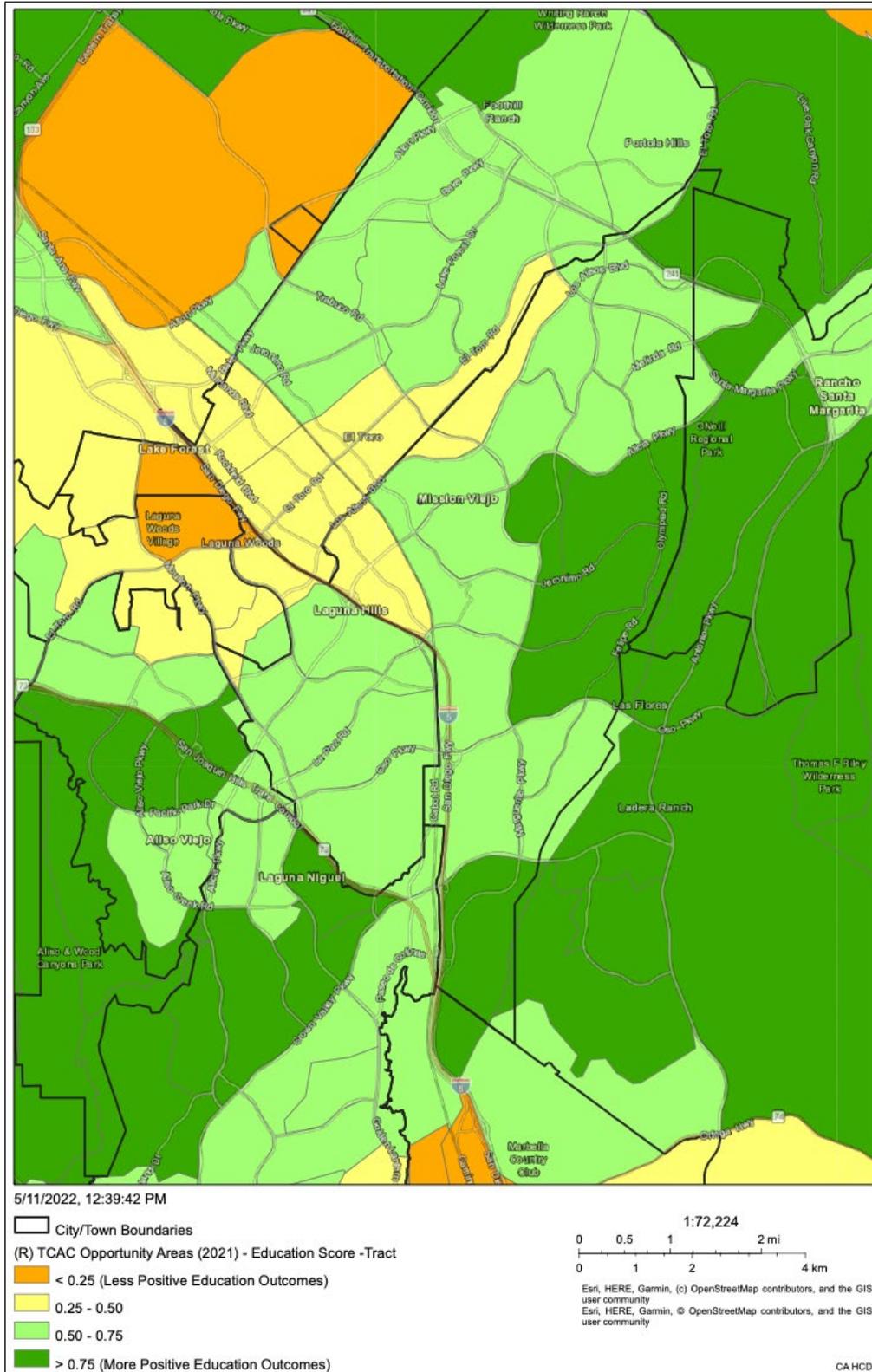
8. Education

According to the Orange County Analysis of Impediments (AI) to Fair Housing report (May 27, 2020 p168 and p183), in terms of educational opportunities countywide there are racial/ethnic disparities in access to educational opportunities, with non-Hispanic Whites scoring the highest exposure to educational opportunity (58.6 on the 0-100 index); Hispanics have the lowest score (30.9). The report also notes that a number of cities, including Mission Viejo (p182), score highly across all racial/ethnic groups on this index (from 68.0 for non-Hispanic Native Americans to 69.6 for Asian/Pacific Islanders).

Table D-18 above shows that the Mission Viejo’s census tracts on the Educational Index (data from AFFH Data Viewer) range from 41 (320.15) to 98 (320.22 – which can partly be explained by the location of Saddleback Community College in its boundaries), with most tracts in the Mission Viejo’s census tracts ranging from the high 50s to high 70s. Figure D-27 maps the Education index for Mission Viejo. The lowest scoring tracts, including 320.15 mentioned above, are almost all on the city’s border with Lake Forest, and have higher non-White proportions of their populations, per the AFFH data viewer at the block group level. The southernmost tract in the city, 320.22, probably scores highly in part because it is the location of the Saddleback College campus.



Figure D-27 - Mission Viejo – TCAC Education Index (2021)





The City of Mission Viejo is served by two school districts, according to www.caschooldashboard.org: Capistrano Unified School District, which serves the southern and eastern parts of the city, south of Oso Parkway and east of Trabuco Road at Los Alisos Boulevard, while the remainder of the city in the north and west is served by Saddleback Valley Unified School District, which also serves the cities of Lake Forest, Laguna Hills and Laguna Woods. Table 13 below compares the two school districts on demographic measures. Saddleback Valley Unified serves a higher proportion of socio-economically disadvantaged students and English Learners, and has a higher proportion of Hispanic students in its enrollment.

Table D-19 - School District Demographics

	Capistrano Unified	Saddleback Valley Unified
Total Enrollment	43,719	24,954
English Learners	9.6%	17.8
Homeless	5.8%	5.0%
Socioeconomically Disadvantaged	25.4%	30.2%
Students with Disabilities	12.2%	12.9%
Race/Ethnicity:		
African American	0.8%	1.2%
American Indian	0.2%	0.1%
Asian	6.6%	8.7%
Filipino	1.8%	3.5%
Hispanic	27.1%	37.3%
Two or More Races	6.6%	7.4%
Pacific Islander	0.1%	0.2%
White	54.1%	40.4%

Capistrano Unified has an overall Graduation Rate of 96.8%, while Saddleback Valley Unified’s rate is 89.3% (the statewide rate is 86.8%). The rate for English Learners is 91.8% and 76.9%, respectively.

9. Economic

According to the Orange County AI report, and borne out by various analyses above, there are disparities in access to economic opportunity at the county level, with a noticeable north-south divide. As with the Educational Opportunity index, non-Hispanic Whites score highest on the index of Economic Opportunity (59.4), and Hispanics have the lowest score (31.9). Mission Viejo and a number of neighboring cities “have moderate economic opportunity scores for all racial/ethnic groups (scores from the mid-40s to mid-50s).” (p170).

Table D-16 above and Figure D-28 below, which maps the Economic Index, show that the city’s census tracts on the Economic Index range from 24 (320.22) to 82 (524.28 – but only a very thin strip of this tract at the northernmost tip of the city is within Mission Viejo; 423.33, with a score of 81 is also split with another city, but more of it, particularly the commercial section, is within Mission Viejo). These two extremes can be partly explained by local factors: tract 320.22 is largely made up of the Saddleback Community College campus, limiting land for economic activity, while 423.33 has a strip of commercial development along both sides of I-5 on the south-western border of the city.



Figure D-28 shows that the cities surrounding Mission Viejo display varying patterns. For example, Rancho Santa Margarita, to the east of Mission Viejo, has a similar pattern on this index to Mission Viejo, while Lake Forest to the northwest of the city, has more tracts with higher scores on the economic index, particularly in its relatively newly developed/annexed section, which included the development of a business park in the Foothills Ranch section. Low scoring tracts are prevalent in the retirement community of Laguna Woods, and also large tracts to the north in Irvine corresponding to the former El Toro military base, which is being redeveloped by the city.

The AFFH data viewer also shows that jobs in Mission Viejo, as measured by HUD's Jobs Proximity Index (Figure D-29 – mapped at the block group level, not census tract), are focused along the I-5 corridor and the railroad tracks along the western edge of the city (areas in green and yellow in Figure D-29). As has been shown in Figure D-3, the bulk of the city's land is residentially zoned, and therefore many block groups score low on this index, (index score under 20, red block groups in Figure D-29).

The Housing Element attempts to balance economic activity and housing need by including sites in the Sites Inventory where it is proposed that both commercial and residential uses will occur through overlay zoning.



Figure D-28 - Mission Viejo – TCAC Economic Index (2021)

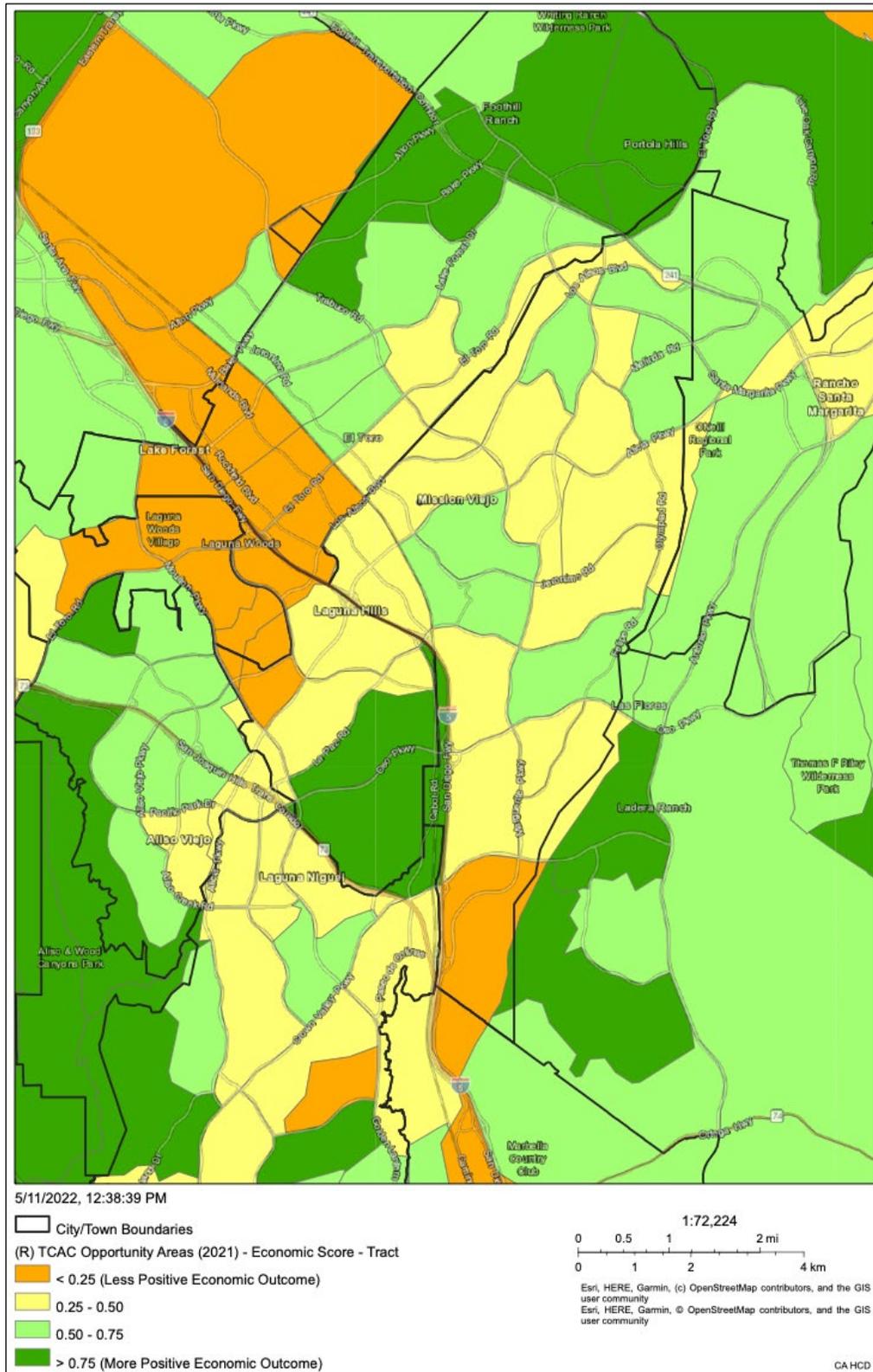
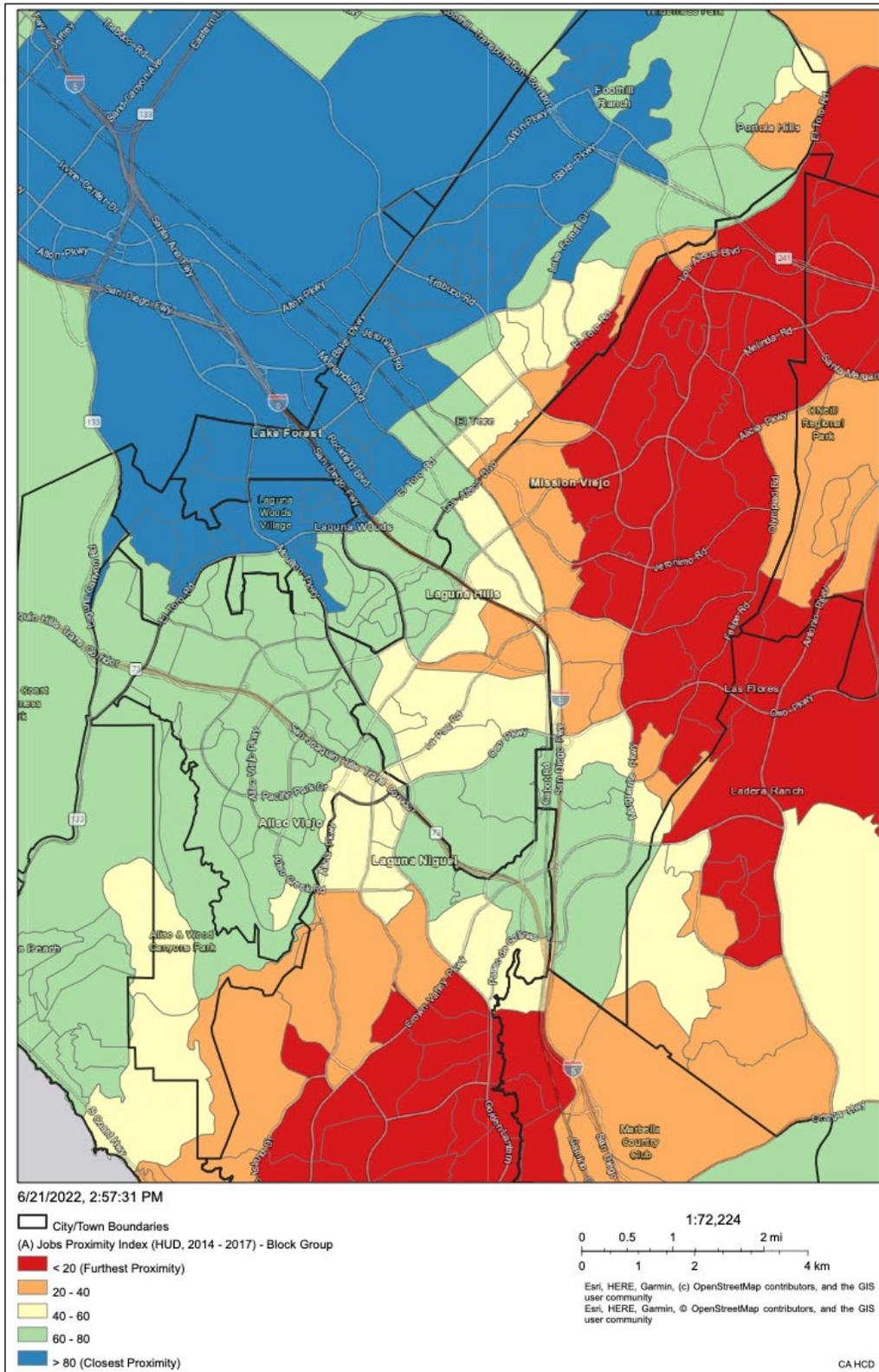




Figure D-29 - Mission Viejo – Jobs Proximity Index (Block Group. HUD, 2014-17)





10. Transportation

The County AI analysis of transportation cost index scores (p171) once again highlights that there is a north-south divide – this time with northern, denser parts of the county scoring well. Transportation cost index scores as well as transit index scores are generally higher in North Orange County than in South Orange County. For example, northern Orange County cities such as Santa Ana and Anaheim have scores in the high 30s to high 40s, while Mission Viejo has scores across racial/ethnic groups in the 20s (p182).

HUD’s AFFH Mapping Viewer (but not the California AFFH Data Viewer) includes the Low Transportation Cost Index, and a screenshot of the Orange County area, including Mission Viejo, is shown in Figure D-30 below. The index is defined by HUD as follows: “The Low Transportation Cost Index is based on estimates of transportation expenses for a family that meets the following description: a 3-person single-parent family with income at 50% of the median income for renters for the region... with values ranging from 0 to 100. The higher the transportation cost index, the lower the cost of transportation in that neighborhood. Transportation costs may be low for a range of reasons, including greater access to public transportation and the density of homes, services, and jobs in the neighborhood and surrounding community.”

The HUD Mapping Viewer has limited options to add data layers such as city boundaries, roads and other features, so Figure D-30 has been annotated to show the approximate location of the City of Mission Viejo. The map confirms the County AI description of the geographic pattern: higher scores on this index can be observed in the northern part of the county (Anaheim-Santa Ana-Orange – darker purple), while Mission Viejo and surrounding cities scored lower (pink). Within Mission Viejo, there are slightly higher scores along the I-5 corridor on the city’s western border, and on its northern border with Lake Forest.

SCAG’s Data/Map Book for Mission Viejo, November 2019 Draft (<https://scag.ca.gov/sites/main/files/file-attachments/missionviejo.pdf?1604904838>), shows a ‘High Quality Transit Corridor’ following I-5 along the city’s western border, and a major transit stop on the Laguna Niguel/Mission Viejo city boundary (Figure D-31). The major transit stop is the Laguna Niguel/Mission Viejo Metrolink Station, which provides an important community link as far north as Los Angeles Union Station, and the potential to avoid freeway congestion. The transit corridor is identified by SCAG as part of its Connect SoCal 2020-2045 Regional Transportation Plan, which aims to focus employment and household growth within these corridors to ease the movement of people and goods in the region.



Figure D-30 - Orange County: Low Cost Transportation Index (Census Tract, HUD)

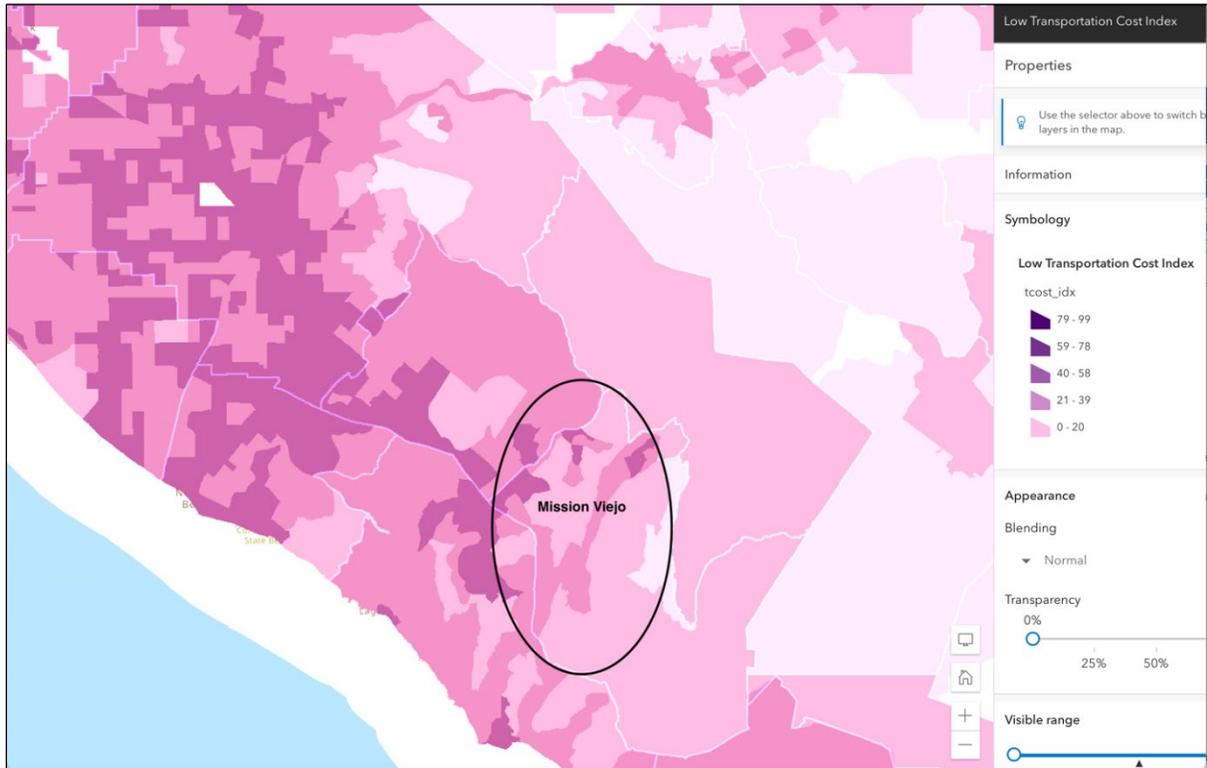
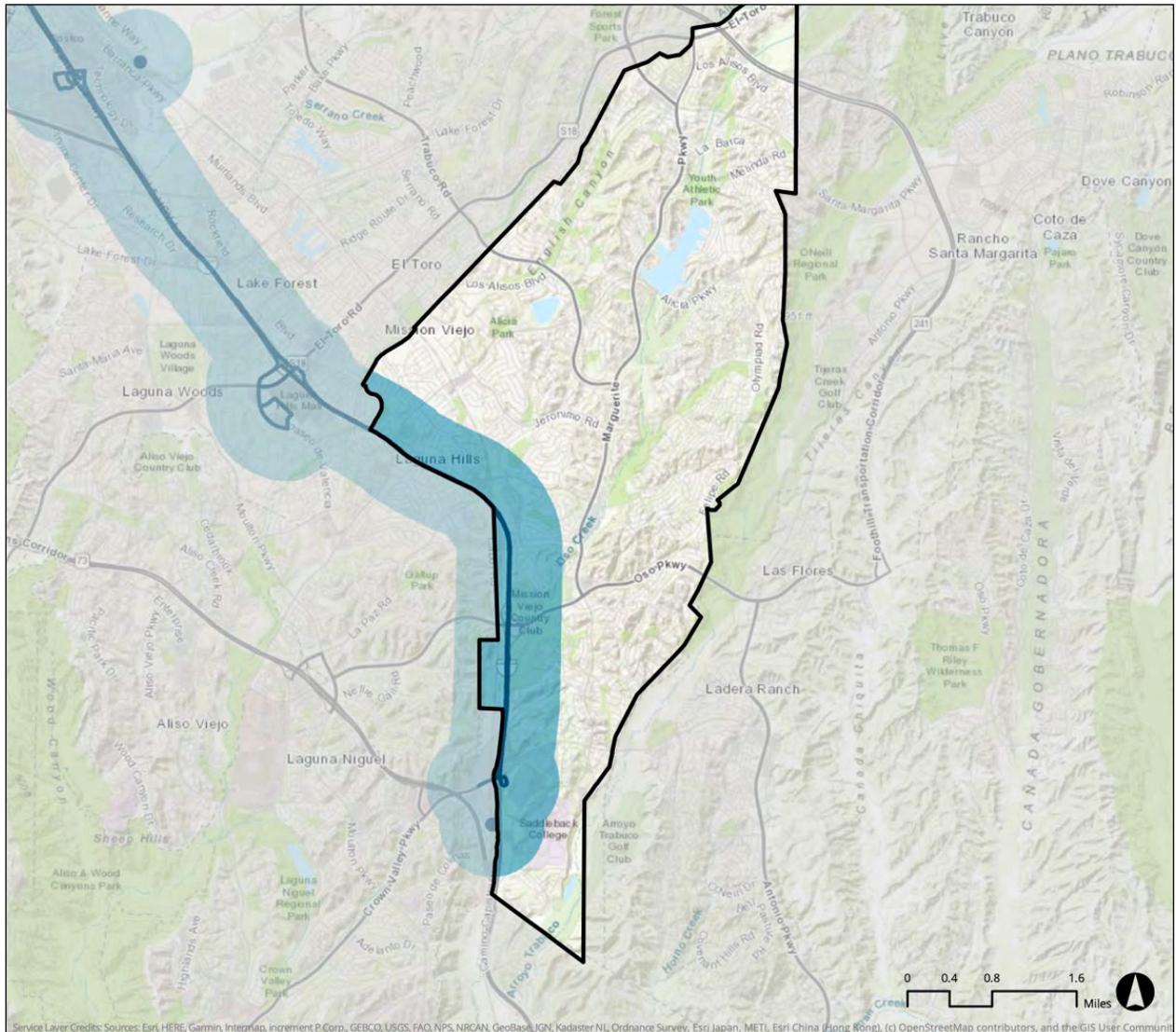




Figure D-31 - Mission Viejo: Major Transit Stops & High Quality Transit Corridor (SCAG Data/Map Book, November 2019)



Major Transit Stops and High Quality Transit Corridors in City of Mission Viejo [Year 2045]

- Major Transit Stops
- High Quality Transit Corridors (HQTCS)
- High Quality Transit Areas (HQTAs)

Note: To assist in identifying transit priority project areas, SCAG identifies Major Transit Stops and High Quality Transit Corridors (HQTCS), and their surrounding areas in one-half mile radius distance, as specified in Section 21155.(b)(3). Major transit stops and HQTCS are extracted from 2045 plan year data of the Draft Connect SoCal. SCAG's High Quality Transit Area (HQTA) is within one-half mile from Major Transit Stops and HQTCS and developed based on the language in SB375. Please note that this map may undergo changes as SCAG continues to update its transportation network as part of the Connect SoCal development process and SCAG shall not be responsible for local jurisdiction's use of this map. Updates to this information will be forthcoming as information becomes available.



11. Environmental

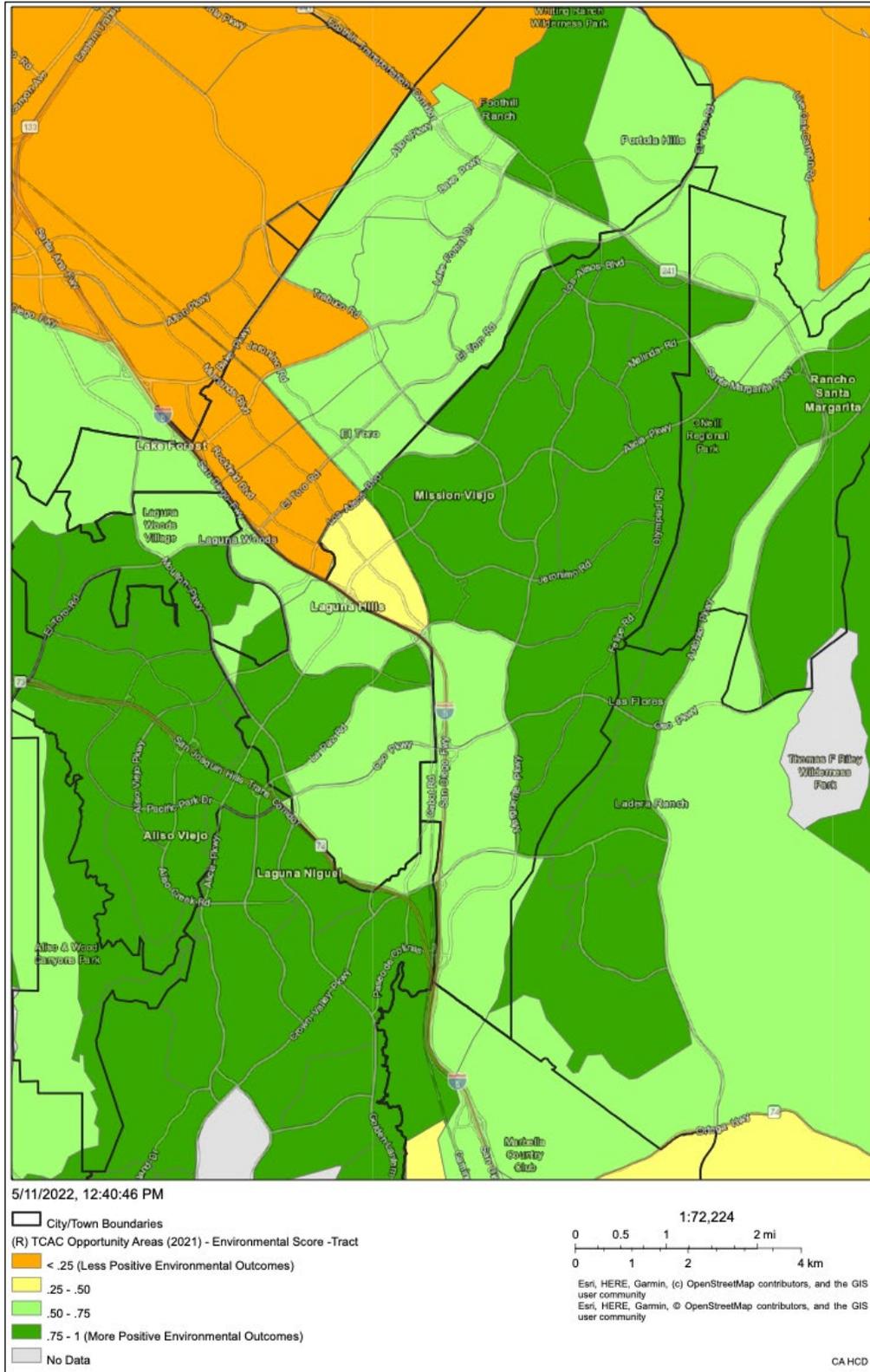
According to the County AI report, at the county level “..there are disparities across racial ethnic groups to environmental opportunities, measured as lower exposure to and effects from pollution.” (p169), with county scores for access to environmentally healthy neighborhoods ranging from 53.8 for Whites to 41 for Hispanics. For Mission Viejo, scores have a relatively narrow range at the high end of the index, from 77.2 for the city’s Black population, to 80.4 for Whites.

Table D-16 above shows that all but five of the city’s census tracts score above 70 on the index, with three tracts in the 50s: 320.15 (50), 320.13 (57) and 320.49 (57). Tract 320.49, at the northern tip of the city, is split with the neighboring city of Rancho Santa Margarita, and the Mission Viejo portion is largely made up of the Upper Oso Reservoir, and a small amount of housing.

Figure D-32 below maps the Environmental Index. Tract 320.15, on the border with Lake Forest, is largely residential, and not the location of major industry that might explain its low score, but it is bounded by I-5 and the railroad, which may partly explain it. It is unclear why Tract 320.13 would score relatively low on the index: most of its area comprises single family and multifamily housing, with only a small amount of business/commercial activities on its southern and eastern edge. The western edge of the tract is I-5, which might have an impact on the score.



Figure D-32 - Mission Viejo – TCAC Environmental Index (2021)





E. Disproportionate Housing Needs and Displacement Risk

12. Housing Vacancy

The recently released 2016-2020 series of ACS data reports (Comparative Housing Characteristics, Table CP04) shows a rental vacancy rate of 6.3%, and 0.3% for owner-occupied units in Mission Viejo. The very low vacancy rate for ownership units implies a strong demand for ownership housing.

13. Cost Burden/Housing Overpayment

Overpayment is defined as expenditure of more than 30% of income on housing, and Severe Overpayment occurs when over 50% of income is spent on housing. According to SCAG’s April 2021 Pre-Certified Local Housing Data report for Mission Viejo, approximately 34% of owner households are spending more than 30% of their income on housing (lower than the 40% figure for Orange County overall).

Focusing on Renter Households, Table D-20 below shows that approximately 32% are in the Overpayment category (versus 27% Countywide) and an additional 26% face Severe Overpayment.

Table D-20 shows that almost all renter households (97%) earning less than \$20,000 a year face severe overpayment. The impact of housing overpayment on Mission Viejo’s lower income households is therefore significant, and in addition, lower income households will have a disproportionate share of special needs populations – seniors, persons with disabilities, and female-headed households with children – who could be most vulnerable to losing their housing due to an inability to pay.

Table D-20 - Spending on Rent by Income (Number of Renter Households)

% of Income	Income Level						Total HH	% of Total HH
	< \$20,000	\$20,000 - \$34,999	\$35,000 - \$49,999	\$50,000 - \$74,999	\$75,000 - \$99,999	> \$100,000		
Over 50%	458	855	356	270	6	-	1,945	26.3%
30%-49%		46	285	880	743	441	2,395	32.3%
20%-29%	15	10	19	107	378	1,391	1,920	25.9%
Under 20%		20			28	1,099	1,147	15.5%
Total HH	473	931	660	1,257	1,155	2,931	7,407	

Defined as "Severe Overpayment"

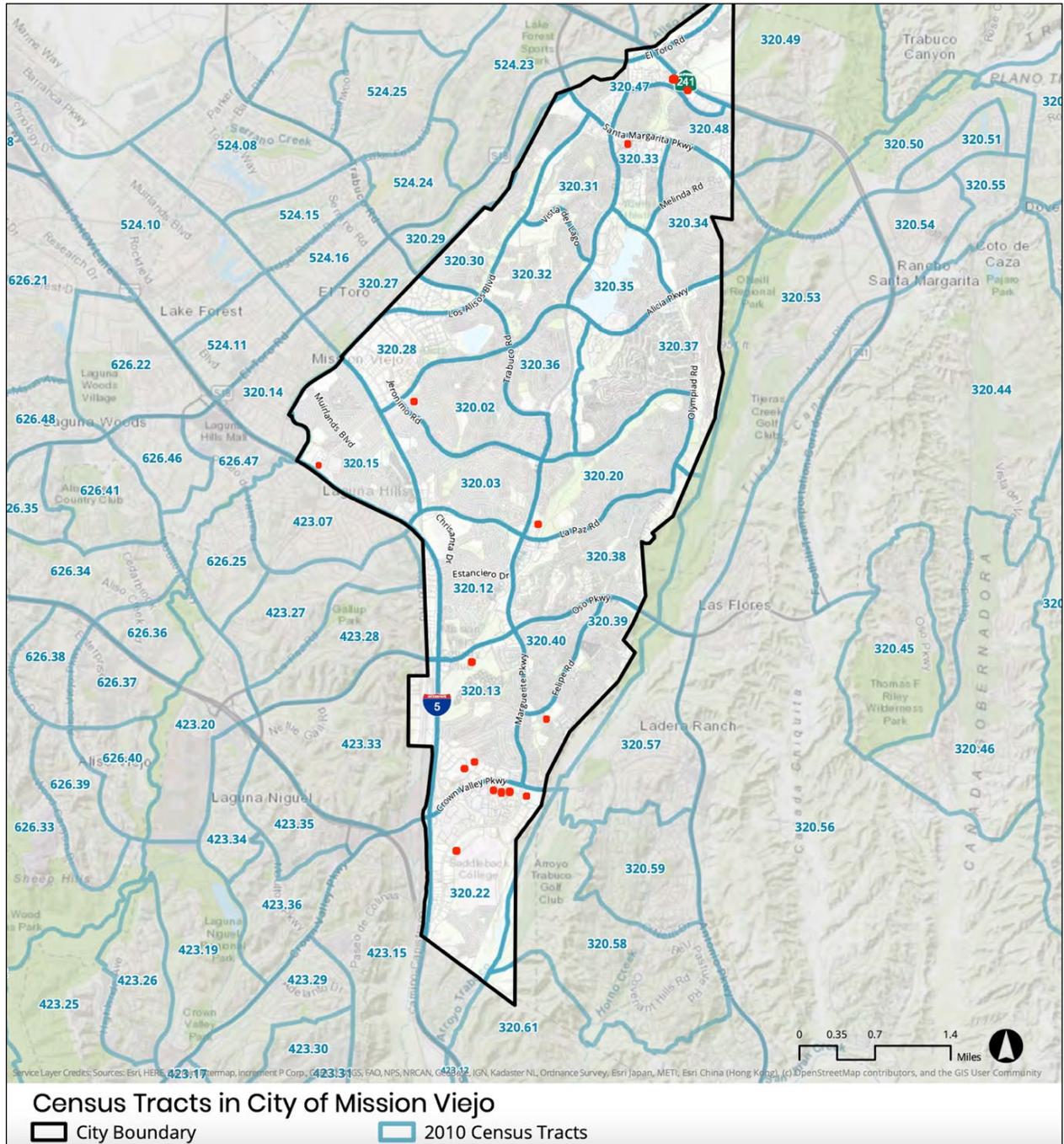
Defined as "Overpayment"

Geographically, a sense of where lower rent housing is located within the City of Mission Viejo can be gleaned from the following two maps. The patterns coincide with those seen for a variety of the socio-economic and land use themes already described in this section.

Figure D-33 below shows the location of apartment complexes with affordable units per a list maintained by the City of Mission Viejo (red dots). In line with the land use map in Figure D-3 above, there is a concentration in the southern section of the city, particularly in Census Tract 320.22. Much of the central and northern parts of the city are zoned for and occupied by single family housing, so few of the affordable complexes are located there.



Figure D-33 - Mission Viejo – Location of Apartment Complexes with Affordable Units





Mapping Overpayment by Renters in Figure D-34 (including the location of the Sites Inventory) below indicates some familiar patterns already discussed on a number of indicators: overpayment is particularly apparent in the southern tip of the city, where a number of larger apartment complexes are located, sometimes catering to the large senior population of the city, and student-age population near Saddleback College, as well as a couple of tracts in the north and center of the city which have a relatively small number of rental units.

As has already been stated, the bulk of the Sites Inventory is located in the southern part of the city. Table D-21 below shows that the bulk of the units (63%) in the Inventory are located in areas with a 61%-80% rental overpayment rate, and another 33% are in areas with a 41%-60% rental overpayment rate. Approximately 73% of Mission Viejo’s census tracts have rental overpayment rates above 61%. Providing the conditions for increasing the supply of more affordable units in parts of the city which have higher rental overpayment rates may help reduce the proportion of residents experiencing high rates of rental overpayment.

Table D-21 - Distribution of Site Inventory Units by % Overpayment by Renters and Unit Income Level

Overpayment by Renters	Lower Income Units	Moderate Income Units	Above Moderate Income Units	Total Units
0-20%				
21-40%	3.0%	2.9%	3.0%	3.0%
41-60%	33.6%	33.5%	33.5%	33.5%
61-80%	63.4%	63.6%	63.5%	63.4%
>80%				
Total Units	1,182	435	810	2,427

The pattern for Overpayment by Owners (Figure D-35 below) is a reflection of land use patterns in Mission Viejo, with 5 of the city’s tracts in the center and north in the 41%-60% owner overpayment range – areas where an overwhelming proportion of the housing stock is owned, particularly single family owned, units. Most of the city – and most of the Site Inventory units (approximately 90%) – are located in areas with a 21%-40% owner overpayment range, as shown in Table D-22 below:

Table D-22 - Distribution of Site Inventory Units by % Overpayment by Owners and Unit Income Level

Overpayment by Owners	Lower Income Units	Moderate Income Units	Above Moderate Income Units	Total Units
0-20%				
21-40%	89.7%	89.9%	90.1%	89.9%
41-60%	10.3%	10.1%	9.9%	10.1%
61-80%				
>80%				
Total Units	1,182	435	810	2,427



Figure D-34 - Mission Viejo – Overpayment by Renters and Site Inventory (ACS 2015-19)

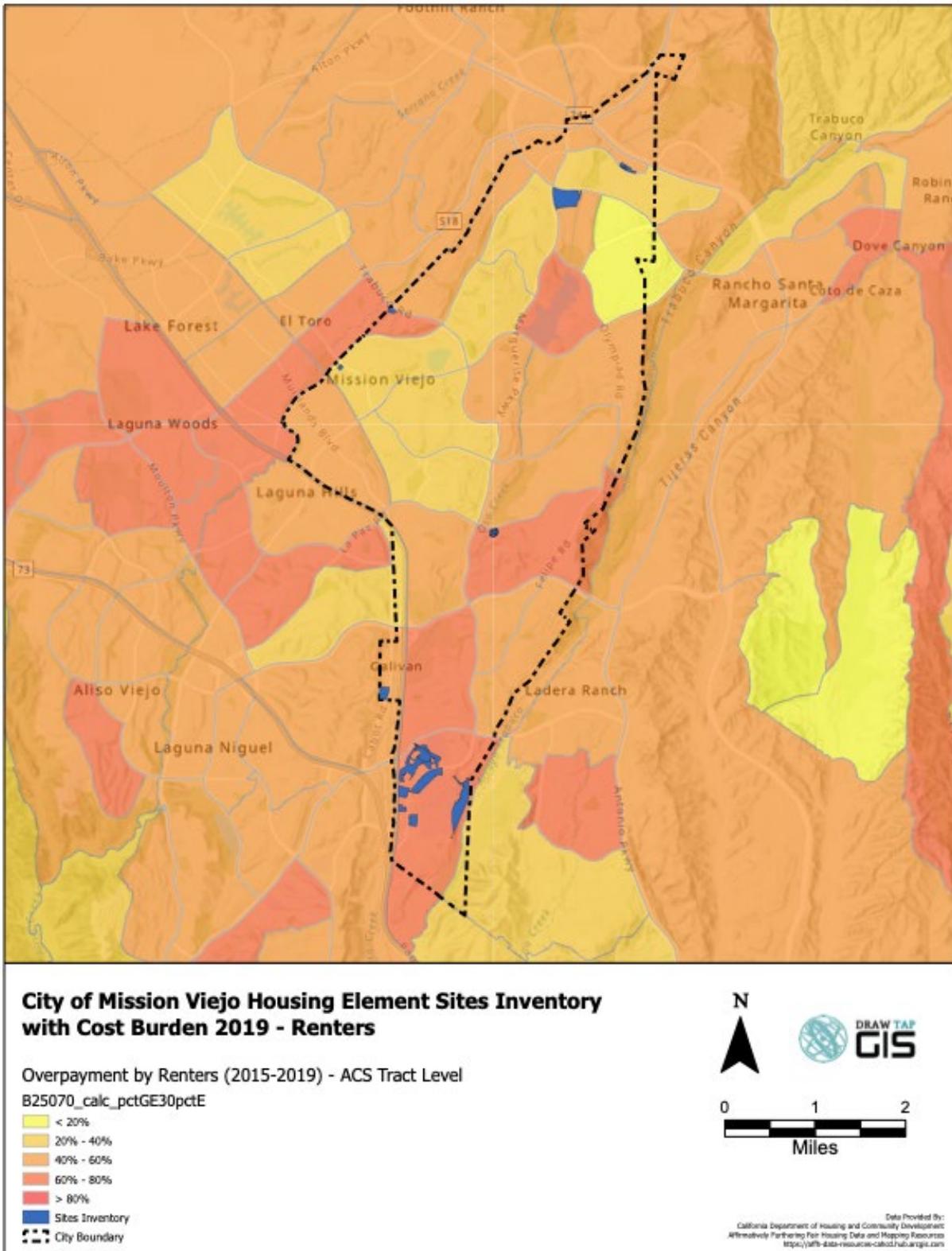
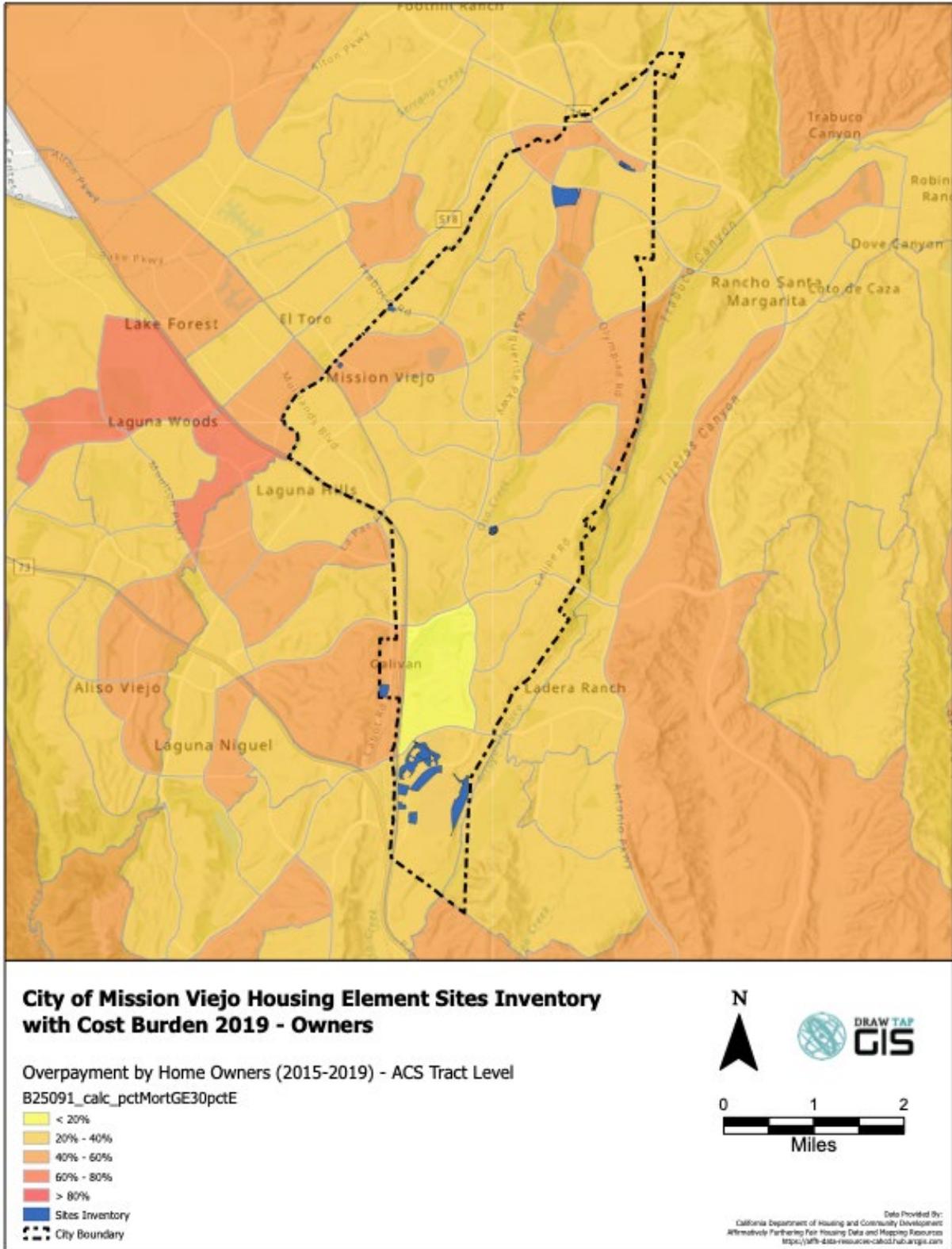




Figure D-35 - Mission Viejo – Overpayment by Owners (ACS 2015-19) and Sites Inventory





14. Overcrowding

The American Community Survey defines an overcrowded housing unit as one occupied by more than 1.01 persons per room (excluding kitchens, porches, and hallways). A unit with more than 1.51 occupants per room is considered severely overcrowded. The incidence of overcrowded housing is a possible indicator of whether there is an available supply of adequately sized housing units.

Only one census tract out of 26 in Mission Viejo – 320.22, in the southern tip of the city, and shared with the City of San Juan Capistrano – is identified in the AFFH Data Viewer as having more than the statewide average of 8.2% of households overcrowded, with a rate of 13.28%. All but five of Mission Viejo’s census tracts have under 3% of households overcrowded. Tract 320.22 therefore appears to be quite anomalous. It contains the Idyllwillow Apartments, one of the sites identified for redevelopment in the Housing Element, and the tract is largely occupied by Saddleback College (which does not have dormitories) and business/commercial uses. There are a significant number of apartment complexes in this tract, including a number with Housing Choice Vouchers, as has already been noted.

In a regional context, once again there is a clear north-south division within Orange County, as shown in Figure D-36 below, with many census tracts in Santa Ana-Garden Grove-Anaheim at 20% or more overcrowded.

Per SCAG’s Pre-Certified Local Housing Data report, owner overcrowding in Mission Viejo is very minor, with 0.6% of owner households experiencing overcrowding and 0.2% facing severe overcrowding. For renters by comparison, 5.6% experience overcrowding, and 2.4% experience severe overcrowding, while most of the southern part of the county is below the statewide average of 8.2%. This in part reflects the different housing/land use patterns within the county, with many southern Orange County cities being planned developments with a relatively small percentage of multifamily units in their tenure composition.

Figure D-37 shows overcrowding by Census Tract for Mission Viejo, plus the location of the Sites Inventory. As has been noted before, the bulk of the Sites Inventory is in the southern part of the city, and is in Tract 320.22, the only tract with an overcrowding rate above the statewide average of 8.2%, with a rate of 13.3%. Increasing the supply of affordable units, many of them likely to be rental, in the single part of the city with a higher rate of overcrowding than the rest of the city, may help to reduce this pattern in the coming decade.



Figure D-36 - Orange County – Percent of Households Overcrowded (Census Tract, HUD)

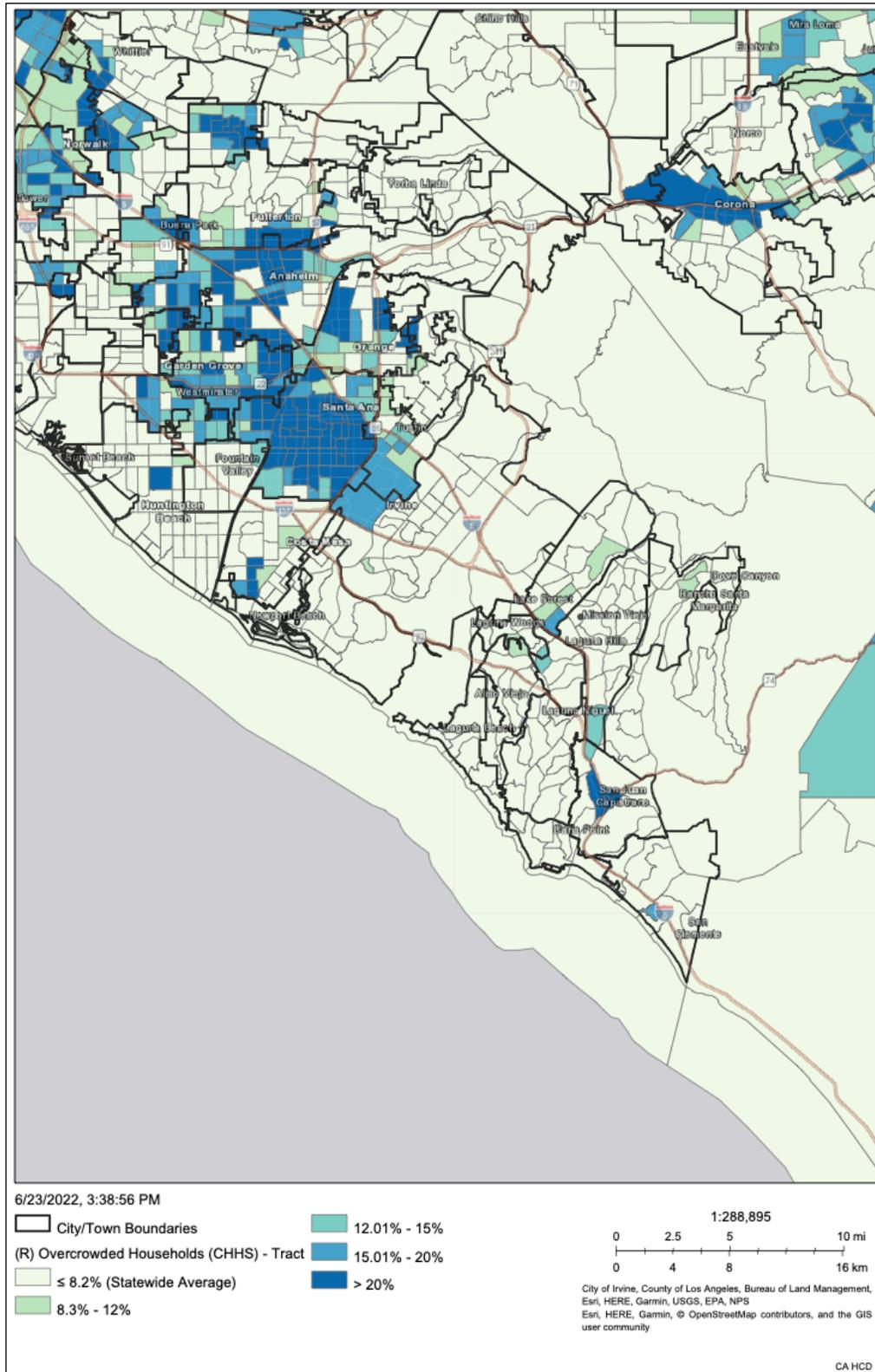
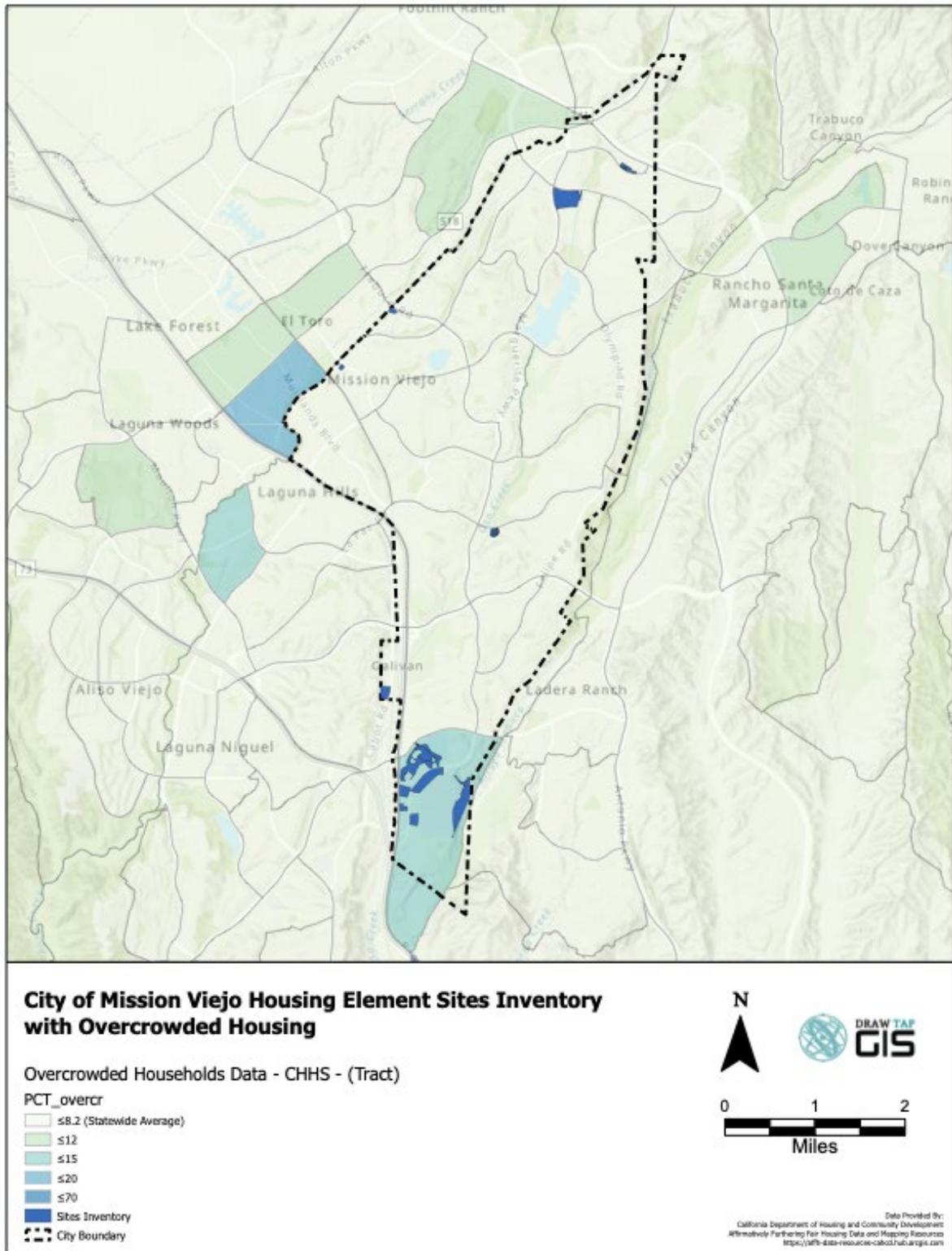




Figure D-37 - Mission Viejo – Percent of Households Overcrowded, and Site Inventory (Census Tract, HUD)





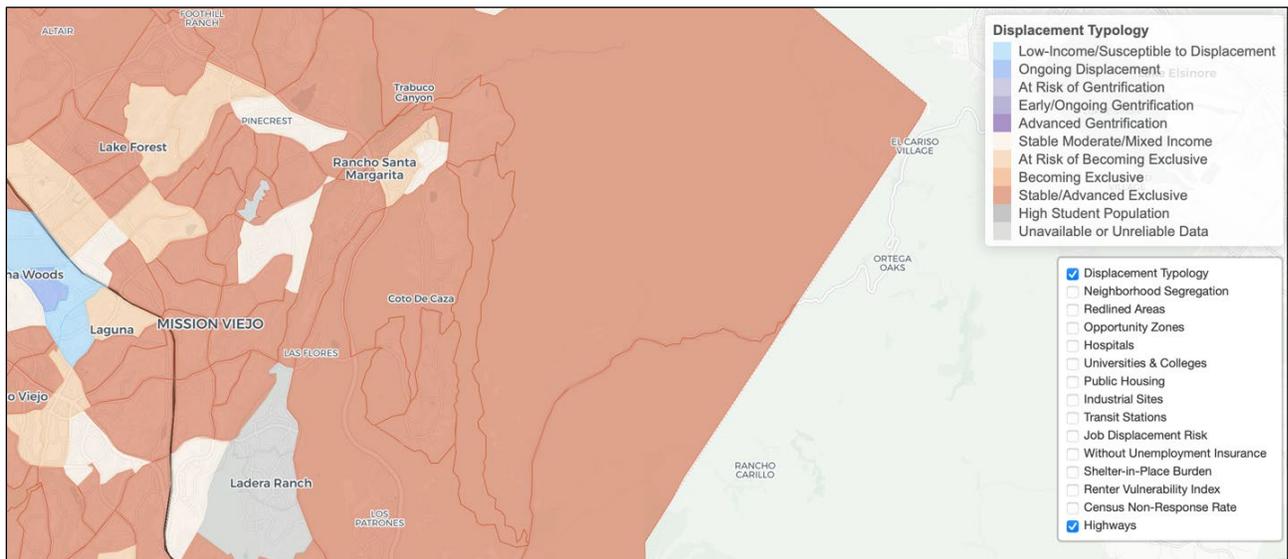
15. Displacement Risk

All of the City’s affordable rental projects (totaling 297 lower income affordable rental units – see Table -II-21 in the Housing Needs Assessment section) have long-term affordability restrictions and none are at-risk of conversion to market rate in the next decade.

Another measure of the potential for displacement has been devised by The Urban Displacement Project (<https://www.urbandisplacement.org/maps/los-angeles-gentrification-and-displacement/>), which has developed a Displacement Typology for census tracts in Southern California to identify areas at risk of gentrification and displacement of low income households.

In the Mission Viejo area (Figure D-38), there are no tracts in those categories. A vast majority of the City’s census tracts have housing “Stable/Advanced Exclusive” category (dark tan color), which denotes high income tracts, affordable only to high or mixed high income households, with only marginal change in housing costs. There are just two tracts out of 26 in Mission Viejo in the “Stable/Moderate/Mixed Income” category - Tracts 320.22 and 320.28 – and one tract (320.28) is classified as being “At Risk of Becoming Exclusive,” meaning moderate/mixed high-income households with housing affordable to those groups, and with a marginal change or increase in housing costs. This pattern is in line with the socio-economic characteristics of the city already noted in the analysis, plus the planned nature of the city’s initial residential development, where approximately 75% of the housing stock is single family.

Figure D-38 - Mission Viejo – Displacement Typology (Urban Displacement Project)





16. Substandard Housing

Per SCAG's Pre-Certified Local Housing Data report for Mission Viejo (p11), about two-thirds of the city's housing stock was built in the 1970s and 1980s (now 40-50 years old). Although the city's housing stock is relatively old, as noted in the Housing Needs Assessment, only about 1%-2% of the total stock has been identified as needing some level of repair and maintenance, per the City's Building and Code Enforcement department. The department has helped direct residents to available resources to assist with improvements. The City has a Housing Rehabilitation program, with interest free loans and grants to assist low and moderate income residents to improve their homes. Over the last 10 years, the City has assisted via loans and/or grants 117 households and spent a total of \$1,695,500 to assist residents with repairs to items like windows, roofing, flooring, plumbing, and bathroom and kitchen remodels

The SCAG report also summarizes the quality of Mission Viejo's housing stock (p12): 0.34% of the city's housing stock (approximately 118 units) lacks plumbing features, slightly less than the SCAG region's 0.39%, and 0.8% of units (approximately 277 units) do not have complete kitchen facilities, significantly lower than the region's 1.29%.

17. Homelessness

As described in detail in the Needs Assessment of this Element, the February 2022 Orange County Point-In-Time Homeless Count and Survey counted a total of 5,718 persons in the entire county, with 585 (10.2%) in the southern part of the county, including 28 (26 unsheltered, 2 sheltered) in Mission Viejo (4.8% of the southern region total; the city comprises 11% of the southern section's total population). The City of Mission Viejo is involved in the following initiatives to address homelessness issues:

- Mission Viejo Homeless Collaborative, a quarterly meeting of homeless related non-profits and the City of Mission Viejo to discuss and develop opportunities for homeless individuals in the city, and for the non-profits to coordinate their work.
- The City contracts with Mercy House Living Centers to perform homeless outreach on a full-time basis, to conduct outreach and engagement with the goal of placing homeless or unsheltered individuals into housing. They partner with law enforcement, city staff and non-profits to provide case management and rehoming services
- Through the Orange County Sheriff's Department, the City has two Homeless Liaison Officers (HLOs) assigned to patrol and provide resources to the homeless community. HLOs receive training on mental illness and how to connect the homeless population with available services and resources.
- The City works with non-profits such as South County Outreach and Families Forward to purchase condominium units to help shelter homeless and families at risk of homelessness on a temporary basis. To date, the City has directly funded or helped fund 9 units.



18. Local Knowledge

Historical Housing Patterns: Racial Covenants

As stated in the introduction to this section of the Housing Element, the earliest housing in the part of Orange County that was ultimately incorporated as Mission Viejo in 1988 occurred in the mid-1960s, after the Supreme Court had ruled racial covenants unenforceable in 1948 and just before the passage of the Fair Housing Act in 1968, which outlawed them. There are therefore no patterns of housing segregation in Mission Viejo that have their roots in the existence of racial covenants.

Environmental and Topography Constraints

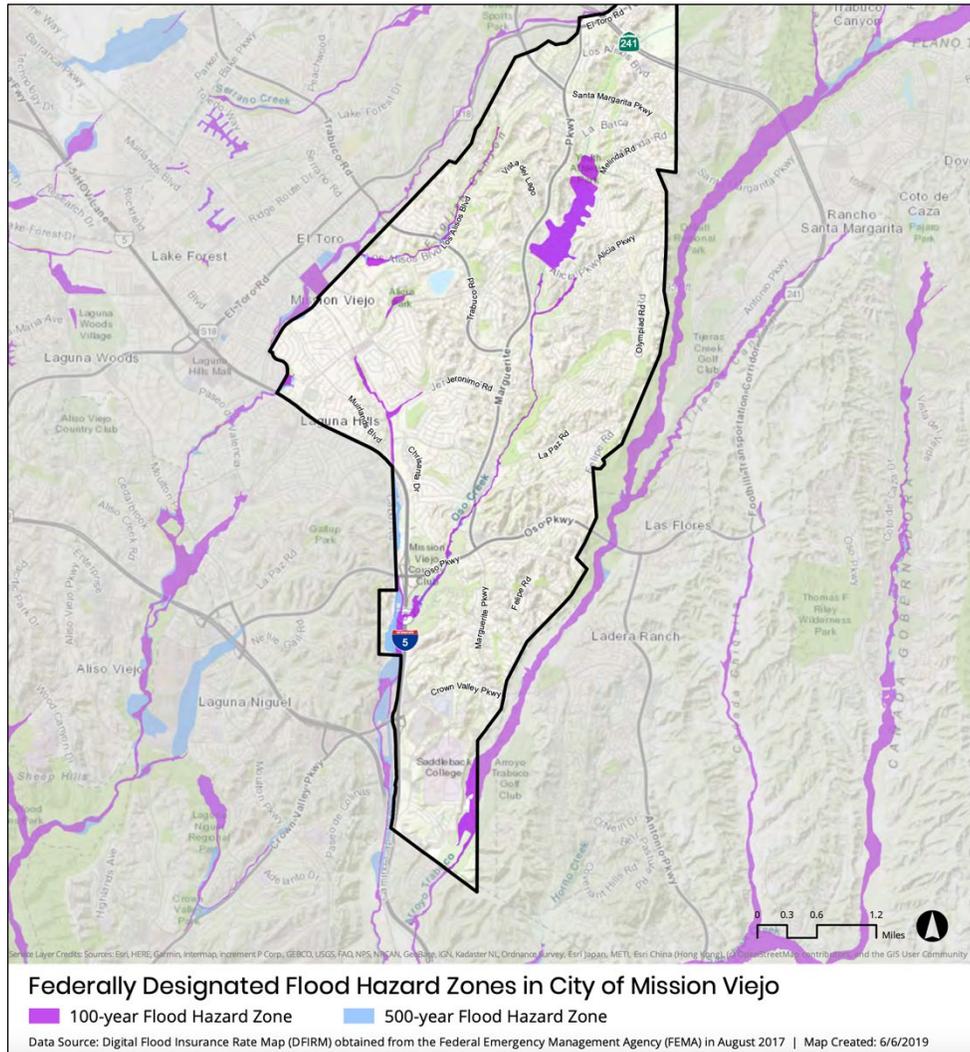
The City of Mission Viejo, as has already been stated, is almost completely built out, with very little undeveloped land available. Infrastructure and buildings occupy much of the city's area and were developed in accordance with prevailing environmental laws and considerations. The city drains into the Aliso Creek and San Juan Creek watersheds, which are both listed as impaired waterbodies by the State of California Water Quality Control Board. Portions of the City are within liquefaction- and earthquake-induced landslide areas as mapped by the US Geological Survey.

Figure D-39 below from SCAG's Data/Map Book for Mission Viejo shows that the vast majority of the land area of Mission Viejo is outside the 100- (purple) and 500-year (light blue) Flood Hazard Zones. The zones correspond to the channels of the San Juan Creek on the eastern border of the city, the artificial Lake Mission Viejo and Oso Creek in the center, and Aliso Creek on the western border of the city.

While there is the potential, like much of Southern California, for environmental impacts from seismic activity, and also a risk of flooding near creeks that drain the city, as has been stated, the city is essentially completely built out, and the new housing generated from this Housing Element would require the appropriate CEQA analyses.



Figure D-39 - Mission Viejo – Flood Hazard Zones



Infrastructure and Accessibility Improvements

Several infrastructure and accessibility improvements have occurred or are planned in the southern section of Mission Viejo, where the majority of the Site Inventory is located:

- The City’s Housing Rehabilitation program is targeting outreach to this section of the city.
- The Coronado Park Rehabilitation Project (\$1 million).
- Crown Valley Parkway center median refresh project.
- Event location constructed and available for rent.
- Renovation of Felipe Tennis Center, including new restrooms.
- Street resurfacing in southern neighborhoods.



Development Patterns in Mission Viejo

As described above, the City of Mission Viejo primarily developed between 1970 and 1990. Approximately two thirds of the housing stock was built during this twenty-year period. Construction began in the western portion of the city between Interstate 5 and Marguerite Parkway, in clusters north and south of La Paz Road, and from the mid 1970s to 1990s, construction extended east of Marguerite, from Crown Valley Parkway in the south to Los Alisos Boulevard in the north.

Due to the historical development and environmental constraints described above, as a master-planned community inaugurated in the mid 1960s, the majority of the Mission Viejo's housing stock and land area is occupied by single-family homes (approximately 72%, compared with approximately 51% countywide) and owner-occupied units comprise approximately 77% of the units in the City.

Over the years, Mission Viejo has worked hard to facilitate several higher density, affordable multi-family and senior projects, with for-sale and rental options. These projects are well dispersed throughout the city, and include: Arroyo Vista apartments (multi-family rental), Heritage Villas (senior rental), The Ridge (for sale), Los Alisos Apartments (multi-family rental), Adagio on the Green (multi-family rental), and Neo by Shea Homes (for sale). The City's ongoing effort to further development of affordable housing, in conjunction with the 6th Cycle Housing Element, includes community, property owner and housing advocacy group input.

**DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF HOUSING POLICY DEVELOPMENT**

2020 W. El Camino Avenue, Suite 500
Sacramento, CA 95833
(916) 263-2911 / FAX (916) 263-7453
www.hcd.ca.gov



January 10, 2022

Elaine Lister, Director
Community Development Department
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

Dear Elaine Lister:

RE: City of Mission Viejo's 6th Cycle (2021-2029) Adopted Housing Element

Thank you for submitting the City of Mission Viejo's (City) housing element adopted October 12, 2021 and received for review on October 13, 2021. Pursuant to Government Code section 65585, subdivision (h), the California Department of Housing and Community Development (HCD) is reporting the results of its review. In addition, HCD considered comments from Mission Viejo Planning Partnership, Welcoming Neighbors Home Initiative and Kennedy Commission pursuant to Government Code, section 65585, subdivision (c).

The adopted housing element addresses some statutory requirements described in HCD's September 7, 2021 review; however, additional revisions are necessary to fully comply with State Housing Element Law (Article 10.6 of the Gov. Code), as described in the enclosed Appendix.

As a reminder, the City's 6th cycle housing element was due October 15, 2021. As of today, the City has not completed the housing element process for the 6th cycle. The City's 5th cycle housing element no longer satisfies statutory requirements. HCD encourages the City to revise the element as described above, adopt, and submit to HCD to regain housing element compliance.

For your information, pursuant to Assembly Bill 1398 (Chapter 358, Statutes of 2021), if a local government fails to adopt a compliant housing element within 120 days of the statutory deadline (October 15, 2021), then any rezoning to accommodate the regional housing needs allocation, including for lower-income households, shall be completed no later than one year from the statutory deadline. Otherwise, the local government's housing element will no longer comply with State Housing Element Law, and HCD may revoke its finding of substantial compliance pursuant to Government Code section 65585, subdivision (i).

Several federal, state, and regional funding programs consider housing element compliance as an eligibility or ranking criterion. For example, the CalTrans Senate Bill (SB) 1 Sustainable Communities grant; the Strategic Growth Council and HCD's Affordable Housing and Sustainable Communities programs; and HCD's Permanent Local Housing Allocation consider housing element compliance and/or annual reporting requirements pursuant to Government Code section 65400. With a compliant housing element, the City will meet housing element requirements for these and other funding sources.

For your information, some general plan element updates are triggered by housing element adoption. HCD reminds the City to consider timing provisions and welcomes the opportunity to provide assistance. For information, please see the Technical Advisories issued by the Governor's Office of Planning and Research at: http://opr.ca.gov/docs/OPR_Appendix_C_final.pdf and http://opr.ca.gov/docs/Final_6.26.15.pdf.

HCD is committed to assist the City in addressing all statutory requirements of State Housing Element Law. If you have any questions or need additional technical assistance, please contact Colin Cross, of our staff, at colin.cross@hcd.ca.gov.

Sincerely,



Paul McDougall
Senior Program Manager

Enclosure

APPENDIX CITY OF MISSION VIEJO

The following changes are necessary to bring the City's housing element into compliance with Article 10.6 of the Government Code. Accompanying each recommended change, we cite the supporting section of the Government Code.

Housing element technical assistance information is available on HCD's website at <http://www.hcd.ca.gov/community-development/housing-element/housing-element-memos.shtml>. Among other resources, the housing element section contains HCD's latest technical assistance tool, *Building Blocks for Effective Housing Elements (Building Blocks)*, available at <http://www.hcd.ca.gov/community-development/building-blocks/index.shtml> and includes the Government Code addressing State Housing Element Law and other resources.

A. Review and Revision

Review the previous element to evaluate the appropriateness, effectiveness, and progress in implementation, and reflect the results of this review in the revised element. (Gov. Code, § 65588 (a) and (b).)

The revised element did not address this finding. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

B. Housing Needs, Resources, and Constraints

1. *Affirmatively further[ing] fair housing in accordance with Chapter 15 (commencing with Section 8899.50) of Division 1 of Title 2...shall include an assessment of fair housing in the jurisdiction. (Gov. Code, § 65583, subd. (c)(10)(A).)*

Outreach: Outreach specifically related to affirmatively furthering fair housing (AFFH) is foundational to a complete analysis and formulating appropriate goals and actions to overcome patterns of segregation and foster more inclusive communities. Despite the many public comments received by HCD, the City appears to have received minimal public input on the housing element or incorporate that input. Further, input does not appear related to AFFH requirements. Moving forward, the City should use a variety of outreach methods (beyond workshops and hearings) to gather input on AFFH requirements. HCD fully encourages the City to make a diligent effort to commenters on this review for example and consider and incorporate comments as part of the AFFH requirement. In addition, the City could consider and tailor outreach from other processes such as a regional analysis of impediments to fair housing choice. Based on this outreach, the element should formulate appropriate programmatic response.

Assessment of Fair Housing: The revised element includes several short paragraphs labeled "Assessment of Fair Housing", but it generally does not adequately address this requirement. The element must analyze fair housing conditions in the jurisdiction with respect to segregation and integration, racially/ethnically concentrated areas of poverty and affluence, access to opportunity, and disproportionate housing needs, including

displacement, as detailed below. The analysis must go beyond mere reporting of data and for example, should consider patterns and trends. Patterns at a local level must address whether areas or neighborhoods differ from other areas or neighborhoods. Patterns at a regional level must compare the City as a whole to the surrounding region. This analysis is particularly important since Mission Viejo appears sharply different from the rest of the region. The analysis should also address any coincidence with other components of the assessment of fair housing and local data and knowledge and other relevant factors as described below. For more information, please visit HCD's Affirmatively Furthering Fair Housing in California website at <https://www.hcd.ca.gov/community-development/affh/index.shtml>. The following are examples of topics that should be addressed as part of this analysis:

- *Enforcement*: The revised element makes note of various outreach efforts the City has undertaken (p. 46), but it must also examine the City's capacity for fair housing enforcement and outreach. This may consist of, but is not limited to, the ability to investigate complaints, obtain remedies, or engage in fair housing testing.
- *Segregation and Integration*: The revised element includes a local map of the percentage of non-white population (p. 49), as well as a brief note stating that there are no patterns of segregation across the City (p. 46). However, this statement does not appear connected to the map which seems to show varying degrees of socio-economic concentrations. Further, this analysis should consider patterns across the region and should describe and analyze patterns of race and ethnicity in greater detail, including trends or relevant factors that may lead to existing patterns. This component of the analysis must also address segregation and integration on the bases of disability, familial status, and income at the local and regional levels.
- *Racially/Ethnically Concentrated Areas of Poverty and Affluence*: The revised element does not address this requirement. The housing element must include an analysis of racially/ethnically concentrated areas of poverty and affluence at the local and regional levels. A full analysis should evaluate patterns and changes over time and consider other relevant factors, such as public participation, past policies, practices, and investments and demographic trends.
- *Disparities in Access to Opportunity*: The revised element includes the TCAC/HCD Opportunity Map (p. 50) and a brief note describing it (p. 46). This is not adequate to satisfy the requirement. A full analysis should examine any patterns in the jurisdiction and should analyze access to opportunity with specific regard for education, economic opportunity, transportation, and environmental justice at the local and regional levels.
- *Disproportionate Housing Needs, Including Displacement*: The revised element does not address this requirement. The housing element must assess disproportionate housing needs on people with protected characteristics and lower-income households. A full analysis should analyze cost burden, overcrowding, substandard housing, homelessness, and displacement risk at the local and regional levels. For Displacement, the City could utilize data and mapping available through the urban Displacement Project at <https://www.urbandisplacement.org/maps/los-angeles-gentrification-and-displacement/>.

- *Local Data and Knowledge*: The element must incorporate local data and knowledge of the jurisdiction into the AFFH section. To assist in meeting this requirement, the element should provide local data not captured in regional, state, or federal data analysis, including information obtained through community participation or consultation.
- *Other Relevant Factors*: The element must include other relevant factors that contribute to fair housing issues in the jurisdiction. For instance, the element can analyze historical land use, zoning, governmental and nongovernmental spending including transportation investments, history of lending practices and demographic trends.
- *Site Inventory*: The element states (p. 81) that sites are geographically distributed in a manner that affirmatively furthers fair housing. This is not adequate to satisfy this requirement. A complete analysis should discuss where sites and the number of units by income group are located, the magnitude of the impact on existing patterns, any isolation of the regional housing needs allocation (RHNA) by income group and whether sites improve or exacerbate fair housing conditions within the jurisdiction. The analysis should address identified sites and AFFH with respect to all components of the assessment of fair housing (e.g., Segregation and Integration, Disparities in Access to Opportunity).
- *Contributing Factors*: The element should re-visit, cull, and prioritize the list of contributing factors to fair housing issues based on the outcomes of a complete analysis. Contributing factors create, contribute to, perpetuate, or increase the severity of fair housing issues and are fundamental to adequate goals and actions. With revisions, the element includes a list of 45 contributing factors to fair housing issues (pp. 47-48). However, these come from a county-wide analysis of impediments and while some may be appropriate, the listing should be tailored and prioritized based on the unique circumstances and conditions in the City. A responsive listing of contributing factors will better connect the assessment of fair housing to appropriate and meaningful goals and actions.
- *Goals, Actions, Metrics and Milestones*: Goals and actions must significantly seek to overcome contributing factors to fair housing issues. Current program actions include Program 16, which commits the City to its already existing actions related to fair housing enforcement and outreach; the adopted element did not revise the language of the original program or add new programs. This is not adequate to satisfy the requirement for specific and meaningful actions. Program actions should be proactive, facilitate meaningful change, and respond directly to the contributing factors to fair housing issues that were identified. Furthermore, the element must include metrics and milestones for evaluating progress on programs, actions, and fair housing results. The element must add, and revise programs based on a complete analysis and connect to prioritized contributing factors to fair housing issues.

2. *Include an analysis of population and employment trends and documentation of projections and a quantification of the locality's existing and projected needs for all income levels, including extremely low-income households. (Gov. Code, § 65583, subd. (a)(1).)*

Extremely Low-Income (ELI) Households: The revised element did not address this finding. Please refer to HCD's September 7, 2021 review for additional information.

3. *An inventory of land suitable and available for residential development, including vacant sites and sites having realistic and demonstrated potential for redevelopment during the planning period to meet the locality's housing need for a designated income level, and an analysis of the relationship of zoning and public facilities and services to these sites. (Gov. Code, § 65583, subd. (a)(3).)*

Realistic Capacity: The revised element assumes 100 percent of maximum allowable densities on residential-only sites and 50 percent of maximum allowable density for overlay sites, occasionally combining these assumptions. However, the element does not adequately support these assumptions based on trends in residential development, land use controls, or other factors. Nor does it explain how the City arrived at these assumptions. Further, an assumption of 100 percent of maximum allowable densities appears to be inconsistent with the samples. For example, Site 2 points to the Shea homes, which are under construction at about 15 units per acre in a zone that allows 30 units per acre. Another project is entitled at approximately 22 units per acre. No connection is drawn between the yield on these sites and the assumptions made in the inventory. The element should include clear supporting information and relate its assumptions to trends and other factors and should adjust its capacity assumptions as appropriate. Please see HCD's prior review for additional information.

Suitability of Nonvacant Sites: The element must analyze the extent to which existing uses may impede additional residential development and include an analysis of any existing leases or other contracts that would perpetuate the existing use or prevent redevelopment of the site for additional residential development. The element notes that nonvacant sites are "significantly underdeveloped, or failing commercial properties" (p. 88), but the actual analysis of existing uses as an impediment to redevelopment is limited. For example, several sites list a multitude of existing commercial uses, but the element does not examine whether those uses constitute an impediment. Other sites include existing residential uses, but the element does not explain how the City envisions redevelopment taking place. The element should be revised to include a complete analysis as described in HCD's prior review.

Substantial Evidence: The adopted element did not address this finding. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

Replacement Housing: The adopted element did not address this finding. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

Small and Large Sites: Sites 3, 4, 8 and 11 all trigger this requirement; the element acknowledges this but does not address the requirement for further analysis. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

Sites Identified in Prior Planning Periods: The revised element includes an expanded Site C and claims that the site was not used in a previous inventory. However, this site triggers the requirements for sites used in previous inventories. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

Infrastructure: The element clarifies sufficient access to existing or planned infrastructure for most sites. However, Sites 3 and 11 do not appear to have sufficient access to infrastructure, and the element does not demonstrate planned infrastructure for the sites either. Sites that do not have access to existing or planned infrastructure will not be counted towards the City's RHNA. The element must demonstrate a plan for infrastructure at these sites or adjust the inventory as appropriate. In addition, the element must clarify sufficient total water and sewer capacity (existing and planned) to accommodate the RHNA or include programs if necessary.

Zoning for a Variety of Housing Types (Emergency Shelters): While the element includes some discussion of parking requirements, it generally does not address findings related to capacity and other development standards such as bed limits. Please see HCD's prior review for additional information.

4. *An analysis of potential and actual governmental constraints upon the maintenance, improvement, or development of housing for all income levels, including the types of housing identified in paragraph (1) of subdivision (c), and for persons with disabilities as identified in the analysis pursuant to paragraph (7), including land use controls, building codes and their enforcement, site improvements, fees and other exactions required of developers, and local processing and permit procedures... (Gov. Code, § 65583, subd. (a)(5).)*

Land Use Controls: The adopted element does not address this finding. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

Processing and Permit Procedures: The adopted element does not address this finding. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

Fees and Exactions: The adopted element does not address this finding. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

Housing for Persons with Disabilities: The adopted element does not address HCD's finding regarding group homes for seven or more residents. Please refer to HCD's September 7, 2021 review to meet this statutory requirement. In addition, the amended text regarding reasonable accommodation now indicates that a public hearing is required. A complete analysis should address this requirement as a potential constraint on housing for persons with disabilities, examining the process and its impact on supply, affordability, and other relevant factors. In addition, the element must still analyze findings of approval for a reasonable accommodation as described in HCD's prior review, particularly, since some findings appear to be constraints. Programs should be added or modified as appropriate. Please see HCD's prior review for additional information.

On/Off-site Improvements: The adopted element adds language clarifying the requirements for street width, but it does not provide the other requirements and does not include any analysis. The element should be revised to include analysis and add or modify programs as appropriate.

5. *An analysis of potential and actual nongovernmental constraints upon the maintenance, improvement, or development of housing for all income levels, including the availability of financing, the price of land, the cost of construction, the requests to develop housing at densities below those anticipated in the analysis required by subdivision (c) of Government Code section 65583.2, and the length of time between receiving approval for a housing development and submittal of an application for building permits for that housing development that hinder the construction of a locality's share of the regional housing need in accordance with Government Code section 65584. The analysis shall also demonstrate local efforts to remove nongovernmental constraints that create a gap between the locality's planning for the development of housing for all income levels and the construction of that housing. (Gov. Code, § 65583, subd. (a)(6).)*

Density and Timing: The adopted element does not address this finding. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

6. *Analyze any special housing needs such as elderly; persons with disabilities, including a developmental disability; large families; farmworkers; families with female heads of households; and families and persons in need of emergency shelter. (Gov. Code, § 65583, subd. (a)(7).)*

The adopted housing element does not address this finding. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

C. Housing Programs

1. *Include a program which sets forth a schedule of actions during the planning period, each with a timeline for implementation, which may recognize that certain programs are ongoing, such that there will be beneficial impacts of the programs within the planning period, that the local government is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the Housing Element through the administration of land use and development controls, the provision of regulatory concessions and incentives, and the utilization of appropriate federal and state financing and subsidy programs when available. The program shall include an identification of the agencies and officials responsible for the implementation of the various actions. (Gov. Code, § 65583, subd. (c).)*

The adopted element now includes discrete timelines for many programs. However, Programs 1 (Housing Rehabilitation Program), 7 (Density Bonus Units), and 8 (Accessory Dwelling Units) still require a discrete timeline as described in HCD's September 7, 2021 review. Please note that Program 7 involves coming into compliance with state law, and as such should be completed within one year of the start of the planning period.

2. *Identify actions that will be taken to make sites available during the planning period with appropriate zoning and development standards and with services and facilities to accommodate that portion of the city's or county's share of the regional housing need for each income level that could not be accommodated on sites identified in the inventory completed pursuant to paragraph (3) of subdivision (a) without rezoning, and to comply*

with the requirements of Government Code section 65584.09. Sites shall be identified as needed to facilitate and encourage the development of a variety of types of housing for all income levels, including multifamily rental housing, factory-built housing, mobilehomes, housing for agricultural employees, supportive housing, single-room occupancy units, emergency shelters, and transitional housing. (Gov. Code, § 65583, subd. (c)(1).)

As noted in Finding B3, the element does not include a complete site analysis; therefore, the adequacy of sites and zoning were not established. Based on the results of a complete sites inventory and analysis, the City may need to add or revise programs to address a shortfall of sites or zoning available to encourage a variety of housing types. In addition, the element should be revised as follows:

City-Owned Sites: Programs 6 (Inventory of Surplus Land) and 9 (Affordable Housing Outreach and Development) were not revised to address HCD’s prior findings regarding City-Owned sites. Please refer to HCD’s September 7, 2021 review to meet this statutory requirement.

Sites Identified in Prior Planning Periods: The adopted element is revised to include a new action under Program 9 (Affordable Housing Outreach and Development) that commits to rezoning requirements regarding sites identified in prior planning periods. Depending on the outcomes of a complete analysis as noted in Finding B3, this Program may necessitate modification in future versions of the housing element.

Emergency Shelters (Parking Requirements): As noted on page 36 of the element, Program 10 (Special Needs Housing) should include specific commitment and discrete implementation dates for amending parking requirements related to emergency shelters.

3. *The Housing Element shall contain programs which assist in the development of adequate housing to meet the needs of extremely low-, very low-, low- and moderate-income households. (Gov. Code, § 65583, subd. (c)(2).)*

The revised Program 9 (Affordable Housing Outreach and Development) is modified to include the words “special needs” for each action step; but it should also clarify and be more explicit about which households are to be targeted or what specific actions are to be taken. The element should also contain additional actions to assist the development of housing for households with special needs (e.g., elderly, persons with disabilities, including developmental, large households). Program actions could include prioritizing some funding for housing developments affordable to special needs households and offering financial incentives or regulatory concessions to encourage the development of housing types, such as multifamily and single-room occupancy.

4. *Address and, where appropriate and legally possible, remove governmental and nongovernmental constraints to the maintenance, improvement, and development of housing, including housing for all income levels and housing for persons with disabilities. The program shall remove constraints to, and provide reasonable accommodations for housing designed for, intended for occupancy by, or with supportive services for, persons with disabilities. (Gov. Code, § 65583, subd. (c)(3).)*

As noted in Findings B4 and B5, the element requires a complete analysis of potential governmental and non-governmental constraints. Depending upon the results of that analysis, the City may need to revise or add programs and address and remove or mitigate any identified constraints.

5. *Promote and affirmatively further fair housing opportunities and promote housing throughout the community or communities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability, and other characteristics protected by the California Fair Employment and Housing Act (Part 2.8 (commencing with Section 12900) of Division 3 of Title 2), Section 65008, and any other state and federal fair housing and planning law. (Gov. Code, § 65583, subd. (c)(5).)*

The adopted element was not revised to address this finding. Please refer to HCD's September 7, 2021 review to meet this statutory requirement.

6. *Develop a plan that incentivizes and promotes the creation of accessory dwelling units that can be offered at affordable rent, as defined in Section 50053 of the Health and Safety Code, for very low, low-, or moderate-income households. For purposes of this paragraph, "accessory dwelling units" has the same meaning as "accessory dwelling unit" as defined in paragraph (4) of subdivision (i) of Section 65852.2. (Gov. Code, § 65583, subd. (c)(7).)*

The adopted element modifies language for Program 8 (Accessory Dwelling Units) by adding that the City "will consider additional actions such as exploring or pursuing funding options" and monitoring ADUs (p. 62). However, program actions must contain a specific commitment to be implemented by a date certain. For example, the Program should "consider" and establish incentives and should list other incentives to be considered. In addition, the program commits to annually track production and affordability, but it should also commit to implement alternatives within a specified timeframe (e.g., within six months) if assumptions are not realized, including rezoning if necessary.

D. Public Participation

Local governments shall make a diligent effort to achieve public participation of all economic segments of the community in the development of the Housing Element, and the element shall describe this effort. (Gov. Code, § 65583, subd.(c)(8).)

The element does not describe a diligent effort to include all economic segments of the community in the development of the housing element. Moreover, it does not appear that the City conducted any additional outreach for the adopted element. HCD received several comments on this review that do not appear to be considered in the adopted element. HCD also observes that past comments and comments on this review included meaningful policy and program suggestions that could be incorporated into the element. Yet, the adopted element does not reflect this input. For example, there is mention of a potential site that may be suitable for residential development, but there is no consideration of the site in the adopted element. Moving forward, the City should employ additional methods for public outreach efforts, particularly to include lower-income and special needs households and neighborhoods with higher concentrations of lower-income households. For example, the City could conduct

targeted stakeholder interviews or establish a committee representative of lower-income households in future public outreach efforts. The City must proactively make future revisions available to the public, including any commenters, with sufficient time to comment and prior to submitting any revisions to HCD and diligently consider and address comments, including revising the document where appropriate. The City's consideration of public comments must not be limited by HCD's findings in this review letter. The element should summarize future public comments and describe how comments were considered and incorporated into the element.

Response to HCD Comments Matrix

May 9, 2023

HCD Comments from January 10, 2022 & September 7, 2021 Letters	City Response
<p>A. Review and Revision: The entire revised Housing Element has been substantially rewritten to address HCD comments and to be in compliance with Housing Element Law. More specific City Response to HCD's January 10, 2022 letter is provided below.</p>	
<p><i>Review the previous element to evaluate the appropriateness, effectiveness, and progress in implementation, and reflect the results of this review in the revised element. (Gov. Code, § 65588 (a) and (b).)</i></p>	<p>Appendix B (Review of Past Accomplishments) has been added to address Section 65588(a) of the California Government Code, which requires that jurisdictions evaluate the effectiveness of the existing Housing Element, including appropriateness of goals, objectives, and policies, and the progress in implementing programs for the previous planning period. A review of past accomplishments under the 2014-2021 Housing Element is included.</p> <p>Table A-1, pp B-3 - B-8 provides a comprehensive review and evaluation of the City's progress to date in implementing the housing programs and their continued appropriateness for the 2021-2029 Housing Element. There is also a review of the quantified objectives (Chapter V (Housing Plan), Section C, page 95).</p> <p>In addition, much greater explanation has been provided in these sections regarding the cumulative effectiveness of goals, policies, and related actions in meeting the housing needs of special needs populations (e.g., elderly, persons with disabilities, large households, female headed households, farmworkers and persons experiencing homelessness).</p> <p>See Appendix B, pp B-1 – B-8.</p>
B. Housing Needs, Resources, and Constraints	Response
<p><i>1 Affirmatively furthering fair housing Affirmatively further[ing] fair housing in accordance with Chapter 15 (commencing with Section 8899.50) of Division 1 of Title 2...shall include an assessment of fair housing in the jurisdiction. (Gov. Code, § 65583, subd. (c)(10)(A).)</i></p>	<p>Affirmatively Furthering Fair Housing has been completely rewritten and included as Appendix D (Assessment of Fair Housing) pp D-1 - D-73, to address this topic. This appendix provides a detailed analysis of fair housing issues in Mission Viejo, and each section discusses the site inventory as it relates to the geographic distribution of these issues. Other sections of the housing element also address these issues and are included in this appendix by reference. Also see Chapter II (Housing Needs Assessment), pp11-38, and Chapter V, Section D, Housing Program 15 on page 98.</p> <p>Additional and more specific response is provided below.</p>

Note: All page numbers reference the numbers at the bottom of the page in the redlined version of the document

Response to HCD Comments Matrix

May 9, 2023

	<p>Outreach: A summary of outreach capacity as it relates to the Assessment of Fair Housing is included in Appendix D, pp D2 -D5. Additional, tailored public outreach was conducted via informal workshops and two different surveys and other opportunities for input. The City's Public Outreach is explained briefly in the Chapter I, Section C (Public Participation), pp4-8, and Appendix A sets forth in detail the City's Community Engagement.</p> <p>Assessment of Fair Housing: Appendix D, pp D-1 – D-73 has been significantly expanded and comprehensively examines patterns and trends in segregation and integration, racially/ethnically concentrated areas of poverty and affluence, access to opportunity, and disproportionate housing needs, comparing these factors to neighboring cities and Orange County as a whole.</p> <ul style="list-style-type: none">• Enforcement: Appendix D, Part 2, Section B, ppD-6 – D-9 provides information from the Fair Housing Foundation, and data on Housing Choice Vouchers.• Integration and Segregation: Appendix D, Part 2, Section C, ppD-9 – D-19 examines in detail trends in race/ethnicity in Mission Viejo, surrounding cities and Orange County, including how the Site Inventory location may impact these patterns. Multiple measures of integration and segregation are included, such as the Diversity Index and Dissimilarity Index, in addition to maps of the geographic distribution of racial/ethnic groups over time, and how the Site Inventory relates to these patterns (Table D-10). Section C also includes detailed analysis in a similar fashion of Persons with Disabilities (ppD-19 – D-22), Familial Status (ppD-23 – D-32), and Income (pp D-33 – D-37).• Racially/Ethnically Concentrated Areas of Poverty and Affluence: Appendix D, Part 2, Section D (ppD-38 – D-42) include a description of these factors, including maps and income figures for Mission Viejo, surrounding cities, and Orange County.• Disparities in Access to Opportunity: Appendix D, Part 2, Section E (ppD-43 – D-60) describes the various components – Economic, Education, Environmental and Composite Scores, including consideration of the Site Inventory in relation to these factors (Table D-17).• Disproportionate Housing Needs, Including Displacement: Appendix D,
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Response to HCD Comments Matrix

May 9, 2023

	<p>Part 2, Section F (ppD-61 – D-70) covers cost burden/overpayment issues for owners and renters, overcrowding, displacement risk (utilizing information from the Urban Displacement Project), substandard housing and homelessness issues, as well as consideration of the Site Inventory as it relates to overpayment issues for owners and renters (Tables D-21 and D-22).</p> <ul style="list-style-type: none">• Local Data and Knowledge, Other Relevant Factors: Appendix D, Part 2, Section F (ppD-71 – D-73). Appendix D includes use of information beyond federal census information, such as historical housing patterns, environmental issues. Information from local organizations such as the Fair Housing Foundation, County Analysis of Impediments to Fair Housing Choice, the Orange County Point in Time Homeless Survey, and the City of Mission Viejo planning, development, and housing quality information was used in Appendix D, as well as in Chapter 2 and Chapter 4 (Housing Needs Resources).• Site Inventory: The Site Inventory in relation to fair housing issues is described and examined relative to the factors of racial/ethnic diversity (Table D-10), People with Disabilities (Table D-11), Familial Status (Tables D-12 and D-13), Income Level (Table D-14), TCAC Opportunity Area Composite Score (Table D-17), and Overpayment for Renters and Owners (Tables D-21 and D-22).• Contributing Factors: Table V-2 provides a detailed summary of the City's AFFH actions based on the contributing factors.• Goals, Actions, Metrics and Milestones: Table V-2 provides a detailed summary of the City's AFFH actions. <p>Chapter II, Section B (Household Profile), pp16–18, describes data on household types, including Household Income and Tenure characteristics, including Extremely Low Income households, their demographic composition, use of Housing Choice Vouchers in the City, compared to neighboring cities, and Orange County as a whole. Affordability estimates for all income levels, including Extremely Low Income Households is described in Table II-20. Information on overpayment issues for renters and owners by income level for Mission Viejo, and surrounding cities, is shown in Tables II-23 and II-24. The percent of owner and renter households experiencing housing problems by</p>
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Response to HCD Comments Matrix

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<p><i>2 Include an analysis of population and employment trends and documentation of projections and a quantification of the locality's existing and projected needs for all income levels, including extremely low-income households. (Gov. Code, § 65583, subd. (a)(1).)</i></p> <p><i>3. An inventory of land suitable and available for residential development, including vacant sites and sites having realistic and demonstrated potential for redevelopment during the planning period to meet the locality's housing need for a designated income level, and an analysis of the relationship of zoning and public facilities and services to these sites. (Gov. Code, § 65583, subd. (a)(3).)</i></p>	<p>income level, including Extremely Low Income households, and different household types (such as Elderly, Small and Large Households) is shown in Table II-26. Future housing needs by income level, including Extremely Low Income Households, is shown in Table II-27. Program 8 (Chapter V, Section B, pp89-91) describes actions the City is taking to encourage and facilitate production of housing to meet the needs of ELI households, and several other programs also address the special needs of the homeless and persons with disabilities, many of whom are extremely low income.</p> <p>Acknowledging that the HCD response letters of September, 2021 and January, 2022 expressed a number of concerns regarding the Site Inventory discussion in Mission Viejo's Housing Element, this section of the revised element was completely reworked and is now substantially different from the prior version. Appendix C (Pages C1-C86), Sites Inventory, provides in-depth description of the sites, along with individual Site Inventory fact sheets for each site. Together this gives a full description of the site characteristics. Chapter IV (Housing Resources) is completely rewritten and addresses specific concerns expressed by HCD. Also included in Appendix C are specific potential site feasibility plans developed for the City by the Related Company of California. The Related Company (www.relatedcalifornia.com) has a track record of experience in planning and developing affordable housing development, responsible for 19,500 units across the state. Additionally, text has been revised in Chapter IV (pp 69-83) to address concerns expressed:</p> <ul style="list-style-type: none">• Realistic Capacity: This revised Element assumes 85% of maximum capacity as a realistic figure, based on the feasibility studies from the Related Company in Appendix C; examples of mixed-use developments in neighboring southern Orange County cities (Chapter IV, p74); and Mission Viejo's 5th Cycle site yields, which ranged from 73% to 100%.• Suitability of Nonvacant Sites: In terms of impediments to redevelopment for commercial sites, the detailed site templates in Section C include discussion of existing use, condition, and interest of owners in redevelopment given assessment of market conditions (Example: Macy's Mall site), as factors demonstrating that the sites are feasible. Some lease expiration information was available, but not in all
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	<p>cases. For the two residential sites, supporting information includes Related California's assessment of how additional density could be added to these sites, as well as current owner engagement in redevelopment shown in the detailed site inventory information in Section C. The City's formal resolution adopting the Element includes these findings developed to support the Element.</p> <ul style="list-style-type: none">• Substantial Evidence: Appendix C and the rewritten Chapter IV, Section B (<u>pp 68-76</u>), represent substantial evidence in support of the site inventory.• Replacement Housing: Program 4 (Chapter V, p87) addresses replacement housing for sites with existing residential uses. Additionally, for Site 11 (Vista del Lago Apartments), the owners are developing plans to redevelop a section of the property to accommodate the increased density, and displacement could be accommodated through keeping units vacant and moving residents to vacant units. The City has been received correspondence from the owners, who are developing plans where they would be able to redevelop a section of the property by managing lease terms, relocating residents to different units within the complex, or to other complexes they own. For Site 4 (Idyllwillow Apartments), the owners (Saddleback College) have stated that they are open to increasing the density of the housing on the property and are open to revising the ground lease to make that happen.• Small and Large Sites: More detailed analysis for Sites 3,4,8 and 11 is included in the site templates in Section C. In addition, Program 1 (Chapter V, Page 85) addresses lot consolidation and Program 2 (Chapter V, Page 86), specifically refers to Site 3 and how to facilitate its development as a large site, and also as a site from a previous Housing Element.• Sites Identified in Prior Planning Period: Program 2 specifically addresses Site 3 as (partially) a site used in a prior planning period, including an Alternative Plan of Action if building permits are not issued by the stipulated deadline. (Chapter V, Page 86)• Infrastructure: The element includes analysis regarding water and sewer capacity (existing and planned) and concludes that services are adequate to accommodate the level of development identified in the
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	<p>RHNA (Chapter IV, p76). In addition, Mission Viejo has made water and sewer providers aware of the potential impact to their services based on the Housing Element and has transmitted the Housing Sites map (and when approved will transmit the revised Housing Element), understanding that utility providers need to grant priority to new developments that will help meet the RHNA.</p> <ul style="list-style-type: none">• Zoning for a Variety of Housing Types (Emergency Shelters): The Element describes regulations for emergency sites and includes potential sites for shelters. Program 13 (Chapter V, Page 92) has been revised to reflect recent changes to state law regarding emergency shelters. Chapter III Pages 47-48 of the Housing Element provides an analysis of the City current requirements for emergency shelters. To comply with AB 2339, the City will be establishing an Emergency Shelter Overlay within the B-P zone and identifying emergency shelters and multi-family housing as permitted uses within the overlay. Other revisions to comply with AB 139 are also scheduled as part of the Zoning Code update. Program 13 on page 93 provides specific actions to amend the Zoning Code to address emergency shelters.
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<p><i>4. An analysis of potential and actual governmental constraints upon the maintenance, improvement, or development of housing for all income levels, including the types of housing identified in paragraph (1) of subdivision (c), and for persons with disabilities as identified in the analysis pursuant to paragraph (7), including land use controls, building codes and their enforcement, site improvements, fees and other exactions required of developers, and local processing and permit procedures... (Gov. Code, § 65583, subd. (a)(5).)</i></p> <p><i>5. An analysis of potential and actual nongovernmental constraints upon the maintenance, improvement, or development of housing for all income levels, including the availability of financing, the price of land, the cost of construction, the requests to develop housing at densities below those anticipated in the analysis required by subdivision (c) of Government Code section 65583.2, and the length of time between receiving approval for a housing development and submittal of an application for building permits for that housing development that hinder the construction of a locality's share of the regional housing need in accordance with Government Code section 65584. The analysis shall also demonstrate local efforts to remove nongovernmental constraints that create a gap between the locality's planning for the development of housing for all income levels and the construction of that housing. (Gov. Code, § 65583, subd. (a)(6).)</i></p>	<p>Governmental Constraints The element has been substantially rewritten to provide detailed information regarding constraints. There is discussion of governmental constraints (land use and regulations, zoning, development standards, building codes, local processing and permitting, and fees); non-governmental constraints (market constraints, construction and land costs, and financing); environmental constraints (flood, seismic, hazardous materials, and fires); and infrastructure constraints (wastewater, sewer, requests to develop at lower density etc) constraints. See Chapter III, Constraints, pp 39-64.</p> <p>Non-Governmental Constraints As noted above, the element has been substantially rewritten to provide detailed information regarding all constraints, including governmental, non-governmental, environmental and infrastructure constraints. See Chapter III, Constraints, Pages 39-64.</p>
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<p><i>6. Analyze any special housing needs such as elderly; persons with disabilities, including a developmental disability; large families; farmworkers; families with female heads of households; and families and persons in need of emergency shelter. (Gov. Code, § 65583, subd. (a)(7).</i></p>	<p>Chapter II (Housing Needs Assessment), Section B, pp18-25 of the Housing Needs Assessment describes in detail the Special Needs Populations of Mission Viejo, and their housing needs. In addition, Chapter III, Housing Constraints, pp44-49 includes a detailed analysis of special housing needs, including residential care facilities, housing for persons with disabilities, agricultural employee housing, housing for the elderly, emergency shelters, transitional/supportive housing, single room occupancy, and low barrier navigation centers. See also Chapter V, Housing Programs 1, 5, 8, 9, 10, 13, 15 and 16, beginning on page 85.</p>
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C. Housing Programs	
<p><i>1. Include a program which sets forth a schedule of actions during the planning period, each with a timeline for implementation, which may recognize that certain programs are ongoing, such that there will be beneficial impacts of the programs within the planning period, that the local government is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the Housing Element through the administration of land use and development controls, the provision of regulatory concessions and incentives, and the utilization of appropriate federal and state financing and subsidy programs when available. The program shall include an identification of the agencies and officials responsible for the implementation of the various actions. (Gov. Code, § 65583, subd. (c).)</i></p> <p><i>2. Identify actions that will be taken to make sites available during the planning period with appropriate zoning and development standards and with services and facilities to accommodate that portion of the city's or county's share of the regional housing need for each income level that could not be accommodated on sites identified in the inventory completed pursuant to paragraph (3) of subdivision (a) without rezoning, and to comply City of Mission Viejo's 6th Cycle Adopted Housing Element Page 7 January 10, 2022 with the requirements of Government Code section 65584.09. Sites shall be identified as needed to facilitate and encourage the development of a variety of types of housing for all income levels, including multifamily rental housing, factory-built housing, mobilehomes, housing for agricultural employees, supportive housing, single-room occupancy units, emergency shelters, and transitional housing. (Gov. Code, § 65583, subd. (c)(1).)</i></p>	<p>C.1 Housing Programs Chapter V, Housing Plan, has been rewritten to address these comments. Housing programs have been completely rewritten to include more discrete timelines and specific commitments. See Chapter V beginning page 82, and more specifically, Housing Programs beginning page 85.</p> <p>C.2 Actions that will be taken to make sites available during the planning period The Sites Inventory has been completely rewritten to address this comment and to better explain and justify the sites. As noted above, detailed individual Site Inventory fact sheets have been developed for each site, which give a full description of the site characteristics. Appendix C, Sites Inventory, provides in-depth description of the sites, along with individual Site Inventory fact sheets for each site, and studies prepared by Related California. In addition, The Housing Programs sections has been substantially revised to address specific HCD comments, including those comments related to City-Owned site, Sites Identified in Prior Planning Periods, and emergency shelter parking. In particular, note that the previous Housing Element's "Site C" is included within the new Site 3 in this 6th Cycle Housing Element. As mentioned above, the revised Element includes Program 2, which has measures to facilitate development of this site, including an Alternative Plan of Action if building permits are not issued by the stipulated deadline. See Appendix C, Sites Inventory, pp1-86. Also see Chapter IV, Housing Resources, pp69-83; and Housing Programs 1, 2, 3, 5 and 8, pp85-91.</p>

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<p><i>3. The Housing Element shall contain programs which assist in the development of adequate housing to meet the needs of extremely low-, very low-, low- and moderate-income households. (Gov. Code, § 65583, subd. (c)(2).)</i></p> <p><i>4. Address and, where appropriate and legally possible, remove governmental and nongovernmental constraints to the maintenance, improvement, and development of housing, including housing for all income levels and housing for persons with disabilities. The program shall remove constraints to, and provide reasonable accommodations for housing designed for, intended for occupancy by, or with supportive services for, persons with disabilities. (Gov. Code, § 65583, subd. (c)(3).)</i></p> <p><i>5. Promote and affirmatively further fair housing opportunities and promote housing throughout the community or communities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability, and other characteristics protected by the California Fair Employment and Housing Act (Part 2.8 (commencing with Section 12900) of Division 3 of Title 2), Section 65008, and any other state and federal fair housing and planning law. (Gov. Code, § 65583, subd. (c)(5).)</i></p> <p><i>6. Develop a plan that incentivizes and promotes the creation of accessory dwelling units that can be offered at affordable rent, as defined in Section 50053 of the Health and Safety Code, for very low,</i></p>	<p>C.3 Programs to assist in the development of housing affordable to special needs households. Program 8 and Program 15 address special housing needs. (see Chapter V, pp 89-91 and Page 94)</p> <p>C.4 Removing constraints As noted in a response above, the element has been substantially rewritten to provide detailed information regarding constraints. There is discussion of governmental constraints (land use and regulations, zoning, development standards, building codes, local processing and permitting, and fees); non-governmental constraints (market constraints, construction and land costs, and financing); environmental constraints (flood, seismic, hazardous materials, and fires); and infrastructure constraints (wastewater, sewer, requests to develop at lower density etc) constraints. In addition, Program has been added and modified as necessary and appropriate to address and mitigate any constraints. See Chapter III, Constraints, pg 39-66. Also see Housing Programs in general, and in particular, Programs 1, 2, 7, 8, 11, 12 and 13 beginning on Page 85.</p> <p>C.5 Affirmatively furthering fair housing The element has been revised to address AFFH issues as described above.</p> <p>C.6 ADUs Program 6 has been completely rewritten to address this comment. See Chapter V, page 88. The City has already made good progress towards implementing additional incentives and tools to facilitate ADUs construction,</p>
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<p><i>low-, or moderate-income households. For purposes of this paragraph, “accessory dwelling units” has the same meaning as “accessory dwelling unit” as defined in paragraph (4) of subdivision (i) of Section 65852.2. (Gov. Code, § 65583, subd. (c)(7).)</i></p>	<p>and will have this fully implemented sometime in 2023.</p>
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D. Public Participation	
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<p><i>Local governments shall make a diligent effort to achieve public participation of all economic segments of the community in the development of the Housing Element, and the element shall describe this effort. (Gov. Code, § 65583, subd.(c)(8).)</i></p>	<p>E. Public Participation Chapter I has been revised and summarizes the City's public engagement. Additionally, a new Appendix A, devoted to a discussion of Public Engagement, has been added to the element and provides detailed description of opportunities for public review and input that includes lower-income and special needs households. Further, Appendix A summarizes public comments received and describes how they were considered and incorporated into the element. See Chapter I, Introduction, pp4-8 and Appendix A, Public Engagement, ppA1-A10.</p>

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City of Mission Viejo General Plan Housing Element Update, 2021-2029

2013 Mission Viejo General Plan Program Environmental Impact Report Addendum General Plan Amendment GPA2021-35 Zone Change ZC2021-25 Development Code Amendment DCA2021-19

I. Introduction

The City of Mission Viejo is the lead agency for this Addendum to the 2013 Mission Viejo General Plan Program Environmental Impact Report (State Clearinghouse #2012031065) (“Mission Viejo General Plan Program EIR”) certified on March 4, 2013 (the 2013 Mission Viejo General Plan Program EIR is referred to herein as the “General Plan Program EIR.”). The General Plan Program EIR was prepared to evaluate the environmental effects of adopting and implementing the 2013 Mission Viejo General Plan in accordance with 2013 Mission Viejo General Plan’s goals, policies, and objectives. In addition to certifying the 2013 Mission Viejo General Plan Program EIR, the City adopted a Mitigation Monitoring and Reporting Program applicable to development activities associated with build-out of the 2013 Mission Viejo General Plan in accordance with Public Resource Code Section 21081.6 (the “MMRP”).

The Addendum to the 2013 Mission Viejo General Plan Program EIR addresses the City-initiated petitions related to the City’s Housing Element update required by state law to address the state’s 6th housing cycle covering the years 2021-2029 as follows: 1) GPA2021-35 is proposed to comprehensively update the City’s General Plan Housing Element, amend the City’s General Plan Land Use Element, and modify the City’s Land Use Policy Map as it pertains to 11 sites, each as described below and identified in the Housing Element update, to accommodate residential development during the 6th housing cycle; 2) ZC2021-25 is proposed to modify the City’s Zoning District Map as it pertains to 11 sites, each as described below and identified in the Housing Element update, to accommodate residential development during the 6th housing cycle; and 3) DCA2021-19 is proposed to amend the City’s Development Code to establish and define new high density zoning districts RPD_50 and RPD_80 (Residential Planned Development) including related land uses and development standards, and to address new state legislation related to accessory dwelling units, density bonus provisions, low-barrier navigation centers, and transitional and supportive housing.

The proposed general plan amendment, zone change and development code amendment is necessary to allow the development of up to 2,491 residential dwelling units on eleven (11) selected sites and Accessory Dwelling Units (ADU’s) within all residential zoning districts in Mission Viejo as identified in the City of Mission Viejo General Plan Housing Element Update, 2021-2029.

II. Background

1990 General Plan. On October 8, 1990, the City of Mission Viejo adopted and certified the Final Environmental Impact Report (SCH 90010622) that was prepared for the City's General Plan. The General Plan was prepared to address issues related to future growth and development in Mission Viejo. The City of Mission Viejo is, for all practical purposes, built out with only a few parcels remaining for development.

Housing Element

California Government Code Section 65302(c) mandates that each city shall include a Housing Element in its General Plan. The Housing Element is required to identify and analyze existing and projected housing needs, and include a statement of the City's goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. The City, in adopting its Housing Element, must consider economic, environmental, and fiscal factors, as well as community goals as set forth in the

General Plan. However, while cities generally have considerable flexibility in drafting the other elements of their General Plan, the Housing Element must comply with the detailed statutory provisions of California Government Code Section 65580 et seq.

2000 Housing Element. On December 4, 2000, in accordance with the requirements of State law, the City Council adopted an updated Housing Element (General Plan Amendment 2000-17), which was subsequently certified by the California Department of Housing and Community Development (HCD) on April 13, 2001. In May 2007 the City Council adopted General Plan Amendment 2007-26, Zone Change 2007-18 and Development Code Amendment 2007-10 (collectively the "2007 Housing Amendments"). Those amendments revised the land use designations for the three sites described below to allow multi-family residential development at a density up to 30 units/acre in order to facilitate the provision of affordable housing pursuant to state law (see Housing Element Exhibit B-1). Those 2007 amendments were evaluated in an Initial Study/Mitigated Negative Declaration (the "2007 MND").

Site A is a 2.74-acre vacant parcel located within and to the east of the Mission Foothill Marketplace shopping center at 28715-28841 Los Alisos Boulevard.

Site B is a 7.12-acre parcel adjacent to Oso Parkway at Montanoso Drive that is owned by the Mission Country Club.

Site C is an 8.5-acre area located on City-owned land directly adjacent to and southeasterly of the City's Animal Services Center off Center Drive, and easterly of Saddleback College.

2008 Housing Element. The City Council adopted an updated Housing Element for the 2008-2014 planning period on July 20, 2009 (General Plan Amendment 2009-28), which was subsequently certified by the California Department of Housing and Community Development (HCD) on August 10, 2009. In conjunction with the Housing Element, the City

Council adopted amendments to the Development Code (DCA 2009-13 and DCA 2009-14), which revised City regulations regarding density bonus and emergency shelters in conformance with state law. An Initial Study/Mitigated Negative Declaration was adopted for the 2008 Housing Element and the two related development code amendments.

2013 Housing Element. The City Council adopted an updated Housing Element for the 2013-2021 planning period on July 20, 2013 (General Plan Amendment 2013-28), which was subsequently certified by the California Department of Housing and Community Development (HCD) on August 10, 2013. In conjunction with the Housing Element, the City Council adopted amendments to the Development Code (DCA 2009-13 and DCA 2009-14), which revised City regulations regarding density bonus and emergency shelters in conformance with state law. An Initial Study/Mitigated Negative Declaration was adopted for the 2013-2021 Housing Element and the two related Development Code amendments.

2021 Housing Element.

State law requires that Housing Elements be updated in 8-year “cycles.” The City has prepared their City of Mission Viejo General Plan Housing Element Update, 2021-2029,¹ which is referred to as the “6th Housing Element cycle” in reference to the six required updates that have occurred since the comprehensive revision to State Housing Element law in 1980. The City of Mission Viejo General Plan Housing Element Update, 2021-2029 addresses the 6th regional housing cycle as required by state law and the subject of this Addendum, and is described in further detail below.

The City of Mission Viejo General Plan Housing Element is a mandatory General Plan element that identifies housing policies and programs aimed at meeting the identified housing needs of the City's current and anticipated future population, with an emphasis on affordable and special needs housing, removal of governmental constraints to housing development, and equal access to housing.

The purpose of the Housing Element is to evaluate the housing needs of Mission Viejo's current and future residents and set forth policies and programs to address those needs.

California State law² establishes detailed requirements for Housing Elements, which are summarized in California Government Code Section 65583:

The housing element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and shall make adequate provision for the existing and projected needs of all economic segments of the community.

¹ <https://cityofmissionviejo.org/departments/community-development/planning/housing>

² California Government Code Sec. 65580 et seq.

The major issues that must be addressed in the Housing Element update are: 1) how City policies, plans and regulations help to meet the region's housing needs for persons and families of all income levels; and 2) how City land use regulations accommodate the special housing needs of those with disabilities or other difficulties.

- Accommodating Regional Housing Needs. Under State law³ all cities are required to plan for additional housing to accommodate population growth and address existing housing problems such as overcrowding and high housing cost. State law recognizes that cities generally do not build housing, since that is typically the role of private and non-profit developers and builders. However, cities are required to adopt policies, development regulations and standards to encourage a variety of housing types that are affordable for persons of all income levels. The Regional Housing Needs Assessment ("RHNA") is the method by which each jurisdiction's share of new housing needs is determined (see #3 below).
- Housing for Persons with Special Needs. Under State law⁴ cities must also ensure that their plans and regulations encourage the provision of housing for persons with special needs including:
 1. Reasonable accommodation for persons with disabilities
 2. Transitional housing
 3. Supportive housing
 4. Emergency shelters and other facilities serving the homeless
 5. Accessory dwelling units ("ADUs")

Each California city is required to plan for new housing to accommodate a share of regional needs. RHNA is the process established in State law⁵ by which housing needs are determined.

Housing Element law requires the City of Mission Viejo to identify housing sites that can accommodate the 2021-2029 RHNA housing allocation. The housing sites can include current vacant land or developed infill sites that allow residential development. If an adequate number of available sites with existing zoning to allow residential development cannot be identified, the City must identify sites to be rezoned.

Prior to each planning cycle the total new housing need for each region of California is determined by California Department of Housing and Community Development (HCD) based upon economic and demographic trends, existing housing problems such as overcrowding and overpayment, and additional housing needed to ensure reasonable vacancy rates and replace units lost due to demolition or natural disasters.

Mission Viejo is located within the Southern California Association of Governments ("SCAG") region, which includes Los Angeles, Orange, Riverside, San Bernardino, Imperial

³ California Government Code Sec. 65583.

⁴ California Government Code Sec. 65583(a)(5).

⁵ California Government Code Sec. 65584 et seq.

and Ventura counties. The total housing need for the SCAG region is distributed to cities and counties by SCAG based upon objectives and criteria established in State law.⁶

In 2019 HCD determined that the total new housing need for the entire SCAG region in the 6th Housing Element cycle is 1,341,827 units. Subsequently, SCAG prepared a methodology for distributing the RHNA allocation to jurisdictions within the region and in March 2021 SCAG adopted the final RHNA Plan for the 6th cycle.⁷ Table 1 shows the RHNA allocations for Mission Viejo, Orange County, and the entire SCAG region.

Table 1
6th Cycle RHNA – Mission Viejo, Orange County and SCAG Region

	Mission Viejo	Orange County	SCAG
Housing need allocation 2021-2029	2,217	183,861	1,341,827

Source: SCAG, 3/4/2021

The RHNA also allocates each jurisdiction’s total housing need into four income categories (the extremely-low and very-low categories are combined for RHNA purposes). Mission Viejo’s 6th cycle RHNA allocation by income category is shown in Table 2.

Table 2
6th RHNA by Income Category – Mission Viejo

Extremely Low + Very Low	Low	Moderate	Above Moderate	Total
674	401	397	745	2,217

Source: SCAG, 3/4/2021

Housing Element Update

The City is required by State law (Government Code §65588 *et seq.*) to update its Housing Element on an eight year cycle and is linked to the Regional Transportation Plan (RTP).

The proposed 6th Cycle Housing Element Update updates the current Housing Element which was adopted in 2013. Once adopted, the Housing Element becomes part of the General Plan, which guides city decisions regarding housing, development review, land use, City budgets and capital improvement programs. The proposed City of Mission Viejo General Plan Housing Element Update, 2021-2029 includes policies and programs intended to increase housing opportunities for extremely low, very-low, low- and moderate income households, while accommodating growth in a manner consistent with goals and policies contained in the Land Use Element and other elements of the Mission Viejo General Plan. The housing element is prescribed under State housing law, and the proposed draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 is prepared to

⁶ California Government Code Sec. 65584(d).

⁷ <https://scag.ca.gov/housing>.

include the state required sections and information for a housing element. The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 addresses the changes in the State housing law and the regional housing needs. State, regional and local housing costs, housing supply and needs have changed since 2013, as evidenced by current information on real estate prices, affordable housing, and the widening “gap” between rental and purchase housing costs and consumers’ incomes.

The City of Mission Viejo General Plan Housing Element Update, 2021-2029 includes 11 sites and the construction of ADU’s to allow the development of 2,491 residential units in Mission Viejo towards meeting the State of California’s mandated Regional Housing Needs Assessment (RHNA) allocation, which for the City of Mission Viejo is 2,217 dwelling units. Of the 2,217 dwelling units, 1,075 units are designated for lower (very low and low) income categories. The 11 sites and ADU’s that would allow the development of 2,217 dwelling units are listed in Table 3. The development of the sites in Table 3 would allow the city to exceed both the projected and existing need of residential units. The sites must be consistent with the Mission Viejo General Plan and the specific types of use, intensity and development standards that are applicable and consistent with the City’s adopted Development Code.

**Table 3
 Mission Viejo Housing Sites Inventory**

Site	Acreage	Density du/ac	Total Units	Lower Income Units	Zoning
Site C / Center Drive	32.8	30	300	300	Rezone
Silverado Plaza	1.5	50	75	36	Rezone
Mission Foothill Center	4.4	30	77	37	Overlay
Commerce Center	3	30	90	44	Overlay
Mission Viejo Town Center	3.4	30	51	25	Overlay
College Center	7.8	30	117	57	Overlay
Macy’s – The Shops	8.6	80	344	167	Overlay
Saddleback Business Center	9.4	30	141	68	Overlay
Grace Church Parking Lot	2.4	50	120	58	Rezone
Burlington	6.9	30	104	50	Overlay
Vista Del Lago Apartments	33	50	1,042	506	Rezone
ADU’s (Acc. Dwelling Units)			30		N/A
Totals	113.2		2,491	1,348	

III. Project Description

The RHNA, adopted by SCAG and presented in Table H-28 of the City of Mission Viejo General Plan Housing Element Update, 2021-2029, determined the City's fair share of the regional housing need to be 2,217 units for the planning period July 2021 through October 2029. This total includes 337 extremely-low-income units, 337 very-low-income units, 401 low-income units, 397 moderate-income units, and 745 above-moderate units. State law requires the City to demonstrate that its inventory of potential housing sites can fully accommodate development of the various types of units that have been allocated in the RHNA. Appendix B of the City of Mission Viejo General Plan Housing Element Update, 2021-2029 provides a detailed description of the inventory of sites that could accommodate the City's need. As summarized in Table 4, this inventory shows a capacity for 2,491 additional housing units, of which 1,348 could accommodate lower-income housing, which exceeds the City's RHNA allocation of 2,217 total units and 1,075 lower (very low and low) income categories for the 2021-2029 period.

It is important to note that the RHNA is a planning target, not a development quota. Under state law, cities must demonstrate that their land use plans and regulations can accommodate the type and amount of housing identified in the RHNA, and also must use their available resources to encourage and facilitate such development. State law does not require that sites identified in the Housing Element as suitable for affordable housing be income-restricted. The law recognizes that cities do not build housing, and development depends on many factors including property owners, builders, available financing, and prevailing market forces. This is particularly true for affordable housing – in high-cost areas like Orange County large subsidies are normally required to make low-income housing feasible.

While demonstrating an adequate inventory of potential residential development sites commensurate with the RHNA is generally considered the most important environmental issue related to the Housing Element, the Housing Plan (Chapter 6 of the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029) describes the actions and programs the City will use to implement the adopted City goals and policies to achieve the objectives for housing development, conservation and improvement. All of these policies and programs represent a continuation of current City activities as revised to reflect current funding levels and circumstances.

Development Code Text Amendments

The City of Mission Viejo General Plan Housing Element Update, 2021-2029 includes four Development Code Text Amendments to encourage the development of the residential units allocated to the city for the period from 2021-2029. The four Development Code Text Amendments are discussed below.

Density Bonus - Pursuant to State law, the City offers a density bonus along with regulatory concessions and/or incentives, if a developer agrees to construct affordable housing or units for qualifying residents (i.e., seniors and disabled). The density bonus program not only assists with the cost of development but also increases the housing stock by allowing

a density above the Development Code standards. In recent years State density bonus law has been amended to create greater incentives for affordable housing and the City is currently in the process of amending the Development Code to incorporate the latest amendments. The City will continue to encourage affordable housing developers to take advantage of this option.⁸

Supportive Housing - Supportive housing is defined in Section 50675.14(b)(2) of the Health and Safety Code as follows:

“Supportive housing” means housing with no limit on length of stay, that is occupied by the target population, and that is linked to onsite or offsite services that assist the supportive housing resident in retaining the housing, improving his or her health status, and maximizing his or her ability to live and, when possible, work in the community.⁹

City regulations permit transitional and supportive housing subject to the same standards and procedures as other residential uses of the same type in the same zone in conformance with SB 2.

In 2018 AB 2162 amended State law to require that supportive housing be a use by-right in zones where multi-family and mixed uses are permitted, including non-residential zones permitting multi-family uses, if the proposed housing development meets specified criteria. Program 10 in Section 6 includes a commitment to process an amendment to the Development Code in compliance with this requirement.¹⁰

Low Barrier Navigation Centers – Low barrier navigation centers meeting specified standards must be allowed by-right in areas zoned for mixed use and in nonresidential zones permitting multi-family uses. Program 10 in Section 6 (Draft 2021-2029 Housing Element) includes a commitment to process an amendment to the Development Code in compliance with this requirement.¹¹

AB 101 (2019) added a requirement that low barrier navigation centers meeting specified standards be allowed by-right in areas zoned for mixed use and in non-residential zones permitting multi-family uses pursuant to California Government Code §65660, et seq.¹²

Accessory Dwelling Units - Accessory dwelling units (“ADUs”) are an important option for creating additional affordable housing opportunities. An ADU is a separate and complete living unit on the same parcel as existing single- or multi-family units. Because ADUs can be created more economically than conventional newly constructed units, they offer an effective method of expanding the affordable housing stock. The cost savings come from the utilization of existing infrastructure and land. ADUs can also help homeowners generate additional income from extra living space by allowing them to convert that space into another unit.

⁸ Draft City of Mission Viejo General Plan Housing Element Update, 2021-2029, page 55.

⁹ City of Mission Viejo General Plan Housing Element Update, 2021-2029, page 36.

¹⁰ Ibid.

¹¹ Ibid, page 35.

¹² Ibid, page 58.

In recent years State law has been amended to create stronger incentives for ADU development, and the City is currently in the process of amending the Development Code in conformance with current State law. The City will continue to promote ADUs by providing brochures and/or informational displays at the building permit counter and other appropriate locations (with PDF versions for website distribution) detailing the benefits of ADUs and the process for obtaining approval.¹³

General Plan Amendments and Zone Changes

In order for the City to meet its RHNA allocation, general plan amendments, zone changes and Development Code text amendments are required to allow the development of the sites shown in Table 3. Table 4 shows the general plan amendments and zone changes required for each site to ultimately meet the RHNA allocation of 2,217 residential units.

**Table 4
 Proposed General Plan Amendments and Zone Changes**

Site	Acreage	Existing Land Use Designation	Proposed Land Use Designation	Existing Zoning Designation	Proposed Zoning Designation
Site C / Center Drive	32.8	Residential 30 & Recreation / Open Space	Residential 30	R (Recreation) / RPD30A (Residential Planned Development 30A)	RPD30 (Residential Planned Development 30)
Silverado Plaza	1.5	Commercial Neighborhood	Residential 50	CN (Commercial Neighborhood)	RPD50 (Residential Planned Development 50)
Mission Foothill Center	4.4	Commercial Highway	Commercial Highway / Residential 30 (Overlay)	CH (Commercial Highway)	RPD30
Commerce Center	3	Commercial Community	Residential 30	CC (Commercial Community)	RPD30
Mission Viejo Town Center	3.4	Commercial Highway	Commercial Highway / Residential 30 (Overlay)	CH (Commercial Highway)	RPD30
College Center	7.8	Commercial Highway	Commercial Highway / Residential 30 (Overlay)	CH (Commercial Highway)	RPD30
Macy's – The Shops	8.6	Commercial Regional (CIOA)	Residential 30	CR (Commercial Regional)	RPD30
Saddleback Business Center	9.4	Business Park & Recreation/Open Space	Business Park & Recreation	BP (Business Park/Industrial) / R (Recreation)	RPD30

¹³ Draft 2021-2029 Housing Element, page 55-56.

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			/Open Space & Residential 30 (Overlay)		
Grace Church Parking Lot	2.4	Commercial Neighborhood & Recreation / Open Space	Residential 50	CN (Commercial Neighborhood) / R (Recreation)	RPD50
Burlington	6.9	Commercial Highway	Commercial Highway / Residential 30 (Overlay)	CH (Commercial Highway)	RPD30
Vista Del Lago Apartments	33	Residential 14	Residential 50	RPD14 (Residential Plan Development 14)	RPD50
ADU's (Acc. Dwelling Units)		Residential 3.5 (0.0-3.5 du/ac) & Residential 6.5 (3.5-6.5 du/ac)		RPD3.5 (Residential Planned Development 3.5) & RPD6.5 (Residential Planned Development 6.5)	

As shown in Table 4, all of the sites will require general plan amendments and/or zone changes to allow the development of up to 30 and 50 dwelling units/acre in residential and commercially zoned properties. No general plan amendments or zone change are required for the development of ADU's in existing residential zoned properties.

IV. Proposed Actions

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 requires compliance with environmental procedures (CEQA and the CEQA Guidelines) and City approval of a general plan amendment, zone change and Development Code text amendment.

V. Statutory Authority

This Addendum is prepared in accordance with the California Environmental Quality Act, Public Resources Code Section 12000 *et seq.* (CEQA), to assist the City in its consideration to update the Mission Viejo Housing Element that was adopted March 4, 2013. Specifically, the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 would implement the City's policies, goals and objectives for the development of housing in the City of Mission Viejo, as described in the 2013 Mission Viejo General Plan and analyzed in the 2013 General Plan Program EIR.

Pursuant to Section 21166, as further clarified by CEQA Guideline Section 15162, when an EIR has been certified, the lead agency may not require a subsequent EIR unless it determines, on the basis of substantial evidence in light of the whole administrative record that one or more of the following subsequent EIR triggers have occurred:

- Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
 - a) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - b) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - c) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - d) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

If none of the Section 21166 subsequent EIR triggers have occurred with respect to the Housing Element Update, per Government Code Section 65457(a), the City's consideration and potential approval of the Housing Element Update are exempt from CEQA.

As discussed below, this Addendum concludes that approval of the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger the need for a subsequent EIR under Section 21166 because implementation of the City of Mission Viejo General Plan Housing Element Update, 2021-2029 will not result in new, or substantially more adverse, significant environmental impacts than those disclosed in the 2013 General Plan Program EIR. At the time a residential project for any of the sites in Table 3 are submitted to the city for approval, the city is required by law to review a project for potential environmental impacts pursuant to the California Environmental Quality Act, Public Resources Code Section 21003. Because no site specific development plans are submitted in conjunction with the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029, as discussed below, there is no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable

diligence at the time the General Plan Program EIR was certified, that shows any new, or substantially more adverse, environmental impacts than those disclosed in the 2013 General Plan Program EIR, or that shows that new, or previously identified infeasible, mitigation measures or alternatives would substantially reduce one or more significant environmental effects of a future project for any of the sites listed in Table 3. Accordingly, per Section 21166, the City does not require a subsequent EIR for the City of Mission Viejo General Plan Housing Element Update, 2021-2029.

VI. Incorporation by Reference

Pursuant to CEQA Guidelines section 15150, this Addendum incorporates, by reference, the analysis contained in the certified General Plan Program EIR and the 2013-2021 Housing Element Mitigated Negative Declaration. In accordance with CEQA Guidelines Section 15164(c), this Addendum does not need to be circulated for public review, but will be attached to the 2013 General Plan Program EIR.

VII. Summary

The 6th cycle Housing Element update proposes 11 sites along with ADU's within the city and shown in Table 3 that would allow the development of up to 2,491 housing units towards the city meeting its RHNA housing unit allocation of 2,217 units. The RHNA numbers assigned to Mission Viejo do not reflect a prediction of growth and development in the city, but rather reflects a current and future housing need in Mission Viejo to the year 2029, which SCAG has determined the City of Mission Viejo has a projected need of 41 residential units and an existing need of 2,170 residential units.¹⁴

IX. Environmental Topics

The following discussion considers the environmental effects of the City of Mission Viejo General Plan Housing Element Update, 2021-2029 with development of residential dwelling units within the 11 sites and development of ADU's shown in Table 3 to determine whether future residential development will result in new, or substantially more adverse, significant environmental impacts than those disclosed in the General Plan Program EIR that would trigger need for a subsequent EIR under Section 21166. The following discussion also considers whether any new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the General Plan Program EIR was certified, shows any new, or substantially more adverse, environmental impacts than those disclosed in the General Plan Program EIR, or that shows that new, or previously identified infeasible, mitigation measures or alternatives would substantially reduce one or more significant environmental effects of the project. As discussed above, this analysis relies on, and incorporates by reference, the General Plan Program EIR and 2013-2021 Housing Element Mitigated Negative Declaration, as applicable.

¹⁴ SCAG-RHNA-6th Final Allocation, March 4, 2021, Excel spreadsheet.

As documented below, this Addendum concludes that approval and development of the City of Mission Viejo General Plan Housing Element Update, 2021-2029 would not result in any new, or substantially more severe, impacts to the environment than those disclosed in the 2013 General Plan Program EIR. Further, a review of available records and literature identified no new information of substantial importance that was not known, or could not have been known, at the time of the certification of the General Plan Program EIR that would trigger the need for a subsequent EIR under Section 21166.

a. Aesthetics

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units on all of the sites could result in aesthetic impacts.

The future development of residential units on any of the sites would have to be consistent with and in compliance with Policy 3.7 of the General Plan to preserve views of significant scenic value and states, “Preserve views of significant value along streets and highways that adjoin such areas as a lake, hillside, ridgeline, creek, open space, or recreational area”. Future development of the sites would also have to comply with all applicable development standards of the Mission Viejo Development Code to protect aesthetic qualities of the identified sites and adjacent surrounding properties.

All residential subdivisions would have to meet and comply with Chapter 9.74 of the Mission Viejo Municipal Code that provides conformance standards for design. Examples of standards of design that all residential projects must comply include consistency with the general plan, zoning regulations, boundary lines, lots/parcels, streets, street lighting, underground utilities, drainage, slopes, landscaping, etc.

Goal 4 of the City of Mission Viejo General Plan Housing Element Update, 2021-2029 states, “Provide for housing that is sensitive to environmental and social needs.” The policy that supports this goal in terms of aesthetics includes:

Policy 4.2: Evaluate residential proposals within hillside areas in terms of potential impacts to landform and viewsheds.

The development of residential use within the sites would be reviewed by the City to minimize impacts to existing landforms and viewsheds as stated in Policy 4.2.

Goal 3 of the Land Use Element (LUE) of the General Plan states “Maintain community identity and development quality for the City and its neighborhoods.” The policies to ensure that future residential development within the 11 parcels in Table 3 is consistent with this goal include:

- Policy 3.2: Ensure that new development and land uses are architecturally consistent and compatible in scale and style with existing development and identified standards for the various districts within the City.
- Policy 3.3: Ensure that infill development is compatible with community open space areas and existing community character.
- Policy 3.5: Emphasize quality of design for new development and rehabilitation of existing development, including the preservation and increase of arterial landscape space.

The Mission Viejo Planning and Transportation Commission (Commission) will use the Municipal Code, among other policies and guidelines, to determine if new development is designed in a manner that is consistent with its surrounding structures and environment. The Commission and the development review process ensure, through required project modifications, conditions of approval or mitigation measures, that development plans are consistent with visual character and quality guidelines prior to project approvals.

No substantial changes with respect to the circumstances under which the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 is undertaken that require major revisions of the General Plan Program EIR, including new or additional impacts to a scenic vista, a scenic highway, visual character or quality of the project site or its surroundings, new sources of substantial light or glare or project design.

Therefore, the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger the need for a subsequent EIR per Section 21166 of the California Public Resources Code on the basis of its effects on aesthetic impacts.

b. Agricultural Resources

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the sites.

The City of Mission Viejo does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.¹⁵ The City also does not have any Williamson Act contract lands or lands zoned for agricultural use, forest land or timberland.¹⁶

Approval of the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 and development of the sites in Table 3 would proceed in a manner contemplated by the General Plan and analyzed in the General Plan Program EIR. The development of

¹⁵ City of Mission Viejo General Plan Update & Sustainability Action Plan Initial Study, March 2012, page 3-3.

¹⁶ Ibid.

residential units on the 11 sites and ADU's would not change or cause impacts to any agricultural or timberland resources since no Prime Farmland, Unique Farmland, Farmland of Statewide Importance, Williamson Act contract lands or lands zoned for agricultural use, forest land or timberland exists in the City of Mission Viejo.

Therefore, the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger the need for a subsequent EIR per Section 21166 of the California Public Resources Code on the basis of its effects on agricultural resource impacts.

c. Air Quality

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the listed sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in air quality and greenhouse gas impacts.

The City of Mission Viejo is located in the South Coast Air Basin (SCAB). The SCAB is comprised of parts of Los Angeles, Riverside and San Bernardino counties and all of Orange County. The primary agencies responsible for regulations to improve air quality in the SCAB are the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). SCAG is an important partner to the SCAQMD, as it is the designated metropolitan planning authority for the area and produces estimates of anticipated future growth and vehicular travel in the basin that are used for air quality planning. The SCAQMD sets and enforces regulations for non-vehicular sources of air pollution in the basin.

The U.S. Environmental Protection Agency (U.S. EPA) is the primary federal agency for regulating air quality. The EPA implements the provisions of the Federal Clean Air Act (FCAA). This Act establishes national ambient air quality standards (NAAQS) that are applicable nationwide. The EPA designates areas with pollutant concentrations that do not meet the NAAQS as non-attainment areas for each criteria pollutant. States are required by the FCAA to prepare State Implementation Plans (SIP) for designated non-attainment areas. The SIP is required to demonstrate how the areas will attain the NAAQS by the prescribed deadlines and what measures will be required to attain the standards. The EPA also oversees implementation of the prescribed measures.

The California Clean Air Act (CCAA) requires all air pollution control districts in the state to prepare plans to reduce pollutant concentrations exceeding the California Ambient Air Quality Standards (CAAQS) and ultimately achieve the CAAQS. The state air districts are required to review and revise the plans every three years. The SCAQMD satisfies this requirement through the publication of an Air Quality Management Plan (AQMP). The AQMP is developed by SCAQMD and SCAG in coordination with local governments and

the private sector. The AQMP is incorporated into the SIP by CARB to satisfy the FCAA requirements discussed above.

Air Quality Management Plan

The CCAA requires plans to demonstrate attainment of the NAAQS for an area that is designated as nonattainment. In the SCAB, SCAQMD and SCAG, in coordination with local governments and the private sector, develop the AQMP for the air basin to satisfy these CAA requirement. The AQMP is the most important air management document for the basin because it provides the blueprint for meeting state and federal ambient air quality standards.

On March 3, 2017, the 2016 AQMP was adopted by the SCAQMD Governing Board. The primary task of the 2016 AQMP is to bring the basin into attainment. The document states that to have any reasonable expectation of meeting the 2023 ozone deadline, the scope and pace of continued air quality improvement must greatly intensify. In response to court decisions, some elements included in the 2016 AQMP required updates. CARB prepared the 2018 Updates to the California State Implementation Plan (2018 SIP Update) to update SIP elements for nonattainment areas throughout the State as needed. CARB adopted the 2018 SIP Update on October 25, 2018.

The AQMP includes a comprehensive analysis of future emission forecasts which reflect demographic and economic growth forecasts provided by SCAG, including RHNA housing construction projections. The AQMP Program EIR states, “ The 2016 AQMP would result in a reduction of criteria pollutants in the Basin, thereby attaining the air quality standards. Additionally, during operation, less than significant air quality and GHG impacts are anticipated. However, significant adverse construction air quality and GHG impacts could be caused by the proposed project. As improved emission reduction technologies become available and as specific control measures are developed and projects proposed, construction mitigation measures will be updated and implemented. Further, future projects that implement 2016 AQMP control measures, including promulgating control measures such as SCAQMD rules or regulations or individual projects that implement the requirements of such promulgated rules where subsequent CEQA construction analyses have been performed, shall rely upon the results of these subsequent CEQA analyses, including whether or not mitigation measures will continue to be required. Implementation of mitigation measures AQ-1 to AQ-23 would reduce construction emissions, but the overall construction air quality and GHG impacts after mitigation would likely remain significant.¹⁷

The construction of the RHNA assigned residential units for Mission Viejo City per the draft Mission Viejo General Plan Housing Element Update, 2021-2029 would not change or alter the conclusions of the 2016 AQMP Program EIR that states that operational air quality and GHG emissions associated with the development of RHNA associated residential units in Mission Viejo would attain criteria pollutant air quality standards and the implementation of measures to reduce construction emissions would be required.

¹⁷ South Coast Air Quality Management District Final Program Environmental Impact Report, 2016 Air Quality Management Plan, January 2017, pages 1-16, 1-17.

Connect SoCal - 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments

SCAG's Connect SoCal is a long-range comprehensive plan for the region's multi-modal transportation system. A regional transportation plan (RTP) is the mechanism used in California by both Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPA) to conduct long-range (at least 20-year) planning in their regions. In 2008, California enacted the Sustainable Communities and Climate Protection Act, which requires MPOs to include a Sustainable Communities Strategy (SCS) element as part of their RTP updates, with the purpose of identifying policies and strategies to reduce per capita passenger vehicle-generated GHG emissions. The SCS is required to identify the general location of land uses, residential densities, and building intensities within the region; identify areas within the region sufficient to house all the population of the region; identify areas within the region sufficient to house an eight-year projection of the regional housing need; identify a transportation network to service the regional transportation needs; gather and consider the best practically available scientific information regarding resources areas and farmland in the region; consider the state housing goals; set forth a forecasted development pattern for the region; and allow the regional transportation plan to comply with the federal Clean Air Act (CAA) of 1970 (42 USC. § 7401 et seq.) (Gov. Code, § 65080, subd. (b)(F)(2)(B)), which, when integrated with the transportation network, and other transportation measures and policies will reduce the GHG from automobiles and light duty trucks to achieve, if there is a reasonable way to do so, the GHG emission reduction targets approved by the California Air Resources Board (ARB).¹⁸

Connect SoCal provides a strategy for accommodating projected population, household and employment growth in the SCAG region by 2045, as well as a transportation investment strategy for the region. Connect SoCal details how the SCAG region can achieve several outcomes essential to the success of the region's long-range transportation and land use goals and includes the following:

- Describes where and how the region can accommodate a 23 percent increase in projected households and 16 percent increase in jobs between 2020 and 2045;
- Details a regional transportation investment given \$633.9 billion in expected revenues from federal, state, regional and local sources over the next 25 years; and
- Complies with SB 375, the state's SCS law, which integrates land use and transportation planning and mandates both a reduction in greenhouse gas emissions from passenger vehicles (19% reduction for the SCAG region) and the provision of adequate housing for the region's 25-year projected population growth.

The Connect SoCal projects growth in employment, population, and households at the regional, county, city, town and neighborhood levels. One of the core components of

¹⁸ Connect SoCal, Certified Final Program Environmental Impact Report, May 2020, page ES-1.

Connect SoCal is to forecast future distribution of population, households, employment, land use, and housing needs.

The state Legislature intended that housing planning be coordinated and integrated with the regional transportation plan and SCS. To achieve this goal, the RHNA allocation plan shall allocate housing units within the region consistent with the development pattern included in the SCS (Govt. Code § 65584.04(m)). Therefore, the current RHNA housing allocations for Mission Viejo and the population growth associated with the RHNA housing allocation are consistent with and do not change the air quality and GHG analysis in the Connect SoCal Final Program EIR.

City of Mission Viejo

The City of Mission Viejo is responsible to assess and mitigate air emissions by its land use decisions. The City is also responsible to implement transportation control measures as outlined in the 2016 AQMP. The City assesses the air quality impacts of new development, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of the mitigation. Because the City does not have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City meets federal and state standards, the City relies on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

The Conservation/Open Space Element of the Mission Viejo General Plan contains the following air quality-related goal and policy that are applicable to the residential development anticipated to be developed on the 11 sites listed in the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029:

GOAL 8: Cooperate with local, regional, and state agencies to improve air quality and reduce greenhouse gas emissions.

Policy 8.1: Cooperate with South Coast Air Quality Management District and Southern California Association of Governments in their efforts to implement the regional Air Quality Management Plan.

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose any development that would not be consistent with and meet Goal 8 and Policy 8.1 of the Conservation/Open Space element to cooperate with SCAQMD and SCAG to implement the AQMP.

The development of new residential units on sites in Table 3 could have both short- and long-term air emission impacts in that air emissions could exceed adopted South Coast Air Quality Management District (SCAQMD) emission thresholds. At the time site specific residential development plans are submitted to the City for any of the sites the City would determine in compliance with CEQA if significant air emissions impacts could occur. At that time the City would determine if an air quality study would be required to identify potential

air quality impacts. The City would also take into account and apply all applicable climate goals and policies of its adopted Sustainability Action Plan to reduce potential air quality impacts.

There have been no substantial changes with respect to the circumstances under which the residential development of the sites in Table 3 would be undertaken in the future that would require major revisions of the General Plan Program EIR. Accordingly, the potential construction, operational and area source emission impacts associated with the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 are the same as described in the General Plan Program EIR.

The actual construction, operational and area source emissions of the residential development proposed in the City of Mission Viejo General Plan Housing Element Update, 2021-2029 would, in all likelihood, be less than the calculated emission levels presented in the General Plan Program EIR due to new regulatory requirements mandating use of cleaner engine fuels and use of more fuel- and emission-efficient engines for today's automobiles, construction equipment and mechanical equipment that would be installed in future residential units. As a result, the residential development anticipated for the sites in Table 3 could result in fewer air emissions compared to the existing condition when taking into account the replacement of existing commercial space with residential use and the benefit of cleaner engine fuels and more fuel- and emission-efficient engines for today's automobiles and construction equipment.

The development of residential units in the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 towards meeting the RHNA allocation for the City would be required to implement all applicable mitigation measures set forth in the General Plan Program EIR MMRP for potential air quality impacts associated with the development of the residential units. The following applicable mitigation measures are carried forward from the General Plan Program EIR MMRP to reduce air quality greenhouse gas impacts associated with the development of residential projects on the sites listed in Table 3 to less than significant.

Mitigation Measures:

AQ-1 Reduce Construction-Related Emissions. The City and project contractors shall implement the following measures during all construction activities involving demolition or exterior construction. Furthermore, a fugitive dust control plan shall be developed and approved by SCAQMD for all projects prior to issuance of a grading permit and commencement of construction activities. The dust control plan shall specifically identify measures that would minimize generation of fugitive dust from all construction activities. In addition, the following standard measures shall be implemented:

- Comply with and implement all applicable SCAQMD rules and regulations that pertain to construction activities (e.g., asphalt paving ROG requirements, administrative requirements, fugitive dust management practices). Implement

all construction-related requirements recommended by the air district or local government.

- Apply water as necessary to prevent visible dust emissions.
- Apply water, nontoxic chemical stabilizers, or dust suppressants, or use tarps or other suitable material in all disturbed areas that will not be utilized for 10 days or more.
- Prevent carryout and track out of fugitive dust on construction vehicles. Methods to limit carryout and track include, but are not limited to, using wheel washers and/or metal tracks at the site egress(es); sweeping any track out on adjacent public streets at the end of each workday; and lining access points with gravel, mulch, or wood chips.
- Cover or wet the filled cargo compartment of all transport trucks to limit visible dust emissions during transport, and maintain at least 2 feet of freeboard space from the top of a container.
- Install sandbags or other erosion control measures on sites with a slope greater than 1 percent to prevent silt runoff to public roadways.
- Maintain all construction equipment according to the manufacturers' specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.
- Minimize idling time either by shutting off equipment when it is not in use or reducing the time of idling to no more than 5 minutes. Provide clear signage regarding idling at site access points.
- Use alternative fueled (e.g., compressed natural gas [CNG], liquefied natural gas [LNG], propane), or electric-powered construction equipment where feasible.
- Use equipment with diesel oxidation catalysts, catalyzed diesel PM filters, or other applicable air district-approved, emission reduction retrofit devices where feasible.

AQ-2 The City shall work with SCAQMD and new development to identify projects that would cause a significant air quality impact. When significant impacts are determined, the City shall work with new development to ensure all applicable General Plan policies are fulfilled by the project and identify and require the implementation of additional mitigation measures that would be consistent with the General Plan goals and policies to reduce air quality pollutant emissions.

- AQ-3 The City shall work with SCAQMD and SCAG to implement and enforce air quality reduction measures in the AQMP to meet all federal and state ambient air quality standards. Projects within the City that have significant air quality impacts should be required by the City to implement mitigation consistent with the goals and measures in the AQMP. The City shall participate in any future amendments and updates to the AQMP when possible.
- AQ-4 Require use of SCAQMD's Localized Significance Thresholds (LST) for construction-related emissions. If construction emissions would exceed the SCAQMD's LSTs, the project shall prepare a health risk assessment of construction emissions and implement all feasible mitigation to reduce impacts to a less-than-significant level (i.e., less than 10 in a million cancer risk and less than 1.0 hazard index).
- AQ-5 If and when needed, which should be determined through the environmental review process under CEQA, a health risk assessment that identifies health risk levels from nearby TAC sources shall be prepared for sensitive land uses (e.g., residential, hospital, convalescent home) that would be developed within 500 feet of I-5 or other stationary sources producing TACs. When health risk levels at the proposed sensitive receptor land uses are determined to exceed applicable significance thresholds, the proposed project shall implement mitigation measures into the project's design and/or implement alternative approaches to land use development that would reduce TAC exposure to proposed or nearby sensitive receptors. These mitigation measures and land use development approaches should use recommendations from ARB and local air districts, if and when possible. Mitigation measures to reduce TAC impacts to a less-than-significant level include, but should not be limited to, setbacks, buffers, and air filters.

Greenhouse Gas Emissions

The greenhouse gas emissions associated with the development of residential units listed in Table 3 are at worst the same as, and no significantly greater than, the greenhouse house gas emission impacts associated with development of the sites in Table 3 under the approved 2013 Mission Viejo General Plan.

On April 20, 2015 Governor Brown signed Executive Order B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. This Executive Order reduction target of 40 percent below 1990 levels by 2030 provides an interim reduction goal that will help the State to reduce GHG emissions by 80 percent under the 1990 levels by 2050. The goals of Executive Order B-30-15 have been legislated through Senate Bill 32.

In addition to improved motor vehicle emission technology to reduce future GHG emissions, improved energy efficiency measures are also available to improve and maximize energy efficiency for buildings and appliances. New technologies, policies, programs, green building programs (CALGreen), etc. are available to reduce current and future GHG emissions.

The California Building Energy Efficiency Standards (Standards) were first adopted in 1976 and have since been updated periodically as directed by statute. The Standards contain energy and water efficiency requirements (and indoor air quality requirements) for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential Standards include the introduction of photovoltaic into the prescriptive package, improvements for attics, walls, water heating, and lighting. The Standards are conceptually divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards the energy budgets that vary by climate zone (of which there are 16 in California) and building type; thus the Standards are tailored to local conditions, and provide flexibility in how energy efficiency in buildings can be achieved. The third set of requirements constitutes an alternative to the performance standards, which is a set of prescriptive packages that provide a recipe or a checklist compliance approach. The compliance of all residential development on sites listed in Table 3 with all applicable energy requirements of the Standards would further reduce GHG emissions related to energy consumption.

Per the 2019 Building Energy Efficiency Standards, as of January 1, 2020 all new residential home construction shall include a photovoltaic (PV) system, battery storage system, and solar ready for single-family and low-rise (three or fewer habitable floors) multi-family buildings. Therefore, all residential dwelling units that are constructed on the sites listed in Table 3 will be required to provide solar ready buildings.

Improved water conservation measures to treat and transport water have been developed since the approval of the General Plan. These improved water conservation measures would further reduce GHG emissions associated with the treatment and transportation of water compared to the emissions at the time of the approval of the 2013 Mission Viejo General Plan. Increasing the efficiency of the treatment and transportation of potable water due to new water conservation measures and water saving devices would reduce GHG emissions compared to the GHG emissions at the time the 2013 Mission Viejo General Plan was approved.

In conjunction with reducing GHG emissions associated with the treat, transportation and consumer consumption of water, the developers of any residential units constructed on sites listed in Table 3 would be required to comply with all applicable California Building Codes to improve water use efficiency, including compliance with Title 8, Chapter 8.12, Water-Efficient Landscape Regulations, of the Mission Viejo Municipal Code. Therefore, the development of all residential units in Table 3 would not conflict with any of the water conservation and efficiency measures.

The developer of any single-family residential units on sites in Table 3 could install electrical wiring so that residents would have the option to install Electric Vehicle Charging (EVC) equipment within their dwelling unit in compliance with and as required by Section 4.106.4 of the 2019 California Green Building Standards Code, Title 24, Part 11. Charging stations could be installed by homeowner associations for the multi-family developments and in

some common open space areas in the tracts for use by residents for a fee. The installation of EVC equipment and charging stations would encourage residents to use electric vehicles and reduce mobile-source air emissions, including GHG emissions.

With the exception of the Grace Church parking lot site, the residents of the other sites would be in close proximity to commercial use that would allow residents to walk or bike to access commercial areas and reduce the use of and reliance of motor vehicles and reduce air and GHG emissions. For the Grace Church parking lot site, residents could walk, bike or use alternative modes of transportation to the closest commercial area that is approximately one-half mile northwest of the site at the intersection of Trabuco Road and El Toro Road.

The existing public transportation system in Mission Viejo would serve the residents of many of the sites in Table 3. The existing public bus transportation system is either adjacent to or within one-half mile of each of each site and allows and encourage residents to use the public transportation to reduce air and GHG emissions.

The developers of all new residential units in sites in Table 3 would be required to meet and comply with all applicable existing State regulations that have been adopted to reduce GHG emissions, including SB 375, Executive Order B-30-15, 2019 Building Energy Efficiency Standards, 2019 California Green Building Standards Code, Title 24, Part 11CALGreen, etc. As discussed, these requirements include the installation of efficient photovoltaics, energy improvements for attics, walls, water heating, and lighting and the installation of electrical wiring so project residents have the option to install EVC equipment within their dwelling unit. The GHG emissions associated with the development of all new dwelling units allowed by the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 would be required to comply with all applicable state plans and programs designed to reduce GHG emissions.

The development of residential units in the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 towards meeting the RHNA allocation for the City would be required to implement all applicable mitigation measures set forth in the General Plan Program EIR MMRP for potential greenhouse gas impacts associated with the development of residential units. The following applicable mitigation measures are carried forward from the General Plan Program EIR MMRP to reduce greenhouse gas impacts for residential projects associated with the sites in Table 3 to less than significant.

Mitigation Measures:

GHG-1 To reduce construction-generated GHG emissions, projects seeking discretionary approval from the City shall implement all feasible measures for reducing GHG emissions associated with construction that are recommended by the City and/or SCAQMD at the time individual portions of the site undergo construction.

The project applicant(s) for any particular discretionary project may submit a report to the City that substantiates why specific measures are considered

infeasible for construction of that particular discretionary project and/or at that point in time. By requiring that the list of feasible measures be established prior to the selection of a primary contractor, this measure requires that the ability of a contractor to effectively implement the selected GHG reduction measures be inherent to the selection process.

The recommended measures for reducing construction-related GHG emissions at the time of writing this EIR are listed below. The list will be updated as new technologies or methods become available. The project applicant(s) shall, at a minimum, be required to implement the following:

- Improve fuel efficiency of construction equipment:
 - reduce unnecessary idling (modify work practices, install auxiliary power for driver comfort);
 - perform equipment maintenance (inspections, detect failures early, corrections);
 - train equipment operators in proper use of equipment;
 - use the proper size of equipment for the job; and
 - use equipment with new technologies (repowered engines, electric drive trains).
- Use alternative fuels for electricity generators and welders at construction sites such as propane or solar, or use electrical power.
- Use an ARB-approved low-carbon fuel, such as biodiesel or renewable diesel for construction equipment. Emissions of NOX from the use of low carbon fuel must be reviewed and increases mitigated. Additional information about low-carbon fuels is available from ARB's Low Carbon Fuel Standard Program.
- Reduce electricity use in the construction offices by using compact fluorescent bulbs, powering off computers every day, and replacing heating and cooling units with more efficient ones.
- Recycle or salvage nonhazardous construction and demolition debris.
- Use locally sourced or recycled materials for construction materials (goal of at least 20 percent based on costs for building materials, and based on volume for roadway, parking lot, sidewalk, and curb materials).
- Develop a plan to efficiently use water for adequate dust control. This may consist of the use of non-potable water from a local source.

GHG-2 As a part of a contractor demolition package, require 25 percent of nonhazardous debris (excluding excavated soil and land-clearing debris) to be recycled or salvaged. Work with contractors to share best practices on building recycling and

reuse, and demolition techniques to minimize waste, dust generation, water and energy use, and other impacts of construction and demolition work.

Therefore, the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger the need for a subsequent EIR per Section 21166 of the California Public Resources Code on the basis of its effects on air quality or greenhouse gas impacts.

d. Biological Resources

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in biological impacts, especially site 8 that is vacant.

The City of Mission Viejo contains many important ecological and biological resources, including the oak woodland, and the coast Live Oak (*Quercus agrifolia*), which was named the Official City Tree by the City Council on April 9, 1990. The City is committed to work with the U.S. Fish and Wildlife Service to pursue grant funding to create a Habitat Conservation Plan for portions of the City. The City desires to improve open spaces to assist in the protection of sensitive plants, animals, and their habitats in the City.¹⁹

The Conservation/Open Space Element includes goals and policies related to the preservation and protection of ecological and biological resources. Goal 1 of the Conservation/Open Space Element states, "Protect and enhance the significant ecological and biological resources within and surrounding the community." The three policies that are applicable to the Housing Element Update include:

- Policy 1.1: Preserve and protect important natural plant and animal communities and their associated habitats, such as areas supporting rare and endangered species, riparian areas, wildlife movement corridors, wetlands, and significant tree stands through appropriate site planning and grading techniques, revegetation, and soil management practices and other resource management techniques.
- Policy 1.2: Utilize a development proposal review process to mitigate the impacts of development on sensitive lands such as steep slopes, wetlands, cultural resources, oak woodlands and sensitive habitats.
- Policy 1.3: Regulate the removal or destruction of the Coast Live Oak (*Quercus agrifolia*) tree.

¹⁹ City of Mission Viejo, General Plan Update & Sustainability Action Plan, March 2012, page 3-6.

While residential development on site 8 would require the removal of some or all of the existing native vegetation and biological resources, the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose to physically alter any existing habitat and/or wildlife resources on site 8 or any of the other sites in Table 3. Potential future development would be subject to further discretionary consideration and environmental analysis in compliance with CEQA once detailed project development plans for a site are filed with the City for consideration. Should additional environmental analysis identify any significant impacts to habitats or species, movement of any resident or migratory species, mitigation measures to reduce those impacts to a less than significant level as required by CEQA Guidelines section 15041(a) and 15041(c).

There is no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the General Plan Program EIR was certified, that shows any new, or substantially more adverse, significant biological impacts than those disclosed in the General Plan Program EIR, or that shows that new, or previously identified infeasible, mitigation measures or alternatives would substantially reduce one or more significant biological effects of the project.

Therefore, the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger the need for a subsequent EIR per Section 21166 of the California Public Resources Code on the basis of its effects on biological resource impacts.

e) Cultural Resources

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in cultural resource impacts.

All of the listed sites in Table 3 are developed, with the exception of site 8, and as a result they have been disturbed during project grading and construction. Any cultural resources that were present on the developed sites have been disturbed and uncovered during development. Therefore, it is not anticipated that future residential development of the developed sites would uncover any existing cultural resources. Because site 8 is not developed and undisturbed, there could be cultural resources present on the site that could be uncovered during any grading and the construction of residential units.

No physical development or land alteration of any sites is proposed at this time. The development of the sites in Table 3 in the future would be subject to further discretionary consideration and environmental analysis by the City in compliance with CEQA once detailed project development plans are filed for consideration. Should future environmental analysis identify any potential significant impacts to archaeological and/or historical

resources to a site, mitigation measures to reduce those impacts to a less than significant level would be required by CEQA Guidelines section 15064.5.

There have been no substantial changes with respect to the circumstances under which the General Plan Update was approved that will require major revisions of the General Plan Program EIR. Accordingly, the potential cultural resource impacts associated with the development of the sites in Table 3 associated with the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 is the same as described and analyzed in the General Plan Program EIR.

Therefore, the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger the need for a subsequent EIR per Section 21166 of the California Public Resources Code on the basis of its effects on cultural resource impacts.

f) Geology and Soils

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the listed sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in geotechnical and/or soil impacts.

There have been no substantial changes with respect to the circumstances under which development can occur for the sites in Table 3 that would require major revisions of the General Plan Program EIR. Accordingly, the potential geology and soil impacts associated with the City of Mission Viejo General Plan Housing Element Update, 2021-2029 is the same as the geology and soil impacts described and analyzed in the General Plan Program EIR.

At the time site specific residential development plans are submitted, the City would conduct environmental analysis in compliance with CEQA to evaluate and determine the potential for geotechnical and/or soils impacts by the project at that time. If required by CEQA, the City would require the project developer to conduct site specific geotechnical and soil studies to determine the potential significance of any impacts. If required, mitigation measures would be required and implemented to reduce potential geotechnical and/or soils impacts.

Therefore, the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger need for a subsequent EIR on the basis of its effects on geology and soil impacts.

g) Hazards and Hazardous Materials

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies

the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the listed sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in hazards and hazardous material impacts.

There have been no substantial changes with respect to the circumstances under which development can occur for each site that would require major revisions of the General Plan Program EIR. Accordingly, the potential hazards and hazardous impacts associated with the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 is the same as the hazardous impacts described and analyzed in the General Plan Program EIR.

At the time site specific residential development plans for a site listed in Table 3 are submitted, the City would conduct environmental analysis in compliance with CEQA to evaluate and determine the potential for hazardous impacts by the project at that time. If required by CEQA, the City would require the project developer to conduct site specific hazardous investigations to determine the potential significance of any impacts. If required, mitigation measures would be required and implemented to reduce potential hazardous impacts.

The approval of the City of Mission Viejo General Plan Housing Element Update, 2021-2029 would not result in any new, or substantially more adverse, significant impacts to hazards than were otherwise disclosed in the 2013 General Plan Program EIR. Moreover, there is no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the General Plan Program EIR was certified, that shows any new, or substantially more adverse, significant hazardous impacts than those disclosed in the 2013 General Plan Program EIR, or that shows that new, or previously identified infeasible, mitigation measures or alternatives would substantially reduce one or more significant effects of the City of Mission Viejo General Plan Housing Element Update, 2021-2029 to hazardous materials.

Therefore, the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger need for a subsequent EIR on the basis of its effects on hazardous materials.

h) Hydrology and Water Quality

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the listed sites, the

demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in hydrology and water quality impacts.

The City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose any substantial changes to the type of development allowed for the sites in Table 3 as analyzed in the 2013 General Plan Program EIR. There have been no substantial changes with respect to the circumstances under which development can occur for each site that would require major revisions of the General Plan Program EIR. Accordingly, the potential hydrology and water quality impacts associated with the City of Mission Viejo General Plan Housing Element Update, 2021-2029 is the same as the hydrology and water quality impacts described and analyzed in the General Plan Program EIR.

At the time site specific residential development plans are submitted, the City would conduct environmental analysis in compliance with CEQA to evaluate and determine the potential for hazardous impacts by the project at that time. If required by CEQA, the City would require the project developer to conduct site specific hydrological and water quality investigations to determine the potential significance of any impacts. If required, mitigation measures would be required and implemented to reduce potential hydrology and water quality impacts.

Therefore, the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger need for a subsequent EIR on the basis of its effects on hydrology and water quality impacts.

i) Land Use

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the listed sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in land use impacts.

Table 4 shows the general plan amendments and zone changes that would be required for each site to allow the type and density of residential development planned for that site. The land use element of the General Plan and the General Plan Land Use map will be updated to allow the higher density of residential development of the sites in Table 4 towards meeting the RHNA allocation of 2,217 units. General Plan policies will be updated and/or revised to encourage higher residential densities on the sites in Table 3. The rezoning of the sites would result in sites being consistent with general plan land use designations to allow higher residential densities. The development code would be revised to provide higher density development standards to accommodate the higher residential densities. Since the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose any residential development at this time, there will not be any land use or zoning impacts. Potential land use and zoning impacts associated with the residential development of the

sites in Table 3 would be evaluated for compliance with CEQA at the time site specific development plans are submitted to the City of Mission Viejo for approval.

Although the City of Mission Viejo General Plan Housing Element Update, 2021-2029 proposes general plan amendments and zone changes for the sites in Table 4, the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose site specific residential development plans for any of the sites. At the time residential development plans are submitted for a site, the City would conduct environmental analysis in compliance with CEQA to evaluate and determine the potential for land use impacts by the project at that time. If required by CEQA, mitigation measures would be required and implemented to reduce potential land use impacts.

Therefore, the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger need for a subsequent EIR on the basis of its potential land use impacts.

j) Noise and Vibration

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the listed sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in short- and long-term noise impacts.

There have been no substantial changes with respect to the circumstances under which development can occur for each site that would require major revisions of the General Plan Program EIR. Accordingly, the potential noise and vibration impacts associated with the City of Mission Viejo General Plan Housing Element Update, 2021-2029 is the same as the noise and vibration impacts described and analyzed in the General Plan Program EIR.

At the time site specific residential development plans are submitted, the City would conduct environmental analysis in compliance with CEQA to evaluate and determine the potential for noise and vibration impacts by the project at that time. If required by CEQA, the City would require the project developer to conduct site specific noise and vibration investigations to determine the potential significance of any impacts. The following applicable mitigation measures are carried forward from the General Plan Program EIR MMRP to reduce noise impacts for residential projects associated with the sites listed in Table 3 to less than significant.

Mitigation Measures:

N-1 Acoustical studies shall be required for all discretionary projects where any of the following apply:

- The project includes a noise-sensitive land use that is located within the existing or future 60-dBA CNEL contour for transportation noise sources.
- The project will cause future traffic volumes to increase by 25 percent or more on any roadway that fronts residential, institutional, or open space land uses.
- The project will expose a noise-sensitive land use to a stationary noise source exceeding the standards outlined in the Noise Element. Such stationary sources may include mechanical equipment operations, entertainment venues, industrial facilities, and property maintenance.
- The project includes a noise-sensitive land use in the vicinity of existing or proposed commercial and industrial areas.
- The project is a mixed-use development that includes a residential component. The focus of this type of acoustical study is to determine likely interior and exterior noise levels and to recommend appropriate design features to reduce noise.
 - Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance. An acoustical analysis prepared in accordance with the Noise Element shall:
 - be the financial responsibility of the applicant seeking City approval of a project;
 - be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics;
 - include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and predominant noise sources;
 - estimate existing and projected cumulative (20 years) noise in terms of CNEL or Ldn, and compare those noise levels to the adopted standards and policies of the Noise Element;
 - estimate noise exposure after the prescribed mitigation measures have been implemented; and
 - describe a post-project assessment program that could be used to evaluate the effectiveness of the proposed mitigation measures.

N-2 A vibration analysis shall be required as part of all acoustical studies required under Mitigation Measure N-1. Where a noise study is not required, the City shall require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:

- For projects where construction will include vibration-generating activities, such as pile driving, within 100 feet of existing structures, site-specific vibration studies shall be conducted to determine the area of impact and to present appropriate mitigation measures that may include the following:
 - Identify sites that would include vibration compaction activities such as pile driving and have the potential to generate groundborne vibration, and the sensitivity of nearby structures to groundborne vibration. This task should be conducted by a qualified structural engineer.
 - Develop a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted; set up a vibration monitoring schedule; define structure-specific vibration limits; and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies would be identified for when vibration levels approached the limits.
 - At a minimum, monitor vibration during initial demolition activities and during pile-driving activities. Monitoring results may indicate the need for more or less intensive measurements.
 - When vibration levels approach limits, suspend construction and implement contingencies to either lower vibration levels or secure the affected structures.
 - Conduct post-survey on structures where either monitoring has indicated high levels or complaints of damage have been made. Make appropriate repairs or compensation where damage has occurred as a result of construction activities.

N-3 The City shall require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:

- Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., mufflers, silencers, wraps).
- Construction operations and related activities associated with the project shall comply with the operational hours outlined in the City of Mission Viejo Municipal Code (Noise Control).

- Construction equipment shall not be idled for extended periods of time in the vicinity of noise-sensitive receptors.
- Locate fixed and/or stationary construction equipment as far as possible from noise-sensitive receptors (e.g., generators, compressors, rock crushers, cement mixers).
- Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.
- Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. Acoustical barriers shall be constructed material having a minimum surface weight of 2 pounds per square foot or greater, and a demonstrated Sound Transmission Class (STC) rating of 25 or greater as defined by American Society for Testing and Materials (ASTM) Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be determined by analysis.

Therefore, the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger need for a subsequent EIR on the basis of its potential noise and vibration impacts.

k) Public Services and Utilities

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites towards meeting its designated RHNA goal to provide new residential dwelling units in Mission Viejo by 2029. All of the sites in Table 3 are currently developed with the exception of site 8, which is vacant. Although the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the listed sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in public service and utility impacts.

There have been no substantial changes with respect to the circumstances under which development can occur for each site in Table 3 that would require major revisions of the General Plan Program EIR. Accordingly, the potential public service and utility impacts associated with the City of Mission Viejo General Plan Housing Element Update, 2021-2029 is the same as the public service and utility impacts described and analyzed in the General Plan Program EIR.

At the time site specific residential development plans are submitted, the City would conduct environmental analysis in compliance with CEQA to evaluate and determine the potential for public service and utility impacts by the project. If required by CEQA, the City would require the project developer to conduct site specific investigations to determine the potential significance of any public service and utility impacts. If required, mitigation

measures would be required and implemented to reduce potential public service and utility impacts.

Therefore, the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger need for a subsequent EIR on the basis of its potential public services and utility impacts.

I) Transportation and Circulation

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 11 sites in the City towards meeting its designated RHNA goal to provide 2,217 new residential dwelling units in Mission Viejo by 2029. All of the selected sites listed in Table 3 are currently developed with the exception of site 8, which is vacant and undeveloped. Although the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the listed sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in transportation and circulation impacts.

There have been no substantial changes with respect to the circumstances under which development can occur for each site that would require major revisions of the General Plan Program EIR. Accordingly, the potential transportation and circulation impacts associated with the draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 is the same as the transportation and circulation impacts described and analyzed in the General Plan Program EIR.

At the time site specific residential development plans are submitted, the City would conduct environmental analysis in compliance with CEQA to evaluate and determine the potential for transportation and circulation impacts by the project. If required by CEQA, the City would require the project developer to conduct site transportation and circulation studies and investigations to determine the potential significance of any impacts. If required, mitigation measures would be required and implemented to reduce potential traffic and circulation impacts. The following applicable mitigation measures are carried forward from the General Plan Program EIR MMRP to reduce traffic impacts for residential projects associated with the sites listed in Table 3 to less than significant.

Mitigation Measures:

TT-1 The City shall implement the improvements to intersections listed below that have been identified in Table 3.5-9²⁰. All of the improvements include additional turn lane capacity provisions. These provisions will require further evaluation to ensure the improvements are appropriate and necessary. Prior to implementation of the identified improvements, the intersections should be monitored to ensure the improvements are ultimately necessary as the surrounding developments mature.

²⁰ Table 3.5-9, 2013 Mission Viejo General Plan Program EIR.

- I-5 northbound ramp/Oso Parkway (PM peak hour LOS E)
- I-5 northbound ramp/Avery Parkway (PM peak hour LOS F)
- Trabuco Road/Los Alisos Boulevard (AM peak hour LOS E)
- Los Alisos Boulevard /Santa Margarita Parkway (AM and PM peak hour LOS E/E)
- Marguerite Parkway/Jeronimo Road (AM peak hour LOS E)
- Marguerite Parkway/Avery Parkway (AM and PM peak hour LOS E/E)
- Felipe Road/Oso Parkway (AM and PM peak hour LOS E/E)

TT-2 Support alternative modes of travel by continuously developing and supporting these modes of travel. This can continually occur by:

- Continued implementation and update of the Bicycle Master Plan and integrating it with a Pedestrian Master Plan;
- Update and maintain City Roadway Standards to consider the public realm of the street and implement complete streets, as appropriate;
- Consider development of a neighborhood electric vehicle (NEV) master plan to encourage use of no emission vehicles on appropriate facilities. Coordinate with SCAG and the State Legislature to allow NEVs on public roadways with greater than 35 miles per hour posted speed limit;
- Develop innovative funding mechanisms (such as fee districts or Transnet funding) to assist in implementing, operating, and maintaining the proposed shuttle system and bike share facilities within the City;
- Work with developers to integrate bicycle and pedestrian amenities within their development plans.

Therefore, the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger need for a subsequent EIR on the basis of its potential transportation and circulation impacts.

m) Tribal Cultural Resources

The draft City of Mission Viejo General Plan Housing Element Update, 2021-2029 identifies the potential to develop up to 2,217 new residential units on 15 sites in the City towards meeting its designated RHNA goal to provide 2,217 new residential dwelling units in Mission Viejo by 2029. All of the selected sites listed in Table 1 currently are developed with the exception of site 8, which is vacant and undeveloped. Although the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not propose residential development for any of the listed sites, the demolition of existing buildings and site improvements on the developed sites and the construction of new residential units could result in tribal cultural impacts, especially site 8 that is vacant and undeveloped.

At the time site specific residential development plans are submitted, the City would conduct environmental analysis in compliance with CEQA and AB 52 and SB 16 as applicable to evaluate and determine the potential for impacts to tribal cultural resources by the project. Consistent with AB 52, the City would contact all tribes with known resources in Mission Viejo and request consultation to determine the potential for tribal cultural resources to exist

on the site. If requested by a tribe, the City would conduct consultation and arrive at the appropriate measures to protect tribal cultural resources if encountered on the site during any ground disturbance, such as grading, trenching, boring, construction, etc. If required, mitigation measures would be required and implemented to reduce potential tribal cultural resources.

Therefore, the City of Mission Viejo General Plan Housing Element Update, 2021-2029 does not trigger need for a subsequent EIR on the basis of its potential tribal cultural resource impacts.

m) Wildfires

The review of the California Department of Forestry and Fire Protection's (Cal Fire) Fire and Resource Assessment Program (FRAP) shows that none of the 11 listed sites are in a designated Fire Hazard Severity Zone in a State Responsibility Area (SRA).²¹ Similarly, the FRAP shows that none of the 11 sites are in a designated Very High Fire Hazard Severity Zone in a Local Responsibility Area (LRA).²² The development of residential units within the 11 listed sites in Table 3 would not be required to install and maintain any roads, fuel breaks, emergency water sources, power lines or other utilities specifically to protect the development and the immediate area from a wildfire because none of the sites are located in a SRA or LRA. However, like all residential development in the city, any residential development within the sites in Table 3 would be required to construct all fire protection measures required to meet and comply with the California Fire Code as applicable.

The City of Mission Viejo General Plan Housing Element Update, 2021-2029 would not result in any significant wildfire impacts that would trigger the need for a subsequent EIR on the basis of its potential wildfire impacts.

VIII. Conclusion

Based on the foregoing, none of the circumstances requiring preparation of a subsequent or supplemental EIR to the General Plan Program EIR (as specified in CEQA section 21166 and CEQA Guidelines 15162 and 15163) exist. The City of Mission Viejo General Plan Housing Element Update, 2021-2029 proposes no substantial changes to the development proposed for the 11 sites listed in Table 3 by the 2013 Mission Viejo General Plan with the approval of the requested general plan amendments, zone changes and development code amendments. Furthermore, no substantial changes are proposed or would occur with respect to the circumstances that development of any of the sites in Table 3 would require major revisions to the General Plan Program EIR and no new information that was not known and could not have been known at the time the General Plan Program EIR was certified has become available.

²¹ https://osfm.fire.ca.gov/media/6662/fhszs_map7.pdf

²² https://osfm.fire.ca.gov/media/6660/fhszl_map7.pdf

PUBLIC HEARINGS

REVISED GENERAL PLAN HOUSING ELEMENT UPDATE

The revised General Plan Housing Element Update includes analysis of the community's housing needs, opportunities and constraints, as well as policies and programs to facilitate the construction, rehabilitation, and preservation of housing for all economic segments of the community. The City is required by State law to prepare an updated Housing Element for the 6th Cycle planning period (2021-2029). Staff has revised the currently adopted Housing Element in response to comments received from the public and the State Department of Housing and Community Development ("HCD"). A second public hearing will be held by the City Council to review the recommendation made by the Planning and Transportation Commission and consider adoption of the revised 2021-2029 Housing Element, in accordance with state housing law.

Director Lister stated this revision is a substantial rewrite of the Housing Element that addresses state law and comments from the State Department of Housing and Community Development. A key point of this presentation will be an assessment of fair housing (issues, patterns of segregation, etc.) and this is addressed in Appendix D of the Housing Element. The report also looks at key housing programs including inclusionary housing and objective design standards, and site capacity. Veronica Tam and Related California were two new consultants hired by the City to work on the revisions.

Chairman Blum inquired on Affordable Dwelling Units (ADU's). Director Lister noted the 64 ADU's projected over the next housing period is a conservative estimate as the City has daily inquiries on ADU's. The City also has a program in place to tract the number of ADU's.

Planning and Economic Development Manager Lowe presented the staff report and power point presentation. State law requires each jurisdiction within the Southern California Association of Governments (SCAG) to update its Housing Element every eight years, and requires State certification. The State mandates that all local governments adequately plan to meet existing and projected housing needs of all economic segments of the community. RHNA requires cities to zone for their "fair share" of the region's housing needs based on State population growth and accounts for a mix of housing for different economic segments. It is a planned target, not a building quota. The City must show that the housing requirement can be achieved, but is not required to build the units. Affordable housing is when the total housing cost, including utilities, is no more than 30% of a family's gross income. For the 6th Cycle, Mission Viejo's allocation is for 2,217 housing units, with 1, 075 units allocated for extremely low and low income.

The revised Housing Element is a substantial rewrite from the previous version, and addresses all the comments from HCD. It includes Housing Programs and Implementing Actions, feasibility studies for rezoned housing sites, affirmatively furthering Fair Housing, and additional public outreach and engagement. Planning and Economic Development Manager Lowe reviewed the revision to the Summary Table IV-2, noting the City will have a surplus capacity of housing units over the RHNA allocation.

Addressing the housing programs and implementation actions, Ms. Lowe noted that the implementation is through various programs and actions. There are 16 Programs proposed in the revised Housing Element. These Programs include: Program 2, Surplus Land Act; Program 5,

Expanded Housing Opportunities; Program 12, Objective Design Standards; Program 13, Zoning and Code Amendments; Program 14, Inclusionary Requirements.

Regarding Appendix A – Public Outreach and Engagement, Ms. Lowe reviewed the dates of all previous meetings and noted upcoming meetings will be June 22, 2023 with a public workshop at the Norman P. Murray Center, and June 27, 2023 at the City Council meeting. Additional resources and information include a new Housing Element website with resources.

Appendix C – the Housing Sites Feasibility Analyses was performed by consultant Related California. The studies evaluated if a housing development could occur and meet projected densities and City development standards. As a more conservative approach, sites were assessed at 85% capacity.

Appendix D – Affirmatively Furthering Fair Housing (AFFH) requires all cities to provide an assessment of Fair Housing in the Housing Element. Components include a summary of fair housing issues and an assessment of fair housing enforcement and outreach capacity, segregation and integration, disparities in access to opportunity, disproportionate housing needs, including displacement risks, and ethically concentrated areas of poverty and affluence. The City of Mission Viejo contracts with the Fair Housing Foundation to offer outreach, and fair housing services. Approximately 60-70 clients from Mission Viejo are assisted per year, with focus on low and very low-income resident issues. Factors that disproportionately impact groups with special needs (such as race, disability status, senior status, etc.) include segregation and integration, overpayment of housing, substandard housing, overcrowding and displacement risk.

Almost all lower rental households in Mission Viejo are paying high proportions of their income on rent. Ms. Lowe reviewed a proportion of rent to household income. Overpayment is when households pay over 30% of income on housing, and severe overpayment is households that pay over 50% of their income. Populations with special needs tend to be disproportionately represented in lower income categories. Housing assistance programs help residents afford housing in Mission Viejo, and the City has the highest percentage among neighboring cities with Housing Choice Vouchers.

The purpose of the AFFH analysis is to identify and analyze patterns of segregation, access to opportunity, housing needs, displacement risk and poverty and influence. It is used to ensure that new housing development meets the City's RHNA, and ensures development will not reinforce concentrations of poverty or lack of opportunity. Ms. Lowe also reviewed the Sites Inventory Map.

Director Lister read into the record email comments received from Linda Shephard, Ann Owens, Rona Henry, and from Mitchell M. Teal on behalf of the Southwest Mountain States Regional Council of Carpenters (SWMSRCC).

Ms. Shephard noted that: 1) desalination units in California will allow new communities to be built less expensively; 2) affordable housing cannot be made affordable without significant subsidies by local and state and questioned why the taxpayers should be subsidizing when they cannot afford to help their own children buy a home in Mission Viejo; 3) the State is forcing the housing

requirements on cities; 4) the State has mismanaged water with large government fees that make new housing expensive; 5) property is expensive due to supply and demand due to poorly managed water and state restrictions on building in any new areas; and 6) the City should join other cities in fighting this over-reach by Sacramento.

Ms. Owens commented on the Housing Document. She applauded the City for hiring The Related Company to analyze the feasibility of the proposed housing sites. She urged the City to follow through with their conducting a feasibility study on an Inclusionary Housing Policy. Ms. Owens suggested that the City create more housing sites so that the amount of workforce housing on each site is more realistic; Site 1 shows 50% of housing units at Silverado Plaza is proposed for low-income residents, but should be 15% at the most. Another suggestion is to create a whole site of low-incoming housing in Mission Viejo. She stated her concern that the City would provide financial support, and noted that with the Core Area expansion the City will not have money to help finance low-income housing. Ms. Owens hoped the City will be aggressive in reaching out to builders to accomplish the housing goal.

Rona Henry, expressed support of the City's plan to conduct a feasibility study of adopting an Inclusionary Housing Policy. There is a critical need for housing at the lowest income levels, and she urged the City to adopt a policy that requires a 5% extremely low, 5% very low, and 5% low income allocation of new housing. Ms. Owens also asked that the City actively recruit developers to build some 100% affordable developments.

The Southwest Mountain States Regional Council of Carpenters asked that the City incorporate language into the Housing document that requires use of local workforce to benefit the community's economic development and environment.

Chairman Blum inquired if the certification of this document will take away local control. Ms. Lister noted that the City had already rezoned sites by the statutory deadline, so there will still be some degree of local control. However, there are new housing bills going in effect in July. Chairman Blum noted rezoning from commercial/retail to residential does decrease the number of generated traffic trips.

Vice Chairman Molinari noted a number of rezoned sites were off of Marguerite Parkway and inquired about a traffic study. Ms. Lister noted there is a higher density at the south end of the City due to the hospital, mall and college, so it is logical for housing needs in that area. Developers will be subject to CEQA review if following the Housing Element.

Commissioner Breton noted the analysis of Site 3 by the consultant shows this is a very feasible and viable site for 215 units. Director Lister noted the site is close to a 30 acres and previous concerns were that the site was originally proposed for a much larger number of units, especially given the proximity of the creek. He addressed the concern of over concentration of low income in one area of the city, stating the units are as evenly dispersed as is practical. Commissioner Breton noted for an Inclusionary Ordinance in the City he would be in favor of a 15% allocation of low-income units.

Commissioner Breton reviewed the report card from the Southern News Group (page 121) noting

that Mission Viejo received a B+. Director Lister stated this was due in part to the City exceeding production for low income housing for the 5th Housing Cycle.

Commissioner Breton stated that the SGAG projected population of 98,570 for Mission Viejo by 2045 is unrealistic, as there has been a fairly stable population since 1990. He suggested for the June 22, 2023 workshop that the City send out a notice for those who want to attend.

Commissioner Breton stated he would be in favor of exploring the adoption of an inclusionary ordinance that requires developers to build 15% of affordable units on a site. Objective Design Standards would benefit developers by knowing what is expected and treating all developers the same. He inquired about actively recruiting developers. Director Lister stated that the City has had meetings with Jamboree Housing and The Related Company regarding recruitment. Commissioner Breton stated that in his opinion the sites identified for housing units are plenty. He added this is a reasonable, defensible and well documented Housing Element. This is an honest and accurate assessment and analysis that could use the support of housing advocates, and is in everyone's interest to join in support this document.

Chairman Blum inquired about density bonuses. Director Lister noted the developers can apply for a density bonus.

Commissioner Disney inquired as to when this document will be submitted to the State. Ms. Lister noted it will be no later than just after the City Council meeting on June 27, 2023. Commissioner Disney noted that it would make more sense to use a range such as 12-18% instead of 15% as it would depend on the size of the property and number of units and a rigid number might be a physical impossibility.

Chairman Blum opened the public hearing.

Linda Tang, resident, noted this is a comprehensive document and that the City should commit to creating and implementing an Inclusionary Housing Ordinance.

James Poettgen, owner of Ballpark Pizza, Foothill Center on Los Alisos, inquired if there was any new overlay zoning in the center. He wanted to bring to staff's attention that ROAC will be dedicating 12 parking stalls for EV's. Director Lister noted the center has already been rezoned and there is currently one application for development of one of the parcels that will be discussed at the July 10, 2023 Planning and Transportation Commission meeting.

Ilene Geiger, Mission Viejo, applauded staff's work on the Housing Element. The City's population is aging, and not attracting the younger generation. The people who work here can't afford to live here. She stated she agrees with the potential solutions, but we will not solve the problems until we increase affordable housing in the City. Her concern is that developers won't find it financially feasible to build housing if they are required to make 50% of the units affordable. She inquired how this will work and if the City is prepared to financially assist developers. She stated she is an advocate of inclusionary housing.

Director Lister clarified that as per State law the City is discussing around 15%, and not 50%

inclusionary. The State establishes a default density at 30 dwelling acres per unit to facilitate lower income units. Under State law, the City can assume 100% of the sites zoned 30+ du/ac as feasible for lower income. However, to be conservative, the City is assuming only a portion of each site to be for lower income. There is also a buffer to cover a shortfall if sites are developed with less affordable housing.

Cathy Palmer, Mission Viejo, stated she has resided in the City since 1989 and loves living in Mission Viejo. Affordable Housing will make it easier for teachers, health care workers, and retail workers to live here. There is increased revenue to the City through property tax, which is a more stable and reliable source of income for Mission Viejo. We should promote housing instead of retail development. She supports the City exploring inclusionary housing, and asked that a priority be for townhomes and condos and for larger rental units for families, three bedrooms versus a studio.

Larry Tucker, Newport Beach, noted that all inclusionary housing requires some type of subsidy. The cost of financing will impact what can be done for affordable housing, and it will be a challenge to figure out how many units are feasible. The money will be made up by grants of entitlement. He also recommended that the City use the Density Bonus Law as an alternative

Tom Moore, Mission Viejo, stated that he would like the City to explore benefiting the property owners as developers with the building of ADU's on their property.

There being no further testimony, Chairman Blum closed the public hearing.

Commissioner Breton noted that the inclusionary zoning will be up to the City Council, but he would like to add to the Housing Element report that the City is "seriously" exploring inclusionary housing as an option. He reviewed with Director Lister the sites that are very feasible and if there has been an developer interest. Director Lister noted that she has had several developer inquiries, and at this time there is one application pending for a small development project on Los Alisos; this will be reviewed at the next Planning and Transportation Commission meeting.

Commissioner Breton suggested the addition of wording to the Conditions of Approval as stated below.

In response to Commissioner Brewer's inquiry, Economic and Planning Manager Lowe stated the power point presentation and public comments received would be available on the Housing Element website.

On motion by Commissioner Breton, seconded by Vice Chairman Molinari, and unanimously carried, the Commission: a) Adopted Resolution 2023-1493 recommending City Council approve revisions to GPA2021-35; b) Finds that the revisions to GPA2021-35 are within the scope of the approved Addendum to the City's 2013 previously-certified General Plan Program Environmental Impact Report; and c) Authorizes the Director of Community Development to approve clerical or technical revisions to the adopted Housing Element as may be necessary to obtain a finding of substantial compliance from the State Department of Housing and Community Development.

The following are changes to the Conditions of Approval:

Page 2, after the last WHEREAS add:

WHEREAS, the Planning and Transportation Commission has determined that the draft update of the General Plan Housing Element: 1) is well-documented and well-reasoned; 2) its conclusions regarding feasibility and viability of all identified sites for potential development are sound, defensible and realistic; and 3) its stated efforts to explore adoption and implementation of inclusionary zoning are made in good faith.

Include the word “seriously” before “exploring inclusionary zoning” in the text of the Housing Element under Program 14 Inclusionary Requirements.

COMMITTEE REPORTS

The Traffic Committee met on June 9, 2023 with Commissioners Brewer and Disney in attendance. For parking restrictions near Via Santa Cruz, the Committee will add a 50 ft. section of red painted curb. There was no action taken on a right turn only request on Augusta at Alicia Parkway. Regarding traffic control on Las Ondas Drive, the Committee will implement 25 mph speed limit signage, playground signage, and double yellow lines on the street.

The Design Review Committee met on May 31, 2023 with Commissioners Breton and Molinari in attendance. The presentation was for a location of an Orange County Goodwill boutique shop in the City, and no decision was made at this time.

STAFF COMMENTS

Director Lister had no comments.

PLANNING AND TRANSPORTATION COMMISSION COMMENTS, REPORTS, AND ACTIONS

Commissioner Breton encouraged the Commissioners to attend two upcoming cultural events in Mission Viejo. Shakespeare Under the Stars will be held in July, and the Pacific Symphony and Prelude in the Park held on August 5, 2023 celebrating the City’s 35th anniversary with the theme “Under the Sea.”

He also wished the City’s Attorney a speedy recovery from his unexpected health issue.

Commissioner Breton is happy to see that staff has a good system for tracking ADU’s. He stated that on the Status Report he noted there are two proposals for massage parlors, and he advised he will be taking a very close and look at the owners/establishments for any red flags.

Vice Chairman Molinari thanked Secretary Hannis for putting the agenda packet together. He welcomed Commission Brewer to the first meeting of all five Commissioners together, and added he looked forward to working with the current Commission for the next few years.

RESOLUTION 2023-1493

A RESOLUTION OF THE CITY OF MISSION VIEJO PLANNING AND TRANSPORTATION COMMISSION RECOMMENDING CITY COUNCIL APPROVAL OF REVISIONS TO GENERAL PLAN AMENDMENT GPA 2021-35 - COMPREHENSIVELY AMENDING THE CITY'S GENERAL PLAN HOUSING ELEMENT IN COMPLIANCE WITH STATE LAW TO ACCOMMODATE RESIDENTIAL DEVELOPMENT FOR THE 2021-2029 PLANNING PERIOD

WHEREAS, Section 65300 of the California Government Code (“Government Code”) requires that each city in California adopt a comprehensive general plan for the long-term physical development of the city; and

WHEREAS, Government Code Section 65302(c) mandates that said general plan include a housing element to adequately plan for the city’s existing and projected housing needs, including its share of the regional housing need; and

WHEREAS, Government Code Section 65583 further requires that the adopted housing element for each city shall identify adequate sites for housing and contain an inventory of land suitable for residential development – including vacant sites and sites having potential for redevelopment with residential land uses, including affordable housing units; and

WHEREAS, the General Plan of the City of Mission Viejo (“City”), originally adopted in 1998, included a housing element as required by Government Code Section 65302(c); and

WHEREAS, the City adopted the previous Housing Element on July 20, 2013 (General Plan Amendment GPA2011-29) covering the City’s housing needs for the 2013-2021 reporting period; and

WHEREAS, the California Department of Housing and Community Development (“HCD”) conditionally certified the City’s 2013-2021 Housing Element in August 10, 2013, contingent upon the City’s rezoning of two identified sites for high-density multifamily residential development; and

WHEREAS, on March 31, 2021, a noticed online public workshop was conducted to discuss with the public and both the Planning and Transportation Commission and City Council of the City of Mission Viejo the purpose and legal requirements regarding the City’s General Plan Housing Element update for the 2021-2029 Planning Period, and to receive initial public input prior to preparation of the draft Housing Element document; and

WHEREAS, on May 24, 2021, the Planning and Transportation Commission held a noticed public meeting at which the Commission considered the draft General Plan Housing Element Update, received public testimony, and provided comments to staff; and

WHEREAS, on June 8, 2021, the City Council of the City of Mission Viejo held a noticed public meeting at which the Council considered the draft General Plan Housing Element Update, received public testimony, provided comments to staff, and directed staff to submit the draft Housing Element update to HCD; and

WHEREAS, on July 8, 2021, the City of Mission Viejo draft General Plan Housing Element Update was submitted to HCD for review and comment; and

WHEREAS, on September 7, 2021, the City received a “findings” review letter from HCD regarding HCD review of the City’s draft Housing Element Update; and

WHEREAS, on September 27, 2021, the Planning and Transportation Commission held a noticed public meeting at which the Commission considered the draft General Plan Housing Element Update, received public testimony, and provided comments to staff; and

WHEREAS, on October 12, 2021, the City Council of the City of Mission Viejo held a noticed public meeting at which the Council considered the draft General Plan Housing Element Update, received public testimony, provided comments to staff, and directed staff to submit the draft Housing Element update to HCD; and

WHEREAS, on October 13, 2021, the City of Mission Viejo General Plan Housing Element Update was submitted to HCD for review and comment; and

WHEREAS, on January 10, 2022, the City received a second “findings” review letter from HCD regarding HCD review of the City’s draft Housing Element Update; and

WHEREAS, notice of separate public hearings, one with the Planning and Transportation Commission and one with the City Council, for GPA2021-35 was published in the *Saddleback Valley News* on June 1, 2023, and sent to: affected property owners (of property listed in the Housing Element Housing Site Inventory); all of the City’s homeowner’s associations; neighboring public agencies, housing advocacy groups; and other parties of interest, and was posted as required by state and local law; and

WHEREAS, the Planning and Transportation Commission conducted a duly noticed public hearing to consider the Proposed Amendment on June 12, 2023, at which time interested persons had an opportunity to testify either in support or in opposition.

WHEREAS, the Planning and Transportation Commission has determined that the draft update of the General Plan Housing Element: 1) is well-documented and well-reasoned; 2) its conclusions regarding feasibility and viability of all identified sites for potential development are sound, defensible and realistic; and 3) its stated efforts to explore adoption and implementation of inclusionary zoning are made in good faith.

NOW, THEREFORE, THE PLANNING AND TRANSPORTATION COMMISSION OF THE CITY OF MISSION VIEJO DOES HEREBY RESOLVE AS FOLLOWS:

SECTION 1 – RECITALS

That the above recitals are true and correct and are hereby incorporated by this reference and made a part of this resolution.

SECTION 2 – ENVIRONMENTAL REVIEW

An Addendum to the Mission Viejo General Plan Program Environmental Impact Report (State Clearinghouse #2012031065) (“Mission Viejo General Plan Program EIR”) was prepared for the

project in accordance with California Environmental Quality Act (“CEQA”) Guidelines. The Addendum examined potential impacts generated by the proposed project and determined the 6th Cycle Housing Element produces no greater impact than those described in the Mission Viejo General Plan Program EIR. On October 12, 2021, the City Council adopted the Addendum to the certified Mission Viejo General Plan Program EIR. The proposed revisions to GPA2021-35 were examined in accordance with CEQA and were found to be consistent with the program for with the original EIR and subsequent Addendum, as prepared and certified. Therefore, the Planning and Transportation Commission recommends that the City Council find that the revisions to GPA2021-35 are within the scope of the approved Addendum to the City’s 2013 previously-certified General Plan Program Environmental Impact Report and does not prompt requirements for subsequent review.

SECTION 3 – APPROVAL OF AMENDMENTS

The Planning and Transportation recommends to the City Council adoption of the following Proposed Amendments:

- 3.1 The proposed resolution entitled “A RESOLUTION OF THE CITY OF MISSION VIEJO PLANNING AND TRANSPORTATION COMMISSION RECOMMENDING CITY COUNCIL APPROVAL OF REVISIONS TO GENERAL PLAN AMENDMENT GPA 2021-35 - COMPREHENSIVELY AMENDING THE CITY’S GENERAL PLAN HOUSING ELEMENT IN COMPLIANCE WITH STATE LAW TO ACCOMMODATE RESIDENTIAL DEVELOPMENT FOR THE 2021-2029 PLANNING PERIOD,” a copy of which is attached hereto as Exhibit A and incorporated herein by reference.
- 3.2 Authorize the Director of Community Development to approve clerical or technical revisions to the adopted Housing Element as may be necessary to obtain a finding of substantial compliance from the State Department of Housing and Community Development.

PASSED, APPROVED AND ADOPTED this 12th day of June, 2023.

Joseph C. Blum, Chairman

Elaine Lister, Secretary

G:\CD\WP\advplan\General Plan Elements\Housing Element\2021 Update - Housing Element\PTC\PTC RESO-REcommending_Housing_Element_Amendments.DOC

From: Linda Shepard <linda92shep@gmail.com>
Sent: Friday, June 9, 2023 9:54 PM
To: Community Development
Subject: Mission Viejo Planning and Transportation Commission Agenda - citizen comments

CAUTION: This Email is from an EXTERNAL source. Ensure you trust this sender before clicking on any links or attachments.

Dear sirs,

I cannot attend the upcoming Planning and Transportation Committee meeting.
I DO have concerns.

My main concerns are:

- 1) Desalination plants up and down the coast will allow NEW communities to be built that will be less expensive. We need whole new communities, not expensive in-fill housing.
- 2) Affordable housing is a category of income and has nothing to do with whether or not the potential owner can afford the house. They most likely cannot afford the house without significant subsidies by local and state government. This is a wealth transfer from one group of taxpayers to another. The taxpayers doing the subsidizing cannot afford to help their own children buy a home here, why should they be forced to help others?
- 3) The State is usurping local control by forcing housing requirements on cities.
- 4) The State has mismanaged water and, with outrageous government fees of well over \$150,000 per housing unit, makes new housing extremely expensive.
- 5) Property is expensive due to supply and demand. Restricted supply because of both poorly managed water supply and state restrictions on building in any new areas, has caused the LAND value portion of homes to quadruple in the past 20 some years. Sticks and bricks cost relatively the same around the country. For a vast state, we should have more buildable areas and land prices will go down, which will help make housing more affordable for ALL.
- 6) This Commission and our city council should fight this over-reach by Sacramento. Join with other cities and take a stand. How is this any different from Sacramento wanting the entire state to be a sanctuary state? OC fought that.

Respectfully submitted,

Linda Shepard

From: Angela Hannis
Sent: Thursday, June 8, 2023 3:02 PM
To: Community Development
Subject: public comment on MV 6th cycle housing element June 2023

On Jun 7, 2023, at 4:57 PM, Ann Owens <annowens@cox.net> wrote:

To: Mission Viejo Planning Commission Chair Blum, Vice Chair Molinari, and Commissioners Breton, Brewer, and Disney.

From: Ann Owens, Mission Viejo Planning Partnership Chair

Date: June 7, 2023

The Mission Viejo Planning Partnership is a group of local advocates who work for affordable workforce housing in Mission Viejo.

We have read the newest draft of the Mission Viejo 6th Cycle Housing Element and wish to comment on the following items:

1. We want to applaud the city for hiring Related California to help them analyze the feasibility of the proposed housing element sites. The amount of information about each site has increased and shows more depth of vetting.
2. In your proposals you stated that the city was planning on conducting a feasibility study on adopting an Inclusionary Housing Policy. We strongly suggest that you follow through on this proposal. The necessity for this is obvious when you look at what is being proposed for the Miner's Village project. The last proposal included only 5% for low- income housing. Our recent conversations with Avalon Bay have also shown that they are not considering any more than 10% at the most for the new proposal. Developers will never offer this without a city law in place.
3. This brings us to the next point. On all of your sites the amount of low and very-low income housing is almost the same number as higher cost housing. For example, site 1, The Silverado Plaza, has 31 low and very- low units and 32 moderate and above moderate. Each site has a similar distribution of units. This means a developer would have to build 50% of the housing for low- income residents. This is not something we have ever seen done and does not work out financially for any company. The usual amount that is offered is 15% at most. Therefore, we suggest that you create more housing sites so that the amount of workforce housing on each site is more realistic and more likely to be accomplished.
4. We also encourage you to reach out to National Core, Jamboree, and Related California to create a whole site of low-income housing for Mission Viejo. Any help that you can give to expedite their projects would be appreciated.
5. Support of Affordable Housing. Page 89 states that the city will provide financial support if available. This is very vague terminology. It seems the city has run out of money due to its Central Core real estate expansion and now has no money to help encourage low- income housing.
6. ADU's – On p. 68 you have Table IV-2 that states 44 ADU's will be for low and very- low renters. What process besides a vague reference to state and local funding sources does the city intend to use to make sure this is carried through? Words such as "Evaluate the feasibility of applying

for funding available at the State to assist lower and moderate-income homeowners to develop ADU's" does not show confidence in the city's ability to accomplish this task.

7. Former site C, now Site 3 Underdeveloped land, has a lengthy list of construction considerations before this site is usable eight years from now. We look forward to the city sharing its research analysis and technical expertise on this site in 2026. We will be looking for this promised information.

We feel everyone understands the need for workforce housing to be built if our community is going to thrive and entice young families to settle here. We hope that the city will be aggressive in its outreach to builders to accomplish such a task. Thank you for listening to our concerns. We hope to be able to work with you in the future if you wish to continue outreach to the community

Cc: HCD

Cesar Covarrubias, Kennedy Commission

Rona Henry – Welcoming Neighbors Home

Mayor Goodell

Mayor Pro Tem Trish Kelley

Cynthia Vasquez, Wendy Bucknam and Rober Ruesch of City Council

From: Angela Hannis
Sent: Friday, June 9, 2023 8:05 AM
To: Community Development
Subject: FW: Mission Viejo Revised Housing Element

From: Rona Henry <rona.s.henry@gmail.com>
Sent: Monday, June 5, 2023 12:14 PM
To: Joe Blum <jblum@cityofmissionviejo.org>; Robert Breton <rbreton@cityofmissionviejo.org>; Gary Disney <gdisney@cityofmissionviejo.org>; LaVal Brewer <lbrewer@cityofmissionviejo.org>; Peter Molinari <pmolinari@cityofmissionviejo.org>
Cc: Kent Doss <rev@tapestryuu.org>; colin.cross@hcd.ca.gov; Cesar Covarrubias <cesarc@kennedycommission.org>; Ann Owens <annowens@cox.net>; Goodell-bgoodell@cityofmissionviejo.org; Wendy Bucknum <wbucknum@cityofmissionviejo.org>; Cynthia Vasquez <cvasquez@cityofmissionviejo.org>; Trish Kelley <tkelley@cityofmissionviejo.org>; Robert Ruesch <rruesch@cityofmissionviejo.org>; CityClerk <cityclerk@cityofmissionviejo.org>
Subject: Mission Viejo Revised Housing Element

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To: Mission Viejo Planning Commission Chair Blum, Vice Chair Molinari and Commissioners Breton, Brewer and Disney

From: Rona Henry, Chair, Welcoming Neighbors Home
Rev Kent Doss, Minister, Tapestry Unitarian Universalist Congregation

Date: June 5, 2023

Welcoming Neighbors Home is a ministry of Tapestry Unitarian Universalist Congregation and we have members who live in Mission Viejo.

Our volunteers have reviewed the revised Mission Viejo 6th Cycle Housing Element Draft and have the following comments.

- We strongly support the City's plan to conduct a feasibility of adopting an Inclusionary Housing Policy. Other OC cities have adopted such policies and they have proven to be effective. There is a critical need for housing at the lowest income levels therefore we urge you to adopt a policy that require 5% extremely low income, 5% very low income and 5% low income. At the same time, we urge you to address the need for workforce housing instead of further development of "luxury apartments".
- We ask that the City actively recruit developers to the City to build some 100% affordable developments. Such developments will really help to address the City's RHNA goals.
- We appreciate the extra details that have been included in the Housing Inventory. One thing that stood out to us was that the percentage of each site allocated for lower income units seemed unrealistically high. When considering market rate housing that includes affordable units, we rarely see it include more than 15% affordable housing. We ask the City to designate more sites for housing and assume less per site for affordable housing so the inventory will more accurately reflect the economic feasibility of such units being built.

Thank you for your service.

Cc: Colin Cross, HCD

Cesar Covarrubias, Kennedy Commission
Ann Owens, Mission Viejo Planning Partnership
Mayor Goodell
Mayor Pro Tem Kelly

--

Rona Henry
Chair, Welcoming Neighbors Home Initiative
Tapestry, a Unitarian Universalist Congregation
rona.s.henry@gmail.com 609-216-1784



P: (626) 314-3821
F: (626) 389-5414
E: info@mitchtsailaw.com

Mitchell M. Tsai
Attorney At Law

139 South Hudson Avenue
Suite 200
Pasadena, California 91101

VIA E-MAIL

June 12, 2023

City Clerk
City of Mission Viejo
200 Civic Center
Mission Viejo, CA 92691

Em: cityclerk@cityofmissionviejo.org

Em: cd@cityofmissionviejo.org

**RE: City of Mission Viejo's revised General Plan Housing Element
Update – Agenda Item 3**

Dear City Clerk,

On behalf of the Southwest Mountain States Regional Council of Carpenters (“**Southwest Carpenters**” or “**SWMSRCC**”), my Office is submitting these comments for the City of Mission Viejo’s (“**City**”) June 12, 2023 Planning Commission meeting regarding the Revised General Plan Housing Element Update (“**Project**”).

The Southwest Carpenters is a labor union representing over 63,000 union carpenters in 10 states, including California, and has a strong interest in well-ordered land use planning and in addressing the environmental impacts of development projects.

Individual members of the Southwest Carpenters live, work, and recreate in the City and surrounding communities and would be directly affected by the Project’s environmental impacts.

The Southwest Carpenters expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearing and proceeding related to this Project. Gov. Code, § 65009, subd. (b); Pub. Res. Code, § 21177, subd. (a); see *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal.App.4th 1184, 1199-1203; see also *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal.App.4th 1109, 1121.

The Southwest Carpenters incorporates by reference all comments raising issues regarding the Environmental Impact Report (EIR) submitted prior to certification of the EIR for the Project. See *Citizens for Clean Energy v City of Woodland* (2014) 225 Cal.App.4th 173, 191 (finding that any party who has objected to the project’s environmental documentation may assert any issue timely raised by other parties).

Moreover, the Southwest Carpenters requests that the City provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act (**CEQA**) (Pub. Res. Code, § 21000 *et seq.*), and the California Planning and Zoning Law (“**Planning and Zoning Law**”) (Gov. Code, §§ 65000–65010). California Public Resources Code Sections 21092.2, and 21167(f) and California Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency’s governing body.

I. THE CITY SHOULD INCORPORATE LANGUAGE THAT REQUIRE THE USE OF A LOCAL WORKFORCE TO BENEFIT THE COMMUNITY’S ECONOMIC DEVELOPMENT AND ENVIRONMENT

The City should incorporate language into the proposed Project requiring residential developments within the Project area to be built using local workers who have graduated from a Joint Labor-Management Apprenticeship Program approved by the State of California, have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from such a state-approved apprenticeship training program, or who are registered apprentices in a state-approved apprenticeship training program.

Community benefits such as local hire can also be helpful to reduce environmental impacts and improve the positive economic impact of the Project. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project site can reduce the length of vendor trips, reduce greenhouse gas emissions, and provide localized economic benefits. As environmental consultants Matt Hagemann and Paul E. Rosenfeld note:

[A]ny local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the

reduction would vary based on the location and urbanization level of the project site.

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

Workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce Development Board and the University of California, Berkeley Center for Labor Research and Education concluded:

[L]abor should be considered an investment rather than a cost and investments in growing, diversifying, and upskilling California’s workforce can positively affect returns on climate mitigation efforts. In other words, well-trained workers are key to delivering emissions reductions and moving California closer to its climate targets.¹

Furthermore, workforce policies have significant environmental benefits given that they improve an area’s jobs-housing balance, decreasing the amount and length of job commutes and the associated greenhouse gas (GHG) emissions. In fact, on May 7, 2021, the South Coast Air Quality Management District found that that the “[u]se of a local state-certified apprenticeship program” can result in air pollutant reductions.²

Locating jobs closer to residential areas can have significant environmental benefits. As the California Planning Roundtable noted in 2008:

People who live and work in the same jurisdiction would be more likely to take transit, walk, or bicycle to work than residents of less balanced communities and their vehicle trips would be shorter. Benefits would

¹ California Workforce Development Board (2020) Putting California on the High Road: A Jobs and Climate Action Plan for 2030 at p. ii, *available at* <https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf>.

² South Coast Air Quality Management District (May 7, 2021) Certify Final Environmental Assessment and Adopt Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions Program, and Proposed Rule 316 – Fees for Rule 2305, Submit Rule 2305 for Inclusion Into the SIP, and Approve Supporting Budget Actions, *available at* <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf?sfvrsn=10>.

include potential reductions in both vehicle miles traveled and vehicle hours traveled.³

Moreover, local hire mandates and skill-training are critical facets of a strategy to reduce vehicle miles traveled (VMT). As planning experts Robert Cervero and Michael Duncan have noted, simply placing jobs near housing stock is insufficient to achieve VMT reductions given that the skill requirements of available local jobs must match those held by local residents.⁴ Some municipalities have even tied local hire and other workforce policies to local development permits to address transportation issues. Cervero and Duncan note that:

In nearly built-out Berkeley, CA, the approach to balancing jobs and housing is to create local jobs rather than to develop new housing. The city's First Source program encourages businesses to hire local residents, especially for entry- and intermediate-level jobs, and sponsors vocational training to ensure residents are employment-ready. While the program is voluntary, some 300 businesses have used it to date, placing more than 3,000 city residents in local jobs since it was launched in 1986. When needed, these carrots are matched by sticks, since the city is not shy about negotiating corporate participation in First Source as a condition of approval for development permits.

Recently, the State of California verified its commitment towards workforce development through the Affordable Housing and High Road Jobs Act of 2022, otherwise known as Assembly Bill No. 2011 (“**AB2011**”). AB2011 amended the Planning and Zoning Law to allow ministerial, by-right approval for projects being built alongside commercial corridors that meet affordability and labor requirements.

The City should consider utilizing local workforce policies and requirements to benefit the local area economically and to mitigate greenhouse gas, improve air quality, and reduce transportation impacts.

³ California Planning Roundtable (2008) Deconstructing Jobs-Housing Balance at p. 6, available at <https://cproundtable.org/static/media/uploads/publications/cpr-jobs-housing.pdf>

⁴ Cervero, Robert and Duncan, Michael (2006) Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing? Journal of the American Planning Association 72 (4), 475-490, 482, available at <http://reconnectingamerica.org/assets/Uploads/UTCT-825.pdf>.

II. THE CITY SHOULD INCORPORATE LANGUAGE IMPOSING TRAINING REQUIREMENTS FOR CONSTRUCTION ACTIVITIES TO PREVENT COMMUNITY SPREAD OF COVID-19 AND OTHER INFECTIOUS DISEASES INTO THE PROJECT.

Construction work has been defined as a Lower to High-risk activity for COVID-19 spread by the Occupational Safety and Health Administration. Recently, several construction sites have been identified as sources of community spread of COVID-19.⁵

Southwest Carpenters recommend that the City adopt additional requirements to mitigate public health risks from various residential development construction activities. Southwest Carpenters requests that the City require safe on-site construction work practices as well as training and certification for any construction workers on residential developments.

In particular, based upon Southwest Carpenters' experience with safe construction site work practices, Southwest Carpenters recommends that the City require that while construction activities are being conducted at residential development sites (“**Project Site**”):

Construction Site Design:

- The Project Site will be limited to two controlled entry points.
- Entry points will have temperature screening technicians taking temperature readings when the entry point is open.
- The Temperature Screening Site Plan shows details regarding access to the Project Site and Project Site logistics for conducting temperature screening.
- A 48-hour advance notice will be provided to all trades prior to the first day of temperature screening.

⁵ Santa Clara County Public Health (June 12, 2020) COVID-19 CASES AT CONSTRUCTION SITES HIGHLIGHT NEED FOR CONTINUED VIGILANCE IN SECTORS THAT HAVE REOPENED, available at <https://www.sccgov.org/sites/covid19/Pages/press-release-06-12-2020-cases-at-construction-sites.aspx>.

- The perimeter fence directly adjacent to the entry points will be clearly marked indicating the appropriate 6-foot social distancing position for when you approach the screening area. Please reference the Apex temperature screening site map for additional details.
- There will be clear signage posted at the project site directing you through temperature screening.
- Provide hand washing stations throughout the construction site.

Testing Procedures:

- The temperature screening being used are non-contact devices.
- Temperature readings will not be recorded.
- Personnel will be screened upon entering the testing center and should only take 1-2 seconds per individual.
- Hard hats, head coverings, sweat, dirt, sunscreen or any other cosmetics must be removed on the forehead before temperature screening.
- Anyone who refuses to submit to a temperature screening or does not answer the health screening questions will be refused access to the Project Site.
- Screening will be performed at both entrances from 5:30 am to 7:30 am.; main gate [ZONE 1] and personnel gate [ZONE 2]
- After 7:30 am only the main gate entrance [ZONE 1] will continue to be used for temperature testing for anybody gaining entry to the project site such as returning personnel, deliveries, and visitors.
- If the digital thermometer displays a temperature reading above 100.0 degrees Fahrenheit, a second reading will be taken to verify an accurate reading.

- If the second reading confirms an elevated temperature, DHS will instruct the individual that he/she will not be allowed to enter the Project Site. DHS will also instruct the individual to promptly notify his/her supervisor and his/her human resources (HR) representative and provide them with a copy of Annex A.

Planning

- Require the development of an Infectious Disease Preparedness and Response Plan that will include basic infection prevention measures (requiring the use of personal protection equipment), policies and procedures for prompt identification and isolation of sick individuals, social distancing (prohibiting gatherings of no more than 10 people including all-hands meetings and all-hands lunches) communication and training and workplace controls that meet standards that may be promulgated by the Center for Disease Control, Occupational Safety and Health Administration, Cal/OSHA, California Department of Public Health or applicable local public health agencies.⁶

The United Brotherhood of Carpenters and Carpenters International Training Fund has developed COVID-19 Training and Certification to ensure that Carpenter union members and apprentices conduct safe work practices. The City should require that all construction workers undergo COVID-19 Training and Certification before being allowed to conduct construction activities at the Project Site.

Southwest Carpenters has also developed a rigorous Infection Control Risk Assessment (“**ICRA**”) training program to ensure it delivers a workforce that understands how to identify and control infection risks by implementing protocols to

⁶ See also The Center for Construction Research and Training, North America’s Building Trades Unions (April 27 2020) NABTU and CPWR COVID-19 Standards for U.S. Construction Sites, available at https://www.cpwr.com/sites/default/files/NABTU_CPWR_Standards_COVID-19.pdf; Los Angeles County Department of Public Works (2020) Guidelines for Construction Sites During COVID-19 Pandemic, available at https://dpw.lacounty.gov/building-and-safety/docs/pw_guidelines-construction-sites.pdf.

protect themselves and all others during renovation and construction projects in healthcare environments.⁷

ICRA protocols are intended to contain pathogens, control airflow, and protect patients during the construction, maintenance and renovation of healthcare facilities. ICRA protocols prevent cross contamination, minimizing the risk of secondary infections in patients at hospital facilities.

The City should require the residential developments be built using a workforce trained in ICRA protocols.

Sincerely,



Mitchell M. Tsai
Attorneys for Southwest Mountain States
Regional Council of Carpenters

Attached:

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling (Exhibit A);
Air Quality and GHG Expert Paul Rosenfeld CV (Exhibit B); and
Air Quality and GHG Expert Matt Hagemann CV (Exhibit C).

⁷ For details concerning Southwest Carpenters's ICRA training program, *see* <https://icrahealthcare.com/>.

EXHIBIT A



Technical Consultation, Data Analysis and
Litigation Support for the Environment

2656 29th Street, Suite 201
Santa Monica, CA 90405

Matt Hagemann, P.G., C.Hg.
(949) 887-9013
mhagemann@swape.com

Paul E. Rosenfeld, PhD
(310) 795-2335
prosenfeld@swape.com

March 8, 2021

Mitchell M. Tsai
155 South El Molino, Suite 104
Pasadena, CA 91101

Subject: Local Hire Requirements and Considerations for Greenhouse Gas Modeling

Dear Mr. Tsai,

Soil Water Air Protection Enterprise (“SWAPE”) is pleased to provide the following draft technical report explaining the significance of worker trips required for construction of land use development projects with respect to the estimation of greenhouse gas (“GHG”) emissions. The report will also discuss the potential for local hire requirements to reduce the length of worker trips, and consequently, reduced or mitigate the potential GHG impacts.

Worker Trips and Greenhouse Gas Calculations

The California Emissions Estimator Model (“CalEEMod”) is a “statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects.”¹ CalEEMod quantifies construction-related emissions associated with land use projects resulting from off-road construction equipment; on-road mobile equipment associated with workers, vendors, and hauling; fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads; and architectural coating activities; and paving.²

The number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.³

¹ “California Emissions Estimator Model.” CAPCOA, 2017, available at: <http://www.aqmd.gov/caleemod/home>.

² “California Emissions Estimator Model.” CAPCOA, 2017, available at: <http://www.aqmd.gov/caleemod/home>.

³ “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

Specifically, the number and length of vehicle trips is utilized to estimate the vehicle miles travelled (“VMT”) associated with construction. Then, utilizing vehicle-class specific EMFAC 2014 emission factors, CalEEMod calculates the vehicle exhaust, evaporative, and dust emissions resulting from construction-related VMT, including personal vehicles for worker commuting.⁴

Specifically, in order to calculate VMT, CalEEMod multiplies the average daily trip rate by the average overall trip length (see excerpt below):

$$\text{“VMT}_d = \Sigma(\text{Average Daily Trip Rate}_i * \text{Average Overall Trip Length}_i)_n$$

Where:

n = Number of land uses being modeled.”⁵

Furthermore, to calculate the on-road emissions associated with worker trips, CalEEMod utilizes the following equation (see excerpt below):

$$\text{“Emissions}_{\text{pollutant}} = \text{VMT} * \text{EF}_{\text{running,pollutant}}$$

Where:

$\text{Emissions}_{\text{pollutant}}$ = emissions from vehicle running for each pollutant

VMT = vehicle miles traveled

$\text{EF}_{\text{running,pollutant}}$ = emission factor for running emissions.”⁶

Thus, there is a direct relationship between trip length and VMT, as well as a direct relationship between VMT and vehicle running emissions. In other words, when the trip length is increased, the VMT and vehicle running emissions increase as a result. Thus, vehicle running emissions can be reduced by decreasing the average overall trip length, by way of a local hire requirement or otherwise.

Default Worker Trip Parameters and Potential Local Hire Requirements

As previously discussed, the number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.⁷ In order to understand how local hire requirements and associated worker trip length reductions impact GHG emissions calculations, it is important to consider the CalEEMod default worker trip parameters. CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act (“CEQA”) requires that such changes be justified by substantial evidence.⁸ The default number of construction-related worker trips is calculated by multiplying the

⁴ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14-15.

⁵ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 23.

⁶ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.

⁷ “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

⁸ CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 1, 9.

number of pieces of equipment for all phases by 1.25, with the exception of worker trips required for the building construction and architectural coating phases.⁹ Furthermore, the worker trip vehicle class is a 50/25/25 percent mix of light duty autos, light duty truck class 1 and light duty truck class 2, respectively.¹⁰ Finally, the default worker trip length is consistent with the length of the operational home-to-work vehicle trips.¹¹ The operational home-to-work vehicle trip lengths are:

“[B]ased on the *location* and *urbanization* selected on the project characteristic screen. These values were *supplied by the air districts or use a default average for the state*. Each district (or county) also assigns trip lengths for urban and rural settings” (emphasis added).¹²

Thus, the default worker trip length is based on the location and urbanization level selected by the User when modeling emissions. The below table shows the CalEEMod default rural and urban worker trip lengths by air basin (see excerpt below and Attachment A).¹³

Worker Trip Length by Air Basin		
Air Basin	Rural (miles)	Urban (miles)
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	16.47	11.17
Minimum	10.80	10.80
Maximum	19.80	14.70
Range	9.00	3.90

⁹ “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

¹⁰ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.

¹¹ “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14.

¹² “Appendix A Calculation Details for CalEEMod.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.

¹³ “Appendix D Default Data Tables.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-84 – D-86.

As demonstrated above, default rural worker trip lengths for air basins in California vary from 10.8- to 19.8- miles, with an average of 16.47 miles. Furthermore, default urban worker trip lengths vary from 10.8- to 14.7- miles, with an average of 11.17 miles. Thus, while default worker trip lengths vary by location, default urban worker trip lengths tend to be shorter in length. Based on these trends evident in the CalEEMod default worker trip lengths, we can reasonably assume that the efficacy of a local hire requirement is especially dependent upon the urbanization of the project site, as well as the project location.

Practical Application of a Local Hire Requirement and Associated Impact

To provide an example of the potential impact of a local hire provision on construction-related GHG emissions, we estimated the significance of a local hire provision for the Village South Specific Plan (“Project”) located in the City of Claremont (“City”). The Project proposed to construct 1,000 residential units, 100,000-SF of retail space, 45,000-SF of office space, as well as a 50-room hotel, on the 24-acre site. The Project location is classified as Urban and lies within the Los Angeles-South Coast County. As a result, the Project has a default worker trip length of 14.7 miles.¹⁴ In an effort to evaluate the potential for a local hire provision to reduce the Project’s construction-related GHG emissions, we prepared an updated model, reducing all worker trip lengths to 10 miles (see Attachment B). Our analysis estimates that if a local hire provision with a 10-mile radius were to be implemented, the GHG emissions associated with Project construction would decrease by approximately 17% (see table below and Attachment C).

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO ₂ e)	3,623
Amortized Construction GHG Emissions (MT CO ₂ e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO ₂ e)	3,024
Amortized Construction GHG Emissions (MT CO ₂ e/year)	100.80
% Decrease in Construction-related GHG Emissions	17%

As demonstrated above, by implementing a local hire provision requiring 10 mile worker trip lengths, the Project could reduce potential GHG emissions associated with construction worker trips. More broadly, any local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

This serves as an example of the potential impacts of local hire requirements on estimated project-level GHG emissions, though it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects. As previously described, the significance of a local hire requirement depends on the worker trip length enforced and the default worker trip length for the project’s urbanization level and location.

¹⁴ “Appendix D Default Data Tables.” CAPCOA, October 2017, available at: http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-85.

Disclaimer

SWAPE has received limited discovery. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,



Matt Hagemann, P.G., C.Hg.



Paul E. Rosenfeld, Ph.D.

Location Type	Location Name	Rural H-W (miles)	Urban H-W (miles)
Air Basin	Great Basin	16.8	10.8
Air Basin	Lake County	16.8	10.8
Air Basin	Lake Tahoe	16.8	10.8
Air Basin	Mojave Desert	16.8	10.8
Air Basin	Mountain	16.8	10.8
Air Basin	North Central	17.1	12.3
Air Basin	North Coast	16.8	10.8
Air Basin	Northeast	16.8	10.8
Air Basin	Sacramento	16.8	10.8
Air Basin	Salton Sea	14.6	11
Air Basin	San Diego	16.8	10.8
Air Basin	San Francisco	10.8	10.8
Air Basin	San Joaquin	16.8	10.8
Air Basin	South Central	16.8	10.8
Air Basin	South Coast	19.8	14.7
Air District	Amador County	16.8	10.8
Air District	Antelope Valley	16.8	10.8
Air District	Bay Area AQMD	10.8	10.8
Air District	Butte County	12.54	12.54
Air District	Calaveras	16.8	10.8
Air District	Colusa County	16.8	10.8
Air District	El Dorado	16.8	10.8
Air District	Feather River	16.8	10.8
Air District	Glenn County	16.8	10.8
Air District	Great Basin	16.8	10.8
Air District	Imperial County	10.2	7.3
Air District	Kern County	16.8	10.8
Air District	Lake County	16.8	10.8
Air District	Lassen County	16.8	10.8
Air District	Mariposa	16.8	10.8
Air District	Mendocino	16.8	10.8
Air District	Modoc County	16.8	10.8
Air District	Mojave Desert	16.8	10.8
Air District	Monterey Bay	16.8	10.8
Air District	North Coast	16.8	10.8
Air District	Northern Sierra	16.8	10.8
Air District	Northern	16.8	10.8
Air District	Placer County	16.8	10.8
Air District	Sacramento	15	10

Air District	San Diego	16.8	10.8
Air District	San Joaquin	16.8	10.8
Air District	San Luis Obispo	13	13
Air District	Santa Barbara	8.3	8.3
Air District	Shasta County	16.8	10.8
Air District	Siskiyou County	16.8	10.8
Air District	South Coast	19.8	14.7
Air District	Tehama County	16.8	10.8
Air District	Tuolumne	16.8	10.8
Air District	Ventura County	16.8	10.8
Air District	Yolo/Solano	15	10
County	Alameda	10.8	10.8
County	Alpine	16.8	10.8
County	Amador	16.8	10.8
County	Butte	12.54	12.54
County	Calaveras	16.8	10.8
County	Colusa	16.8	10.8
County	Contra Costa	10.8	10.8
County	Del Norte	16.8	10.8
County	El Dorado-Lake	16.8	10.8
County	El Dorado-	16.8	10.8
County	Fresno	16.8	10.8
County	Glenn	16.8	10.8
County	Humboldt	16.8	10.8
County	Imperial	10.2	7.3
County	Inyo	16.8	10.8
County	Kern-Mojave	16.8	10.8
County	Kern-San	16.8	10.8
County	Kings	16.8	10.8
County	Lake	16.8	10.8
County	Lassen	16.8	10.8
County	Los Angeles-	16.8	10.8
County	Los Angeles-	19.8	14.7
County	Madera	16.8	10.8
County	Marin	10.8	10.8
County	Mariposa	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Merced	16.8	10.8
County	Modoc	16.8	10.8
County	Mono	16.8	10.8
County	Monterey	16.8	10.8
County	Napa	10.8	10.8

County	Nevada	16.8	10.8
County	Orange	19.8	14.7
County	Placer-Lake	16.8	10.8
County	Placer-Mountain	16.8	10.8
County	Placer-	16.8	10.8
County	Plumas	16.8	10.8
County	Riverside-	16.8	10.8
County	Riverside-	19.8	14.7
County	Riverside-Salton	14.6	11
County	Riverside-South	19.8	14.7
County	Sacramento	15	10
County	San Benito	16.8	10.8
County	San Bernardino-	16.8	10.8
County	San Bernardino-	19.8	14.7
County	San Diego	16.8	10.8
County	San Francisco	10.8	10.8
County	San Joaquin	16.8	10.8
County	San Luis Obispo	13	13
County	San Mateo	10.8	10.8
County	Santa Barbara-	8.3	8.3
County	Santa Barbara-	8.3	8.3
County	Santa Clara	10.8	10.8
County	Santa Cruz	16.8	10.8
County	Shasta	16.8	10.8
County	Sierra	16.8	10.8
County	Siskiyou	16.8	10.8
County	Solano-	15	10
County	Solano-San	16.8	10.8
County	Sonoma-North	16.8	10.8
County	Sonoma-San	10.8	10.8
County	Stanislaus	16.8	10.8
County	Sutter	16.8	10.8
County	Tehama	16.8	10.8
County	Trinity	16.8	10.8
County	Tulare	16.8	10.8
County	Tuolumne	16.8	10.8
County	Ventura	16.8	10.8
County	Yolo	15	10
County	Yuba	16.8	10.8
Statewide	Statewide	16.8	10.8

Worker Trip Length by Air Basin		
Air Basin	Rural (miles)	Urban (miles)
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	16.47	11.17
Minimum	10.80	10.80
Maximum	19.80	14.70
Range	9.00	3.90

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2028

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	702.44	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

- Project Characteristics - Consistent with the DEIR's model.
- Land Use - See SWAPE comment regarding residential and retail land uses.
- Construction Phase - See SWAPE comment regarding individual construction phase lengths.
- Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.
- Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.
- Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.
- Energy Use -
- Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.
- Area Mitigation - See SWAPE comment regarding operational mitigation measures.
- Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

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tbVehicleTrips	SU_TR	5.95	3.20
tbVehicleTrips	SU_TR	72.16	57.65
tbVehicleTrips	SU_TR	25.24	6.39
tbVehicleTrips	WD_TR	6.59	5.83
tbVehicleTrips	WD_TR	6.65	4.13
tbVehicleTrips	WD_TR	11.03	6.41
tbVehicleTrips	WD_TR	127.15	65.80
tbVehicleTrips	WD_TR	8.17	3.84
tbVehicleTrips	WD_TR	89.95	62.64
tbVehicleTrips	WD_TR	42.70	9.43
tbWoodstoves	NumberCatalytic	1.25	0.00
tbWoodstoves	NumberCatalytic	48.75	0.00
tbWoodstoves	NumberNoncatalytic	1.25	0.00
tbWoodstoves	NumberNoncatalytic	48.75	0.00
tbWoodstoves	WoodstoveDayYear	25.00	0.00
tbWoodstoves	WoodstoveDayYear	25.00	0.00
tbWoodstoves	WoodstoveWoodMass	999.60	0.00
tbWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

2.1 Overall Construction
Unmitigated Construction

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2021	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1969	213.1969	0.0601	0.0000	214.6993
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6826	1,721.6826	0.1294	0.0000	1,724.9187
2023	0.6148	3.3649	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5295	1,627.5295	0.1185	0.0000	1,630.4925
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9078	52.9078	8.0200e-003	0.0000	53.1082
Maximum	4.1619	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6826	1,721.6826	0.1294	0.0000	1,724.9187

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

2.1 Overall Construction

Mitigated Construction

Year	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2021	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1967	213.1967	0.0601	0.0000	214.6991
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6823	1,721.6823	0.1294	0.0000	1,724.9183
2023	0.6148	3.3648	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5291	1,627.5291	0.1185	0.0000	1,630.4921
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9077	52.9077	8.0200e-003	0.0000	53.1082
Maximum	4.1619	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6823	1,721.6823	0.1294	0.0000	1,724.9183

Percent Reduction	tons/quarter											tons/quarter				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2021	11-30-2021	1.4103	1.4103
2	12-1-2021	2-28-2022	1.3613	1.3613
3	3-1-2022	5-31-2022	1.1985	1.1985
4	6-1-2022	8-31-2022	1.1921	1.1921
5	9-1-2022	11-30-2022	1.1918	1.1918
6	12-1-2022	2-28-2023	1.0774	1.0774
7	3-1-2023	5-31-2023	1.0320	1.0320
8	6-1-2023	8-31-2023	1.0260	1.0260

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9	9-1-2023	11-30-2023	1.0265	1.0265
10	12-1-2023	2-29-2024	2.8857	2.8857
11	3-1-2024	5-31-2024	1.6207	1.6207
		Highest	2.8857	2.8857

2.2 Overall Operational

Unmitigated Operational

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	Biogenic CO2	Total CO2	CH4	N2O	CO2e
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3.896.0732	3.896.0732	0.1303	0.0468	3.913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7.620.4986	7.620.4986	0.3407	0.0000	7.629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	207.8079	12.2811	0.0000		514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	3.0183	0.0755		683.7567
Total	6.8692	9.5223	30.3407	0.0914	7.7979	0.2260	8.0240	2.0895	0.2219	2.3114	236.9712	12,294.1807	12,531.1519	15.7904	0.1260	12,963.4751

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2.2 Overall Operational

Mitigated Operational

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	5.1437	0.2950	10.3804	1.6700e-003	0.0714	0.0714	0.0714	0.0714	0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003	0.0966	0.0966	0.0966	0.0966	0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	6.8692	9.5223	30.3407	0.0914	7.7979	0.2260	8.0240	2.0895	0.2219	2.3114	236.9712	12,294.1807	12,531.1519	15.7904	0.1260	12,963.4751

Percent Reduction	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

Category	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
tons/yr																
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004	0.0233	0.0233	0.0233	0.0216	0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	0.0475	0.4716	0.3235	5.8000e-004	0.0496	0.0233	0.0729	0.0216	0.0216	0.0291	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
MT/yr																

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3.2 Demolition - 2021

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	0.0000	2.2267
Total	2.9000e-003	0.0641	0.0233	2.0000e-004	6.4100e-003	2.1000e-004	6.6200e-003	1.7300e-003	2.0000e-004	1.9300e-003	0.0000	19.6816	19.6816	1.2800e-003	0.0000	0.0000	19.7136

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233	0.0216	0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	0.0475	0.4716	0.3235	5.8000e-004	0.0496	0.0233	0.0729	7.5100e-003	0.0216	0.0291	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600

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3.2 Demolition - 2021

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					CO2e	
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O		
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	0.0000	2.2267
Total	2.9000e-003	0.0641	0.0233	2.0000e-004	6.4100e-003	2.1000e-004	6.6200e-003	1.7300e-003	2.0000e-004	1.9300e-003	0.0000	19.6816	19.6816	1.2800e-003	0.0000	0.0000	19.7136

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					CO2e	
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O		
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	0.0000	33.7061
Total	0.0389	0.4050	0.2115	3.8000e-004	0.1807	0.0204	0.2011	0.0993	0.0188	0.1181	0.0000	33.4357	33.4357	0.0108	0.0000	0.0000	33.7061

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**3.3 Site Preparation - 2021
Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	0.0389	0.4050	0.2115	3.8000e-004	0.1807	0.0204	0.2011	0.0993	0.0188	0.1181	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060

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3.3 Site Preparation - 2021
Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814

3.4 Grading - 2021
Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377	0.0347		0.0347	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776
Total	0.0796	0.8816	0.5867	1.1800e-003	0.1741	0.0377	0.2118	0.0693	0.0347	0.1040	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776

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3.4 Grading - 2021

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	0.0000	3.7607
Total	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	0.0000	3.7607

Mitigated Construction On-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5403	103.5403	0.0335	0.0000	0.0000	104.3775
Total	0.0796	0.8816	0.5867	1.1800e-003	0.1741	0.0377	0.2118	0.0693	0.0347	0.1040	0.0000	103.5403	103.5403	0.0335	0.0000	0.0000	104.3775

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3.4 Grading - 2021

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607
Total	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607

3.4 Grading - 2022

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004	5.7200e-003	5.7200e-003	5.7200e-003	5.2600e-003	5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	0.0127	0.1360	0.1017	2.2000e-004	0.0807	5.7200e-003	0.0865	0.0180	5.2600e-003	0.0233	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414

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3.4 Grading - 2022

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	0.0127	0.1360	0.1017	2.2000e-004	0.0807	5.7200e-003	0.0865	0.0180	5.2600e-003	0.0233	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414

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3.4 Grading - 2022

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684

3.5 Building Construction - 2022

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2158	1.9754	2.0700	3.4100e-003	0.1023	0.1023	0.1023	0.0963	0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881
Total	0.2158	1.9754	2.0700	3.4100e-003	0.1023	0.1023	0.1023	0.0963	0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881

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3.5 Building Construction - 2022

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	0.4616	2.0027	3.9885	0.0152	1.2243	0.0121	1.2363	0.3278	0.0112	0.3390	0.0000	1,408.795₂	1,408.795₂	0.0530	0.0000	1,410.120₈

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877
Total	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877

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3.5 Building Construction - 2022
Mitigated Construction Off-Site

Category	tons/yr										MT/yr				CO2e	
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4		N2O
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	0.4616	2.0027	3.9885	0.0152	1.2243	0.0121	1.2363	0.3278	0.0112	0.3390	0.0000	1,408.795₂	1,408.795₂	0.0530	0.0000	1,410.120₈

3.5 Building Construction - 2023
Unmitigated Construction On-Site

Category	tons/yr										MT/yr				CO2e	
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4		N2O
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	287.9814
Total	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	287.9814

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3.5 Building Construction - 2023
Unmitigated Construction Off-Site

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	0.4135	1.5218	3.5707	0.0144	1.1953	9.8700e-003	1.2051	0.3200	9.1400e-003	0.3292	0.0000	1,327.3369	1,327.3369	0.0462	0.0000	1,328.4916

Mitigated Construction On-Site

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811
Total	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811

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3.5 Building Construction - 2023
Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	0.4135	1.5218	3.5707	0.0144	1.1953	9.8700e-003	1.2051	0.3200	9.1400e-003	0.3292	0.0000	1,327.3369	1,327.3369	0.0462	0.0000	1,328.4916

3.6 Paving - 2023
Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227

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3.6 Paving - 2023

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968

Mitigated Construction On-Site

Category	tons/yr										MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227

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3.6 Paving - 2023

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968

3.6 Paving - 2024

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0109	0.1048	0.1609	2.5000e-004	5.1500e-003	5.1500e-003	5.1500e-003	4.7400e-003	4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0109	0.1048	0.1609	2.5000e-004	5.1500e-003	5.1500e-003	5.1500e-003	4.7400e-003	4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073

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3.6 Paving - 2024

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706
Total	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073

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3.6 Paving - 2024

Mitigated Construction Off-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	0.0000	1.4706
Total	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	0.0000	1.4706

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Archit. Coating	4.1372					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	0.0000	4.4745
Total	4.1404	0.0213	0.0317	5.0000e-005	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	0.0000	4.4745

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**3.7 Architectural Coating - 2024
Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	4.1404	0.0213	0.0317	5.0000e-005	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745

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3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620,498 6	7,620,498 6	0.3407	0.0000	7,629,016 2
Unmitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620,498 6	7,620,498 6	0.3407	0.0000	7,629,016 2

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452	20,552,452	20,552,452

4.3 Trip Type Information

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Land Use	Miles						Trip %						Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by			
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.60	19.20	86	11	3				
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.60	19.20	86	11	3				
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	19.00	48.00	77	19	4				
High Turnover (Sit Down)	16.60	8.40	6.90	8.50	72.50	19.00	19.00	72.50	37	20	43				
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	19.00	61.60	58	38	4				
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	19.00	69.00	38	18	44				
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	19.00	64.70	54	35	11				

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2,512,646 ₅	2,512,646 ₅	0.1037	0.0215	2,521,635 ₆
Electricity Unmitigated					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2,512,646 ₅	2,512,646 ₅	0.1037	0.0215	2,521,635 ₆
Natural Gas Mitigated	0.1398	1.2312	0.7770	7.6200e-003	0.0966	0.0966	0.0966	0.0966	0.0966	0.0966	0.0000	1,383,426 ₇	1,383,426 ₇	0.0265	0.0254	1,391,647 ₈
Natural Gas Unmitigated	0.1398	1.2312	0.7770	7.6200e-003	0.0966	0.0966	0.0966	0.0966	0.0966	0.0966	0.0000	1,383,426 ₇	1,383,426 ₇	0.0265	0.0254	1,391,647 ₈

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5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	tons/yr										MT/yr					CO2e
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003	0.0487	0.0487	0.0487	0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408	
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004	1.7500e-003	1.7500e-003	1.7500e-003	1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468	
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003	0.0310	0.0310	0.0310	0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468	
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004	6.4900e-003	6.4900e-003	6.4900e-003	6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557	
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004	6.8800e-003	6.8800e-003	6.8800e-003	6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993	
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301	
Total		0.1398	1.2312	0.7770	7.6200e-003	0.0966	0.0966	0.0966	0.0966	0.0966	0.0000	1,383.4268	1,383.4268	0.0265	0.0254	1,391.6478	

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5.2 Energy by Land Use - NaturalGas

Mitigated

Land Use	NaturalGas Use kBTU/yr	ROG	NOx	CO	SO2	tons/yr				MT/yr				CO2e		
						Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2		Total CO2	CH4
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	0.0000	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003	0.0487	0.0487	0.0487	0.0487	0.0487	0.0487	0.0000	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004	1.7500e-003	1.7500e-003	1.7500e-003	1.7500e-003	1.7500e-003	1.7500e-003	0.0000	24.9983	4.8000e-004	4.6000e-004	25.1488
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003	0.0310	0.0310	0.0310	0.0310	0.0310	0.0310	0.0000	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004	6.4900e-003	6.4900e-003	6.4900e-003	6.4900e-003	6.4900e-003	6.4900e-003	0.0000	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004	6.8800e-003	6.8800e-003	6.8800e-003	6.8800e-003	6.8800e-003	6.8800e-003	0.0000	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		0.1398	1.2312	0.7770	7.6200e-003	0.0966	0.0966	0.0966	0.0966	0.0966	0.0966	0.0000	1,383.4268	0.0265	0.0254	1,391.6478

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

5.3 Energy by Land Use - Electricity

Mitigated

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr	MT/yr	MT/yr	MT/yr
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257,587 ⁹	0.0519	0.0107	1,262,086 ⁹
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		2,512,646⁵	0.1037	0.0215	2,521,635⁶

6.0 Area Detail

6.1 Mitigation Measures Area

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Mitigated	5.1437	0.2950	10.3804	1.6700e-003	0.0714	0.0714	0.0714	0.0714	0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Unmitigated	5.1437	0.2950	10.3804	1.6700e-003	0.0714	0.0714	0.0714	0.0714	0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
	MT/yr															

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003	0.0143	0.0143	0.0143	0.0143	0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004	0.0572	0.0572	0.0572	0.0572	0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	5.1437	0.2950	10.3804	1.6600e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
	MT/yr															

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

6.2 Area by SubCategory

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
Architectural Coating	0.4137					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143	0.0143	0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572	0.0572	0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	5.1437	0.2950	10.3804	1.6600e-003		0.0714	0.0714	0.0714	0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

7.0 Water Detail

7.1 Mitigation Measures Water

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Category	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	585.8052	3.0183	0.0755	683.7567
Unmitigated	585.8052	3.0183	0.0755	683.7567

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

7.2 Water by Land Use

Unmitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		585.8052	3.0183	0.0755	683.7567

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

7.2 Water by Land Use

Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02888	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		565.8052	3.0183	0.0755	683.7567

8.0 Waste Detail

8.1 Mitigation Measures Waste

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	207.8079	12.2811	0.0000	514.8354
Unmitigated	207.8079	12.2811	0.0000	514.8354

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

8.2 Waste by Land Use

Unmitigated

Land Use	Waste Disposed tons	MT/yr				CO2e
		Total CO2	CH4	N2O	CO2e	
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834	
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513	
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464	
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430	
Hotel	27.38	5.5579	0.3285	0.0000	13.7694	
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712	
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706	
Total		207.8079	12.2811	0.0000	514.8354	

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

8.2 Waste by Land Use

Mitigated

Land Use	Waste Disposed tons	Total CO2			CO2e
		CH4	N2O	MT/yr	
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		207.8079	12.2811	0.0000	514.8354

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Village South Specific Plan (Proposed)
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2028

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	702.44	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2021	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1521
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	237.1630	46.4588	49.5629	0.1517	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2021	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1520
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	237.1630	46.4588	49.5629	0.1517	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

**2.2 Overall Operational
Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.60 34	50,306.60 34	2.1807		50,361.12 08
Total	41.1168	67.2262	207.5497	0.6278	45.9592	2.4626	48.4217	12.2950	2.4385	14.7336	0.0000	76,811.18 16	76,811.18 16	2.8282	0.4832	77,025.87 86

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.60 34	50,306.60 34	2.1807		50,361.12 08
Total	41.1168	67.2262	207.5497	0.6278	45.9592	2.4626	48.4217	12.2950	2.4385	14.7336	0.0000	76,811.18 16	76,811.18 16	2.8282	0.4832	77,025.87 86

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388	1.5513	1.5513	1.5513	1.4411	1.4411	1.4411	3,747.944 ₉	3,747.944 ₉	3,747.944 ₉	1.0549		3,774.317 ₄
Total	3.1651	31.4407	21.5650	0.0388	3.3074	1.5513	4.8588	0.5008	1.4411	1.9419		3,747.944₉	3,747.944₉	1.0549		3,774.317₄

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.2 Demolition - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.241 3	1,292.241 3	0.0877		1,294.433 7
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	0.1916	4.1394	1.5644	0.0136	0.4346	0.0139	0.4485	0.1176	0.0133	0.1309		1,463.056 8	1,463.056 8	0.0927		1,465.375 0

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513	1.4411	1.4411	1.4411	0.0000	3,747.944 9	3,747.944 9	1.0549		3,774.317 4
Total	3.1651	31,4407	21,5650	0.0388	3,3074	1,5513	4,8588	0,5008	1,4411	1,9419	0,0000	3,747,944 9	3,747,944 9	1,0549		3,774,317 4

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.2 Demolition - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.241 ₃	1,292.241 ₃	0.0877		1,294.433 ₇
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	0.1916	4.1394	1.5644	0.0136	0.4346	0.0139	0.4485	0.1176	0.0133	0.1309		1,463.056₈	1,463.056₈	0.0927		1,465.375₀

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.656 ₉	3,685.656 ₉	1.1920		3,715.457 ₃
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.656₉	3,685.656₉	1.1920		3,715.457₃

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

**3.3 Site Preparation - 2021
Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549	204.9786	204.9786	204.9786	6.0400e-003		205.1296
Total	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307	0.0000		0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380	2.0445	2.0445	2.0445	1.8809	1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549	204.9786	204.9786	204.9786	6.0400e-003		205.1296
Total	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549	204.9786	204.9786	204.9786	6.0400e-003		205.1296

3.4 Grading - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620	1.9853	1.9853	1.9853	1.8265	1.8265	1.8265	6,007.0434	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6587	3.5965	1.8265	5.4230	6,007.0434	6,007.0434	6,007.0434	1.9428		6,055.6134

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.4 Grading - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610	227.7540	227.7540	6.7100e-003	6.7100e-003		227.9217
Total	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610	227.7540	227.7540	6.7100e-003	6.7100e-003		227.9217

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965	0.0000	0.0000	0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620	1.9853	1.9853	1.9853	1.8265	1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6587	3.5965	1.8265	5.4230	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.4 Grading - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610	227.7540	227.7540	227.7540	6.7100e-003		227.9217
Total	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610	227.7540	227.7540	227.7540	6.7100e-003		227.9217

3.4 Grading - 2022

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621	1.6349	1.6349	1.6349	1.5041	1.5041	1.5041	6,011.4105	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	8.6733	1.6349	10.3082	3.5965	1.5041	5.1006	6,011.4105	6,011.4105	6,011.4105	1.9442		6,060.0158

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.4 Grading - 2022

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	219.7425	219.7425	219.7425	6.0600e-003	219.8941	219.8941
Total	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	219.7425	219.7425	219.7425	6.0600e-003	219.8941	219.8941

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621	1.6349	1.6349	1.6349	1.5041	1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	8.6733	1.6349	10.3082	3.5965	1.5041	5.1006	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.4 Grading - 2022

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	219.7425	219.7425	219.7425	6.0600e-003	219.8941	219.8941
Total	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	219.7425	219.7425	219.7425	6.0600e-003	219.8941	219.8941

3.5 Building Construction - 2022

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	2,554,333	2,554,333	2,554,333	0.6120		2,569.632
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	2,554,333	2,554,333	2,554,333	0.6120		2,569.632

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2022
Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.548 2	3,896.548 2	0.2236		3,902.138 4
Worker	3.2162	2.1318	29.7654	0.0883	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,800.685 7	8,800.685 7	0.2429		8,806.758 2
Total	3.6242	15.3350	33.1995	0.1247	9.8688	0.0949	9.9637	2.6381	0.0883	2.7263		12,697.23 39	12,697.23 39	0.4665		12,708.89 66

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2022

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873	3,896.548 2	3,896.548 2	3,896.548 2	0.2236		3,902.138 4
Worker	3.2162	2.1318	29.7654	0.0883	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390	8,800.685 7	8,800.685 7	8,800.685 7	0.2429		8,806.758 2
Total	3.6242	15.3350	33.1995	0.1247	9.8688	0.0949	9.9637	2.6381	0.0883	2.7263	12,697.23 39	12,697.23 39	12,697.23 39	0.4665		12,708.89 66

3.5 Building Construction - 2023

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	2,555.209 9	2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	2,555.209 9	2,555.209 9	2,555.209 9	0.6079		2,570.406 1

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	3.0203	1.9287	27.4113	0.0851	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		8,478.4408	8,478.4408	0.2190		8,483.9160
Total	3.3229	11.9468	30.5127	0.1203	9.8688	0.0797	9.9485	2.6381	0.0738	2.7118		12,252.3170	12,252.3170	0.4172		12,262.7460

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

**3.5 Building Construction - 2023
Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747	3,773.876 2	3,773.876 2	3,773.876 2	0.1982		3,778.830 0
Worker	3.0203	1.9287	27.4113	0.0851	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372	8,478.440 8	8,478.440 8	8,478.440 8	0.2190		8,483.916 0
Total	3.3229	11.9468	30.5127	0.1203	9.8688	0.0797	9.9485	2.6381	0.0738	2.7118	12,252.31 70	12,252.31 70	12,252.31 70	0.4172		12,262.74 60

3.6 Paving - 2023

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.0327	10.1917	14.5842	0.0228	0.5102	0.5102	0.5102	0.4694	0.4694	0.4694	2,207.584 1	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	1.0327	10.1917	14.5842	0.0228	0.5102	0.5102	0.5102	0.4694	0.4694	0.4694	2,207.584 1	2,207.584 1	2,207.584 1	0.7140		2,225.433 6

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.6 Paving - 2023

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456	158.7723	158.7723	158.7723	4.1000e-003		158.8748
Total	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456	158.7723	158.7723	158.7723	4.1000e-003		158.8748

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 ₁	2,207.584 ₁	0.7140		2,225.433 ₆
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000		0.0000			0.0000
Total	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584₁	2,207.584₁	0.7140		2,225.433₆

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.6 Paving - 2023

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456	158.7723	158.7723	4.1000e-003	158.8748		158.8748
Total	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456	158.7723	158.7723	4.1000e-003	158.8748		158.8748

3.6 Paving - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	0.9882	9.5246	14.6258	0.0228	0.4685	0.4685	0.4685	0.4310	0.4310	0.4310	2,207.547 ₂	2,207.547 ₂	0.7140	0.7140		2,225.396 ₃
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	0.9882	9.5246	14.6258	0.0228	0.4685	0.4685	0.4685	0.4310	0.4310	0.4310	2,207.547₂	2,207.547₂	0.7140	0.7140		2,225.396₃

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.6 Paving - 2024

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456	153.8517	153.8517	153.8517	3.7600e-003		153.9458
Total	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456	153.8517	153.8517	153.8517	3.7600e-003		153.9458

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685	0.4310	0.4310	0.4310	0.0000	2,207.547 ₂	2,207.547 ₂	0.7140		2,225.396 ₃
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685	0.4310	0.4310	0.4310	0.0000	2,207.547₂	2,207.547₂	0.7140		2,225.396₃

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.6 Paving - 2024

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456	153.8517	153.8517	153.8517	3.7600e-003		153.9458
Total	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456	153.8517	153.8517	153.8517	3.7600e-003		153.9458

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	236.5923	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.7 Architectural Coating - 2024
Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866	1,641,085 ₂	1,641,085 ₂	1,641,085 ₂	0.0401		1,642,088 ₆
Total	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866	1,641,085₂	1,641,085₂	1,641,085₂	0.0401		1,642,088₆

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	236.5923	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,641.085 2	1,641.085 2	0.0401		1,642.088 6
Total	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,641.085 2	1,641.085 2	0.0401		1,642.088 6

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070	50,306.60	34	50,306.60	2.1807	34	50,361.12
Unmitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070	50,306.60	34	50,306.60	2.1807	34	50,361.12

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452	20,552,452	20,552,452

4.3 Trip Type Information

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by			
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3			
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3			
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4			
High Turnover (Sit Down Hotel)	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43			
Quality Restaurant	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4			
Regional Shopping Center	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44			
	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11			

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	lb/day										CO2e						
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004	8.3400e-003	8.3400e-003	8.3400e-003	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.0807	0.0772	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.0807	0.0772	2.4100e-003	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004	9.5600e-003	9.5600e-003	9.5600e-003	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.0513	0.0491	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.0513	0.0491	2.7700e-003	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0108	0.0103	0.0109	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0114	0.0109	0.0109	598.5656
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	5.7000e-004	5.4000e-004	5.4000e-004	29.7778
Total		0.7660	6.7463	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.1602	0.1532	0.1532	8,405.6387

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas

Mitigated

Land Use	NaturalGas Use kBTU/yr	lb/day										CO2e						
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Apartment Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	0.2666	0.2666	0.2666	0.2666	0.2666	0.0807	0.0772	2.4100e-003	132.4486
Apartment Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.0807	0.0772	2.4100e-003	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	0.1696	0.1696	0.1696	0.1696	0.1696	0.0513	0.0491	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.0513	0.0491	2.7700e-003	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0108	0.0103	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0114	0.0109	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	5.7000e-004	5.4000e-004	5.4000e-004	29.7778
Total		0.7660	6.7463	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.1602	0.1532	0.1532	8,405.6387

6.0 Area Detail

6.1 Mitigation Measures Area

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory
Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Architectural Coating	2.2670				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900	1.1400	1.1400	1.1400	1.1400	1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003	0.4574	0.4574	0.4574	0.4574	0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

6.2 Area by SubCategory

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400	1.1400	1.1400	1.1400	0.0000	18,000.00	18,000.00	0.3450	0.3300	18,106.96
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574	0.4574	0.4574	0.4574	148.5950	148.5950	148.5950	0.1424		152.1542
Total	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.59	18,148.59	0.4874	0.3300	18,259.11

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Village South Specific Plan (Proposed)
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2028

Utility Company Southern California Edison

CO2 Intensity (lb/MWthr)	702.44	CH4 Intensity (lb/MWthr)	0.029	N2O Intensity (lb/MWthr)	0.006
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1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2021	4.2865	46.4651	31.6150	0.0642	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,221.4937	6,221.4937	1.9491	0.0000	6,270.2214
2022	5.7218	38.9024	47.3319	0.1455	9.8688	1.6366	10.7736	3.6558	1.5057	5.1615	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	14,657.2663
2023	5.2705	28.4914	44.5936	0.1413	9.8688	0.7800	10.6488	2.6381	0.7328	3.3708	0.0000	14,210.3424	14,210.3424	1.0230	0.0000	14,235.9160
2024	237.2328	9.5610	15.0611	0.0243	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,352.4178	2,352.4178	0.7175	0.0000	2,370.3550
Maximum	237.2328	46.4651	47.3319	0.1455	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	14,657.2663

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

Year	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
2021	4.2865	46.4651	31.6150	0.0642	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,221.4937	6,221.4937	1.9491	0.0000	0.0000	6,270.2214
2022	5.7218	36.9024	47.3319	0.1455	9.8688	1.6366	10.7736	3.6558	1.5057	5.1615	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	0.0000	14,657.2663
2023	5.2705	26.4914	44.5936	0.1413	9.8688	0.7800	10.6488	2.6381	0.7328	3.3708	0.0000	14,210.3424	14,210.3424	1.0230	0.0000	0.0000	14,235.9160
2024	237.2328	9.5610	15.0611	0.0243	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,352.4178	2,352.4178	0.7175	0.0000	0.0000	2,370.3550
Maximum	237.2328	46.4651	47.3319	0.1455	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	0.0000	14,657.2663

Percent Reduction	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

2.2 Overall Operational

Unmitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92
Energy	0.7660	6.7462	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	8,355.983 2	8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083	47,917.80 05	47,917.80 05	47,917.80 05	2.1953		47,972.68 39
Total	40.7912	67.7872	202.7424	0.6043	45.9592	2.4640	48.4231	12.2950	2.4399	14.7349	0.0000	74,422.37 87	74,422.37 87	2.8429	0.4832	74,637.44 17

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92
Energy	0.7660	6.7462	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	8,355.983 2	8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083	47,917.80 05	47,917.80 05	47,917.80 05	2.1953		47,972.68 39
Total	40.7912	67.7872	202.7424	0.6043	45.9592	2.4640	48.4231	12.2950	2.4399	14.7349	0.0000	74,422.37 87	74,422.37 87	2.8429	0.4832	74,637.44 17

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMI

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388	1.5513	1.5513	1.5513	1.4411	1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	3.1651	31.4407	21.5650	0.0388	3.3074	1.5513	4.8588	0.5008	1.4411	1.9419		3,747.9449	3,747.9449	1.0549		3,774.3174

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.2 Demolition - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
Total	0.2019	4.1943	1.5706	0.0133	0.4346	0.0141	0.4487	0.1176	0.0135	0.1311		1,430.6932	1,430.6932	0.0955		1,433.0812

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	3.1651	31.4407	21.5650	0.0388	3.3074	1.5513	4.8588	0.5008	1.4411	1.9419	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.2 Demolition - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.855 5	1,269.855 5	0.0908		1,272.125 2
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
Total	0.2019	4.1943	1.5706	0.0133	0.4346	0.0141	0.4487	0.1176	0.0135	0.1311		1,430.693 2	1,430.693 2	0.0955		1,433.081 2

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.656 9	3,685.656 9	1.1920		3,715.457 3
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.656 9	3,685.656 9	1.1920		3,715.457 3

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549	193.0052	193.0052	5.6800e-003			193.1472
Total	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549	193.0052	193.0052	5.6800e-003			193.1472

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3.685.6569	3.685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116	0.0000	3.685.6569	3.685.6569	1.1920		3,715.4573

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549	193.0052	193.0052	193.0052	5.6800e-003		193.1472
Total	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472

3.4 Grading - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620	1.9853	1.9853	1.9853	1.8265	1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6587	3.5965	1.8265	5.4230		6,007.0434	6,007.0434	1.9428		6,055.6134

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.4 Grading - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610	214.4502	214.4502	214.4502	6.3100e-003		214.6080
Total	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610	214.4502	214.4502	214.4502	6.3100e-003		214.6080

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620	1.9853	1.9853	1.9853	1.8265	1.8265	1.8265	0.0000	6,007,043 ⁴	6,007,043 ⁴	1.9428		6,055.613 ⁴
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6587	3.5965	1.8265	5.4230	0.0000	6,007,043⁴	6,007,043⁴	1.9428		6,055.613⁴

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.4 Grading - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610	214.4502	214.4502	214.4502	6.3100e-003	214.6080	214.6080
Total	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610	214.4502	214.4502	214.4502	6.3100e-003	214.6080	214.6080

3.4 Grading - 2022

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621	1.6349	1.6349	1.6349	1.5041	1.5041	1.5041	6,011.410	6,011.410	6,011.410	1.9442		6,060.015
Total	3.6248	38.8435	29.0415	0.0621	8.6733	1.6349	10.3082	3.5965	1.5041	5.1006	6,011.410	6,011.410	6,011.410	1.9442		6,060.015

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.4 Grading - 2022

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	206.9139	206.9139	206.9139	5.7000e-003		207.0563
Total	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	206.9139	206.9139	206.9139	5.7000e-003		207.0563

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621	1.6349	1.6349	1.6349	1.5041	1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	8.6733	1.6349	10.3082	3.5965	1.5041	5.1006	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.4 Grading - 2022

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	206.9139	206.9139	206.9139	5.7000e-003	5.7000e-003	207.0563
Total	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609	206.9139	206.9139	206.9139	5.7000e-003	5.7000e-003	207.0563

3.5 Building Construction - 2022

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269	0.8090	0.8090	0.8090	0.7612	0.7612	0.7612	2,554.3336	2,554.3336	2,554.3336	0.6120	0.6120	2,569.6322
Total	1.7062	15.6156	16.3634	0.0269	0.8090	0.8090	0.8090	0.7612	0.7612	0.7612	2,554.3336	2,554.3336	2,554.3336	0.6120	0.6120	2,569.6322

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2022
Unmitigated Construction Off-Site

Category	lb/day										lb/day						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881	3,789.075	0	3,789.075	0.2381		3,795.028	3
Worker	3.5872	2.3593	27.1680	0.0832	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390	8,286.901	3	8,286.901	0.2282		8,292.605	8
Total	4.0156	15.5266	30.9685	0.1186	9.8688	0.0957	9.9645	2.6381	0.0891	2.7271	12,075.97	63	12,075.97	0.4663		12,087.63	41

Mitigated Construction On-Site

Category	lb/day										lb/day						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333	2,554.333	0.6120		2,569.632	2
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333	2,554.333	0.6120		2,569.632	2

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2022

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.075 0	3,789.075 0	0.2381		3,795.028 3
Worker	3.5872	2.3593	27.1680	0.0832	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,286.901 3	8,286.901 3	0.2282		8,292.605 8
Total	4.0156	15.5266	30.9685	0.1186	9.8688	0.0957	9.9645	2.6381	0.0891	2.7271		12,075.97 63	12,075.97 63	0.4663		12,087.63 41

3.5 Building Construction - 2023

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.209 9	2,555.209 9	0.6079		2,570.406 1

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752	3,671.400	3,671.400	3,671.400	0.2096		3,676.641
Worker	3.3795	2.1338	24.9725	0.0801	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372	7,983.731	7,983.731	7,983.731	0.2055		7,988.868
Total	3.6978	12.1065	28.3496	0.1144	9.8688	0.0803	9.9491	2.6381	0.0743	2.7124	11,655.13	11,655.13	11,655.13	0.4151		11,665.50

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.209	2,555.209	0.6079		2,570.406
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.209	2,555.209	0.6079		2,570.406

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2023

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752	3,671,400 ⁷	3,671,400 ⁷	3,671,400 ⁷	0.2096		3,676,641 ⁷
Worker	3.3795	2.1338	24.9725	0.0801	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372	7,983,731 ⁸	7,983,731 ⁸	7,983,731 ⁸	0.2055		7,988,868 ⁸
Total	3.6978	12.1065	28.3496	0.1144	9.8688	0.0803	9.9491	2.6381	0.0743	2.7124	11,655.13²⁵	11,655.13²⁵	11,655.13²⁵	0.4151		11,665.50⁹⁹

3.6 Paving - 2023

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207,584 ¹	2,207,584 ¹	0.7140		2,225,433 ⁶
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207,584¹	2,207,584¹	0.7140		2,225,433⁶

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.6 Paving - 2023

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456	149.5081	149.5081	149.5081	3.8500e-003		149.6043
Total	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456	149.5081	149.5081	149.5081	3.8500e-003		149.6043

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.0327	10.1917	14.5842	0.0228	0.5102	0.5102	0.5102	0.4694	0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	1.0327	10.1917	14.5842	0.0228	0.5102	0.5102	0.5102	0.4694	0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.6 Paving - 2023

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456	149.5081	149.5081	149.5081	3.8500e-003		149.6043
Total	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456	149.5081	149.5081	149.5081	3.8500e-003		149.6043

3.6 Paving - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 ₂	2,207.547 ₂	0.7140		2,225.396 ₃
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547₂	2,207.547₂	0.7140		2,225.396₃

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.6 Paving - 2024

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456	144.8706	144.8706	144.8706	3.5300e-003		144.9587
Total	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456	144.8706	144.8706	144.8706	3.5300e-003		144.9587

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685	0.4310	0.4310	0.4310	0.0000	2.207.547 ²	2.207.547 ²	0.7140		2,225.396 ³
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685	0.4310	0.4310	0.4310	0.0000	2,207.547²	2,207.547²	0.7140		2,225.396³

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.6 Paving - 2024

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456	144.8706	144.8706	144.8706	3.5300e-003		144.9587
Total	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456	144.8706	144.8706	144.8706	3.5300e-003		144.9587

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	236.5923	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

**3.7 Architectural Coating - 2024
Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	PM10 Fugitive	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866	1,545,286	0	1,545,286	0.0376		1,546,226
Total	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866	1,545,286	0	1,545,286	0.0376		1,546,226

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	PM10 Fugitive	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	236.4115				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003	0.0609	0.0609	0.0609	0.0609	0.0609	0.0609	0.0000	281,448.1	281,448.1	0.0159		281,844.3
Total	236.5923	1.2188	1.8101	2.9700e-003	0.0609	0.0609	0.0609	0.0609	0.0609	0.0609	0.0000	281,448.1	281,448.1	0.0159		281,844.3

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Biogenic CO2	Non-Biogenic CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866	1,545,286 0	1,545,286 0	1,545,286 0	0.0376	0.0376	1,546,226 2
Total	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866	1,545,286 0	1,545,286 0	1,545,286 0	0.0376	0.0376	1,546,226 2

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083	47,917.80 05	47,917.80 05	2.1953			47,972.68 39
Unmitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083	47,917.80 05	47,917.80 05	2.1953			47,972.68 39

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4,075.50	13,660,065	13,660,065	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452	20,552,452	20,552,452

4.3 Trip Type Information

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Land Use	Miles								Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	Primary	Diverted	Pass-by	
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.20	19.20	40.60	86	11	3	86	11	3	
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.20	19.20	40.60	86	11	3	86	11	3	
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	33.00	48.00	19.00	77	19	4	77	19	4	
High Turnover (Sit Down)	16.60	8.40	6.90	8.50	72.50	19.00	8.50	72.50	19.00	37	20	43	37	20	43	
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	19.40	61.60	19.00	58	38	4	58	38	4	
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	12.00	69.00	19.00	38	18	44	38	18	44	
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	16.30	64.70	19.00	54	35	11	54	35	11	

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use KBTU/yr	lb/day										lb/day						
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	131.6662	131.6662	131.6662	2.5200e-003	2.4100e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	4.209.9164	4.209.9164	4.209.9164	0.0807	0.0772	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	150.9911	150.9911	150.9911	2.8900e-003	2.7700e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	2.677.6342	2.677.6342	2.677.6342	0.0513	0.0491	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	561.1436	561.1436	561.1436	0.0108	0.0103	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	595.0298	595.0298	595.0298	0.0114	0.0109	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	29.6019	29.6019	29.6019	5.7000e-004	5.4000e-004	5.4000e-004	29.7778
Total		0.7660	6.7463	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	8,355.9832	8,355.9832	8,355.9832	0.1602	0.1532	0.1532	8,405.6387

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

5.2 Energy by Land Use - NaturalGas

Mitigated

Land Use	NaturalGas Use kBTU/yr	lb/day										CO _{2e}					
		ROG	NOx	CO	SO ₂	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO ₂	NBio- CO ₂	Total CO ₂	CH ₄	N ₂ O
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004	8.3400e-003	8.3400e-003	8.3400e-003	0.2666	0.2666	0.2666	8.3400e-003	8.3400e-003	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004	9.5600e-003	9.5600e-003	9.5600e-003	0.1696	0.1696	0.1696	9.5600e-003	9.5600e-003	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		0.7660	6.7463	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	8,355.9832	0.1602	0.1532	8,405.6387

6.0 Area Detail

6.1 Mitigation Measures Area

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.00 00	18,000.00 00	0.3450	0.3300	18,106.96 50
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

6.2 Area by SubCategory

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	2.2670				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900	1.1400	1.1400	1.1400	1.1400	1.1400	1.1400	0.0000	18,000.00	18,000.00	0.3450	0.3300	18,106.96
Landscaping	2.4766	0.9496	82.4430	4.3600e-003	0.4574	0.4574	0.4574	0.4574	0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.59	18,148.59	0.4874	0.3300	18,259.11
lb/day																

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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9.0.0 Stationary Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Village South Specific Plan (Proposed)
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2028

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	702.44	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

- Project Characteristics - Consistent with the DEIR's model.
- Land Use - See SWAPE comment regarding residential and retail land uses.
- Construction Phase - See SWAPE comment regarding individual construction phase lengths.
- Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.
- Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.
- Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.
- Energy Use -
- Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.
- Area Mitigation - See SWAPE comment regarding operational mitigation measures.
- Water Mitigation - See SWAPE comment regarding operational mitigation measures.
- Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

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tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

2.1 Overall Construction

Unmitigated Construction

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2021	0.1704	1.8234	1.1577	2.3800e-003	0.4141	0.0817	0.4958	0.1788	0.0754	0.2542	0.0000	210.7654	210.7654	0.0600	0.0000	212.2661
2022	0.5865	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6554	1,418.6554	0.1215	0.0000	1,421.6925
2023	0.5190	3.2850	4.7678	0.0147	0.8497	0.0971	0.9468	0.2283	0.0912	0.3195	0.0000	1,342.4412	1,342.4412	0.1115	0.0000	1,345.2291
2024	4.1592	0.1313	0.2557	5.0000e-004	0.0221	6.3900e-003	0.0285	5.8700e-003	5.9700e-003	0.0118	0.0000	44.6355	44.6355	7.8300e-003	0.0000	44.8311
Maximum	4.1592	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6554	1,418.6554	0.1215	0.0000	1,421.6925

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

2.1 Overall Construction

Mitigated Construction

Year	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
2021	0.1704	1.8234	1.1577	2.3800e-003	0.4141	0.0817	0.4958	0.1788	0.0754	0.2542	0.0000	210.7651	210.7651	0.0600	0.0000	212.2658
2022	0.5865	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6550	1,418.6550	0.1215	0.0000	1,421.6921
2023	0.5190	3.2850	4.7678	0.0147	0.8497	0.0971	0.9468	0.2283	0.0912	0.3195	0.0000	1,342.4409	1,342.4409	0.1115	0.0000	1,345.2287
2024	4.1592	0.1313	0.2557	5.0000e-004	0.0221	6.3900e-003	0.0285	5.8700e-003	5.9700e-003	0.0118	0.0000	44.6354	44.6354	7.8300e-003	0.0000	44.8311
Maximum	4.1592	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6550	1,418.6550	0.1215	0.0000	1,421.6921

Percent Reduction	tons/quarter										tons/quarter					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2021	11-30-2021	1.4091	1.4091
2	12-1-2021	2-28-2022	1.3329	1.3329
3	3-1-2022	5-31-2022	1.1499	1.1499
4	6-1-2022	8-31-2022	1.1457	1.1457
5	9-1-2022	11-30-2022	1.1415	1.1415
6	12-1-2022	2-28-2023	1.0278	1.0278
7	3-1-2023	5-31-2023	0.9868	0.9868
8	6-1-2023	8-31-2023	0.9831	0.9831

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9	9-1-2023	11-30-2023	0.9798	0.9798
10	12-1-2023	2-29-2024	2.8757	2.8757
11	3-1-2024	5-31-2024	1.6188	1.6188
		Highest	2.8757	2.8757

2.2 Overall Operational

Unmitigated Operational

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3.896.0732	3.896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7.620.4986	7.620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	6.8692	9.5223	30.3407	0.0914	7.7979	0.2260	8.0240	2.0895	0.2219	2.3114	236.9712	12,294.1807	12,531.1519	15.7904	0.1260	12,963.4751

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2.2 Overall Operational

Mitigated Operational

Category	tons/yr											MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O		
Area	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835	
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833	
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,628.0162	
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354	
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567	
Total	6.8692	9.5223	30.3407	0.0914	7.7979	0.2260	8.0240	2.0895	0.2219	2.3114	236.9712	12,294.1807	12,531.1519	15.7904	0.1260	12,963.4751	

Percent Reduction	tons/yr											MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

3.0 Construction Detail

Construction Phase

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004	0.0233	0.0233	0.0233	0.0216	0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	0.0475	0.4716	0.3235	5.8000e-004	0.0496	0.0233	0.0729	0.0216	0.0216	0.0291	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601

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3.2 Demolition - 2021

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.3000e-004	6.0900e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5281	1.5281	5.0000e-005	0.0000	1.5293
Total	2.6500e-003	0.0639	0.0209	2.0000e-004	5.6200e-003	2.0000e-004	5.8200e-003	1.5300e-003	1.9000e-004	1.7200e-003	0.0000	18.9847	18.9847	1.2600e-003	0.0000	19.0161

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233	0.0216	0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	0.0475	0.4716	0.3235	5.8000e-004	0.0496	0.0233	0.0729	0.0216	0.0216	0.0291	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600

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3.2 Demolition - 2021

Mitigated Construction Off-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.3000e-004	6.0900e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5281	1.5281	5.0000e-005	0.0000	0.0000	1.5293
Total	2.6500e-003	0.0639	0.0209	2.0000e-004	5.6200e-003	2.0000e-004	5.8200e-003	1.5300e-003	1.9000e-004	1.7200e-003	0.0000	18.9847	18.9847	1.2600e-003	0.0000	0.0000	19.0161

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204	0.0188	0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	0.0389	0.4050	0.2115	3.8000e-004	0.1807	0.0204	0.2011	0.0993	0.0188	0.1181	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061

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3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	0.0000	1.2234
Total	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	0.0000	1.2234

Mitigated Construction On-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204	0.0188	0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	0.0000	33.7060
Total	0.0389	0.4050	0.2115	3.8000e-004	0.1807	0.0204	0.2011	0.0993	0.0188	0.1181	0.0000	33.4357	33.4357	0.0108	0.0000	0.0000	33.7060

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3.3 Site Preparation - 2021

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	1.2234
Total	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	1.2234

3.4 Grading - 2021

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377	0.0347	0.0347	0.0347	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776
Total	0.0796	0.8816	0.5867	1.1800e-003	0.1741	0.0377	0.2118	0.0693	0.0347	0.1040	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776

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3.4 Grading - 2021

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828
Total	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377	0.0347	0.0347	0.0347	0.0000	103.5403	103.5403	0.0335	0.0000	104.3775
Total	0.0796	0.8816	0.5867	1.1800e-003	0.1741	0.0377	0.2118	0.0693	0.0347	0.1040	0.0000	103.5403	103.5403	0.0335	0.0000	104.3775

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3.4 Grading - 2021

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828
Total	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828

3.4 Grading - 2022

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003	5.2600e-003	5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	0.0127	0.1360	0.1017	2.2000e-004	0.0807	5.7200e-003	0.0865	0.0180	5.2600e-003	0.0233	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414

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3.4 Grading - 2022

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590
Total	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004	5.7200e-003	5.7200e-003	5.7200e-003	5.2600e-003	5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	0.0127	0.1360	0.1017	2.2000e-004	0.0807	5.7200e-003	0.0865	0.0180	5.2600e-003	0.0233	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414

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3.4 Grading - 2022

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590
Total	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590

3.5 Building Construction - 2022

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023	0.0963	0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881
Total	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023	0.0963	0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881

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**3.5 Building Construction - 2022
Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.3051	0.2164	2.5233	7.3500e-003	0.7557	6.2300e-003	0.7619	0.2007	5.7400e-003	0.2065	0.0000	663.9936	663.9936	0.0187	0.0000	664.4604
Total	0.3578	1.9125	2.9812	0.0119	0.8696	9.4100e-003	0.8790	0.2336	8.7800e-003	0.2424	0.0000	1,105.9771	1,105.9771	0.0451	0.0000	1,107.1039

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.2158	1.9754	2.0700	3.4100e-003	0.1023	0.1023	0.1023	0.0963	0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877
Total	0.2158	1.9754	2.0700	3.4100e-003	0.1023	0.1023	0.1023	0.0963	0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877

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3.5 Building Construction - 2022

Mitigated Construction Off-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	0.0000	442.6435
Worker	0.3051	0.2164	2.5233	7.3500e-003	0.7557	6.2300e-003	0.7619	0.2007	5.7400e-003	0.2065	0.0000	663.9936	663.9936	0.0187	0.0000	0.0000	664.4604
Total	0.3578	1.9125	2.9812	0.0119	0.8696	9.4100e-003	0.8790	0.2336	8.7800e-003	0.2424	0.0000	1,105.9771	1,105.9771	0.0451	0.0000	0.0000	1,107.1039

3.5 Building Construction - 2023

Unmitigated Construction On-Site

Category	tons/yr										MT/yr						
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Off-Road	0.1942	1.7765	2.0061	3.3300e-003	0.0864	0.0864	0.0864	0.0813	0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	0.0000	287.9814
Total	0.1942	1.7765	2.0061	3.3300e-003	0.0864	0.0864	0.0864	0.0813	0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	0.0000	287.9814

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3.5 Building Construction - 2023
Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.2795	0.1910	2.2635	6.9100e-003	0.7377	5.9100e-003	0.7436	0.1960	5.4500e-003	0.2014	0.0000	624.5363	624.5363	0.0164	0.0000	624.9466
Total	0.3177	1.4420	2.6646	0.0112	0.8490	7.3700e-003	0.8564	0.2281	6.8500e-003	0.2349	0.0000	1,042.5294	1,042.5294	0.0392	0.0000	1,043.5090

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811
Total	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811

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3.5 Building Construction - 2023

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.9624
Worker	0.2795	0.1910	2.2635	6.9100e-003	0.7377	5.9100e-003	0.7436	0.1960	5.4500e-003	0.2014	0.0000	624.5363	624.5363	0.0164	0.0000	624.9466
Total	0.3177	1.4420	2.6646	0.0112	0.8490	7.3700e-003	0.8564	0.2281	6.8500e-003	0.2349	0.0000	1,042.5294	1,042.5294	0.0392	0.0000	1,043.5090

3.6 Paving - 2023

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004	3.3200e-003	3.3200e-003	3.3200e-003	3.0500e-003	3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227

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3.6 Paving - 2023

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160
Total	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160

Mitigated Construction On-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004	3.3200e-003	3.3200e-003	3.3200e-003	3.0500e-003	3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.7100e-003	0.0663	0.0948	1.5000e-004	3.3200e-003	3.3200e-003	3.3200e-003	3.0500e-003	3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227

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3.6 Paving - 2023

Mitigated Construction Off-Site

Category	tons/yr										MT/yr				CO2e	
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4		N2O
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160
Total	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160

3.6 Paving - 2024

Unmitigated Construction On-Site

Category	tons/yr										MT/yr				CO2e	
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4		N2O
Off-Road	0.0109	0.1048	0.1609	2.5000e-004	5.1500e-003	5.1500e-003	5.1500e-003	4.7400e-003	4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0109	0.1048	0.1609	2.5000e-004	5.1500e-003	5.1500e-003	5.1500e-003	4.7400e-003	4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073

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3.6 Paving - 2024

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100
Total	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100

Mitigated Construction On-Site

Category	tons/yr										MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Off-Road	0.0109	0.1048	0.1609	2.5000e-004	5.1500e-003	5.1500e-003	5.1500e-003	4.7400e-003	4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0109	0.1048	0.1609	2.5000e-004	5.1500e-003	5.1500e-003	5.1500e-003	4.7400e-003	4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073

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3.6 Paving - 2024

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100
Total	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

Category	tons/yr										MT/yr					CO2e
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Archit. Coating	4.1372					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cliff-Road	3.1600e-003	0.0213	0.0317	5.0000e-005	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	4.1404	0.0213	0.0317	5.0000e-005	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745

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3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr				CO2e	
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4		N2O
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394
Total	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394

Mitigated Construction On-Site

Category	tons/yr										MT/yr				CO2e	
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4		N2O
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003	1.0700e-003		1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	4.1404	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003	1.0700e-003		1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745

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3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

Category	tons/yr										MT/yr					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394
Total	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Village South-Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.498 6	7,620.498 6	0.3407	0.0000	7,629.016 2
Unmitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.498 6	7,620.498 6	0.3407	0.0000	7,629.016 2

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452	20,552,452	20,552,452

4.3 Trip Type Information

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Land Use	Miles						Trip %						Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.20	19.20	40.60	40.20	19.20	40.60	86	11	3	
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.20	19.20	40.60	40.20	19.20	40.60	86	11	3	
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	33.00	48.00	19.00	33.00	48.00	19.00	77	19	4	
High Turnover (Sit Down)	16.60	8.40	6.90	8.50	72.50	19.00	8.50	72.50	19.00	8.50	72.50	19.00	37	20	43	
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	19.40	61.60	19.00	19.40	61.60	19.00	58	38	4	
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	12.00	69.00	19.00	12.00	69.00	19.00	38	18	44	
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	16.30	64.70	19.00	16.30	64.70	19.00	54	35	11	

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Category	tons/yr											MT/yr				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.646 ₅	2,512.646 ₅	0.1037	0.0215	2,521.635 ₆
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.646 ₅	2,512.646 ₅	0.1037	0.0215	2,521.635 ₆
NaturalGas Mitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.426 ₇	1,383.426 ₇	0.0265	0.0254	1,391.647 ₈
NaturalGas Unmitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.426 ₇	1,383.426 ₇	0.0265	0.0254	1,391.647 ₈

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	tons/yr										MT/yr					CO2e
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Apartments Low Rise	408494	2.200e-003	0.0188	8.0100e-003	1.2000e-004	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003	0.0487	0.0487	0.0487	0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408	
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004	1.7500e-003	1.7500e-003	1.7500e-003	1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468	
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003	0.0310	0.0310	0.0310	0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468	
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004	6.4900e-003	6.4900e-003	6.4900e-003	6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557	
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004	6.8800e-003	6.8800e-003	6.8800e-003	6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993	
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301	
Total		0.1398	1.2312	0.7770	7.6200e-003	0.0966	0.0966	0.0966	0.0966	0.0966	0.0000	1,383.4268	1,383.4268	0.0265	0.0254	1,391.6478	

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

5.2 Energy by Land Use - NaturalGas

Mitigated

Land Use	NaturalGas Use kBTU/yr	tons/yr										MT/yr					
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003	0.0487	0.0487	0.0487	0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408	
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004	1.7500e-003	1.7500e-003	1.7500e-003	1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468	
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003	0.0310	0.0310	0.0310	0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468	
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004	6.4900e-003	6.4900e-003	6.4900e-003	6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557	
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004	6.8800e-003	6.8800e-003	6.8800e-003	6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993	
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301	
Total		0.1398	1.2312	0.7770	7.6200e-003	0.0966	0.0966	0.0966	0.0966	0.0966	0.0000	1,383.4268	1,383.4268	0.0265	0.0254	1,391.6478	

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Apartment Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartment Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		2,512.6465	0.1037	0.0215	2,521.6356

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

5.3 Energy by Land Use - Electricity
Mitigated

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Apartment Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartment Mid Rise	3.94697e+006	1,257,587 ⁹	0.0519	0.0107	1,262,086 ⁹
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		2,512,646⁵	0.1037	0.0215	2,521,635⁶

6.0 Area Detail

6.1 Mitigation Measures Area

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Mitigated	5.1437	0.2950	10.3804	1.6700e-003	0.0714	0.0714	0.0714	0.0714	0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Unmitigated	5.1437	0.2950	10.3804	1.6700e-003	0.0714	0.0714	0.0714	0.0714	0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr															
	MT/yr															
Architectural Coating	0.4137				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003	0.0143	0.0143	0.0143	0.0143	0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004	0.0572	0.0572	0.0572	0.0572	0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	5.1437	0.2950	10.3804	1.6600e-003	0.0714	0.0714	0.0714	0.0714	0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

6.2 Area by SubCategory

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Architectural Coating	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	5.1437	0.2950	10.3804	1.6600e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

7.0 Water Detail

7.1 Mitigation Measures Water

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Category	Total CO2			CH4	N2O	CO2e
	MT/yr					
Mitigated	585.8052	3.0183	0.0755	683.7567		
Unmitigated	585.8052	3.0183	0.0755	683.7567		

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

7.2 Water by Land Use

Unmitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		585.8052	3.0183	0.0755	683.7567

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

7.2 Water by Land Use

Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Apartment Low Rise	1.62885 / 1.02688	10.9085	0.0535	1.3400e-003	12.6471
Apartment Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		585.8052	3.0183	0.0755	683.7567

8.0 Waste Detail

8.1 Mitigation Measures Waste

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	207.8079	12.2811	0.0000	514.8354
Unmitigated	207.8079	12.2811	0.0000	514.8354

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

8.2 Waste by Land Use

Unmitigated

Land Use	Waste Disposed tons	Total CO2			CO2e
		CH4	N2O	CO2e	
MT/yr					
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		207.8079	12.2811	0.0000	514.8354

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

8.2 Waste by Land Use

Mitigated

Land Use	Waste Disposed tons	Total CO2				CO2e
		CH4	N2O	MT/yr		
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834	
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513	
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464	
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430	
Hotel	27.38	5.5579	0.3285	0.0000	13.7694	
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712	
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706	
Total		207.8079	12.2811	0.0000	514.8354	

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Village South Specific Plan (Proposed)
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2028

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	702.44	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

tb VehicleTrips	ST_TR	8.19	3.75
tb VehicleTrips	ST_TR	94.36	63.99
tb VehicleTrips	ST_TR	49.97	10.74
tb VehicleTrips	SU_TR	6.07	6.16
tb VehicleTrips	SU_TR	5.86	4.18
tb VehicleTrips	SU_TR	1.05	0.69
tb VehicleTrips	SU_TR	131.84	78.27
tb VehicleTrips	SU_TR	5.95	3.20
tb VehicleTrips	SU_TR	72.16	57.65
tb VehicleTrips	SU_TR	25.24	6.39
tb VehicleTrips	WD_TR	6.59	5.83
tb VehicleTrips	WD_TR	6.65	4.13
tb VehicleTrips	WD_TR	11.03	6.41
tb VehicleTrips	WD_TR	127.15	65.80
tb VehicleTrips	WD_TR	8.17	3.84
tb VehicleTrips	WD_TR	89.95	62.64
tb VehicleTrips	WD_TR	42.70	9.43
tb Woodstoves	NumberCatalytic	1.25	0.00
tb Woodstoves	NumberCatalytic	48.75	0.00
tb Woodstoves	NumberNoncatalytic	1.25	0.00
tb Woodstoves	NumberNoncatalytic	48.75	0.00
tb Woodstoves	WoodstoveDayYear	25.00	0.00
tb Woodstoves	WoodstoveDayYear	25.00	0.00
tb Woodstoves	WoodstoveWoodMass	999.60	0.00
tb Woodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2021	4.2561	46.4415	31.4494	0.0636	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,163.4166	6,163.4166	1.9475	0.0000	6,212.1039
2022	4.5441	38.8811	40.8776	0.1240	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707
2023	4.1534	25.7658	38.7457	0.1206	7.0088	0.7592	7.7679	1.8799	0.7136	2.5935	0.0000	12,150.4890	12,150.4890	0.9589	0.0000	12,174.4615
2024	237.0219	9.5478	14.9642	0.0239	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,313.1808	2,313.1808	0.7166	0.0000	2,331.0956
Maximum	237.0219	46.4415	40.8776	0.1240	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

Year	lb/day											CO2e				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2		NBio- CO2	Total CO2	CH4	N2O
2021	4.2561	46.4415	31.4494	0.0636	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,163.4166	6,163.4166	1.9475	0.0000	6,212.1039
2022	4.5441	38.8811	40.8776	0.1240	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707
2023	4.1534	25.7658	38.7457	0.1206	7.0088	0.7592	7.7679	1.8799	0.7136	2.5935	0.0000	12,150.4890	12,150.4890	0.9589	0.0000	12,174.4615
2024	237.0219	9.5478	14.9642	0.0239	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,313.1808	2,313.1808	0.7166	0.0000	2,331.0955
Maximum	237.0219	46.4415	40.8776	0.1240	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

2.2 Overall Operational

Unmitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.60 34	50,306.60 34	2.1807		50,361.12 08
Total	41.1168	67.2262	207.5497	0.6278	45.9592	2.4626	48.4217	12.2950	2.4385	14.7336	0.0000	76,811.18 16	76,811.18 16	2.8282	0.4832	77,025.87 86

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.60 34	50,306.60 34	2.1807		50,361.12 08
Total	41.1168	67.2262	207.5497	0.6278	45.9592	2.4626	48.4217	12.2950	2.4385	14.7336	0.0000	76,811.18 16	76,811.18 16	2.8282	0.4832	77,025.87 86

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388	1.5513	1.5513	1.5513	1.4411	1.4411	1.4411	3,747.944 ₉	3,747.944 ₉	3,747.944 ₉	1.0549		3,774.317 ₄
Total	3.1651	31.4407	21.5650	0.0388	3.3074	1.5513	4.8588	0.5008	1.4411	1.9419		3,747.944₉	3,747.944₉	1.0549		3,774.317₄

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.2 Demolition - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.241 ₃	1,292.241 ₃	0.0877		1,294.433 ₇
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0313	0.4282	1.1800e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		117.2799	117.2799	3.5200e-003		117.3678
Total	0.1760	4.1265	1.3884	0.0131	0.3810	0.0135	0.3946	0.1034	0.0129	0.1163		1,409.521₂	1,409.521₂	0.0912		1,411.801₅

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513	1.4411	1.4411	1.4411	0.0000	3,747.944 ₉	3,747.944 ₉	1.0549		3,774.317 ₄
Total	3.1651	31.4407	21.5650	0.0388	3.3074	1.5513	4.8588	0.5008	1.4411	1.9419	0.0000	3,747.944₉	3,747.944₉	1.0549		3,774.317₄

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.2 Demolition - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292,241 ₃	1,292,241 ₃	0.0877		1,294,433 ₇
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0313	0.4282	1.1800e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		117,2799	117,2799	3.5200e-003		117,3678
Total	0.1760	4.1265	1.3884	0.0131	0.3810	0.0135	0.3946	0.1034	0.0129	0.1163		1,409,521₂	1,409,521₂	0.0912		1,411,801₅

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685,656 ₉	3,685,656 ₉	1.1920		3,715,457 ₃
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685,656₉	3,685,656₉	1.1920		3,715,457₃

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374	140.7359	140.7359	140.7359	4.2200e-003		140.8414
Total	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374	140.7359	140.7359	140.7359	4.2200e-003		140.8414

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3.685.6569	3.685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

**3.3 Site Preparation - 2021
Mitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374	140.7359	140.7359	4.2200e-003	4.2200e-003		140.8414
Total	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374	140.7359	140.7359	4.2200e-003	4.2200e-003		140.8414

**3.4 Grading - 2021
Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620	1.9853	1.9853	1.9853	1.8265	1.8265	1.8265	6,007.0434	6,007.0434	1.9428	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6567	3.5965	1.8265	5.4230	6,007.0434	6,007.0434	1.9428	1.9428		6,055.6134

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.4 Grading - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415	156.3732	156.3732	4.6900e-003	156.4904		156.4904
Total	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415	156.3732	156.3732	4.6900e-003	156.4904		156.4904

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620	1.9853	1.9853	1.9853	1.8265	1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6587	3.5965	1.8265	5.4230	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.4 Grading - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415	156.3732	156.3732	4.6900e-003	156.4904		156.4904
Total	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415	156.3732	156.3732	4.6900e-003	156.4904		156.4904

3.4 Grading - 2022

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349	1.5041	1.5041	1.5041	6,011.4105	6,011.4105	1.9442	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	8.6733	1.6349	10.3082	3.5965	1.5041	5.1006	6,011.4105	6,011.4105	1.9442	1.9442		6,060.0158

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.4 Grading - 2022

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415	150.8754	4.2400e-003	150.8754	4.2400e-003	150.9813	150.9813
Total	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415	150.8754	4.2400e-003	150.8754	4.2400e-003	150.9813	150.9813

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621	1.6349	1.6349	1.6349	1.5041	1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	8.6733	1.6349	10.3082	3.5965	1.5041	5.1006	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.4 Grading - 2022

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415	150.8754	150.8754	4.2400e-003	150.9813		150.9813
Total	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415	150.8754	150.8754	4.2400e-003	150.9813		150.9813

3.5 Building Construction - 2022

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2022
Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873	3,896.548 2	3,896.548 2	3,902.138 4	0.2236		3,902.138 4
Worker	2.4299	1.5074	21.0801	0.0607	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617	6,042.558 5	6,042.558 5	6,046.800 0	0.1697		6,046.800 0
Total	2.8378	14.7106	24.5142	0.0971	7.0087	0.0741	7.0828	1.8799	0.0691	1.9490	9,939.106 7	9,939.106 7	9,939.106 7	0.3933		9,948.638 4

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.333 6	2,554.333 6	0.6120		2,569.632 2

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2022

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873	3,896.548	2	3,896.548	0.2236		3,902.138
Worker	2.4299	1.5074	21.0801	0.0607	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617	6,042.558	5	6,042.558	0.1697		6,046.800
Total	2.8378	14.7106	24.5142	0.0971	7.0087	0.0741	7.0828	1.8799	0.0691	1.9490	9,939.106	7	9,939.106	0.3933		9,948.938
																4

3.5 Building Construction - 2023

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	2,555.209	9	2,555.209	0.6079		2,570.406
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	2,555.209	9	2,555.209	0.6079		2,570.406
																1

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2023
Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747	3,773.876 2	3,773.876 2	3,773.876 2	0.1982		3,778.830 0
Worker	2.2780	1.3628	19.4002	0.0584	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604	5,821.402 8	5,821.402 8	5,821.402 8	0.1529		5,825.225 4
Total	2.5807	11.3809	22.5017	0.0936	7.0088	0.0595	7.0682	1.8799	0.0552	1.9350	9,595.279 0	9,595.279 0	9,595.279 0	0.3511		9,604.055 4

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.5728	14.3849	16.2440	0.0269	0.6997	0.6997	0.6997	0.6584	0.6584	0.6584	0.0000	2,555.209 9	2,555.209 9	0.6079		2,570.406 1
Total	1.5728	14.3849	16.2440	0.0269	0.6997	0.6997	0.6997	0.6584	0.6584	0.6584	0.0000	2,555.209 9	2,555.209 9	0.6079		2,570.406 1

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2023

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747	3,773.876 2	3,773.876 2	3,773.876 2	0.1982		3,778.830 0
Worker	2.2780	1.3628	19.4002	0.0584	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604	5,821.402 8	5,821.402 8	5,821.402 8	0.1529		5,825.225 4
Total	2.5807	11.3809	22.5017	0.0936	7.0088	0.0595	7.0682	1.8799	0.0552	1.9350	9,595.279 0	9,595.279 0	9,595.279 0	0.3511		9,604.055 4

3.6 Paving - 2023

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.0327	10.1917	14.5842	0.0228	0.5102	0.5102	0.5102	0.4694	0.4694	0.4694	2,207.584 1	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	1.0327	10.1917	14.5842	0.0228	0.5102	0.5102	0.5102	0.4694	0.4694	0.4694	2,207.584 1	2,207.584 1	2,207.584 1	0.7140		2,225.433 6

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.6 Paving - 2023

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311	109.0150	109.0150	109.0150	2.8600e-003		109.0866
Total	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311	109.0150	109.0150	109.0150	2.8600e-003		109.0866

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584 ₁	2,207.584 ₁	0.7140		2,225.433 ₆
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584₁	2,207.584₁	0.7140		2,225.433₆

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.6 Paving - 2023

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311	109.0150	109.0150	2.8600e-003	2.8600e-003		109.0866
Total	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311	109.0150	109.0150	2.8600e-003	2.8600e-003		109.0866

3.6 Paving - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 ₂	2,207.547 ₂	0.7140		2,225.396 ₃
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547₂	2,207.547₂	0.7140		2,225.396₃

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.6 Paving - 2024

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311	105.6336	105.6336	2.6300e-003	2.6300e-003		105.6992
Total	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311	105.6336	105.6336	2.6300e-003	2.6300e-003		105.6992

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	0.9882	9.5246	14.8258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 ₂	2,207.547 ₂	0.7140		2,225.396 ₃
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000		0.0000			0.0000
Total	0.9882	9.5246	14.8258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547₂	2,207.547₂	0.7140		2,225.396₃

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.6 Paving - 2024

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311	105.6336	105.6336	2.6300e-003	105.6992		
Total	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311	105.6336	105.6336	2.6300e-003	105.6992		

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003	0.0609	0.0609	0.0609		0.0609	0.0609	281.4481	281.4481	0.0159	0.0159		281.8443
Total	236.5923	1.2188	1.8101	2.9700e-003	0.0609	0.0609	0.0609		0.0609	0.0609	281.4481	281.4481	0.0159	0.0159		281.8443

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

**3.7 Architectural Coating - 2024
Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315	1,126.758 3	1,126.758 3	0.0280	0.0280		1,127.458 3
Total	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315	1,126.758 3	1,126.758 3	0.0280	0.0280		1,127.458 3

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	236.4115				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003	0.0609	0.0609	0.0609	0.0609	0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	236.5923	1.2188	1.8101	2.9700e-003	0.0609	0.0609	0.0609	0.0609	0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
	lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,126.7583	1,126.7583	0.0280			1,127.4583
Total	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,126.7583	1,126.7583	0.0280			1,127.4583

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Category	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated	9,8489	45,4304	114,8495	0,4917	45,9592	0,3360	46,2951	12,2950	0,3119	12,6070		50,306,60 34	50,306,60 34	2,1807		50,361,12 08
Unmitigated	9,8489	45,4304	114,8495	0,4917	45,9592	0,3360	46,2951	12,2950	0,3119	12,6070		50,306,60 34	50,306,60 34	2,1807		50,361,12 08

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452	20,552,452	20,552,452

4.3 Trip Type Information

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Land Use	Miles				Trip %				Trip Purpose %			
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down Hotel)	16.60	8.40	6.90	8.50	72.50	19.00	8.50	72.50	19.00	37	20	43
Quality Restaurant	16.60	8.40	6.90	19.40	61.60	19.00	19.40	61.60	19.00	58	38	4
Regional Shopping Center	16.60	8.40	6.90	12.00	69.00	19.00	12.00	69.00	19.00	38	18	44
	16.60	8.40	6.90	16.30	64.70	19.00	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Category	lb/day										lb/day					
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBtu/yr	lb/day										CO2e						
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004	8.3400e-003	8.3400e-003	8.3400e-003	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.0807	0.0772	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	0.0807	0.0772	2.4100e-003	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004	9.5600e-003	9.5600e-003	9.5600e-003	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.0513	0.0491	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	0.0513	0.0491	2.7700e-003	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	0.0108	0.0103	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	0.0114	0.0109	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	5.7000e-004	5.4000e-004	5.4000e-004	29.7778
Total		0.7660	6.7463	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	0.1602	0.1532	0.1532	8,405.6387

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory
Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	2.2670				0.0000	0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085				0.0000	0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900	1.1400	1.1400	1.1400	1.1400	1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003	0.4574	0.4574	0.4574	0.4574	0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

6.2 Area by SubCategory

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	2.2670					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Heath	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400	1.1400	1.1400	1.1400	0.0000	18,000.00	18,000.00	0.3450	0.3300	18,106.96
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574	0.4574	0.4574	0.4574	148.5950	148.5950	148.5950	0.1424		152.1542
Total	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.59	18,148.59	0.4874	0.3300	18,259.11
lb/day																

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Village South Specific Plan (Proposed)
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2028

Utility Company Southern California Edison

CO2 Intensity (lb/MW/hr)	702.44	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

tbiVehicleTrips	ST_TR	8.19	3.75
tbiVehicleTrips	ST_TR	94.36	63.99
tbiVehicleTrips	ST_TR	49.97	10.74
tbiVehicleTrips	SU_TR	6.07	6.16
tbiVehicleTrips	SU_TR	5.86	4.18
tbiVehicleTrips	SU_TR	1.05	0.69
tbiVehicleTrips	SU_TR	131.84	78.27
tbiVehicleTrips	SU_TR	5.95	3.20
tbiVehicleTrips	SU_TR	72.16	57.65
tbiVehicleTrips	SU_TR	25.24	6.39
tbiVehicleTrips	WD_TR	6.59	5.83
tbiVehicleTrips	WD_TR	6.65	4.13
tbiVehicleTrips	WD_TR	11.03	6.41
tbiVehicleTrips	WD_TR	127.15	65.80
tbiVehicleTrips	WD_TR	8.17	3.84
tbiVehicleTrips	WD_TR	89.95	62.64
tbiVehicleTrips	WD_TR	42.70	9.43
tbiWoodstoves	NumberCatalytic	1.25	0.00
tbiWoodstoves	NumberCatalytic	48.75	0.00
tbiWoodstoves	NumberNoncatalytic	1.25	0.00
tbiWoodstoves	NumberNoncatalytic	48.75	0.00
tbiWoodstoves	WoodstoveDayYear	25.00	0.00
tbiWoodstoves	WoodstoveDayYear	25.00	0.00
tbiWoodstoves	WoodstoveWoodMass	999.60	0.00
tbiWoodstoves	WoodstoveWoodMass	999.60	0.00

5.0 Emissions Summary

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day															
2021	4.2621	46.4460	31.4068	0.0635	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,154.337 7	6,154.337 7	1.9472	0.0000	6,203.018 6
2022	4.7966	38.8851	39.6338	0.1195	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,035.34 40	12,035.34 40	1.9482	0.0000	12,060.60 13
2023	4.3939	25.8648	37.5031	0.1162	7.0088	0.7598	7.7685	1.8799	0.7142	2.5940	0.0000	11,710.40 80	11,710.40 80	0.9617	0.0000	11,734.44 97
2024	237.0656	9.5503	14.9372	0.0238	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,307.051 7	2,307.051 7	0.7164	0.0000	2,324.962 7
Maximum	237.0656	46.4460	39.6338	0.1195	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	12,035.34 40	12,035.34 40	1.9482	0.0000	12,060.60 13

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

Year	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
2021	4.2621	46.4460	31.4068	0.0635	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,154.337 7	6,154.337 7	1.9472	0.0000	0.0000	6,203.018 6
2022	4.7966	38.8851	39.6338	0.1195	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,035.34 40	12,035.34 40	1.9482	0.0000	0.0000	12,060.60 13
2023	4.3939	25.8648	37.5031	0.1162	7.0088	0.7598	7.7685	1.8799	0.7142	2.5940	0.0000	11,710.40 80	11,710.40 80	0.9617	0.0000	0.0000	11,734.44 97
2024	237.0656	9.5503	14.9372	0.0238	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,307.051 7	2,307.051 7	0.7164	0.0000	0.0000	2,324.962 7
Maximum	237.0656	46.4460	39.6338	0.1195	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	12,035.34 40	12,035.34 40	1.9482	0.0000	0.0000	12,060.60 13

Percent Reduction	lb/day															
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

**2.2 Overall Operational
Unmitigated Operational**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92
Energy	0.7660	6.7462	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.80 05	47,917.80 05	2.1953		47,972.68 39
Total	40.7912	67.7872	202.7424	0.6043	45.9592	2.4640	48.4231	12.2950	2.4399	14.7349	0.0000	74,422.37 87	74,422.37 87	2.8429	0.4832	74,637.44 17

Mitigated Operational

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Area	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.59 50	18,148.59 50	0.4874	0.3300	18,259.11 92
Energy	0.7660	6.7462	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.80 05	47,917.80 05	2.1953		47,972.68 39
Total	40.7912	67.7872	202.7424	0.6043	45.9592	2.4640	48.4231	12.2950	2.4399	14.7349	0.0000	74,422.37 87	74,422.37 87	2.8429	0.4832	74,637.44 17

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513	1.4411	1.4411	1.4411		3,747.944 ₉	3,747.944 ₉	1.0549		3,774.317 ₄
Total	3.1651	31.4407	21.5650	0.0388	3.3074	1.5513	4.8588	0.5008	1.4411	1.9419		3,747.944₉	3,747.944₉	1.0549		3,774.317₄

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.2 Demolition - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0532	0.0346	0.3963	1.1100e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		110.4707	110.4707	3.3300e-003		110.5539
Total	0.1835	4.1800	1.4144	0.0128	0.3810	0.0137	0.3948	0.1034	0.0131	0.1165		1,380.3262	1,380.3262	0.0941		1,382.6791

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513	1.4411	1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	3.1651	31.4407	21.5650	0.0388	3.3074	1.5513	4.8588	0.5008	1.4411	1.9419	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.2 Demolition - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.855 5	1,269.855 5	0.0908		1,272.125 2
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0532	0.0346	0.3963	1.1100e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		110.4707	110.4707	3.3300e-003		110.5539
Total	0.1835	4.1800	1.4144	0.0128	0.3810	0.0137	0.3948	0.1034	0.0131	0.1165		1,380.326 2	1,380.326 2	0.0941		1,382.679 1

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.656 9	3,685.656 9	1.1920		3,715.457 3
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.656 9	3,685.656 9	1.1920		3,715.457 3

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

**3.3 Site Preparation - 2021
Unmitigated Construction Off-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374	132.5649	132.5649	3.9900e-003	132.5646		
Total	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374	132.5649	132.5649	3.9900e-003	132.5646		

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3.685.6569	1.1920			3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116	0.0000	3.685.6569	1.1920			3,715.4573

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.3 Site Preparation - 2021
Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374	132.5649	132.5649	132.5649	3.9900e-003		132.6646
Total	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374	132.5649	132.5649	132.5649	3.9900e-003		132.6646

3.4 Grading - 2021
Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853	1.8265	1.8265	1.8265	6,007.0434	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6587	3.5965	1.8265	5.4230	6,007.0434	6,007.0434	6,007.0434	1.9428		6,055.6134

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.4 Grading - 2021

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415	147.2943	147.2943	147.2943	4.4300e-003		147.4051
Total	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415	147.2943	147.2943	147.2943	4.4300e-003		147.4051

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620	1.9853	1.9853	1.9853	1.8265	1.8265	1.8265	0.0000	6.007.043	6,007.043	1.9428		6,055.613
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6587	3.5965	1.8265	5.4230	0.0000	6,007.043	6,007.043	1.9428		6,055.613

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.4 Grading - 2021

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415	147.2943	147.2943	147.2943	4.4300e-003		147.4051
Total	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415	147.2943	147.2943	147.2943	4.4300e-003		147.4051

3.4 Grading - 2022

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349	1.5041		1.5041	6,011.4105	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	3.6248	38.8435	29.0415	0.0621	8.6733	1.6349	10.3082	3.5965	1.5041	5.1006	6,011.4105	6,011.4105	6,011.4105	1.9442		6,060.0158

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.4 Grading - 2022

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0665	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415	142.1207	142.1207	142.1207	4.0000e-003		142.2207
Total	0.0665	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415	142.1207	142.1207	142.1207	4.0000e-003		142.2207

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621	1.6349	1.6349	1.6349	1.5041	1.5041	1.5041	0.0000	6.011,410 ₅	6,011,410 ₅	1.9442		6,060.015 ₈
Total	3.6248	38.8435	29.0415	0.0621	8.6733	1.6349	10.3082	3.5965	1.5041	5.1006	0.0000	6,011,410₅	6,011,410₅	1.9442		6,060.015₈

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.4 Grading - 2022

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0665	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415	142.1207	142.1207	142.1207	4.0000e-003		142.2207
Total	0.0665	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415	142.1207	142.1207	142.1207	4.0000e-003		142.2207

3.5 Building Construction - 2022

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269	0.8090	0.8090	0.8090	0.7612	0.7612	0.7612	2,554.3336	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269	0.8090	0.8090	0.8090	0.7612	0.7612	0.7612	2,554.3336	2,554.3336	2,554.3336	0.6120		2,569.6322

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	2.6620	1.6677	19.4699	0.0571	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		5,691.9354	5,691.9354	0.1602		5,695.9408
Total	3.0904	14.8350	23.2704	0.0926	7.0087	0.0749	7.0836	1.8799	0.0699	1.9498		9,481.0104	9,481.0104	0.3984		9,490.9691

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2022

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	2.6620	1.6677	19.4699	0.0571	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		5,691.9354	5,691.9354	0.1602		5,695.9408
Total	3.0904	14.8350	23.2704	0.0926	7.0087	0.0749	7.0836	1.8799	0.0699	1.9498		9,481.0104	9,481.0104	0.3984		9,490.9691

3.5 Building Construction - 2023

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2023
Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752	3,671.4007	3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	2.5029	1.5073	17.8820	0.0550	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604	5,483.7974	5,483.7974	5,483.7974	0.1442		5,487.4020
Total	2.8211	11.4799	21.2591	0.0893	7.0088	0.0601	7.0688	1.8799	0.0557	1.9356	9,155.1981	9,155.1981	9,155.1981	0.3538		9,164.0437

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2023
Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752	3,671.400 7	3,671.400 7	3,671.400 7	0.2096		3,676.641 7
Worker	2.5029	1.5073	17.8820	0.0550	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604	5,483.797 4	5,483.797 4	5,483.797 4	0.1442		5,487.402 0
Total	2.8211	11.4799	21.2591	0.0893	7.0088	0.0601	7.0688	1.8799	0.0557	1.9356	9,155.198 1	9,155.198 1	9,155.198 1	0.3538		9,164.043 7

3.6 Paving - 2023
Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.0327	10.1917	14.5842	0.0228	0.5102	0.5102	0.5102	0.4694	0.4694	0.4694	2,207.584 1	2,207.584 1	2,207.584 1	0.7140		2,225.433 6
Paving	0.0000				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total	1.0327	10.1917	14.5842	0.0228	0.5102	0.5102	0.5102	0.4694	0.4694	0.4694	2,207.584 1	2,207.584 1	2,207.584 1	0.7140		2,225.433 6

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.6 Paving - 2023

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0469	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311	102.6928	102.6928	102.6928	2.7000e-003		102.7603
Total	0.0469	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311	102.6928	102.6928	102.6928	2.7000e-003		102.7603

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584	2,207.584	0.7140		2,225.433
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.584	2,207.584	0.7140		2,225.433

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.6 Paving - 2023

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0489	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311	102.6928	102.6928	102.6928	2.7000e-003		102.7603
Total	0.0489	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311	102.6928	102.6928	102.6928	2.7000e-003		102.7603

3.6 Paving - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 ₂	2,207.547 ₂	0.7140		2,225.396 ₃
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547₂	2,207.547₂	0.7140		2,225.396₃

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.6 Paving - 2024

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311	99.5045	99.5045	99.5045	2.4700e-003		99.5663
Total	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311	99.5045	99.5045	99.5045	2.4700e-003		99.5663

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 ₂	2,207.547 ₂	0.7140		2,225.396 ₃
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547₂	2,207.547₂	0.7140		2,225.396₃

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.6 Paving - 2024

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311	99.5045	99.5045	99.5045	2.4700e-003		99.5663
Total	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311	99.5045	99.5045	99.5045	2.4700e-003		99.5663

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609			281.4481	0.0159		281.8443
Total	236.5923	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609			281.4481	0.0159		281.8443

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315	1,061.3818	1,061.3818	0.0264			1,062.0410
Total	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315	1,061.3818	1,061.3818	0.0264			1,062.0410

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003	0.0609	0.0609	0.0609	0.0609	0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	236.5923	1.2188	1.8101	2.9700e-003	0.0609	0.0609	0.0609	0.0609	0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Worker	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315	1,061.3818	1,061.3818	0.0264			1,062.0410
Total	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315	1,061.3818	1,061.3818	0.0264			1,062.0410

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Category	lb/day																
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Mitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953			47,972.6839
Unmitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953			47,972.6839

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated		Mitigated	
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452	20,552,452	20,552,452

4.3 Trip Type Information

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Land Use	Miles					Trip %					Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.20	19.20	40.60	86	11	3	
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	40.20	19.20	40.60	86	11	3	
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	33.00	48.00	19.00	77	19	4	
High Turnover (Sit Down Hotel)	16.60	8.40	6.90	8.50	72.50	19.00	8.50	72.50	19.00	37	20	43	
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	12.00	69.00	19.00	58	38	4	
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	16.30	64.70	19.00	54	35	11	

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant) Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Category	lb/day											lb/day				
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Natural/Gas Mitigated	0.7660	6.7462	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7
Natural/Gas Unmitigated	0.7660	6.7462	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292		8,355.983 2	8,355.983 2	0.1602	0.1532	8,405.638 7

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	lb/day										CO2e					
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total		Bio- CO2	NBio- CO2	Total CO2	CH4	N2O
Apartments Low Rise	1119.16	0.0121	0.1031	0.0439	6.6000e-004	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	131.6662	131.6662	2.5200e-003	2.4100e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	4.209.9164	4,209.9164	0.0807	0.0772	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	150.9911	150.9911	2.8900e-003	2.7700e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	2.677.6342	2,677.6342	0.0513	0.0491	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	561.1436	561.1436	0.0108	0.0103	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	595.0298	595.0298	0.0114	0.0109	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	29.6019	29.6019	5.7000e-004	5.4000e-004	5.4000e-004	29.7778
Total		0.7660	6.7463	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	8,355.9832	8,355.9832	0.1602	0.1532	0.1532	8,405.6387

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

5.2 Energy by Land Use - NaturalGas

Mitigated

Land Use	NaturalGas Use kBTU/yr	lb/day										lb/day			CO2e		
		ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2		CH4	N2O
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	8.3400e-003	131.6662	131.6662	2.5200e-003	2.4100e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211	0.2666	0.2666	0.2666	0.2666	0.2666	0.2666	4,209.9164	4,209.9164	0.0807	0.0772	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	9.5600e-003	150.9911	150.9911	2.8900e-003	2.7700e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134	0.1696	0.1696	0.1696	0.1696	0.1696	0.1696	2,677.6342	2,677.6342	0.0513	0.0491	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003	0.0355	0.0355	0.0355	0.0355	0.0355	0.0355	561.1436	561.1436	0.0108	0.0103	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003	0.0377	0.0377	0.0377	0.0377	0.0377	0.0377	595.0298	595.0298	0.0114	0.0109	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	1.8700e-003	29.6019	29.6019	5.7000e-004	5.4000e-004	5.4000e-004	29.7778
Total		0.7660	6.7463	4.2573	0.0418	0.5292	0.5292	0.5292	0.5292	0.5292	0.5292	8,355.9832	8,355.9832	0.1602	0.1532	0.1532	8,405.6387

6.0 Area Detail

6.1 Mitigation Measures Area

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Mitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400	1.1400	1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

6.2 Area by SubCategory

Mitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
lb/day																
Architectural Coating	2.2670				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900	1.1400	1.1400	1.1400	1.1400	1.1400	1.1400	0.0000	18,000.00	18,000.00	0.3450	0.3300	18,106.96
Landscaping	2.4766	0.9496	82.4430	4.3600e-003	0.4574	0.4574	0.4574	0.4574	0.4574	0.4574	148.5950	148.5950	148.5950	0.1424		152.1542
Total	30.5020	15.0496	88.4430	0.0944	1.5974	1.5974	1.5974	1.5974	1.5974	1.5974	0.0000	18,148.59	18,148.59	0.4874	0.3300	18,259.11
lb/day																

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Attachment C

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,623
Amortized (MT CO2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized (MT CO2e/year)	100.80
<i>% Decrease in Construction-related GHG Emissions</i>	<i>17%</i>

EXHIBIT B



Paul Rosenfeld, Ph.D.

Principal Environmental Chemist

Chemical Fate and Transport & Air Dispersion Modeling

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling operations, oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, and many other industrial and agricultural sources. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at dozens of sites and has testified as an expert witness on more than ten cases involving exposure to air contaminants from industrial sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H₂O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health*. 18:48

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Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition*. Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

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Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants..* Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conference*. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation*. Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest*. Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell*. Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest*. Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. \$41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: \$10,000 grant awarded to San Diego State University. Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. \$100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. \$20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: \$10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: \$15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. \$500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the United States District Court For The District of New Jersey

Duarte et al, *Plaintiffs*, vs. United States Metals Refining Company et. al. *Defendant*.

Case No.: 2:17-cv-01624-ES-SCM

Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division

M/T Carla Maersk, *Plaintiffs*, vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS “Conti Perdido”
Defendant.

Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237

Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica

Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants

Case No.: No. BC615636

Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica

The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants

Case No.: No. BC646857

Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado

Bells et al. Plaintiff vs. The 3M Company et al., Defendants

Case: No 1:16-cv-02531-RBJ

Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District

Phillip Bales et al., Plaintiff vs. Dow Agrosiences, LLC, et al., Defendants

Cause No 1923

Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa

Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants

Cause No C12-01481

Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois

Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants

Case No.: No. 0i9-L-2295

Rosenfeld Deposition, 8-23-2017

In The Superior Court of the State of California, For The County of Los Angeles

Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC

Case No.: LC102019 (c/w BC582154)

Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division

Brenda J. Cooper, et al., *Plaintiffs*, vs. Meritor Inc., et al., *Defendants*

Case Number: 4:16-cv-52-DMB-JVM

Rosenfeld Deposition: July 2017

- In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017
- In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015
- In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015
- In The Iowa District Court For Wapello County
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants
Law No.: LALA105144 - Division A
Rosenfeld Deposition, August 2015
- In The Iowa District Court For Wapello County
Doug Pauls, et al., et al., Plaintiffs vs. Richard Warren, et al., Defendants
Law No.: LALA105144 - Division A
Rosenfeld Deposition, August 2015
- In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015
- In The Third Judicial District County of Dona Ana, New Mexico
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward
DeRuyter, Defendants
Rosenfeld Deposition: July 2015
- In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015
- In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014
- In the United States District Court Western District of Oklahoma
Tommy McCarty, et al., Plaintiffs, v. Oklahoma City Landfill, LLC d/b/a Southeast Oklahoma City
Landfill, et al. Defendants.
Case No. 5:12-cv-01152-C
Rosenfeld Deposition: July 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant*.
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs*, vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court of Southern District of Texas Galveston Division
Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs*, vs. BP Products North America, Inc., *Defendant*.
Case 3:10-cv-00622
Rosenfeld Deposition: February 2012
Rosenfeld Trial: April 2013

In the Circuit Court of Baltimore County Maryland
Philip E. Cvach, II et al., *Plaintiffs* vs. Two Farms, Inc. d/b/a Royal Farms, Defendants
Case Number: 03-C-12-012487 OT
Rosenfeld Deposition: September 2013

EXHIBIT C



Technical Consultation, Data Analysis and
Litigation Support for the Environment

1640 5th St., Suite 204 Santa
Santa Monica, California 90401
Tel: (949) 887-9013
Email: mhagemann@swape.com

Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

**Geologic and Hydrogeologic Characterization
Industrial Stormwater Compliance
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
CEQA Review**

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.

B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist

California Certified Hydrogeologist

Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2014;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt’s responsibilities have included:

- Lead analyst and testifying expert in the review of over 100 environmental impact reports since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, Valley Fever, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt’s duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nationwide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, *Oxygenates in Water: Critical Information and Research Needs*.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt taught physical geology (lecture and lab and introductory geology at Golden West College in Huntington Beach, California from 2010 to 2014.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Colorado.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.